



**THE STRUCTURE AND NATURE OF VERTICAL COORDINATION AND
REGULATION IN KENYAN FRESH FRUITS AND VEGETABLES EXPORT
VALUE CHAIN: TRANSACTION COSTS APPROACH**



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ABSTRACT

This thesis was inspired and guided by the question; how have Kenyan smallholder farmers managed to enter and stay in the Kenyan fresh fruits and vegetables export value chain that has high entry and stay barriers? From this question, the study aimed to analyse the structure and nature of vertical coordination and the corresponding regulatory systems in the value chain. Three research questions were then raised in line with the research aim. To explore these questions, Oliver Williamson's transaction costs economics and John Braithwaite and Valerie Braithwaite's motivational postures theory were applied to respectively analyse the structure and nature of vertical coordination and the regulatory and compliance systems in the value chain. A mixed methods approach was adopted for the study with fieldwork carried out in six counties in Kenya. The study participants included smallholder farmers, non-governmental organisations, public and private organisations.

The study found that the structure of vertical coordination of the value chain was nodal whereby two nodes of contracted coordination were identified. The two nodes comprised of a European retailers-Kenyan exporters' node and an exporters-smallholder farmers node. The retailers-exporters node was found to have stable long-term contracts which allowed for transactional relationships to emerge and mature. Conversely, the exporters-farmers node was found to have unstable and volatile short-termed transactions which inhibited maturity of exchange relationships. Importantly, the study found that the absence of property rights, forced the parties to rely on relational contracting anchored on supply reliability. It was for this supply reliability reason that the exporters were willing to bear high transaction costs of contracting smallholders, hence enabling smallholders' entry and stay in the value chain. Regulation was found to be through three pathways including; exporters-farmers, state regulatory and network regulation pathways. Further, the study found that responsive regulation was central to exporters' and farmers' compliance with regulation.

DEDICATION

To Hellen...with eternal love and appreciation.

Thy dawn O Master of the world, thy dawn;

The hour the lilies open on the lawn,

The hour the grey wings pass beyond the mountains,

The hour of silence, when we hear the fountains,

The hour that dreams are brighter and winds colder,

The hour that young love wakes on a white shoulder,

O Master of the world, the Persian Dawn.

That hour, O Master, shall be bright for thee:

Thy merchants chase the morning down the sea,

The braves who fight thy war unsheathe the sabre,

The slaves who work thy mines are lashed to labour,

For thee the waggons of the world are drawn -

The ebony of night, the red of dawn!

James Elroy Flecker

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ABBREVIATIONS AND ACRONYMS

AAK	Agro-Chemical Association of Kenya
AFA	Agriculture and Food Authority
ASAO	Agriculture Sector Adjustment Operations
ASDS	Agricultural Sector Development Strategy
ATO	Australian Taxation Office
BEAP	British East Africa Protectorate
BRC	British Retail Consortium
BSE	Bovine Spongiform Encephalopathy
CB	Certifying Body
DCK	Dansk Chrysanthemum Kultur
EAC	East Africa Community
ECS	Electronic Certification System
EFSA	European Food Safety Authority
EHMG	Ethnically Homogeneous Middleman Group
EU	European Union
EUREP	Euro Retailers Produce
EUREPGAP	Euro-Retailer Produce Good Agricultural Practices
FFV	Fresh Fruits and Vegetables
FPEAK	Fresh Produce Exporters Association of Kenya
GAP	Good Agricultural Practices
GlobalGAP	Global Good Agricultural Practices
GCC	Global Commodity Chain
GDP	Gross Domestic product
GVC	Global Value Chain
GPN	Global Production Network
HCAS	Horticulture Competent Authority Structure
HCD	Horticultural Crops Directorate
HCDA	Horticultural Crops Development Authority
IOE	Institutional and Organisational Economics
ICM	Integrated Crop Management
IMF	International Monetary Fund
KARI	Kenya Agricultural Research Institute
KALRO	Kenya Agriculture and Livestock Research Organisation

KBS	Kenya Bureau of Standards
KEFE	Kenya Association of Fruits and Vegetables Exporters
KEPHIS	Kenya Plant health inspectorate Service
KES	Kenya Shillings
JKIA	Jomo Kenyatta International Airport
MENA	Middle East and North Africa
MP	Motivational Posture
MRL	Maximum Residue Level
NGO	Non-Governmental organisation
PCAK	Pesticide Chemicals Association of Kenya
QA	Quality Assurance
SAP	Structural Adjustment Programme
SRA	Strategy for Revitalising Agriculture
SoP	Systems of Production
TA	Technical Assistant
TCE	Transaction Costs Economics
TCR	Transaction Costs Regulation
UIN	Unique Identification Number
USAID	United States Agency for International Development

CHAPTER ONE

INTRODUCTION

1.1 Research Background

This study was inspired and guided by the question: *how have Kenyan smallholder farmers managed to consistently participate in the fresh fruits and vegetables (FFV) export value chain that is seemingly structured to exclude them?* To answer this question, the study sought to analyse the structure¹ and nature² of vertical coordination and the regulatory systems in the Kenyan FFV value chain in order to understand governance and regulatory systems that have enabled smallholder farmers to participate in the value chain. In so doing, two theories were applied; Oliver Williamson's Transaction Costs Economics (TCE), and John Braithwaite and Valerie Braithwaite's Motivational Postures (MP) theories to analyse, respectively, the structure and nature of vertical coordination and the regulatory systems in the Kenyan FFV value chain.

From previous studies, it is evident that governance changes in the Kenyan FFV value chain, introduced high entry and stay barriers on the smallholder producers through technology, knowledge and cost associated with the need to comply with food standards (Dolan & Humphrey, 2000; Humphrey, 2004). Because of food contaminations, from the late 1980s, spot market arrangements in African FFV value chain were gradually replaced by vertical coordination as European retailers sought to assert their control over the value chain (Dolan & Humphrey, 2000; Jaffee, 2003). To contain food contamination, later in the mid-1990s, European retailers introduced food standards to govern production and sourcing of fresh food as discussed further below.

But even before these changes, the global food system was already undergoing transformations from as early as the 1960s. Some of the many changes included: emergence and acceptance of biotech; the emergence of food standards, relocation of production from global North to South; and, privatisation of food production and increased retailer activities in the value chain other changes (Gebreyesus & Sonobe, 2012; Ouma, 2012; Stiegert, 2008). Earlier on, Mackintosh (1977) had noted how the relocation of food production and increased retailer activities in the value chain, was transforming food production and marketing from 'food as we know it' to food as an international tradeable commodity. Macdonald (2014) labelled these processes as entailing disaggregation and dispersion of food production by firms.

¹ Defined further below

² Defined further below

In cognizance of these changes, the last few decades have seen considerable research output related to the political economy of agri-food³ governance of production and marketing of African FFV sector. Historically, scholars have often been interested in the fundamentals of agri-food production and supply. Allen and Lueck (2008) reckon that scholars' interests in agri-food have been piqued by the fact that farming has historically been the social, economic and industrial activity of humans. Hence, to Allen and Lueck, the importance of food to human survival coupled with the fact that agriculture is always present in our environment, has historically made it a safer and familiar place for scholars to experiment with their ideas.

From Isaac Newton with the apple tree, Adam Smith with the benevolence of the butcher and the baker, Gregor Mendel experimenting with the pea plants and numerous other scientists, agri-food has often provided a fertile ground for scientists to test their ideas. Thereby, agriculture was at the frontier of the Industrial Revolution with innovations being driven by the need to efficiently produce more food and to process agricultural products in large volumes for trade. In modern times, scientists have grappled with understanding and explaining the critical issues related to agriculture production and food supply systems.

Notably through the lens of governance, food scholars, in the last quarter of a century, have analysed the changes in the food Global Value Chain (GVC) and the implication of these changes on various actors. From literature, it is evident that the re-organisation of food value chain has had both positive and negative effects on actors in global South. On the positive side, globalisation has opened new markets for farmers in developing countries, enabled sharing of technology and knowledge increasing agricultural production, and established efficient global production and supply networks among other benefits (Burch & Lawrence, 2005; Gereffi, Humphrey, & Sturgeon, 2005; Gibbon, 2003).

In contrast, globalisation has introduced costly and competitive production and marketing demands on peasants, brought new technologies out of reach of farmers, exacerbated the movements of food-related pathogens from one part of the globe to another and increased environmental problems associated with agricultural production (Campbell, 2009; Gibbon, 2003). Fine (1994) notes the paradox of globalisation in which developing world farmers have been made to produce exotic food for affluent tables in the developed world while their citizens starve. Because of these paradoxes, the world of food today, looks very different than it did a

³ This research project uses the terms agriculture and agri-food interchangeably to refer to the practices of food production and the related post-harvest activities of marketing and supply of fresh foods.

few decades ago and the changes have in-turn shifted what constitute food problems (Fine, 1998).

From the 1960s, these changes saw arm's length producer-consumer interactions symbolised by the local baker and the butcher increasingly, and in some instances completely, replaced by large shops and retailers⁴ (Richards, Lawrence, & Burch, 2011, p. 42). In this period, supermarkets increased their claim in the governance of global food production and supply system (Freidberg, 2004; Richards et al., 2011). Harvey (2007) narrated the two periods that marked the emergence of supermarket control over agri-food systems in the United Kingdom (UK) to mirror the global changes. The first period comprised of the years leading to the 1st World War, which saw cooperative societies in the UK begin to set up regional then national outlets to sell food (Harvey, Quilley, & Beyon, 2002). The second period according to Harvey (2007), was after the 2nd World War when small food retailers were increasingly replaced by large out of town stores.

Later in the 1960s, increased demands for healthy and fresh food and an era of consumer mass consumption emerged driven by rising incomes of citizens of the developed countries (Dolan & Humphrey, 2000). In order to meet increased consumer demands, the earlier mentioned relocation of food production to the global South by firms began, and this further reconfigured the food supply system in the UK. Within these changes the retailers emerged and became a dominant force in the selling of food with four UK retailers, Tesco, Asda, Morrisons and Sainsbury, emerging at the top (Burch & Lawrence, 2005; Qazi & Selfa, 2005). These changes occurred within broader transformations in the world economy involving expansion of trade through globalisation and increased movement of global capital (Neilson, Pritchard, & Yeung, 2014).

The global sourcing of food was put to the test from the 1980s as invisible risks associated with food contamination began to emerge in the global North. First in the UK, then later in European Union (EU), food contamination began with the Salmonella incidences in the 1980s and Bovine Spongiform Encephalopathy (BSE), commonly known as mad cow disease (BSE is transferred to humans via beef in the form of Creutzfeldt-Jakob disease) in 1990s which initiated the processes that changed the governance of food supply from arm's length to vertical coordination (Cuffaro & Liu, 2008; Dolan & Humphrey, 2004; Freidberg, 2004). Because food contamination incidences drew consumers' attention to the shortfalls of the existing food regulatory systems (Richards et al., 2011), consumers began to demand stricter regulatory assurances. This led to

⁴ The two terms retailers and supermarkets are interchangeably used in the thesis to mean the same thing; the large self-service shops that sells households and food items.

regulatory changes, first from the state and later private agencies (Cuffaro & Liu, 2008; Hammoudi, Grazia, Surry, & Traversac, 2015)

State-led regulatory changes in the UK involved parliament enacting the 1990 Food Safety Act aimed at stemming food contaminations. The Act placed the burden of proof and the legal liability on the supermarkets on providing quality assurance to consumers by stipulating that the seller must provide a guarantee to the consumer on the quality of the food they purchased (Jaffee, 2003). Since the Food Act made the retailers the gatekeepers of food quality in the UK (Bonanno & Busch, 2015; Hobbs & Young, 1999), each UK retailer set up their own Integrated Crops Management (ICM) systems to govern the production of food within their supply chain (Campbell & Heron, 2007). Some of the retailers' specific ICM included Tesco Nurture and Mark and Spencer Field to Fork.

Later, because each retailer's based ICM created confusion among the food suppliers, UK and Dutch retailers came together and formulated a set of harmonised Good Agricultural Practices (GAP) to govern the fresh food supply chain. This led to the standard, Euro Retailers Produce Good Agricultural Practices (EurepGAP) being formulated by 1999 (Ouma, 2010). Aside from EurepGAP, retailers also sought to directly control production and sourcing of FFV among the early African players such as Kenya, Zimbabwe and South Africa. The retailer's direct engagement is what shifted FFV sourcing from arm's length to vertical coordination from the 1990s in these African countries (Dolan & Humphrey, 2000).

For Kenya, a large volume of previous studies has confirmed that these changes were reflected within its value chain as discussed further below. From these previous studies, it is also clear that smallholder farmers' participation barriers emerged through cost, technology and knowledge⁵ related barriers (Graffham, Karehu, & MacGregor, 2007) as a high level of competence was introduced. With previous studies silent on how smallholder farmers have managed to participate within the value chain with such high entry and stay barriers, this study was deemed necessary to fill this research gap. Additionally, previous studies of the Kenyan value chain have mainly applied Gereffi's (1994) Global Commodity Chain (GCC) approach to analyse these changes especially how EU retailers have exerted control over the value chain by creating competent supply systems without direct ownership (Gereffi et al., 2005).

Although the GCC approach has been successful in analysing the governance dynamism in Kenyan FFV value chain, especially by explicating the inter-firm linkages and the implication of this for exporters and farmers, the framework has been critiqued for its limited analytical

⁵ These exclusionary and entry barriers, are discussed in detail in the next chapter.

power to explore the response of African actors to these changes (Gebreyesus & Sonobe, 2012). Hallam and Rapsomanikis (2008) noted the disparate nature of the GCC framework, whereby net positive gains on one side of the value chain is expected to lead to net losses on the opposite side. Meanwhile, C. Gilbert (2008) has compared this GCC limitation to a cake division fallacy in which value created is asymmetrically distributed with the powerful actors gobbling the bigger share. Thereby, in extant literature, there is considerably less empirical work on the response of Kenyan actors to these changes, particularly how smallholder producers have managed to cope with the high entry and stay barriers in the value chain.

As such, with the Kenyan FFV value chain having been intensively studied, this value chain was found to be the ideal place to apply a different theoretical framework to analyse this question. Through a mixed methods fieldwork in Kenya, this research analysed the response of Kenyan FFV smallholder farmers and exporters to governance changes and the exclusionary systems. While McCulloch and Ota (2002) study showed the anti-poverty benefit of smallholders participating in FFV production in terms of increased income, existing literature shows that there are costs and technology related entry and participation barriers for smallholder farmers. That is, smallholders' net positive income gains are considerably reduced by the net negative participation and compliance costs.

In this study, Transaction Cost Economics (TCE) theoretical framework was used from the perspective of agrarian political economy, whereby the victim-victimiser opposites of GCC were dropped, with the lens of contract applied to analyse governance arrangements in the value chain. This led to the identification of various gaps in the literature including; the structure of vertical coordination, the nature of transactions, the structure of regulation and the nature of compliance and ultimately, why and how smallholder farmers have managed to participate in the value chain. The next section introduces the research problem before key approaches to value chain governance is discussed. Thereafter, the chapter introduces the study theoretical framework, the research journey is then described and lastly, the structure of the thesis is presented.

1.2 The Study Research Problem

While the African horticultural industry has been regarded as a success story, the Kenyan industry is regarded as an African leader due to its early development and its competitiveness through expansion into new markets as other African countries began to emerge and compete (Jaffee, 2003; Minot & Ngigi, 2004). For instance, Kenya was the first African country to formulate its own food standard in the form of Kenya Good Agricultural Practices (KenyaGAP) (Ouma, 2010). As such, the Kenyan horticultural export value chain is one of the most

competitively developed sectors of the Kenyan economy providing support for smallholder farmers, employment opportunities and foreign exchange for the Kenyan state (United Nations Conference on Trade and Development, 2008).

The evolution of the Kenyan FFV sector can be traced back to the colonial period when British settlers introduced temperate fruits and vegetables. Later in the 2nd World War, production of these crops was accelerated to supply allied soldiers (Jaffee, 2003). In its early stages, the sector was mainly made up of white settlers, then in the post-independence period, Kenyan smallholder farmers' involvement in FFV production accelerated especially from the 1970s. Estimates in early 1990 showed that smallholder farmers accounted for over half of exported FFV from Kenya (Jaffee, 1995). As Jaffe narrates, before the 1980s, production of FFV was mainly by smallholder producers who produced Asian vegetables such as chillies, okras, dudhi among others for the Asian market in the UK.

From the 1980s, various financially-endowed large-scale exporting companies began to introduce European vegetables to the smallholders through grower schemes, which expanded export crops diversity to over 75 varieties (Jaffee, 1995). In the 1980s and 1990s, Kenya was by far the largest exporter of fresh vegetables to the European market (Dolan & Humphrey, 2000). Hence, the food contamination problems in the UK, the enactment of Food Safety Act by the UK Parliament, and later food standards, impacted on the Kenyan value chain and its players.

As Dolan and Humphrey narrate, in the 1980s, the marketing system was such that smallholder farmers sold their produce to middlemen and other intermediaries who then supplied Kenyan based small- and medium-sized firms, who then sold the produce to wholesale markets in the UK from where the retailers sourced FFV. In other arrangements, the middlemen supplied wholesale markets in Kenya from which the exporters sourced their produce and channelled it to the UK wholesale markets (Ouma, 2010). However, after food contamination and the enactment of the Food Act, the UK retailers began to directly source for FFV by bypassing the wholesale markets. Later from 2003, as food standards were introduced, the retailers' direct control over the value chain was escalated as discussed further below.

Meanwhile, retailers' direct sourcing led to organisational and compliance related cost demands on the exporters and the farmers (Dolan & Humphrey, 2000). From 1990 onwards, the exporters and farmers were required to invest in their production and post-harvesting handling facilities in the pack-house, in order to guarantee reliable and high-quality produce supply system (Dolan, 2004). These investments escalated production costs on the farmers and the exporters. Because the smallholders could not meet the high competence and production efficiency demanded by

the retailers, the exporters' preference for sourcing FFV from the smallholders⁶ waned. Instead, the exporters focused on sourcing FFV from large and medium-scale farmers who had the financial and knowledge capacity to meet these demands (United Nations Conference on Trade and Development, 2008).

Hence, by late 1990s, the number of smallholder producers in the value chain had declined significantly such that Dolan and Humphrey (2000) found that by 1998, four of the largest exporters in Kenya sourced only 18 percent of their export produce from smallholders. Thereby, even before the introduction of food standards, the Kenyan FFV value chain was already exposed to stringent controls from UK retailers. From 2003 onwards, EurepGAP standard was introduced in the value chain and GlobalGAP from 2007 as EurepGAP changed its name to GlobalGAP. EurepGAP standard was intended to bring efficiency in FFV production on the farm while British Retail Consortium (BRC) standard was to bring quality performance in the exporters' pack-houses.

As Campbell and Heron (2007) point out, the EurepGAP standard was a complex and technical European style of agriculture production which required farmers to be literate, have access to computers in the presence of advanced labour laws. Accordingly, with the standards, farmers and exporters were required to invest in specialised assets⁷, such as skills upgrade, in order to comply with the food standards. The smallholder farmers had limited resources to invest in these GlobalGAP related organisational changes such as chemical stores, bathrooms, toilets, chemical spraying equipment and technical knowledge, thereby, their number in Kenyan value chain declined at the turn of the millennium.

Jaffee (2003) estimated that after the introduction of the standards in 2003, 27 percent of exported vegetables was from smallholders, down from 50 percent a decade earlier while the smallholder farmers' fruits production increased to account for 87 percent of exports. Smallholder farmers' fruits production increased because of the less stringent GlobalGAP requirements on fruit production. In general, as Graffham et al. (2007) note, by 2006, 60 percent of smallholder growers had dropped out of the value chain after the introduction of the standards due to their inability to comply with standards technicalities and the requisite investments. From

⁶ Ngigi (2002) defines smallholder producers as farmers with landholding of 1-2 acres in high rainfall zones and 5-10 acres in semi-arid zones. The same definition was adopted for this research.

⁷ Defined further below in section 1.4.

the literature, it is evident, that although the number of smallholder farmers in the value chain declined from 1990 onwards, there is no consistency in the exact percentages.⁸

For the supermarkets, the standards offered a double-barrelled benefit, allowing them to govern the value chain from a distance while providing food safety guarantee for their customers at a minimum cost (Richards et al., 2011). Despite the introduction of GlobalGAP and the pack-house standard BRC in the Kenyan value chain, UK retailers' individual quality protocol such as Tesco Nurture are still prevalent (Ouma, 2010). This is mainly driven by the competitive nature of UK retail environment exemplified by the product differentiation strategies adopted by these retailers (Dolan & Humphrey, 2004). As such, the UK retailer-based standards have created an additional governance trajectory in the Kenyan value chain, increasing the need for exporters to invest in specialised equipment such as product cutting and packaging tools, in order to meet the retailer's demands.

In the literature, these changes and their impact have been analysed through Gereffi's (1994) GCC framework in which the Kenyan FFV value chain has been classified as buyer-driven.⁹ These changes have been highlighted to have led to smallholder farmers entry and stay barriers in the value chain (Gibbon, 2003; Graffham et al., 2007), hence, the reduction of their number in the value chain. Therefore, this study was inspired by the earlier stated question of how smallholder farmers have managed to consistently participate in this value chain structured to exclude them. It was evident that previous studies of the Kenyan FFV value chain have, through GCC framework, primarily analysed restructuring of the local governance systems and the effect of this on Kenyan actors (Dolan & Humphrey, 2000, 2004; Dolan, Humphrey, & Harris-Pascal, 1999a; Ouma, 2010).

Equally, Ouma (2010) broadly noted that the food standards have led to the introduction of market-based self-regulatory systems in the value chain. However, Ouma did not clarify the nature of these self-regulatory systems in the Kenyan value chain. Against this backdrop, this study was concerned with exploring the missing nuances in the value chain. The missing

⁸ The available data are not consistent in relation to the actual number of farmers who exited the Kenyan FFV value as a result of the governance changes. Ouma (2010, p. 209) gives a critical review of the divergent figures given by Dolan and Humphrey (2004), Jaffee (2003), Asfaw, Mithöfer, and Waibel (2010b) and Mbithi (2008). Ouma explains that the divergence can be related to the differences in products sampled by different scholars, different definitions of a smallholder, variations in the spatial coverage in the studies, high volatility of smallholders' participation in the export market, and complex configuration of the informal supply chain systems.

⁹ Defined and discussed in the next section.

nuances of interest to the study included the structure and nature of vertical coordination and regulation in the value chain which would reveal how smallholder farmers enter and stay in the value chain. Structure was defined as the arrangement of relations between the parts or elements of something complex with nature defined as basic or inherent features, character, or qualities of something (Oxford University Press, 2018). The something complex was the vertical coordination arrangement in the value chain.

As such, the study's overall research objective was: to explore the structure and nature of vertical coordination, regulation and compliance systems in the Kenyan FFV export value chain. In order to explore the research objective, three research questions were proposed:

- 1) What is the structure and nature of vertical coordination arrangements in the Kenyan FFV export value chain?
- 2) What is the nature and cost of relational contracting between exporters and farmers in the Kenyan FFV export value chain?
- 3) What is the structure and nature of regulatory and compliance systems in the Kenyan FFV export value chain in relation to vertical coordination arrangements?

To answer these questions, the study analysed governance and regulatory reasons for smallholder farmers' entry, stay and exit in the supposedly excluding value chain. The next section introduces the different approaches used to analyse value chain governance.

1.3 Introduction to the Different Approaches to Analysis of Value Chain Governance

Governance in this study was defined within TCE attribute, as the process through which order is infused in transactions in order to mitigate conflicts and realize mutual gains (Williamson, 1996b). As such, governance was viewed to include the processes of mitigating conflicts in the various activities of the value chain from production to supply to consumption, such as food contamination, towards enabling different parties to realize mutual gains. For instance, the study viewed the aforementioned introduction of food standards as a governance activity in which order was being infused in food production and supply system, through vertical coordination, in order to mitigate different risks such as loss-making for retailers and disease risk for consumers. However, this definition as used in the study was inclined towards mitigating conflicts in transactions as discussed in the next section.

As described above the African FFV export sector has often been regarded as an agricultural success story having recorded impressive performance and growth over the years compared to other agricultural sectors (Minot & Ngigi, 2004). The driver to the African FFV export success story has been related to different factors including the relocation of production from global

North to South, expansion of trade through globalisation and the increased foreign investments in African agriculture. Equally, the earlier discussed increased demands for year-round supply of fresh and healthy food from global North consumers, has been related to the increased foreign investment in African agriculture by investors who responded to these demands in order to take advantage of African year-round favourable climate (Barrientos, Knorringer, Evers, Visser, & Opondo, 2016; Gibbon, 2003; Maertens, 2009).

From literature, it is evident that the changes in the global governance of agri-food are closely tied to the international public policy pendulum swings from Keynesianism of 1940s-1970s to neo-liberalism in the 1980s-1990s to the re-emergence of the state after the post-2008 financial crisis. As noted earlier, the emergence of retailers in the organisation of food systems began in the 1940s. However, in that period, the state was playing a leading role in agri-food driven by the need to provide affordable food and raw materials for industrial development in the Post-War reconstruction (Bonanno & Busch, 2015). Hence, while the supermarkets were beginning to emerge from the 1920s in the agri-food sector, the implementation of Keynesian policies ensured continued state control over the agri-food sector (Lawrence & Dixon, 2015).

By late 1970s with renewed faith in the virtues of the market (Fafchamps, 2004), retailers' control over food production and sourcing was accelerated partly by liberalisation policies and partly by the emergence of food contamination problems in 1980s (Gibbon, 2003). As earlier noted, food contamination problems of the 1980s, catalysed introduction of food standards by European retailers, allowing them to consolidate their control over agri-food processes (Campbell, 2009). However, the post-2008 financial crisis, saw the re-emergence of the state in the agri-food sector especially in relation to state control over the movement of global capital and increased regulation of poor production and labour practices in the global South (Neilson et al., 2014). The post-2008 governance changes did not imply that retailers have lost their place in FFV value chain, rather, that the state, increasingly, provides oversight over retailers' activities (Mayer & Phillips, 2017).

The evolution of value chain governance systems has also led to the evolution of different approaches for analysing these changes. Especially from the 1990s, different value chain frameworks emerged concerned with exploring the global reorganization of production. The emerging theories were mainly value-chain centred. Given this, Kaplinsky (2000, p. 121) has defined value chain as the full range of activities of a product, from conception to the intermediary processes of production, delivery to consumers and the post-use disposal. As Fine (2002) states, it is through the value chain that commodities acquire different meaning and value.

Such a definition according to Kaplinsky, changes the conceptualisation of the value chain from being an abstract concept to an analytical one that can be studied.

Equally, globalisation is differentiated from value chain in that, globalisation is concerned with the global integration of disaggregated and dispersed production activities, while value chain analysis is concerned with the scrutiny of the different forms of integration takes (Gereffi, Humphrey, Kaplinsky, & Sturgeon, 2001). Thereby, value chain analytical approaches prioritise the various ways through which firms' source and contract production process by problematizing governance of value chain activities (Gereffi et al., 2001; Kaplinsky, 2000). The main value chain analysis approaches discussed in the literature and applied to analyse governance changes in agri-food sector includes Gereffi (1994) GCC framework and Henderson, Dicken, Hess, Coe, and Yeung (2002) Global Production Networks (GPN) framework.

Gereffi's GCC framework focuses on the organisation and sequencing of global production by firms by exploring the structure of production and the different actors involved in a specific sector (Gereffi & Fernandez-Stark, 2016). The GCC framework focuses on the sequences of global production from conception to production and distribution of products by firms. In particular, GCC provides a holistic view of the shifting patterns of global production situated in different contexts and how lead firms are able to govern these separated production activities (Cattaneo, Gereffi, & Staritz, 2010). Thereby, GCC approach is well-suited to analyse cross-border firm activities especially how lead firms influence the patterns of production by coordinating and controlling the activities of the value chain (Gereffi & Fernandez-Stark, 2016).

Gereffi (1994) identified two types of lead firm roles in value chain governance as being either buyer-driven or producer-driven. Producer-driven chains consist of value chains where key producers command the vital technologies and play the role of coordinating the various activities (Kaplinsky, 2000). Producer-driven chains are mostly made up of industries that the producers are directly involved in the formation of the production process of the good or service such as capital and technology-intensive industries for example, motor vehicles and computer industries (Gereffi, 1994). In these value chains, the lead firm, such as Apple Co, controls the forward activities including advertisement and marketing and backward activities including design, innovation and production.

In contrast, Gereffi (1994) related buyer-driven chains to the large retailers and brand name centred industries whereby, retailers critically inform the production processes in the value chain through governing design, retailing, marketing and the general organisation processes in the value chain (Kaplinsky, 2000). In buyer-driven chains, the lead firm in most cases does not

participate in the production process, instead, the lead firm outsources production while actively defining production activities. Such chains are called buyer-driven because the buyers use the value chain to source products and also shape the activities in the chain in order to achieve higher levels of flexibility (Gibbon, 2003). Buyer-driven chains are often made up of labour-intensive industries such as agri-food and clothes and footwear industries (Kaplinsky, 2000).

In the agri-food sector, Gereffi's GCC framework, has been used to extensively analyse the governance systems in the value chain. For instance, Neilson et al. (2014) related the retailing transformation in North America and Europe, which was driven by enhanced consumer purchasing power and the off-shoring of production to global South, to buyer-driven chain. In the Kenyan FFV value chain, key scholarship that has applied GCC approach is Dolan and Humphrey (2000) study which analysed the growing dominance of UK supermarkets in food retailing and sourcing and the resulting retailers' increased coordination and control over Kenyan FFV value chain activities.

Dolan and Humphrey noted that through the double barrel of food standards and retailers' competitive strategies, UK retailers have successfully escalated inclusion and exclusion strategies in the value chain by pushing costs onto Kenyan exporters and farmers. Particularly for the smallholders, they have had to contend with capital and knowledge deficits required for this model of production (Ouma, 2010). Later based on their critique of GCC approach, which they pointed out had failed to account for the social and institutional context at the national level from which all firms emerge, Henderson et al. (2002) proposed the GPN approach.

The GPN, according to Henderson et al. (2002, p. 445), is a value chain conceptual framework, which integrates global, regional and local economic and social dimensions in the processes involved in forms of economic globalization. As such, GPN analyses the different organizational and geographical sites, including regional and national economies, through which actors compete and cooperate for a share of value creation, transformation and capture (Yeung & Coe, 2015). Whereas Gereffi GCC approach is inclined towards economic sociology concentrating on the role of key actors in value chain, Henderson et al GPN approach is inclined towards economic geography focusing on the interconnectedness of firms' spatial functions and operations. The similarity in these two approaches is that they are both influenced by network theories.

In the same period, Fine, 1994, 1998, 2002 and Fine & Leopold, 1993, articulated the systems of production (SoP) approach which focused on the often-neglected consumer sovereignty in value chain analysis approaches. The SoP approach asks the question, how does the economic origin of a commodity affect the way in which it is perceived as a use value for consumption

(Fine, 2002)? Borrowing from Friedland's (1984) commodity systems analysis, the SoP approach articulates the economic and social factors that give rise to the composition of consumption and how different meanings are attached to a commodity e.g. food, through the value chain. As such, SoP places the uniqueness of each commodity at the centre with commodity uniqueness shaping its provisioning and thus, its consumption (Bayliss, Fine, & Robertson, 2013). This approach has been useful in the analysis of consumer sovereignty in driving changes in food industry.

While GVC and GPN approaches have been effective in conceptualising and explaining the different forms and processes of global economic integration and organisation of production, these approaches have been critiqued for their neglect of the state in their analysis (Neilson et al., 2014). Similarly, these frameworks have been found limiting in the analysis of the response of global South actors to the changes in the value chain as earlier elucidated. Hence, recent scholarship has sought to explain the place of the state in the governance of value chain especially the distributive role of the state in the governance of value chain.

As such, various forms and degrees of state participation in GVC governance have been proposed including outsourcing of governance (Mayer & Phillips, 2017), delegation of governance (Ferguson & Gupta, 2002) or hybrid forms of governance (Bair, 2017). In these different approaches, it is clear that the state is neither assertive nor a spectator in governance, rather terms of inclusivity, participatory, diversity and competitiveness have been used to describe the state's role. These terms have been used to capture contemporary governance arrangements in GVC in which the state and the private actors work in tandem.

The above narration shows that there are diverse frameworks that can and have been applied to analyse governance of the agri-food sector. For this study, TCE approach was found relevant in the analysis of the structure and nature of vertical coordination in the Kenyan FFV because it is a theory of vertical integration. Hence, TCE, was deemed to have the theoretical tools, such as contract, and rich explanatory power, such as transactional attributes, to explore and analyse the issues of interest to the study. Within TCE, Spiller (2013) Transaction Cost Regulation (TCR) approach was adopted to actualise John Braithwaite and Valerie Braithwaite's MP theory in the study in order to analyse broader constituencies in regulation including state and non-state actors and to explore the regulatory relationship between regulators and regulatees in the value chain. These theories are introduced in the next section.

1.4. Introduction to the Study's Theoretical Framework

Oliver Williamson's TCE was adopted for this research project because it is a theory of vertical integration and its theoretical richness enables empirical analysis of vertical coordination,

transactional and contractual arrangements and regulation in the value chain. Thereby, a key difference between this study and the previous studies of Kenyan FFV value chain was the use of TCE to analyse governance system in the value chain. First, vertical coordination and vertical integration are differentiated. Vertical coordination refers to the synchronization of all the successive stages of production and marketing, with respect to quantity, quality, and timing of a product (Martinez, 2002, p. 2). Vertical coordination encompasses all the arrangements of economic activities including spot-markets, hybrids, bilateral contracting and vertical integration among others.

Conversely, vertical integration is related to internal governance system whereby, a firm takes over ownership of the successive production stages of a good, according to Martinez. TCE is concerned with the various vertical coordination arrangements through the question of why firms may choose to vertically integrate, outsource or use spot markets in the production of goods and services (P. G. Klein, 2008). As Joskow (2008) notes there are significant differences between TCE and other vertical coordination approaches. According to Joskow, while TCE focuses on the detailed attributes of the transaction and how transactional attributes determines the best governance arrangement, the other vertical integration approaches often focuses on market power problems, for instance how a firm may strategically advance its power in upstream or downstream market processes such as in GVC and GPN frameworks.

As such, studies applying GCC approach tend to be 'power-centric'. For instance, analyses of the Kenyan FFV value chain through GCC have mainly focused on how firms have reshaped governance of the value chain through hands-off forms of governance resulting in asymmetrical power distribution that favours the retailers (Dolan & Humphrey, 2000; Gibbon & Stefano, 2005; Ouma, 2010). In contrast, TCE analysis focuses on the best contractual arrangement by firms that economise on transaction costs in production of a good or a service. Transaction costs in this case are the non-productive costs related to the running of an economic system such as screening costs, contract writing and monitoring costs (Williamson, 1996b) and these costs rise as a firm engages in production activities.

Contracting works to economise on transaction costs with the best transactional arrangement selected, for instance spot market arrangement may reduce contract monitoring costs. Hence, TCE accepts that markets, outsourcing and vertical integration are different forms of governance of economic activities (P. G. Klein, 2008). Transaction costs theory is, therefore, a theory of vertical integration representing the alternative governance forms which mediate over the supply of a product that requires investment in specific assets (Joskow, 2008, p. 333). Much of TCE, according to Williamson (1998a, p. 75), is predicated on the discriminating alignment

hypothesis¹⁰ in which “transactions, which differ in their attributes, are aligned with governance structures, which differ in their cost and competence, so as to effect transaction-cost economizing result”.

According to TCE, there are three transactional attributes that are hazardous for transactions. These include asset specificity/relationship-specific assets, the frequency with which transactions occur and uncertainty (Spiller & Tommasi, 2008; Williamson, 1985). However, at the heart of TCE argument is asset specificity, which are the investments, once committed to support an ongoing bilateral transaction, can only be redeployed to alternative use at a loss (Joskow, 2012). The power of asset specificity is that it creates a bilateral dependence between parties in a transaction because such assets if redeployed to alternative use results to great loss in productive value, resulting to sizable quasi-rents¹¹ (Martinez, 2002).

The frequency of transactions in an ongoing bilateral transaction is important, because frequency introduces reputational effect in transactions, hence the incentive on parties to have internal governance system in order to avoid reputational effect¹² on transactions (Williamson, 2008b). Uncertainty on the other hand, is related to the disturbances to which transactions are often exposed to for instance climatic uncertainty in agriculture. Additionally, TCE holds that, because actors in a transaction are rationally bounded, it is expensive to write complete contracts, hence, all complex contracts are incomplete (Williamson, 1985). Given specific investments in a bilateral transaction situation, adaptational problems may arise if uncertainty is high in incomplete contracts situations.

Consequently, present opportunism, which is self-seeking with guile (Williamson, 1975), incomplete contracts are pushed out of alignment in a bilateral trading situation (Williamson, 2008b). Thereby, present bilateral dependence and uncertainty, opportunistic parties bargaining for their own self-interest may affect specific investment made, the distribution of gains and the efficiency of production (Joskow, 2008) especially if the contract cannot be re-written to capture the changes to the transaction that motivates opportunism. Hence, TCE, through discrimination alignment hypothesis, takes into consideration all the transactional aspects and compares the

¹⁰ This is discussed in detail in Chapter Three.

¹¹ The difference between the value of an asset in its best use and in its next-best use is referred to as quasi-rent (Joskow, 2008; Martinez, 2002, p. 6).

¹² Reputational effect is concerned with behaviour of parties in a transaction for instance presence or lack of opportunism in transaction which impacts on how one party is perceived, hence additional costs may arise related to the need to screen ‘bad’ actors. This is discussed further in Chapter Three.

transactional performance with alternative governance arrangements that can resolve the problems above (Joskow, 2012).

TCE accentuates the realisation that parties in a transaction ought to select the right governance system that will mitigate against the hazards above and also the governance arrangement that will also incur the least contracting cost (P. G. Klein, 2008, p. 437). In TCE the contract is the lens through which firms to make or buy decision is made (Williamson, 2008b). Being a theory of vertical coordination, TCE was adopted for this study to explore the structure and nature of vertical coordination in the Kenyan FFV value chain. Evidently, from 1990 onwards, vertical coordination replaced arm's length governance arrangements in Kenyan FFV value chain as previously discussed (Dolan, 2005; Dolan & Humphrey, 2000, 2004; Dolan et al., 1999a; Ouma, 2010).

However, less was known about the structure and nature of vertical coordination in terms of the contractual arrangement, the type and nature of contracts between different parties, distribution of specific assets and transactions costs, and the prevailing regulatory and compliance systems in the value chain. This study was deemed necessary to fill these gaps in the literature. Notwithstanding TCE, the study also adopted motivational postures theory of regulation as proposed by Ayres and Braithwaite (1992) and V. Braithwaite (2002b). The MP theory is concerned with the question of what triggers regulation from the regulator and the subsequent response from the regulatees. In answer to this, John Braithwaite and Valerie Braithwaite proposed a regulatory theory that is based on regulatee responsiveness to regulation to reflect the relationship between the regulatee and the regulator.

As such, in MP theory, punishment as the first instrument to compliance is rejected, rather regulatory instruments escalate up a pyramid of enforcement from subtle means such as self-regulation to severe means such as penalties by the regulator. Likewise, in MP theory, regulatees exhibits various regulatory compliance stances towards regulation and the regulator in what comprises regulatees' motivational postures to regulation. V. Braithwaite (2002b) proposed five regulatees motivational postures comprising of commitment, capitulation, resistance, disengagement and game-playing as discussed further in Chapter Three. This theory was applied in the study to explore the nature of regulation and compliance in line with the structure of vertical coordination in the Kenyan FFV value chain. The next section presents the structure of this thesis.

1.5 The Structure of the Thesis

With the brief introduction above to the research problem and the study theoretical framework, this thesis is structured as follows. Chapter Two of the thesis is concerned with the background analysis of the Kenyan FFV production and marketing as well discussion of the literature on contract farming and governance of the sector. Chapter Three is concerned with detailed analysis of transaction costs theoretical framework and the operationalisation of TCE in the study. Moreover, Chapter Three also discusses MP regulatory and compliance approach as was adopted for this study. Chapter Four focuses on the data collection methods that were adopted for this study as well as detailing the fieldwork and data analysis process.

Meanwhile, Chapters Five, Six, Seven and Eight of the thesis present the empirical results of the study and they are organised as follows. Chapter Five presents the results on the overall structure and nature of vertical coordination in the Kenyan FFV export value chain. Chapter Six is concerned with discussing and analysing in detail the nature of farmers-exporters contracts and their transactional arrangement in the value chain. Meanwhile, Chapter Seven discusses the regulatory and compliance systems in the Kenyan FFV value chain. Lastly, Chapter Eight summarises the study key arguments, the study main contributions to the literature and recommendations for policy and areas for further research.

CHAPTER TWO

COUNTRY CONTEXT: GOVERNANCE OF KENYAN FRESH FRUIT AND VEGETABLE EXPORT SECTOR

2.1 Introduction

The previous Chapter introduced the study's key themes and theoretical framework as well as the research questions. This Chapter is concerned with unpacking the literature on the historical evolution of Kenyan agriculture and FFV export sectors. The Chapter also discusses the governance changes in the Kenyan FFV value chain and the implication of these changes on the farmers and exporters. Prior to, after independence and to the present day, agriculture has been the mainstay of the Kenyan economy. After Kenya became part of the British East Africa Protectorate (BEAP) in 1895 and the Kenya-Uganda railway was completed in 1901, white settlers began arriving in Kenya. The settlers were allocated highly productive farmlands, first by BEAP and later by the colonial state, in areas that were later termed as the 'White Highlands' because they were inhabited by white settlers.

After completion of the railway, BEAP focused on intensive export agriculture in order to make economic returns for the expensive investment in the Kenya-Uganda railway project (Bradshaw, 1990). In order to support settlers' agricultural production and marketing, the state formed various agricultural marketing boards and crop development authorities that the post-independent Kenyan state inherited for the same reasons (Jaffee, 1992). The post-independent Kenyan state maintained these agricultural boards up to the time of Structural Adjustments Programmes (SAP) when most were disbanded. As such, the modern Kenyan agriculture production system is underpinned by the strengths and weaknesses of the colonial agricultural policies.

Some of the policies that were borrowed and extended by the post-independence Kenyan state, included consolidation of small farms into large-scale farms for commercial¹³ agriculture and the establishment of African led export-oriented agriculture (Bates, 1989). Likewise, according to Cone and Lipscomb (1972), some of the post-independence (to present day) problems, and failures in smallholder and pastoralist agriculture, can also be related to colonial agricultural policies that discriminated against pastoralists and were later adopted by the post-independent

¹³ Dewey (1989) defined commercial agriculture as the type of agriculture that moves agricultural good and commodities to the market for sale rather than for home consumption.

Kenyan state. Therefore, to a large extent, the commercialisation and modernisation of Kenyan agriculture, through time, has been marked with contradictions¹⁴.

On the one hand, Kenya boasts a modern commercial export agriculture made up of large-scale production farms, while in contrast, there is a large population of resource-poor peasants, who are often farmers by default and not by choice (P. Collier & Dercon, 2014). The development of Kenya's agriculture has also been greatly influenced by the climatic conditions which vary across the country. With a landmass of 587,000 KM² ranging from below the sea level at the coastal region to over 5,000 metres at the top of Mount Kenya, the latitude varies from 4 degrees north to 4 degrees south of the equator (Government of Kenya, 2009; Pereira, 1997, p. 8).

As a result, the climate varies from temperate on the high-altitude areas to tropical in the Lake Victoria and the Indian Ocean basin to arid and semi-arid (ASAL) in the northern part of the country. Hence, 84 percent of the country is considered ASAL not suitable for rain-fed agriculture with only 16 percent considered to be of high and medium agricultural potential with adequate and reliable rainfall (Government of Kenya, 2009, p. 13). Therefore, most commercial and export agriculture in Kenya, is restricted to the highlands of the Great Rift Valley, Western and Central Kenya as well as the Coastal region with the ASAL areas largely confined to nomadic pastoralism (Bigsten & Collier, 1995).

As mentioned above this chapter discusses the development of Kenyan agriculture and export horticulture sector through the years. In addition, the unfolding governance system in the global agri-food sector is discussed in relation to the governance transformation in Kenyan FFV export sector as well as contract farming in Kenyan FFV export sector. The chapter is structured as follows; first a brief introduction to the development of Kenyan agriculture through time is laid down before the overall development of horticultural production is discussed with the final part discussing governance and contract farming issues in the sector.

2.2 Evolution of Kenyan Agriculture Production and Marketing

Before the establishment of BEAP and the subsequent arrival of British settlers', agriculture in Kenya was characterised by traditional farming methods developed to cater for subsistence needs of the household and for local trading with neighbouring communities, though in the coastal region, some farmers were growing rice to supply the seasonal Arab trading boats (Talbot, 1992). As Talbot further highlights, although the Portuguese traders had earlier arrived in the 15th century on East Africa's coast, they never established a base for commercial

¹⁴ For a major analysis of the nexus of land, agriculture, class and state contradictions in Kenya, see York Bradshaw (1990), Gavin Kitching (1980) and Robert Bates (1989).

agriculture apart from encouraging the locals to grow surplus crops to supply their trading ships. Thereby, large-scale commercial agriculture production in Kenya commenced with the arrival of British settlers from the late 1890s.

The completion of the Kenya-Uganda railway in 1901 spurred among the settlers, the establishment and growth of large-scale cash crops export agriculture including coffee, tea, cotton and sisal (Munyi & Jonge, 2015; Pereira, 1997). As Fiona and MacKenzie (1999) note, in this period settler agriculture was driven by the colonial state selective preference for settler agriculture. This selective policy, according to Fiona and MacKenzie, implied that the colonial state introduced science-led agricultural practices for the settlers, generating discourses of betterment and trade for the settlers and the colony at the expense of the locals. Such exclusive policy included the production of export crops, such as coffee, tea and pyrethrum by the settlers while the locals were restricted to small-scale subsistence agriculture.

The selective agricultural policy eventually led to unrest in the form of the Mau Mau¹⁵ revolt in the 1950s from local Kenyans who felt alienated from their land (Bates, 1989; Kitching, 1980). In response, in 1954 the colonial state established a Commission led by the then colonial Department of Agriculture official Roger Swynnerton to look at ways of improving the production and marketing of cash crops among the locals (Pereira, 1997). On its publication, the Swynnerton Plan was implemented by the colonial state allowing the locals to grow export crops, such as coffee and tea, leading to increased adoption of export agriculture among the smallholder farmers. Equally, the implementation of Swynnerton's plan also facilitated the evolution of institutions and policies that were a precursor to the development of smallholder commercial agriculture in post-colonial Kenya (Otsuka, Yamano, & Place, 2011; Thurston, 1987).

At Independence in 1963, post-colonial agriculture was framed by several internal and externally generated factors that affected the development of export agriculture. Internally, the departure of the settlers after Independence led to redistribution of land by the state to Kenyans, leading to further growth of smallholder agriculture in the 1960s (Wamicha & Mwanje, 2000). Consequently, as Migot-Adholla, 1984 highlights, (as cited in Bradshaw (1990), smallholder production increased from 19 percent of total agricultural output in 1958 to 51 percent in 1968.

¹⁵ The Mau Mau uprising comprised uprising from different ethnic tribes made up of Kikuyu, Embu, Meru and some Kamba and Maasai who fought against the British colonial state especially against land consolidation by the settlers.

Likewise, the post-independent state adopted the colonial state agricultural policies including state-led investments and interventions in agriculture through agricultural boards (Miatta, 2006).

As such, in the first two decades after Independence, agriculture experienced rapid growth due to the earlier implementation of the Swynnerton plan, land transfers and a strong orientation towards export agriculture (Bigsten & Collier, 1995; Nyangito & Okello, 1998; Winter-Nelson & Argwings-Kodhek, 2007). Between 1965 to 1972, the Kenyan agriculture sector recorded impressive annual growth averaging 5.2 percent (Nyangito & Okello, 1998). Externally, the global oil crisis of the 1970s and the drop-in commodity prices led to depressed agricultural growth from late 1970s (Wamicha & Mwanje, 2000).

Because agriculture is the mainstay of the Kenyan economy, the depressed agricultural growth also depressed overall economic growth in Kenya in the same period. Therefore, the neo-liberal reforms introduced in the general economy from the 1980s, were also adopted in the agricultural sector. The first phase of The World Bank/International Monetary Fund (IMF) neoliberal reforms from 1981 to late 1980s focused on general macroeconomic stability while the second part of the reforms was sectoral (Gamba & Kibaara, 2007). In the agricultural sector, the SAP policies were implemented through the World Bank/IMF led Agriculture Sector Adjustment Operations (ASAO) policy one and later ASAO policy two in a period of over ten years (Nyairo, Kola, & Sumelius, 2010).

These policies introduced reforms including; deregulation of agricultural marketing boards, improved producer payment services, reform of the fertiliser sector; and the abolition of agricultural subsidies among other changes. By the end of the implementation of the SAPs in 2002 the growth in the agricultural sector had fallen from 3.5 percent between 1980 to 1990 to negative 4.1 percent in 1993 (Nyangito & Okello, 1998, p. 13). It is not clear why the SAPs did not have the intended growth impact in the agricultural sector. Nevertheless, Bates' (1989) argues that the then structure of Kenyan agricultural sector, whereby the political class captured and used Kenyan agricultural institutions to gain political mileage, might explain the failure of SAPs policies. Because of this, the Kenyan political class was not willing to let go of their hold of such institutions, hence some agricultural boards withstood the SAP reforms.

This implied that liberalisation may not have occurred fully with some of the boards left behind hence, extending the pre-liberalisation malfeasance in agricultural institutions. As such, Poulton and Kanyinga (2014, p. 2) argued that "little has changed in the sector" implying that some state agricultural boards are still intact and under state capture. Additionally, in that period, there was general economic mismanagement which may have impacted on the agricultural growth. Again, it may have been too soon for the impact of SAPs' reforms to realise positive growth in the

agriculture sector. Because of the failures of the SAPs, from 2002 onwards a post-liberalisation era of private sector driven agriculture was introduced to correct some of the adjustment policies (Nyairo et al., 2010). This was articulated in the government post-liberalisation agricultural policy called Strategy for Revitalising Agriculture (SRA) that was launched in March 2004 and later in 2010 a new policy called the Agriculture Sector Development Strategy (ASDS) was launched. The SRA and ASDS, focused on the private sector-led growth with the aim of revitalising the growth of the agricultural sector with the state playing a facilitative role (Poulton & Kanyinga, 2014). It is expected that this regime of post-liberalisation is still in operation in the current period.

It is clear from the above discussion that the growth and performance of Kenyan agriculture through time has largely been predicated on the colonial agricultural policies which were adopted and continued by the post-colonial Kenyan state. Similarly, Bates (1989) makes us aware of opportunistic behaviour of Kenyan political actors in the agricultural sector which may have contributed to poor performance of the agricultural sector. Hence, the idea of opportunism within the state emerges which is further deliberated upon in Chapter Three. The next section briefly discusses the role of agriculture in Kenya's economy and development.

2.2.2 The Role of agriculture in Kenya economic development

The role of agriculture in economic development has been a contested issue over the years among economists and development scholars. While some scholars have clearly articulated the importance of agriculture in economic development such as Schultz (1964), Gollin, Parente, and Rogerson (2002) and Juma (2011) others such as Lewis (1954) have taken an opposite viewpoint arguing that agriculture lacks adequate innovative structures necessary for fostering higher productivity and export growth. In his seminal article, '*Economic Development with Unlimited Supply of Labour*', Arthur Lewis (1954) proposed a labour market dualism in the process of economic transformation which has come to be known as the Lewis model. According to the Lewis model, the surplus labour in the subsistence sector supplies labour to the capitalist sector for an extended period of time until the labour reservoir in the subsistence sector is exhausted, and wages in the subsistence sector begin to rise to match wages in the capitalist sector (Kirkpatrick & Barrientos, 2004).

Hence, according to Lewis model, agriculture is a precursor to industrialisation with the sector limited to providing cheap labour to the economy and eventually with time agriculture would diminish as manufacturing picks up. However, other studies have clearly shown the direct link of agriculture as a catalyst for national growth through its effect on rural incomes and the provision of resources for transformation into an industrialised economy (Awokuse & Xie,

2015; Datt & Ravallion, 1998; Juma, 2011). In one such case, the World Bank (2008) cross-country study showed that Gross Domestic Product (GDP) growth from agriculture was twice as effective in reducing rural poverty compared to GDP growth from outside agriculture. The 1960s Asian Green Revolution is one example that has been given that was effective in generating growth that was instrumental in reducing rural poverty from 50 percent in the 1970s to 18 percent in 2004 with hunger declining from 30 percent to 16 percent over the same period (Denning, 2007, p. 24)

While other factors such as manufacturing played a major role in the reduction of poverty in Asia, World Bank (2008) associated reduction in rural poverty to the Green Revolution where agriculture was the main economic activity. The Asian Green Revolution demonstrated that agriculture can play a central role in rural poverty reduction as opposed to the restrictive Lewis's Model (Diao, Hazell, & Thurlow, 2010). In Kenya, agriculture has continuously played a central role in the economy as discussed in the wider literature (W. Collier, 2010; Government of Kenya, 2009; Nyangito & Okello, 1998; Poulton & Kanyinga, 2014). The sector contributes directly and indirectly to rural employment and income, food production and foreign exchange earnings. Since Kenyan independence, it is clear that the general growth of the economy is linked to the performance of the agricultural sector as shown in Figure 1 below:

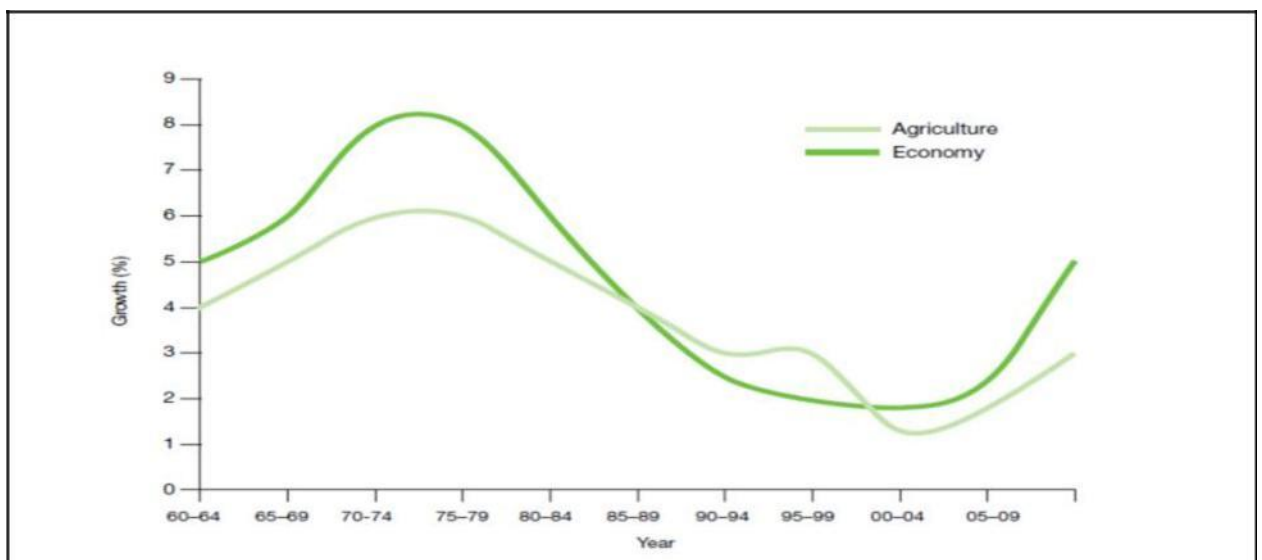


Figure 1: Trends in Kenyan Agriculture and Economic Growth from 1960-2008: Source Government of Kenya (2009)

As Figure 1 shows, there is a close correlation between agricultural performance and the performance of the Kenyan economy. In 2016, agriculture share of GDP increased to 32.6 percent from 30.4 percent in 2015 and contributed about 27 percent to GDP through linkages with manufacturing, distribution and other related service sectors (Kenya Institute of Public Policy Research and Analysis, 2017, p. 45). In addition, the sector accounted for 65 percent of

Kenya's total exports and 18 percent and 60 percent of the formal and total employment respectively (Government of Kenya, 2009, p. 9). The sector has also been a key driver of rural development in Kenya for the last four decades accounting for over two thirds of the rural economy, generating over two thirds of the rural-based GDP and employing over 80 percent of the rural population (Kenya Institute of Public Policy Research and Analysis, 2014, p. 88; Thurlow, Kiringai, & Gautam, 2007).

Therefore, agriculture is the single most important economic sector for Kenya's general economic and rural development. Thurlow et al. (2007) highlighted that any significant reduction in poverty in Kenya should address the problems in agricultural sector especially smallholder farmers' production. The close tie between the agricultural sector and the general performance of the economy has been maintained even in recent years as shown in Figure 2 below:

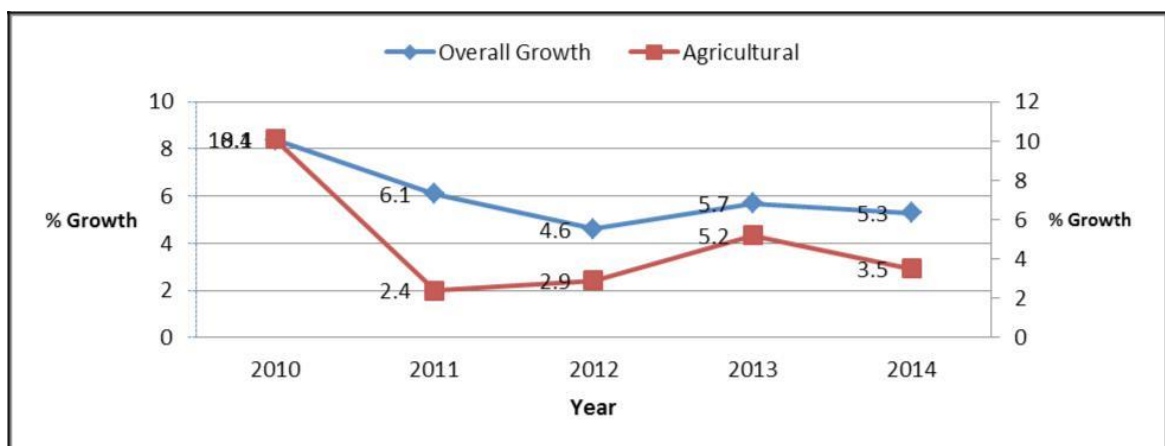


Figure 2: Trends in National GDP and Agriculture GDP, 2010-2014: Source: Government of Kenya (2015)

As Figure 2 shows, the growth curve of the Kenyan economy, in recent years is still heavily dependent on the growth and performance of the agricultural sector. Fluctuations in performance in the agriculture sector lead to fluctuations to the general Kenyan economy as between 2010 to 2011 as represented in Figure 2. The agricultural sector in Kenya is comprised of six major sub-sectors which include: industrial crops, food crops, horticultural crops, livestock, fisheries and forestry. The contribution of the sub-sectors to overall agriculture GDP and to exports is represented in Figure 3 below:

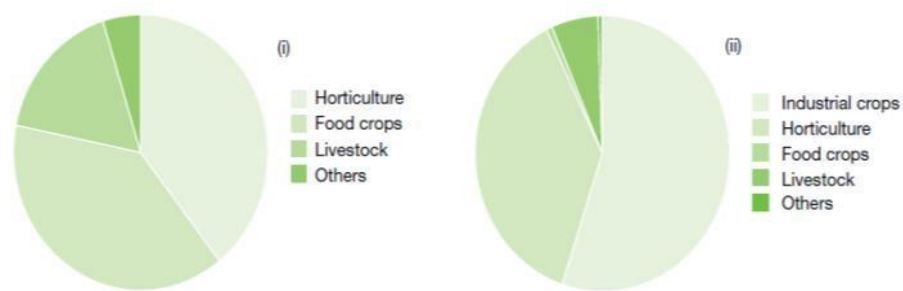


Figure 3: Contribution of Agricultural Sub-sectors to Agriculture GDP (i) and to Agricultural Exports (ii). Source Government of Kenya (2009)

As Figure 3 shows, the industrial crops sector made up of tea and coffee are the major export contributors, followed by the horticultural sector which comprises cut flowers and the FFV sector. However, the horticulture sector is the largest contributor to Kenyan agriculture GDP as the figure shows. The next section introduces the Kenyan horticultural industry before a detailed analysis of the FFV industry.

2.3 The Kenyan Horticultural Sector

The Kenyan horticultural export sector is one of the most competitively developed sectors of the Kenyan economy supporting the livelihood of a large base of smallholder farmers. Recent data support this with the Kenya National Bureau of Statistics (2017) data showing that the total value of Kenyan horticultural exports in 2016 was Ksh¹⁶ 101.5 billion of which Ksh 30.683 billion was vegetables and fruits. Muchiri (2010) estimated that smallholder producers' accounts for about 40-50 percent of the total exported fruits and vegetables from Kenya. From Muchiri's estimates, smallholder farmers then accounted for about Ksh 15.3 billion¹⁷ of the total value of FFV exports in 2016.

In the last two decades, the Kenyan horticulture sector has grown continually and is a major contributor to agricultural GDP at 33 percent with an estimated 5 million Kenyans working either directly or indirectly in the sub-sector (Netherlands Development Organisation, 2012, p. 1). A combination of colonial legacy, favourable climate, geographical conditions and minimal government regulation has allowed the development of commercial horticultural production (Jaffee, 1992). With an equatorial latitude and bimodal rainfall patterns and a range of altitudes that allows for growing of tropical fruits as well as temperate vegetables, Kenya has over the years established itself as an African leader in export horticulture. Additionally, the sector is

¹⁶ Ksh 101 billion is approximately £ 731 million while Ksh 30.683 billion is equivalent to approximately £217 million.

¹⁷ This is approximately £108 million.

important to the Kenyan economy as it is a major contributor to food security, poverty reduction, income and employment creation, raw materials for industries and a major foreign exchange earner as Figure 3 above shows (Government of Kenya, 2009). The evolution of the Kenyan export horticulture sector is closely tied to the evolution of agricultural sector as analysed below.

2.3.1 The evolution of Kenyan horticultural production and export systems

From a relatively minor agricultural sector after independence, the horticulture sector has grown over the years and presently, horticultural produce makes up the second largest export commodity in Kenya after tea in terms of value (Kenya National Bureau of Statistics, 2017). From a narrow-based trade in the 1960s with few participants and products, the sector has evolved into two subgroups comprising of cut-flowers and the FFV industry each with different sets of growers and a dense network of traders, processors and exporters (Jaffee, 1995). The growth of the sub-sector has been gradual and eclectic with periods of boom and bust in-between.

The British farmers arriving in Kenya began experimenting with temperate fruits as early as 1895 and later the immigrant Indian railway workers began growing Asian vegetables in the same period (Minot & Ngigi, 2004). Before that, the indigenous Africans had been growing vegetables and fruits for their own consumption and trading with neighbouring communities. As horticulture and agricultural production was growing the European settlers founded the East African Agricultural and Horticultural Society in 1901 to support the industry (Minot & Ngigi, 2004). However, large-scale horticultural production and export in Kenya began in the period of the 2nd World War when demand for dried vegetables from the Allied troops increased (McCulloch & Ota, 2002).

Minot and Ngigi (2004) and Jaffee (1995) highlighted the three factors that provided the impetus for the growth of horticultural farming at the onset of the 2nd World War. First, the war disrupted the international market for most agricultural products and as a result the farmers resorted to selling their produce to the domestic market which increased local awareness about horticultural farming. Second, the demand for dehydrated vegetables at the onset of the 2nd World War led to the establishment of dehydrated vegetable factories to supply the Allied troops in the Middle East and North Africa (MENA). Third, African smallholder producers were supported by the government through the provision of quality seeds and technical advice to grow vegetables to supply the dehydrated vegetable project factories. By the end of the scheme, 13,500 smallholder farmers had produced about 22,000 tons of vegetables signalling that the smallholder farmers could be mobilised for commercial horticulture production (Jaffee, 1995, p. 336).

The experiences of the war period especially the institutional and technical features of the dehydrated vegetables project, and the success of smallholder farmers' participation in the project, facilitated the development of horticultural sector in Kenya. Jaffee (2003) notes that from the mid-1950s, the export of FFV began with small quantities of temperate vegetables being supplied to up-market stores in London during winter. Accordingly, Jaffe highlights that in time, other crops such as green beans, peppers and courgettes were included in this winter supply scheme with France, Belgium, Netherlands and Germany being part of this supply system.

However, it was after Kenya's Independence in 1963 that horticultural production and exports experienced major growth. Between 1963-1973, there was a marginal expansion of cut flower production by European-owned companies and a small number of Africans directed at the domestic market (Jaffee, 1995). In the same period, Del Monte Company (previously California Packing Company) from the USA took over a local pineapple canning factory and expanded its' operations and exports through Kenyan government support. In 1967 the government established a regulatory authority, Horticultural Crops Development Authority (HCDA) to regulate the sub-sector continuing the colonial state policy of establishing agricultural boards to support agriculture (Muendo, Tschirley, & Weber, 2004).

Although HCDA was set up to regulate the horticulture sector, its powers were limited to facilitating meetings between exporters and air freight companies and instituting common standards for produce packaging (Jaffee, 1995; Minot & Ngigi, 2004). Unlike other state-run agricultural boards at the time which directly engaged in their area of interest, hence exposed to political patronage (Bates, 1989), HCDA was insulated from such rent-seeking behaviour from the Kenyan political class because it engaged in the sector from a distance playing a facilitatory role. This is thought to have expedited the active investment by private sector actors in the Kenyan horticultural sector facilitating its growth (English, Jaffee, & Okello, 2004; Kimenye, 2002).

In the late 1960s, a Danish company, Dansk Chrysanthemum Kultur (DCK), invested in a 6000-hectare (HA) flower estate in the eastern province of Kenya through financial support from the Danish government and tax incentives from the Kenyan government (English et al., 2004). Despite some initial hiccups in the project, by 1973 cut flower production from Kenya was about 1500 tons with DCK accounting for 90 percent of total production (Jaffee, 1995, p. 346). However, the project collapsed within ten years. Despite this, it provided the base for development of the cut flower industry in Kenya with some of the former employees later playing a major role in the establishment and running of flower companies in Kenya (English et al., 2004; Minot & Ngigi, 2004). By 1980s cut flowers were the leading horticultural export

from Kenya due to investments from foreign companies (Hornberger, Ndiritu, Ponce-Brito, Tashu, & Watt, 2007).

For the FFV industry, several events in the 1970s spurred rapid growth. First the Asians expelled from Uganda in 1974 migrated to the UK, thereby, creating a market for Asian vegetables which Kenya took advantage of because of the strong Kenyan Asian family connections to UK Asians (Minot & Ngigi, 2004). Second, the fall of tea and coffee prices in the 1970s led to the need for diversification in farming among the smallholder producers leading to their adoption of horticulture farming which had better prices (Jaffee, 1995). Third, from 1960 to 1980s Kenya was Africa's leading tourism destination receiving over 300,000 tourists every year (Dieke, 1991, p. 271). The returning passenger jets provided the space for exporting FFV to Europe and demand for these vegetables also increased from the tourist hotels in order to serve their guests. These factors, together with the year-round demand for FFV from Europe led to the growth of the FFV industry in Kenya.

Despite many challenges and competition from other African countries, by 1997, Kenya was the main supplier of fresh and chilled vegetables to the EU (Dolan & Humphrey, 2000; Dolan, Humphrey, & Harris-Pascal, 1999b). By 1992, the total quantity of horticultural exports from Kenya was 57,363 tons rising from 22,266 tons in 1980 (M'Ribu, Neel, & Fretz, 1993 p. 870). However, the emergence of vertical coordination from 1990 and later introduction of standards in 2003 affected smallholder farmers' participation in the FFV export industry as previously introduced in Chapter One. The historical evolution and major occurrences in Kenyan horticultural development are summarised in Table 1 below.

Table 1: Historical Evolution of Kenyan Horticultural Sector and Major Occurrences

Major Occurrence	Timeline
Establishment of British East Africa Protectorate: 1895-1920	
Introduction of temperate fruits and Asian vegetables	1895-1990
Construction of Kenya Uganda Railway	1896-1901
Formation of East African Horticultural Society	1901
Establishment of Kenyan Colony: 1920	
2 nd World War Dehydrated vegetable scheme	1939-1945
Growing of temperate vegetables to supply London stores in winter	The 1950s
Roger Swynnerton Plan	1954
Kenyan Independence: 1963	
Introduction of cut flower production by European and African farmers	1963 to-date
Pineapple growing by DelMonte	The 1970s to-date
Horticultural Crops Development Authority established	1967 to 2013
Dansk Chrysanthemum Kultur begins large-scale flower production and later collapses	1960s-1970s
Expansion of FFV production	The 1970s
Increased smallholder participation in FFV production	The 1980s
The emergence of food contaminations in Europe	1987
The emergence of vertical coordination	1990
Formulation of EurepGAP standard	1997
The emergence of food standards in Kenyan value chain	2003
EurepGAP changes to GlobalGAP standard	2007
Formulation of KenyaGAP standard	2007
Establishment of Agriculture Food Authority	2013

Despite the exclusionary effect of food standards, recent data show that the Kenyan horticulture sector has been performing well with vegetable production leading fruit production and the flower sector being the largest sector in horticulture as captured in Table 2 below:

Table 2: Horticulture Industry Performance by Sector. Source: Agriculture and Food Authority (2016)

Commodity	2014		2015		2016		% of Total Value (In billions of KSH)
	Volume (Tonnes)	Value (In billions of KSH)	Volume (Tonnes)	Value (In billions of KSH)	Volume (Tonnes)	Value (In billions of KSH)	
Fruits	35,149	5.4	46,246	6.6	48,657	7.3	7.2
Vegetables	70,344	18.7	68,942	20.9	78,790	23.6	23.0
Flowers	144,763	59.8	122,825	62.9	133,658	70.8	69.8
Total	250,256	83.9	238,013	90.4	261,105	101.7	100

Data in Table 2 show, there was a dip in volume of production in 2015 for flowers and FFV with the production improving in 2016. However, it is not clear why the dip occurred. Nevertheless, the value for all the crops has been steadily growing even with vegetables and flowers volume dip in 2015. Kenya's main horticultural export destination has been the EU accounting for over 80 percent of the exports. The main EU importers include the Netherlands for cut-flowers and the UK, Germany, France and some countries in the Middle East for FFV (Fintrack Inc, 2014).

The volume of horticultural exports from Kenya has been rising from the year 2000 onwards in terms of volume and value to account for two-thirds of total agricultural exports in growth by 2007 (Government of Kenya, 2009, p. 13). This has been mainly due to the increased investment in the production facilities and the weakening of the value of the local currency against the dollar, thereby, increasing the value of exports (Kenya Institute of Public Policy Research and Analysis, 2014). Table 3 below shows a steady increase in the value of horticultural exports over the years:

Table 3: The Growth of Kenya's Horticultural Exports, 1973-2003. Source: Horticultural Crops Development Authority (2004)

Year	Volume in Tonnes	Value in millions of Kenya Shilling	Value in millions of USD	Average unit value in US dollars per ton
1973	27.4	3.6	10.4	380
1976	47.3	13.2	31.8	672
1980	66.3	23.1	61.0	920
1984	90.0	51.6	65.4	727
1988	111.1	99.9	107.4	967
1991	125.1	187.3	133.4	1,066
1995	71.1	320	95.5	1,343
1999	99	710	205.8	2,076
2003	133.2	1,440	369.2	2772

As Table 3 shows, there has been a steady growth in Kenyan horticultural exports over the years with strong growth experienced between 1995 and 2003. Interestingly, this was the same period when vertical coordination was emerging in the sector. As the data in Figure 4 below show, the value of Kenyan horticultural export has still been strong in this decade with only a small dip between 2011 to 2012.



Figure 4: Graphical representation of Kenyan Horticultural Export from 2010-2014. Source: Horticultural Crops Development Authority (2015) and Kenya National Bureau of Statistics (2015)

The strongest growth in export value was between the years 2010 and 2011 as represented in Figure 4. The marginal decline between 2011 and 2012 has been related to fluctuations in foreign currency exchange (Kenya National Bureau of Statistics, 2015). Between 2013-2014, the volume of horticultural exports increased by three percent to stand at 220.2 thousand tonnes in 2014 compared to 213.8 thousand tonnes in 2013 while the value of marketed fresh horticultural produce stood at KES 83.4 billion in 2014 (Kenya National Bureau of Statistics, 2015, p. 148). The production trends in Kenyan FFV sector are discussed next.

2.4 The Fresh Fruits and Vegetables Industry in Kenya

While the production of cut flower has been dominated by medium and large-scale producers due to the resources and technical capability required, the production of FFV in Kenya is dominated by smallholder producers. It was not until the 1980s that there was rapid growth in the FFV industry particularly in regard to the growing of French beans and the Asian vegetables (English et al., 2004; Jaffee, 2003). The production of vegetables has been leading in terms of tonnes and value in comparison to the fruit sector. However, estimates by the Horticultural Crops Development Authority (2015) shows that the fruit sector will overtake the vegetable sector before the end of this decade. The section below analyses exports vegetable and fruit production separately.

2.4.1 The export vegetable sector in Kenya

Export vegetables constitute the second largest produce in the Kenyan horticultural industry after cut-flowers in terms of volume and value. Vegetables accounted for about 35 percent of total horticultural export in 2015 with French beans being the leading vegetable. The production of other vegetables such as sugar snaps, snow peas, runner beans and Asian

vegetables such as Okra, Karela, dudhi, chilli and aubergines have also been increasing (Export Promotion Council, 2015). In the 1980s, the main vegetables grown were Asian vegetables until late 1980s when well-resourced large exporters introduced European vegetables as discussed in Chapter One. The diversity of vegetables produced is captured in Table 5 below which shows the volume and value of the main export vegetables from Kenya from 2012 to 2014.

Table 4: Volume and Value of Main Vegetable Crops Exported by Kenya between 2012-2014. Source: Horticultural Crops Development Authority (2015)

Year	2012		2013		2014	
	Production in tonnes/HA	Value in millions of KSH	Production in tonnes/HA	Value in millions of KSH	Production in tonnes/HA	Value in millions of KSH
French beans	108	2,569	100	2,093	234	3,737
Runner beans	5	593	4	608	31	1,945
Garden/snow peas	37	1,531	40	1,774	44	1,697
Baby carrots	69	949	73	1,592	95	1,010
Baby corns	4	76	5	109	111	821
Butternut	7	112	7	134	21	509
Capsicums	6	159	6	147	17	457

As Table 5 shows, while there is diversification of vegetables being grown, French beans is the main vegetable grown and exported. However, Fintrack Inc (2014) anticipated that the volume of garden peas will surpass that of French beans in the near future. The total volumes of major export vegetables produced in 2014 are indicated in Table 5 below.

Table 5: Volume and Value of the Main Kenyan Export Vegetables in 2014. Source: Horticultural Crops Development Authority (2015)

Commodity	Production in HA	Volumes in tonnes	Value in millions of KES
French beans	4,572	112,409	5,040
Snow peas	1,639	18,645	866
Sugar snap	2,683	43,497	579
Runner beans	404	1,973	174
Garden/snow peas	10,556	40,164	1,021
Courgettes	548	5,278	143
Baby corn	567	4,784	110
Total	20,969	226,750	7,933
Asian Vegetables			
Aubergines	9,193	46,932	954.2
Okra	657	8,758	288
Karella	212	1,636	41
Dudhi	717	4,960	234
Valore, Tindori and Turia	226	13,183	78
Total	11,005	75,469	1595

French beans was the largest export vegetable in 2014 with garden and sugar snap second and third respectively as Table 5 shows. In the Asian export vegetable category, aubergines formed the largest export crop in 2014 followed by okra and dudhi. The export fruit sector is discussed in the next section.

2.4.2 Export Fruit Production in Kenya

Compared with vegetable exports industry, the fruit export industry has had slow growth over the years. While the vegetable sector rigorously adopted GlobalGAP standards successfully, the fruit sector by 2008 according to African Centre for Economic Transformation (2009) report, had not followed through with the adoption of standards. This is mainly due to the less vigorous phytosanitary GlobalGAP requirements for export fruits production in comparison to the vegetable sector, hence less investment on the training of fruit farmers by the exporters

(Otieno, 2016). The volume and value of the main fruits exported in 2014 is captured in Table 6 below:

Table 6: Volume and Value of the Main Kenyan Exports Fruits in 2014. Source: Horticultural Crops Development Authority (2015)

Commodity	Production in HA	Volume in tonnes	Value in millions of KES
Avocado	12,966	225,808	3,838
Papaya	12,729	160,848	3,216.5
Pineapple	13,989	1,263,482	10,149
Passion fruit	4,288	57,753	1,974.6
Mangoes	47,620	744,639	8,902
Total	91,592	2,452,530	28,080.1

The production of mangoes and avocados was strong in the reporting period although pineapple was the leading fruit because of the large-scale production by DelMonte farms as Table 6 shows. While most of the Kenyan vegetable export is destined for the EU, the fruit export is diversified with the main market for avocados going to France, UK, Saudi Arabia and United Arab Emirates with India as the main market for mango especially during their off-season period (African Centre for Economic Transformation, 2009; Fintrack Inc, 2014; United States Agency for International Development, 2014). Nevertheless, there is lesser data on the structure of Kenyan export fruits sector compared to vegetable sector because of its relative underdevelopment.

Unlike vegetable production where large-scale farmers' play a key role, in the fruit sector smallholder farmers account for most of the exported fruit with 61 percent of mangoes and 72 percent of passion fruits, produced by the smallholders (African Centre for Economic Transformation, 2009; Horticultural Crops Development Authority, 2015). Part of the reason for smallholder dominance of export fruit production is because of the less rigorous GlobalGAP requirements on export fruits, hence low production costs. The smallholder farmers export FFV production and marketing systems, is discussed next.

2.5 Smallholder Farmers' Fruits and Vegetables Production Systems in Kenya

There have been contested debates over the place of smallholders within the unfolding changes of agriculture with the rise of transgenic crops, biotechnology and technology-driven

mechanised agriculture (Kirsten & Sartorius, 2002). While some scholars have clearly demonstrated the importance of smallholder farmers in the changing agriculture landscape (Altieri, Funes-Monzote, & Petersen, 2012; Anthony & Ferroni, 2012; Macheche, 2004) others have taken the opposite view that smallholder farming holds no place in future scenarios of advanced agriculture (P. Collier & Dercon, 2014).

However, it is generally accepted that the growth and resilience of smallholder farming is partly due to the reducing land under agricultural production in Africa as well as the labour efficiency of smallholders in comparison to large-scale farming (Asfaw et al., 2010b; Haggblade, Hazell, Kirsten, & Mkandawire, 2003; World Bank, 2008). Smallholders' resilience and growth has also been aided by the promotion and investment in smallholder farming in the developing countries by development agencies (Sebastian, 2009).

In Kenya, with about 67 percent of the population being rural (Government of Kenya, 2011, p. 1; IFAD, 2011, p. 1), smallholder producers, owning farms averaging 0.2-3 HA, accounts for 75 percent of the total agricultural output and 70 percent of the total marketed agricultural produce (Government of Kenya, 2009, p. 13). The Kenyan smallholder farmers practice a mixed farming model that incorporates crop and livestock systems including food crops for consumption and cash crops for sale and livestock to provide milk, draft power to cultivate the land and manure to fertilise the soil (Herrero et al., 2014).

It is estimated that the horticultural production sector supports over 5 million Kenyans directly and indirectly through employment and income with the majority being smallholder producers (Netherlands Development Organisation, 2012, p. 1). Within the FFV industry, smallholder farmers accounted for 10-20 percent of the total exported FFV by the late 1980s and by the early 1990s to the mid-2000s, they accounted for over half of the total volume of FFV (Jaffee, 1995; Muchiri, 2010). Low financial and technical barriers in the 1980s and better prices being offered for FFV in comparison to tea and coffee provided the incentives for increased participation of smallholder farmers in FFV production (Lenné et al., 2005). Later data indicates that in spite of various challenges, smallholder farmers accounted for about 40-50 percent of the total exported FFV from Kenya in 2010 (Muchiri, 2010), hence their resiliency.

Smallholder farmers in FFV sector use family labour especially because of the labour-intensive nature of export vegetables. As such, Dolan and Humphrey (2000) noted the comparative advantage that the smallholder farmers have in the production of certain crops, such as French beans, which are labour-intensive and do not require mechanised production allowing the

smallholder growers to deploy low-cost family labour. In Kenya, the production of FFV involves a considerable investment on inputs which include irrigation facilities because of poor rainfall patterns and the need to produce year-round. From 1990 production costs increased and escalated from 2003 as food standards were introduced which required farmers and export companies to upgrade their production and post-harvest handling facilities.

Although smallholder farmers output volume is often lower in comparison to the large farms, their level of efficiency has been estimated to be same as for the exporter owned farms and relatively more efficient than exporter contracted large farmers (Asfaw, Mithöfer, & Waibel, 2010a). Thereby, questions have been raised as to why the smallholder farmers are being excluded from the FFV industry by the exporters and the retailers (Dolan & Humphrey, 2000; United Nations Conference on Trade and Development, 2008). Dolan and Humphrey in particular argue that because of their labour comparative advantage, smallholders' can compete with the large-scale producers if given a chance. Currently, the Kenyan FFV marketing system is structured through the fresh produce exporting companies who directly source for produce from farmers through contract farming as discussed in the next section.

Previously, marketing of FFV occurred via spot and wholesale markets in Kenya from which the exporting companies sourced the produce. The emergence of food contamination problems led to the consolidation of production and marketing processes of FFV as the European retailers sought to directly control these processes. The above discussion has laid out the historical evolution of Kenyan FFV sector, first defined by colonial legacy and policies up to 1980s. Thereafter, from the late 1980s, as problems of food contamination arose and increased, European retailers began to define the practices within the value chain through their buyer-driven governance strategies observed by Dolan and Humphrey. This impacted on the place of smallholder farmers in the value chain through cost and skills related barriers. These changes in Kenyan FFV value chain are discussed below.

2.6 Global Agri-Food Governance Changes and its Implication for Kenyan Fresh Produce Value Chain

In the introduction to their edited book '*Handbook of the International Political Economy of Agriculture and Food*', the editors Bonanno and Busch (2015) narrate the post 2nd World War contrast between theory and reality in relation to the governance of the global agri-food sector. While Friedrich von Hayek was writing about the marvel of the market in that period, in contrast, Bonanno and Busch narrate the unfolding reality of state control in the global agri-

food sector. According to Bonanno and Busch, the political economy of agri-food throughout the 20th century, was largely defined by state control in different periods even as market forces were emerging over the general economy.

Between the period 1870-1930, according to Friedman and McMichael (1989) Food Regime Approach, state control over the agri-food sector was marked by the colonial powers ambition of establishing their hegemony over agriculture production and trade to support the industrialisation process in Europe. As such, in this period, the colonial state established export agricultural systems in their colonies in order to produce cheap food and raw materials from the global South to meet Europe's industrialization needs. In Kenya, this was the period of establishment of settler agriculture and the expansion of export farming after the completion of the Kenya-Uganda railway as earlier narrated.

Accordingly, after the 2nd World War, state control in agri-food accelerated driven by the need to provide abundant and affordable food to the rural and urban masses involved in the Post-War reconstruction (Bonanno & Busch, 2015). While supermarkets were beginning to emerge and grow from the 1920s (Lawrence & Dixon, 2015), implementation of Keynesian policies after the 2nd World War ensured that the state control over agri-food sector remained as earlier described. In this period, Western government interventions in agriculture involved investments aimed at modernising the sector and improving food production with surpluses converted to food aid for the newly independent countries in Africa and Asia (McMichael, 2009). At the same time, industrial production in agriculture also increased through mechanisation, increased adoption of technology through plant and animal breeding and increased use of chemicals to control pests and diseases (Bonanno & Busch, 2015).

In developing countries like Kenya, the 1950s and 1960s marked colonial and post-colonial governments' modernisation interventions including land re-distribution, irrigation schemes, export subsidies, import controls and national farm programs to support the smallholder farmers (Bonanno & Busch, 2015; Ochoa, 2012). In Kenya particularly, in this period the colonial state adopted the Roger Swynnerton Plan to support and accelerate smallholder export production. At the global level, state investment in agriculture led to increased agricultural production which fuelled the need for food processing and manufacturing to increase the shelf life of food (Harvey et al., 2002). As a result of the processing and manufacturing, in the 1950s supermarkets, food processors and manufacturers' control over agri-food system increased (Burch & Lawrence, 2005).

However, it was from the 1970s that governance by firms over agri-food increased. From the 1970s onwards due to the global economic crisis, neo-liberal economic order emerged. As such, the 1980s and 1990s were marked with renewed optimism on the virtues of free markets which spurred the neo-liberal reforms. Spurred by neo-liberalisms, the 1950s and 1960s import barriers were dropped, in favour of reduced tariffs and this triggered global trade, further driving firms control over agri-food production and trade networks (Bonanno & Busch, 2015). The re-organisation of the agri-food sector led to large monopolies, including supermarkets, establishing control over the agri-food sector (Kirsten & Sartorius, 2002). As discussed in Chapter One, in this period the big four retailers in UK, increased their control over the food sector.

While neo-liberal policies were aimed at allowing unregulated free markets, they led to the unintended rise of private sector governance over the economy and agri-food sector a phenomenon Levi-Faur (2005) labelled as regulatory capitalism to capture the paradox of the unintended rise of private sector regulation and governance of the global economy. The emergence and eventual domination of supermarket governance in the agri-food sector was also aided by the European food contaminations crisis of the 1980s and 1990s as discussed in Chapter One. With the spotlight on the retailers, especially the potential losses, the retailers resorted to finding ways of governing food quality which in this case was through food standards, as explicated in Chapter One.

As such, GlobalGAP standards fall under what is commonly known as private standards which are voluntary since they are not enforceable by law, however they are a requirement for producers and importers associated with European retailers, therefore, mandatory (Webb, 2015). The launch of these standards set in motion a period of supermarkets governance of the agri-food system especially in regard to the shift in power dynamics from the state, farmers and food manufacturers to the retailers (Dolan & Humphrey, 2000; English et al., 2004; Ouma, 2010). Through vertical coordination, the whole fresh food supply chain was re-organised through tightening of production and supply systems and elimination of existing intermediaries such as wholesale food markets (English et al., 2004; Gibbon, 2003). Campbell and Heron (2007) have argued that while GlobalGAP was good for the large producers and exporters' by bringing high level of efficiency beneficial for consumers, they introduced production hurdles for the smallholder producers because of their complex technicality and costs. Similarly, the

reorganisation also changed the power relationship in food supply chain particularly through the emergence of monopsony¹⁸ in the supply chain (Burch & Lawrence, 2005).

With vertical coordination, retailers' consolidation over FFV supply and production systems was absolute (Kirsten & Sartorius, 2002). Although these changes in agri-food systems were occurring in developed countries, they had far-reaching implications for agricultural development in developing countries. With Kenya being a dominant player in the FFV export sector, the changes described above were mirrored in the governance systems with the introduction of food standards from 2003 as described below.

2.6.1 Food standards and governance of Kenyan fresh produce export sector

As described in section 2.3, the governance of the Kenyan FFV export sector, was mainly defined by the colonial and post-colonial legacies up to 1990 when UK retailers began to assert control over the sector. Prior to the introduction of quality controls and food standards, the quality requirements for vegetables, like French beans, was limited to physical attributes, such as size and shape, and suppliers' consistency and reliability with chemical and pathogens control protocols. Nevertheless, these quality protocols were not being observed by the farmers and exporters. As Okello and Swinton (2007) highlights, farmers indiscriminately applied chemicals on the crops, there was lack of use of protective gear, poor disposal of pesticide waste and containers, poor storage of chemicals and poor handling of harvested produce at farm-level. The introduction of the quality controls was, therefore, necessary to bring about safe use and application of chemicals as well as improve post-harvest handling of crops.

Similarly, before vertical coordination, contract farming was not widely adopted and contracts between buyers and farmers was often loose and almost exclusively verbal in nature (Jaffee & Morton, 1995). However, even then, Kenya already had some quality control systems embedded in the FFV production system involving random tests on sampled produce by the Ministry of Agriculture personnel (Jaffee, 2003; Ouma, 2010). Thereafter, a strict quality control regime from the UK supermarkets was introduced in Kenya from 1990 involving increased monitoring and testing of restricted chemicals to monitor and prevent contamination (Ouma, 2010). In response, the Kenyan industry players came up with their own code of

¹⁸ Burch and Lawrence (2005) have defined monopsony as the scenario where there are a few buyers purchasing the same products from many suppliers.

practice that was aimed at meeting the required quality controls in the sector¹⁹ (Jaffee, 2003). In the same period, UK supermarkets also began to carry out technical audits on the exporters to formalize quality control and other management requirements.

EurepGAP standard was formally introduced in the Kenyan FFV export sector from 2003 with support from donors which was crucial to the Kenyan industry adopting the standards (Ouma, 2010). Despite the donors' support in the adoption of the standard, different studies have shown the negative impact that the standards had on the sector especially in relation to smallholder farmers' production and marketing systems (Dolan & Humphrey, 2000, 2004; Graffham et al., 2007; Ouma, 2010; United Nations Conference on Trade and Development, 2008). Some of the effects discussed in the literature include financial, technology and literacy barriers that excluded smallholder farmer from the value chain (Graffham et al., 2007). Other negative impacts include; labour intensification among women in Kenyan FFV production see Dolan (2001); gender segregation in the fresh produce pack-house see Barrientos, Kritzinger, Opondo, and Smith (2005); standards as a barrier to participation for smallholder farmers' see Dolan (2004); and standards as a non-tariff trade barrier see Frohberg, Grote, and Winter (2006).

According to Okello and Swinton (2007), the regulatory changes in food standards, although aimed at addressing problems of contaminants, evolved to cover three broad areas: (i) pesticide residue component in food including pesticide usage, handling, storage and disposal of pesticide containers and leftover pesticides (ii) hygiene component, including personal hygiene of farmers and pack-house workers and sanitation of grading and storage facilities (iii) traceability component which was comprehensive including documentation of all production activities such as pesticide usage, planting and spraying dates among other practices. The result of these arrangements coupled with the aforementioned negative impact was that 60 percent of smallholder farmers had dropped out of the value chain by 2006 (Graffham et al., 2007).

As alluded to in Chapter One, Dolan and Humphrey (2000) and Jaffee (2003) have highlighted the structural changes in marketing of fresh produce over the years in Kenyan FFV sector before and after introduction of standards. Until 1990, Kenyan based exporters worked with intermediaries and middlemen to source for produce from farmers through spot or wholesale

¹⁹ For a detailed analysis of the smallholder farmers production activities before and after the introduction of food standards see Jaffee (2003).

markets in an arm's length relationship (Dijkstra, 1997; Ouma, 2010). The exporters then supplied wholesale markets in UK from which the retailers' sourced their produce. However, towards the end of 1980s, there was a shift from these spot-market arrangements to vertical coordination by the UK retailers, partly because of retail concentration and partly because of the food contamination problems.

In the new arrangement, farmers supplied exporters, then the exporters, through importing entities in UK, supplied the retailers. As such, some key players such as wholesale markets in UK and Kenya and the middlemen in Kenya were eliminated as the retailers sought to take control over production processes. In the new arrangement, every UK based importer was allowed to only deal with a single Kenyan exporter (Dolan et al., 1999a). With the introduction of food standards in 2003, there was further escalation of control in the value chain as exporters and farmers were expected to comply with the standards and develop comprehensive crops quality management systems.

Because of vertical coordination Jaffee's (2003, p. 6) survey found that by 1996 the UK supermarkets accounted for 80 percent of Kenyan FFV sales up from 40 percent in 1990. Dolan and Humphrey (2000) also found the same trends of growth of UK retailers' share in Kenyan FFV market. Likewise, Jaffee found the same growth trend in the expansion of supermarkets' control in other European countries. The introduction of GlobalGAP also had a positive effect on the Kenyan value chain. These included the expansion of contract farming in the fresh food supply chain through the institutionalisation of contract farming (Kirsten & Sartorius, 2002). Accordingly, Ouma's (2010) study found that 80 percent of exporter participants in his study had introduced contract farming as a result of the standards.

Equally, UK retailers also began to establish a comprehensive exporter monitoring system and the exporters in turn also increased monitoring of farmers production systems. Because of the new arrangements, the Kenyan FFV value chain is dominated by a handful of actors including retailers, exporters and farmers as shown in Figure 5 below.

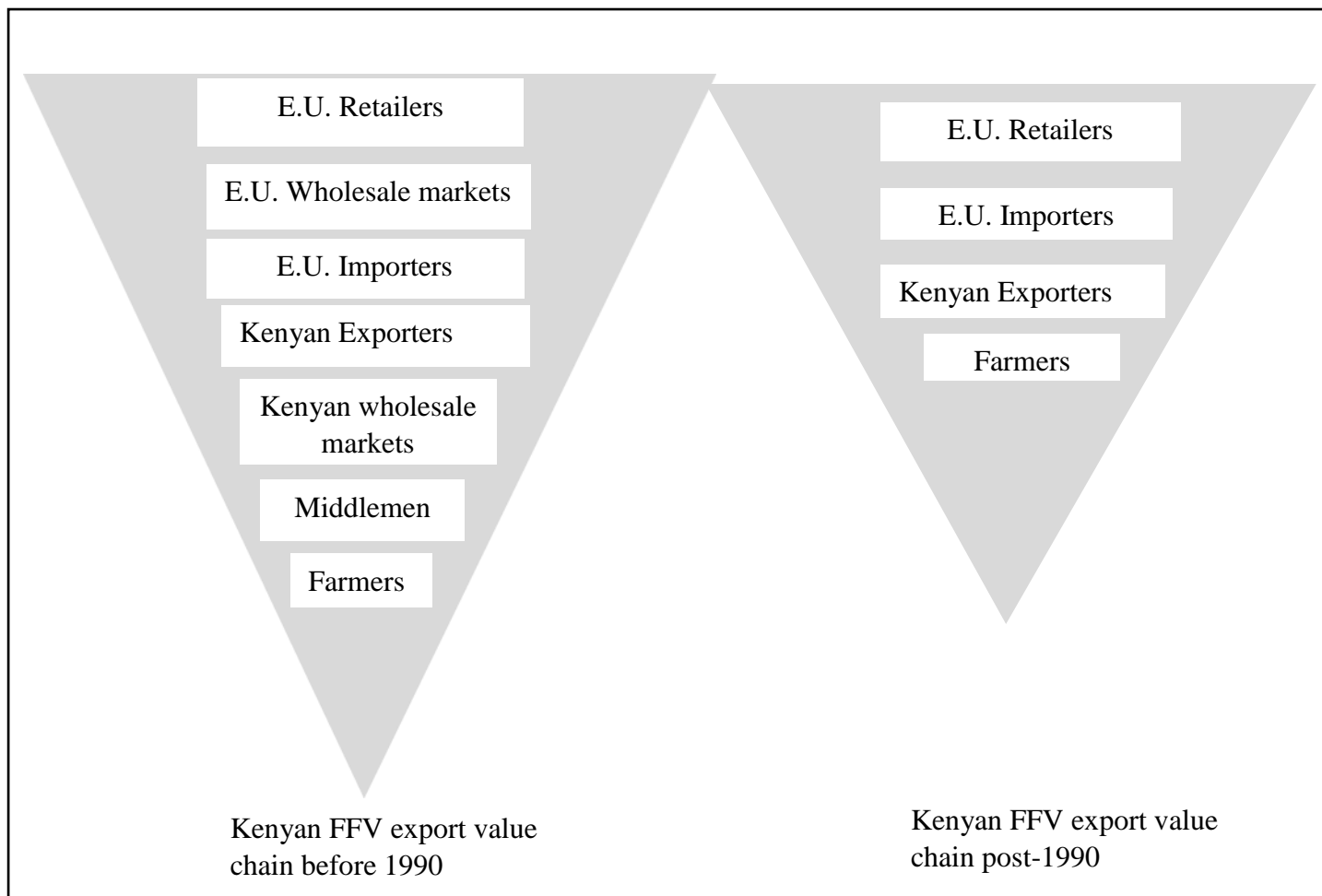


Figure 5: Before and After 1990 Comparative Organisation of Kenyan FFV Export Value Chain. Source: Researcher representation, 2018

As Figure 5 shows, post-1990 saw the exogenous shock of food contamination leading to elimination of existing intermediaries such as middlemen and wholesale markets while increasing retailers’ control over the value chain. In some arrangements, the importers and farmers were eliminated as some exporters integrated backwards and forward. Although, it was anticipated that the middlemen would be eliminated in the emerging vertical coordination, Ouma (2010) has acknowledged their continued participation through what he has termed as backstage arrangements. With these , consisting of middlemen using the pre-1990 FFV supply system, whereby there is no contract farming, basic compliance with food standards and the produce is sold to exporters without prior contractual arrangement. However, the contamination shock led to increased retailer control in the value chain.

Because of the competitive nature of UK retail environment, UK retailers’ standards are still pervasive in the sector. Because of the competition, the retailers use standards to gain competitive advantage over their competitors by claiming product unique characteristics such as place of origin, ready-to-eat, attractive packaging designs, new products and increased

varieties (Humphrey, 2004). The UK retailers have, therefore, maintained an increasingly complex regulatory environment related to food safety. This has been associated with emergence of a different governance trajectory of retailer-based standards concerned with environmental and labour standards. In the UK, the retailers adopted Product differentiation in FFV sector because these products were being purchased by higher-income consumers, hence, it was important to attract and retain them (Dolan & Humphrey, 2000).

Moreover, buyer preferences for homogenous food products, such as availability of ready to eat meals, also encouraged product differentiation among the supermarkets leading to further control by the supermarkets (Hobbs & Young, 1999; Kirsten & Sartorius, 2002). Jaffee highlights that Marks & Spencer in the UK was the first retailer to focus on product differentiation, in which they invested in a broad range of chilled and prepared food products including a wide range of exotic fruits and vegetables. Later other retailers followed suit. As Dolan and Humphrey (2000) emphasize, supermarkets accrue competitive advantage from product differentiation, which allows them to compete for the market by selling non-standardised products that are not generally available in the market.

Hence, because of product differentiation, further control is actualised whereby in Kenya, it led to costs escalation on the exporters and farmers as they were required to invest in special post-harvest handling facilities such as largescale cold stores and increased staff training. These factors have been associated with the exclusionary systems and high entry barriers that have worked to keep smallholder out of the value chain. Hence, this study's inspirational question; how have smallholder farmers managed to participate in such exclusionary value chain? This question is tackled in the empirical results chapters.

In conclusion, the discussion above has laid out the emergence and establishment of vertical coordination arrangement in the Kenyan FFV export value chain. From the discussion it is evident that the overall governance arrangement changes from 1990, but little was known about the structure of vertical coordination in the extant literature. Similarly, it was not clear how transactions were organised in the post-1990 governance dispensation in the value chain in terms of the place of contracting between the different players. Evidently, governance analysis of the Kenyan FFV value chain has been mainly done through the Gereffi GCC approach, with the Kenyan value chain falling within buyer-driven arrangements.

This study has sought to fill the knowledge gaps above through transaction costs theoretical approach as discussed in the next Chapter. In so doing, the study, pushed these debates further

by exploring how smallholder farmers have managed to participate in the FFV value chain, a clear lacuna in the existing literature. Thereby, transaction costs theoretical approach offered a different analytical lens to examine the same problem of governance extensively analysed through GCC framework. The emergence and institutionalisation of contract farming in the Kenyan FFV value chain is discussed in the next section.

2.7 Contract Farming in Kenyan Fresh Produce Export Sector

Central to organisation of economic activities is property rights that often needs to be clearly defined and backed with legal institutions to provide contract enforcement mechanism for efficient organisation of production (Landa, 1981). When property rights are clearly defined, firms are at liberty to employ a variety of means to organise production including buying a product through spot-market, bilateral-contracting or vertical integration which may vary from full to partial (Key & Rungsten, 1999; Sartorius & Kirsten, 2005). All these arrangements fall within transaction costs vertical coordination mechanism that include spot-markets, outsourcing, hybrids and full integration among other arrangements as introduced in Chapter One.

In the spot-market arrangement, the buyer and seller have no before-sale commitment for the good or service of interest before completion of production of the good/service of interest and it enters the market (Martinez, 2002). In spot-markets, prices are the coordinating mechanism with different actors responding to price signalling. In contrast, according to Martinez, bilateral-contracting involves the buyer and seller entering into future commitment on a good/service pricing, delivery and product characteristics even before the good or service of interest is manufactured. Accordingly, full integration involves complete ownership of the different parts of production by a firm while partial integration involves ownership of some parts and outsourcing of others. In order to coordinate these different parts of production, firms deploy contracts.

As such, vertical coordination arrangements have varied degrees of control over decision making by the buyer as well as risk transfer across the stages of production (Martinez, 2002). The degree of control over decision making by the buyer is represented in Figure 6 below.

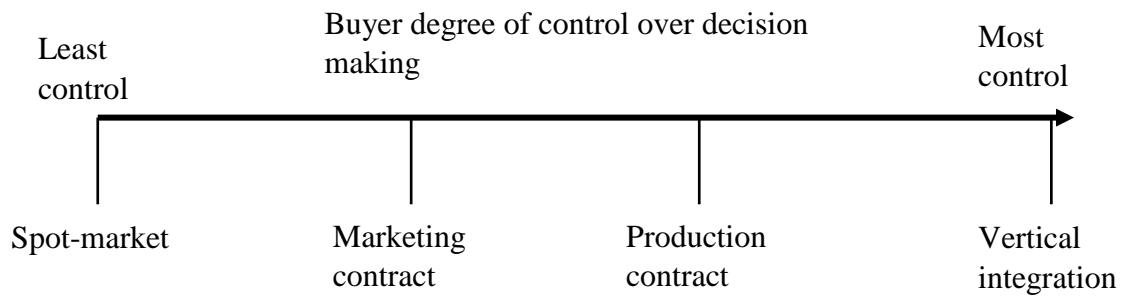


Figure 6: Firm Degree of Control over Decision Making in the Vertical Coordination Continuum. Source: Mighell and Jones 1963 as cited by Martinez (2002)

As Figure 6 shows, it is in the open/spot market contracting that the firm has less control over the production process and production decisions. The firm control increases along the continuum with the firm having absolute control in vertical integration. As alluded to in Chapter One, a firm’s choice of one form of coordination over another is influenced by the cost involved in contracting²⁰ with the motive being to select the best arrangement that will economise on transaction costs. In marketing contracts, a firm may agree with the seller to buy a certain quantity of products over time without prior commitment on the price or quality of the product needed. Alternatively, production contracts can be related to bilateral contracts as described above, whereby prior commitment between a buyer and the seller is in place before production begins.

Thereby, in agriculture production, the institution of contract farming is related to either marketing contract or production contract as in Figure 6 above, an intermediate institutional arrangement between spot-market and full integration depending on a firm’s participation and control over production processes and decisions (Grosh, 1994; Key & Rungsten, 1999; Kirsten & Sartorius, 2002) as discussed further below. In the Kenyan FFV export sector, contract farming was introduced in the 1940s when the colonial state was producing dried vegetables for the allied soldiers in the 2nd World War (Jaffee, 1994).

By the 1950s, contract farming was already a key part of Kenyan smallholder export agriculture (Key & Rungsten, 1999) stemming out of the implementation of the Roger Swynnerton plan (Little & Watts, 1994). In the 1980s, growing demand for Asian vegetables and French beans

²⁰ These themes are discussed further in the next Chapter.

led to various Kenyan fresh produce exporting companies to introduce contract farming in Western Kenya and in Meru under smallholder export vegetable production schemes (Dolan, 2005; Jaffee, 1994). At that time, contract farming was being practised in ad hoc arrangements without institutional support. Hence, the introduction of the food standards, from 2003, provided the institutional support for contract farming in the sector, because the standards made contractual arrangement between farmers and exporters compulsory.

By 2004 after the introduction of EurepGAP, 80 percent of the exporters had introduced contract farming among their farmers (Ouma, 2010, p. 210). In particular, Dolan (2005) notes the productivity model of export horticulture that made it convenient for contract farming. According to Dolan, horticultural crops are well suited for contract farming because of their exacting quality and cosmetic imperatives, which require sustained attention to the growing process. Hence, then and even in the present time, contracts were written between exporters and farmers, with the farmers' guaranteed access to inputs and technical advice from the exporters with the exporters' guaranteed farmers' products (Henson & Jaffee, 2008). Smallholder farmers were/are expected to intensify their production by responding to the exporters market needs.

The literature discusses various negative and positive impact of contract farming on farmers. The negative impact of contract farming on the smallholder farmers include the contention by Key and Rungsten (1999) that farmers in developing countries usually realise limited gains from contract farming due to exploitation from either government's contract farming schemes or private buyers. The exploitation usually tends to be related to contract prices being less than spot-market prices; hence, less returns and control over farmers decisions (Kirsten & Sartorius, 2002). However, Kirsten & Sartorius argue that because of reduced marketing risk on the farmers accruing from contracts, farmers still find contract farming attractive.

Equally, other scholarship has argued that contract farming is part of the industrialisation of agriculture in developing countries which has increased capitalistic coordination and accumulation by buyers at the expense of farmers (Key & Rungsten, 1999; Little & Watts, 1994; Watts, 1994). Moreover, other studies have viewed contract farming in FFV as part of the wider restructuring of the agricultural process in which gender discrimination and labour intensification has been institutionalised through the preference of men over women and extended use of family labour in farms (Dolan, 2005). This according to, Key and Rungsten

(1999) includes the disruption of power relations in African households; hence, increasing household tensions between male household heads, their wives and children.

In general,²¹, the literature is packed by case studies that largely critic contract farming as a capitalistic institution that has increased exclusion of farmers in the global production networks (Clapp, 1994; Dolan, 2005; Key & Rungsten, 1999; Kirsten & Sartorius, 2002; Little, 1994; Little & Watts, 1994; Watts, 1994). Recent studies on contract farming in the Kenyan FFV sector have revealed various governance problems related to smallholder farmers' management. These include; smallholder farmers' opportunism in transactions whereby, the farmers, sometimes, engage with middlemen over spot-market arrangements despite being contracted to exporters (Jaffee, 1994; Kariuki, 2014). Also, information search problems among contracted French bean export farmers was found to limit their ability to match their interest with potential buyers' hence contributing to their exit from the value chain (Rosch, Zhang, Preckel, & Ortega, 2015).

Moreover, Kariuki and Loy's (2016) study found that contract farming in the Kenyan FFV sector did not minimize input constraints, product quality and safety risks nor improve market certainty. Instead, they found that the adaptability of contracts in the sector was conditioned by farm sizes, extension service provision and the number of farmers in a producer group. This points to structural marketing problems in the value chain, such as information asymmetry problem, which inhibit farmers from accessing price information. Conversely, Porter and Phillips-Howard (1997) and (Grosh, 1994) examined contract farming as having the potential of incorporating farmers into the modern agriculture through the incentive of price stability, protection against market failures and facilitating their access to credit and information.

According to Porter and Phillips-Howard, contracts specify beforehand produce prices, quantity, and quality, provision of inputs and credit facilities, which can be attractive to farmers. Hence, the reduction of marketing risk becomes appealing to farmers, especially when produce markets are thin, because market and information search costs problems are minimised for the farmers (Kirsten & Sartorius, 2002). To that end, agricultural contracts vary on the degree of buyer control from those in which the buyer stipulate prices and quantity in advance to those which the buyer coordinates all the production activities (Grosh, 1994). Wolz and

²¹ See Kirsten and Sartorius (2002) for a comprehensive literature review on the advantages and disadvantages of contract farming to the smallholder farmers and the buyers.

Kirsch (1999) have listed three main types of agricultural contracts based on control of production processes and ownership. These are:

- 1) Marketing contract in which the farmer is required to sell unprocessed produce to the buyer at a specified price, time and quality (Wolz & Kirsch, 1999). In this type of contract, the farmer has full control over the production process (Kirsten & Sartorius, 2002).
- 2) Shared control contracts in which the buyer and the farmer have equal control over production decisions. In this contract, the farmer is producing the crop under semi-control from the buyer who gives production specifications in relation to pricing, quality and timing specifications (Grosh, 1994; Wolz & Kirsch, 1999).
- 3) Buyer/company full control contracts in which the buyer has full control over the farmers' production decision and systems. In this contract, the buyer/company supervises production and provides the farmer with inputs and technical knowledge and, when the product is ready, the company purchases the crop from the farmer at an earlier agreed price (Wolz & Kirsch, 1999)

In the second and third contracting type, the farmer's authority and decision making is displaced and conferred to the buyer/company with the farmer turning into a quasi-employee on his/her own farm (Kirsten & Sartorius, 2002). Hence, the second and third contract types are often the preferred architecture for buyers and firms in their relationship with farmers in transaction and crops exposed to risks. This is because the next alternative to contract type two and three is vertical integration which demands increased investment from the buyer in order to attain full ownership of the production systems (Grosh, 1994).

Notwithstanding these arrangements, contracting smallholder farmers can be costly to buyers, in comparison to large-scale farmers (Kirsten & Sartorius, 2002). These costs include training costs, input supply costs, screening costs, monitoring costs, administration costs, communication costs and transport costs among other. Hence, dealing with a large number of smallholder farmers, e.g. one thousand, is often costlier compared to a small number of large-scale farmers, e.g. five large-scale farmers (Key & Rungsten, 1999). Moreover, as Key and Rungsten state, if the smallholder farmers are dispersed, there is a cost increment related to accessing them for produce, training, input delivery, monitoring and increased trips to pick produce. Hence, when an exporter makes such an investment on smallholder farmers, the

investments can be related to dedicated assets²², as the investments enable farmers to produce the crops to the standards stipulated by the buyer, in this case the exporter.

Importantly because of the structural and contractual imperfections in African agricultural markets (Binswanger & Rosenzweig, 1986; Fafchamps, 1996, 2004) trading relationships are often important in such situations. Therefore, the extent of a good trading relationship between farmers and buyers is often predicated on good relationships (Macchiavello & Morjaria, 2015a) as documented by Fafchamps and Minten (1999) in Madagascar where informal buyer-farmer relationship was central. In the Kenyan FFV value chain, it was evident that the type of contract farming that prevailed in the value chain had not been defined i.e. buyer control, shared control or marketing contract, hence the necessity for this study.

Identifying the type of contract farming that was used in the value chain, enabled the study to answer Research Question Three, thus, explain the nature of the contractual and transactional relationships between the farmers and exporters. Similarly, exploring the type of contract farming in the value chain was key to analysing the study motivational question on how smallholder farmers have managed to participate in value chain with exclusionary systems. Accordingly, the study also analysed the place of informal relationships on contractual stability in the value chain. The next sections give a descriptive review of KenyaGAP and the state and private sector agencies in the sector before the arguments in the chapter are summarised.

2.8 The Evolution and Application of KenyaGAP

As earlier discussed, from 1990 when the UK retailers increased their regulatory regime within the Kenyan value chain, the Kenyan industry players formulated their own code of practice to guide the industry in relation to quality control over the sector (Ouma, 2010). In 2005 key stakeholders²³ in Kenyan horticulture, began a process of converting these codes into a voluntary standard in line with GlobalGAP. This was informed by the significant role horticulture plays in the Kenyan economy (Carey, 2008). A technical working group was formed comprising of private horticultural sector organisations such as the Fresh Produce Exporters Association of Kenya (FPEAK) and a standards Certifying Body (CB) called Africert Limited and various government agencies including Kenya Bureau of Standards

²² This is a type of asset specificity that is made by a seller of produce to support a bilateral transaction. This is discussed further in the next Chapter.

²³ Including Kenya Horticultural Council and Fresh Produce Exporters Association of Kenya.

(KBS) and Kenya Plant Health Inspectorate Services (KEPHIS) supported by funding from the United States Agency for International Development (USAID) (Mbithi, 2008)

After a series of technical group meetings spanning two years, KenyaGAP was launched in August 2007 after being benchmarked to the GlobalGAP standards. Africert Limited was approved as the main standards CB in the implementation process (Carey, 2008). In doing this, Kenya became the first African country to have its own set of standards benchmarked to GlobalGAP (GlobalG.A.P, 2014), indicating the innovativeness of the Kenyan industry above its African competitors. In this, FPEAK became the KenyaGAP secretariat coordinating the implementation process through organizing farmers' training and capacity building. The main aim of KenyaGAP was to adopt and tailor GlobalGAP to local realities and farmers capabilities, in order to unburden the farmers from the complex GlobalGAP requirements.

Despite this, Ouma (2010) noted the ineffectiveness of KenyaGAP in the industry for three main reasons. First, Ouma states that KenyaGAP failed to considerably reduce the costs of compliance on the farmers. Likewise, Ouma argues that KenyaGAP failed to reduce the technical hurdles of GlobalGAP on the farmers. Third, Ouma highlights the power differential in the value chain, in which European retailers were not willing to accept KenyaGAP as an equal to GlobalGAP despite being benchmarked on it. Hence, Ouma found that by 2010, there was not a single company certified under KenyaGAP. For this research project, the aim was to explore the place of KenyaGAP in the Kenyan FFV regulatory and compliance framework in relation to GlobalGAP, especially seven years after Ouma's research. As per the literature, GlobalGAP and KenyaGAP compliance system are assumed to be in parallel operation to - another. The KenyaGAP and GlobalGAP compliance process in the value chain is discussed below.

2.8.1 The GAPs implementation process

Both GlobalGAP and KenyaGAP are voluntary sets of standards for certification of fresh horticultural products in Kenya. While the standards were conceived as voluntary falling within the consensus type of standards, compliance is mandatory. Hence, if a party fails to comply, sanctions are issued which results in the non-complying party forced out of the supply chain (Ouma, 2010) In the compliance system, there is an independent CB delegated to audit and certify farmers' and exporters' compliance with the standards. In Kenya, there are various CBs including Africert Ltd, SGS and Bureau Veritas which are private organisations licensed to

grant GAP certification for the relevant product scope against the set criteria in Kenya (Baghasa, 2008).

The first process in the GAPs implementation process begins with farmer training and capacity building on the GAP requirements. After training, the farmers are required to comply with the standard regulations such as: proper documentation of every farm activity; planting the right crop variety, good soil management, proper fertilizer and irrigation application, proper crop protection process; good harvesting techniques and post-harvest treatment, pollution management, workers health and safety and proper environmental management (Baghasa, 2008). The farmer is then audited by the CBs and if they are compliant, they are certified allowing them to supply FFV to exporters.

The exporters are also audited and certified by the CBs, but they rarely have compliance problems in comparison to farmers. For KenyaGap, in order for a farmer or a farmer group to apply for certification they must first become members of FPEAK as the standard is restricted for use by the association's members only (Carey, 2008). According to Carey, the certification process for both standards is as follows:

1. Option 1: Individual certification against GlobalGAP: A farmer goes through certification process by the CBs to ensure they meet the standards. This is mostly for the large-scale farmers.
2. Option 2: Farmer group certification against GlobalGAP: Smallholder farmers in groups are certified as groups against GlobalGAP by a CB.
3. Option 3: Individual certification against KenyaGAP: An individual farmer applies to be a member of FPEAK then goes through the certification process by Africert Ltd 4.
4. Option 4: Farmer group certification against KenyaGAP: A farmer group applies to be FPEAK members then goes through the certification process by a CB.

The certification process has been structured to be tight and rigorous with frequent check-ups to ensure that compliance is maintained even after certification (Baghasa, 2008; Carey, 2008). The compliance to either of the standards is what forms the basis of the produce traceability system in the value chain. As such, the supermarkets can trace each product from the specific farm from which it was harvested from and the responsible farmer. As such, standards have served to render local production practices visible at the global level (Campbell, 2009).

But how do smallholders and exporters comply with the standards, i.e. what are the regulatory systems in place to bring compliance? Importantly how have Kenyan regulatory and compliance systems evolved to match the vertical coordination arrangements? It was clear in the literature that there was considerably less research on regulation systems in Kenyan FFV value chain in comparison to governance systems. Hence, the necessity of this study through research question two to fill the gap in the literature. The next section briefly describes the main private and public organisations in the Kenyan FFV sector.

2.9 Public and Private Organisations in Kenya's Fruits and Vegetables Sector

There are various organisations that play a key role within the Kenyan horticultural export sector. These organisations include private and public agencies with the main role of regulating the sector to ensure that the exports meet the required certification. The main ones are described below.

2.9.1 Private sector organisations

The main private organisation in the sector is FPEAK which was formed in 1975 by different fresh produce exporters and farmers. Over time, the organisation has grown and become the main private sector coordinating agency in the fruits and vegetable export sector in Kenya. FPEAK's main functions involve: coordination of the horticulture export industry by providing support to growers and exporters through technical training; providing marketing; and information; acting as an information centre and lobbying and advocacy on behalf of its members (Fresh Produce Exporters Association of Kenya, 2015). As such, FPEAK has been at the frontier of innovation and changes in the industry by being the focal point through which global changes in the sector are adopted and actualised to maintain Kenya's lead in the FFV export industry (Mbithi, 2008). For instance, before the introduction of the standards, FPEAK had formulated a code of practice for the industry, in the early 1990s, to ensure quality production and later these codes informed the formulation of KenyaGAP.

Moreover, FPEAK supports smallholder farmer groups through technical assistance by employing on-field Technical Assistants (TA) to train farmers and provide support services such as market intelligence and market promotion. The technical assistance for the smallholder farmers by FPEAK, has made it possible for farmers to meet the strict GlobalGAP requirements (Kirsten & Sartorius, 2002). The other main private organisations of importance to the study included various CBs in the sector. This included Africert Ltd which was borne out of a 2001 International Centre of Insect Physiology and Ecology project funded by the German International Cooperation Enterprise to create a local CB for certification in East

Africa (Carey, 2008). After technical training and capacity building of staff, Africert Ltd was launched as the first local institution to offer accreditation and certification for farmers in East and Central Africa.

The other CBs includes the French firm Bureau Veritas, the Swiss firm SGS and the South African NSF International, all with local offices in Nairobi. These organisations main roles include: GlobalGAP analysis for the farms that are beginning the certification process; audit to ensure that the standards are met before certification is issued; re-certification and annual audits for previously certified farms; and training and capacity building initiatives (Africert LTD, 2016; Bureau Veritas Kenya, 2017). Other private sector organisations include: Agrochemical Association of Kenya (AAK), a private sector chemical manufacturer's member organisation. This Association was founded in 1977 when the then Pesticide Chemical Association of East Africa collapsed and Pesticide Chemicals Association of Kenya (PCAK) was founded. In 1997 PCAK changed its name to AAK with the role of promoting, representing and protecting its members' interests in policy and public fora in Kenya (Agrochemicals Association of Kenya, 2017)

In addition, there are numerous fresh produce exporting companies who are mostly based at the Jomo Kenyatta International Airport (JKIA) in Nairobi and are mostly involved in exporting produce to the EU retailers. The exact number of the exporters in the Kenyan industry is unknown although Dolan and Humphrey (2000) found that the number of small exporting firms declined in the industry as vertical coordination emerged. As such, Ouma (2010) found that the large exporters, whom he associated with those exporting over 5000 tonnes of produce per annum, accounted for over 50 percent of Kenyan FFV exports.

2.9.2 Kenyan Government agencies

There are several government agencies that play direct and indirect roles within the FFV industry in Kenya. The four main agencies playing a direct role include: Horticulture Crops Directorate (HCD), KEPHIS, Pest Control Products Board (PCPB) and Kenya Agricultural and Livestock Research organisation (KALRO). KEPHIS was created in 1996 by Kenyan Parliament Act No 54 as a state agency responsible for enforcing phytosanitary safety and quality of agricultural inputs and outputs to prevent adverse impact on the economy, the environment and human health (Andae, 2016). As such, KEPHIS is responsible for implementing the phytosanitary measures of the International Plant Protection Convention and World Trade Organisation's Sanitary & Phytosanitary agreement (Carey, 2008).

In the FFV sector, KEPHIS is directly responsible for providing the technical capacity and laboratories for testing chemical residues and pathogens for exporters and farmers. In January 2016, KEPHIS laboratories were fully accredited by EU to fully test for chemical residues on all the exported flowers and FFV from Kenya (Andae, 2016). On the other hand, HCD (previously HCDA, with the A being authority) was established by the Kenyan Parliament Act 318 of 1967 to regulate the horticultural sector in Kenya. However, in 2013 HCDA was merged with several other agricultural agencies including Coffee Board of Kenya, Kenya Sugar Board, Tea Board of Kenya, Coconut Development Authority, Cotton Development Authority, Sisal Board of Kenya, and Pyrethrum Board of Kenya into a single authority called Agriculture and Food Authority (AFA).

As a result, HCDA became a department under AFA as HCD drawing mandate and authority from a very large and non-specific mandate in AFA. Currently, HCD plays the role of coordinating the horticulture sector and issuing licence to exporters as well as renting out its pack-house facilities to small exporting companies at the JKIA. Likewise, KALRO was previously called Kenya Agricultural Research Institute (KARI) but in 2014, KARI was merged with various agricultural research agencies including Coffee Research Foundation, Tea Research Foundation and the Kenya Sugar Research Foundation to create KALRO. KARI itself was created in 1986 to conduct agricultural research in Kenya in order to improve agricultural productivity (Miruka, Julius K, Kirigua, & Murithi, 2012). Hence, KALRO's main role in the sector is related to FFV research. In general, this study, sought to explore the role of these organisations in regulation of the industry.

2.10 Summary of Discussion in the Chapter

This chapter has discussed the evolution of production, marketing and governance systems in the Kenyan fruit and vegetable export sector. The main thesis of this chapter is that the evolution of production, marketing and governance in the Kenyan FFV export sector was at first informed by Kenya's colonial legacy and later by the European retailers' buyer-driven strategies through food standards and their competitive strategies. As such, colonial settlers were responsible for introducing and establishing the FFV export sector in Kenya through the growth of temperate fruits and by setting up institutions that informed the growth of the sector in the post-Independence period. The growth and expansion of the sector occurred in the post-independence period in which smallholder farmers became fully included.

The chapter has also discussed the gradual and eventual takeover of governance of the sector by the European retailers. At first the UK retailers and later EU retailers formulated food standards to bring order to the industry after the food contamination cases. The chapter has argued that the introduction of food standards marked the turning point from colonial legacy influence to EU retailers' influence, hence vertical coordination. The chapter has also discussed contract farming within the Kenyan FFV export sector, the emergence of KenyaGAP and the key organisations involved in the sector.

Importantly, the chapter has stated this research project's main focus; to analyse the structure of vertical coordination and the nature of regulation in the Kenyan FFV export value chain. This analysis above makes us aware that while the assumption in most Kenyan FFV value chain has been that the sector is governed through EU retailers' vertical coordination, the type of verticality within vertical coordination continuum, was not clear. Therefore, this study sought to explore this gap. This was done by analysing the type of contracting in the value chain, especially between the farmers and exporters, and the nature of transactions occurring between these two parties.

Thereby, the study was able to analyse why the existing governance structure was not adaptive to the risk and prevailing contractual problems. As discussed in the next chapter, in TCE, an entrepreneur aims for the right governance structure that is adaptive to both the transaction costs and the prevailing contractually-based hazards. Thereby, the contract exposes the related transaction costs which then allows the entrepreneur to adapt transactions to the right governance framework in order to minimise on risks and the costs thereof. The structure of vertical coordination was explored within these dimensions. The next chapter further discusses these themes in the proposed study's theoretical framework.

CHAPTER THREE

THE STUDY THEORETICAL FRAMEWORK

3.1 Introduction

The previous chapter discussed the evolution and development of the Kenyan FFV export value chain especially the evolution of governance arrangements and their implications for exporters and smallholders. In the discussion above, transaction costs economics (TCE) was alluded to especially while discussing contract farming in the value chain. In this Chapter, TCE is introduced, expanded and operationalised for this study. Motivational Postures (MP) regulatory theory is also introduced and operationalised as it was applied in this study. According to Miller and Moe (1986), organisation of economic activities is often a complex undertaking with the entrepreneur having to grapple with several decisions. The decisions include how to make available different factors of production and efficiently organise them.

In modern times, organisation of production is increasingly complex, because in addition to the traditional factors of production, land, labour, capital and entrepreneurship, technology has also become a key part of the production process. Thereby, the functions attributed to an entrepreneur have become even more complex with increased need not only to put together the different factors of production, but to do so efficiently in order to maximise on output while minimising on costs. As such, economists have for long been puzzled by how entrepreneurs manage to organise production efficiently and at lower costs. Over the years, these questions have led to the emergence of different theoretical frameworks proposed by economists and other social scientists in their attempt to answer these questions. One such theoretical framework is transaction costs, which falls within the wider Institutional and Organisational Economics (IOE) research agenda.

The modern agriculture production system, because of its adoption of technology and the considerable investment from private capital (Magnan, 2012) has come to inhabit the same complex processes of modern production. Moreover, mirroring modern production systems, agri-food production has also adopted specialisation processes in which crops and livestock sectors have been fragmented into different specialised parts of production and processing. The FFV sector is one such highly specialised part of the modern agriculture system that has been transformed in the last three decades as discussed in Chapter Two. The Kenyan FFV sector in particular, is largely viewed as a success story because of its development and the impressive growth witnessed in the last three decades compared to other agricultural sectors as discussed in Chapter Two.

Therefore, is it possible to apply complex economic theories and structural analysis of the modern economy to analyse peasants' agricultural systems? In response to this query, Allen and Lueck (2008), writing about the use of TCE in analysis of agricultural contracts, submits that farming, as a fundamental economic enterprise of mankind, formed the basis of analysis for classical economists of yore such as Adam Smith and John Stuart Mill, which laid the ground for contemporary economic theories. Hence, with modern agriculture being industrialised and complex, it is possible to apply mainstream economic theories to analyse agri-food production and marketing systems. As such, agri-food scholars, including Allen and Lueck and Martinez (2002), have increasingly applied TCE to analyse contractual and governance problems in agri-food with scholars seeking insights into the organisation of exchange relationships between buyers and sellers in spot-market or vertical integration arrangements (Kirsten & Sartorius, 2002).

This chapter discusses the adoption of Oliver Williamson's TCE approach for the analysis of governance and regulation systems in the Kenyan FFV export sector. The chapter also discusses MP regulation theory as was adopted for this study. In overall, TCE provided the framework on which governance, regulation and compliance approaches used in the study were based. The chapter is organised as follows; first transaction costs theory is introduced and discussed as was adopted in the study and, thereafter, regulatory and compliance approaches applied in the study are discussed.

3.2 Antecedent: Evolution of Transaction Costs Economics

Transaction costs economics, according to Ménard (2008) incorporates contract and property rights theories to analyse how economic activities are usually organised. As stated above, TCE forms part of the broader IOE research agenda that began to emerge in the 1970s primarily concerned with the study of institutions and their interaction with different organisational arrangements (Ménard & Shirley, 2008). Prominent IOE scholars have included Douglas North with his analysis of institutions, Ronald Coase with his analysis of the structure of production, Oliver Williamson with TCE, Elinor Ostrom with her study of governance of the commons and Sanford Grossman, Oliver Hart and Bengt Holmström with contract theory.

To that end, TCE is primarily concerned with the analysis of the alternative ways in which economic activities are governed and the trade-offs among the different modes (P. G. Klein, 2008; Shelanski & Klein, 1995). The theory was pioneered by the seminal research by Oliver Williamson, Benjamin Klein, Robert G. Crawford, and Armen A. Alchian, from the 1970s

inspired by an earlier pioneering paper by Ronald Coase (1937), '*The Nature of the Firm*'. Williamson, in particular, in the 1970s began to lay down his arguments on TCE by building upon Coase's work. In '*The Nature of the Firm*' Coase challenged the then prevailing neo-classical view that markets were the only mode of organising economic activities with the firm confined to productive activities. Coase's research question was why the firm emerges?

Before Coase's work, economists viewed the firm as technologically efficient in the transformation of inputs into outputs (Williamson, 1996b). Hence, as Joskow (2008) notes, Coase's view that firms and markets are alternative forms of governance was rejected then because it went against mainstream economic thinking. Coase (1937) argued that there were particular instances when marketing costs (later called transaction costs), such as information search costs, bargaining and haggling costs and contract writing, policing and enforcement costs, attached to buying goods from the market were higher than the actual price of the good itself. In such instances, according to Coase, the firm was better placed as an effective governance mechanism. For this reason, Coase research identified that transaction costs is important in the analysis of governance of economic activities.

Theoretically, Coase pioneered the thinking that organisation of production depended on production technology as well as the costs of transacting business. Thereby, the decision to organize transactions within the firm or through the market is based on the costs related to internal or external exchange (P. G. Klein, 2008). Later, economists became aware that transaction costs influenced an entrepreneur's preference of where to organise production activities, in markets or firms. As such, Coase's work made economists realise that the market was not superior but an alternative mode to the firm in the organisation of economic activities (Allen & Lueck, 2008). Therefore, the answer to Coase's query, on why firms emerges, was that when transaction cost of using the market becomes too high, entrepreneurs may opt to use firms to organise economic activities because in such situations, the efficiency of the firm is higher than the market (Ménard, 2008; Shelanski & Klein, 1995).

As Miller and Moe (1986) note, '*The Nature of the Firm*' lay unrecognised for many years until the 1970s when Williamson brought it to fore as a major source of economic theory. Apart from Coase, Ménard (2008) has summarised other crucial studies that influenced Williamson's research agenda. These include: John Commons' 1934 work '*Institutional Economics*' which proposed that transaction costs should be the basic unit of analysing economic activities; organisational scholar Chester Barnard's 1938 work '*The Functions of the Executive*' which

was concerned with internal organisation; Herbert Simon's 1947 book '*Administrative Behaviour*' in which he looked at internal organisation through employment relations and Kenneth Arrow's 1964 paper '*Control in Large Organisations*' in which Arrow proposed the distinctive role of control in hierarchies over markets²⁴.

The first papers in this line of inquiry included Williamson (1967) in which he proposed the boundary of the firm²⁵ in governance of economic activities by looking at hierarchical organisation and optimal firm size and Williamson (1971) in which he proposed transactions costs and contracts as questions that economists and organisational scholars needed to investigate further. However, it was the pioneering book Williamson (1975) '*Markets and Hierarchies: Analysis and Antitrust Implications: A Study in the Economics of Internal Organization*' where Williamson put together the different papers from his earlier work including Coase to Arrow arguments and unified them into a general framework of economic theory related to internal organisation.

In *Market and Hierarchies* Williamson went beyond Coase's identification of transaction costs and identified the complex transactional and human factors, such as asset specificity and uncertainty, which significantly impact on transactions making it harder and costlier to write and enforce contracts over the market interface. Hence, the book '*Market and Hierarchies*' introduced contracts as key in the analysis of organisation of economic activities, by examining why and when it was costly to write and enforce contracts through different arrangements. Accordingly, Williamson proposed that in cases where it was difficult, costly and risky to write and enforce contracts over the market interface, then the entrepreneur ought to shift governance of economic activities to the firm/hierarchies/internal organisation.

As such, Williamson's transaction cost theory recognises that exchanges are often not smooth but have frictions called transaction costs related to writing and enforcing contracts and searching for information etc. hence, best-fit governance arrangements that economises on these costs is preferred (Hobbs & Young, 1999). Through the 1970s and 1980s, a stream of TCE theoretical and empirical research emerged explaining and testing the reasoning behind the emergence of the firm. Williamson's second key TCE theoretical work in this period

²⁴ Williamson (1996b, pp. 23-53) chronicles the influence of these different works on his research agenda especially in the initial stages of development of TCE.

²⁵ The terms firm, internal organisation and hierarchy are used interchangeably in transaction costs, and in this study, to imply the governance system of complete ownership of production process by a firm.

included Williamson (1985) '*The Economic Institutions of Capitalism*' in which he expanded on his earlier research through the analysis of transactional and contractual attributes related to the organisation of economic activities. In '*The Economic Institutions of Capitalism*' Williamson, clearly defined the boundary of the firm and the different modes of governance within the vertical coordination continuum as discussed further below.

Ménard (2008) summarises the two TCE alternative views that emerged in the 1970s as follows. The first view was associated with Alchian and Demsetz (1972) which asserted that the firm is an efficient coordinating entity in which the entrepreneur is the one with access to information which he/she uses to efficiently direct resources. The second and widely accepted approach, according to Ménard is Oliver Williamson's proposition in which the firm is an efficient mode of organisation of economic activities when transaction costs is high in spot markets and other governance arrangements. Hence, markets and hierarchies are alternative forms of organisation of economic activities related to an entrepreneur's make or buy decision (Williamson, 1975). This study adopted Williamson's approach and the key arguments and theses of this approach are discussed below.

3.3 Key Arguments in Transaction Costs Economics

Williamson (1996b), in line with John R Commons' thesis, defines governance as the means through which conflicts in transactions are stabilised when such conflicts threaten opportunities to realize mutual gains. This line of definition, according to Williamson, is based on the Chester Barnard and Friedrich Hayek assertion that adaptation is the central problem in economics, whereby transactions have to adapt to emerging conflicts and threats. While an entrepreneur in the market responds and adapts to price signalling, in firms, adaptation is achieved through administrative organisation and cooperation (Williamson, 2008b). Moreover, Williamson differentiates market and hierarchical coordination through the lens of analysis. Whereas the lens of choice is used to examine transactions in the market, in hierarchies, the lens of contract is used. For this reason, an entrepreneur ought to go for the right governance structure that is adaptive to both the transaction costs and the prevailing transactional hazards (Williamson, 1996b).

The firm in TCE is defined as a "combination of legal, economic and social dimensions" of exchanges (Ménard, 2008, p. 287). Ménard states that the firm as a legal entity operates as a centralised unit in relation to the transfer of rights, while the firm as an economic entity relies on contractual arrangements coordinated through a hierarchy whereas the firm as a social

device is dependent on motivations that are beyond monetary incentives. As such, in TCE the firm as a governance entity operates within these three dimensions of legal, economic and social.

Hence, Williamson (1998b) states that TCE is a theory of vertical integration which draws upon the dimensions of economics, law and organisational studies in the analysis of economic governance. To achieve this, TCE takes a comparative micro-analysis of discrete structures of economic organisation including the problems of private ordering (how individual parties agree on how to govern activities), adaptational problems and human behaviour (Williamson, 1991) as discussed further below. In dealing with these inquiries, Williamson begins from a wider IOE perspective of explaining the theoretical rationale for contracts and the problems of market failure (Sartorius & Kirsten, 2005) but prioritises discrete structural analysis.

The working hypothesis of TCE is linked to the discriminating alignment as proposed by Williamson (1985, 2008b). As defined in Chapter One, discriminating alignment hypothesis holds that transactions which differ in their attributes are aligned to the governance structures which differ in their cost and competence in order to effect transaction-cost economizing ends. Simply, this hypothesis explains how buyers and sellers ought to choose a governance arrangement that economises on costs from a set of alternatives (Shelanski & Klein, 1995). Since, every transaction has costs attached to it, the contract exposes the related transaction costs, which then allows the buyer and seller to adapt transactions to the right governance framework that minimises on these costs. At any given time, transaction costs will vary depending on the mode of organisation chosen.

Discriminating alignment hypothesis is actualised as follows. In TCE the main purpose and effect of contracting and vertical integration is to reduce transaction costs. Transaction costs (simply defined in Chapter One, are the costs attached to the organisation of economic activities) differs according to the type of governance system chosen. For instance, spot-market coordination transaction costs may include information search costs, input search costs, buyer/seller search costs, preferred quality search costs, seller costs of determining prices and buyer preferences among other costs. Because of these costs, a buyer and a seller may decide to eliminate some of these costs by, for instance, shifting transactions from spot-markets to marketing contracts as represented in Figure 6 in Chapter Two. With marketing contracts, the seller costs of determining prices and buyer preferences search costs may be eliminated.

However, with marketing contract other costs may occur including the *ex-ante* contractual costs of negotiation, screening and contract writing and *ex-post* costs of contract monitoring and enforcement. In agriculture such marketing contracts transaction costs may include: transport costs, storage costs, market research costs, seller/buyer and produce screening costs, arbitration and, legal costs, product inspection costs and the costs incurred in safeguarding property and in regulating trading practices among numerous others (Jaffee, 1992). Notwithstanding marketing contracts, the buyer and seller may decide to eliminate these *ex-ante* and *ex-post* contracting costs, by shifting their transaction to vertical integration by combining their operations under one roof to create a single firm. At the point vertical integration occurs the *ex-post* and *ex-ante* costs of contracting are, potentially, eliminated because all the selling and buying activities are unified into one. According to TCE, these decisions, from spot-market to marketing contract to vertical integration, are made based on the discriminating alignment hypothesis.

Therefore, in TCE a transaction occurs when goods or services are transferred across technologically separable interfaces, whereby different activities such as production, marketing, supply, and value addition occurs (Rowlinson, 1997; Sartorius & Kirsten, 2005). In this arrangement, contracting unifies the separate economic activity interfaces depending on the chosen governance mechanism. Spot-market arrangements rarely have contracting, but moving forward as represented in Figure 6 in Chapter Two, contracting takes place (Sartorius & Kirsten, 2005). While completely integrated firms forgo the costs of contracting, as P. G. Klein (2008) explains, there are other problems and costs associated with such governance arrangement. These include, information flow problems, performance monitoring and incentive allocation costs.

In a vertically-integrated firm, a key task of a manager is to develop a performance monitoring and financial reward systems in order to incentivise employee performance towards pursuing the goals of the firm (Williamson, 1985). That is, administrative organisation by a manager may be needed in order to actualise employees' cooperation towards achieving key goals of the firm as one of the central adaptation features of the firm as Williamson (2008b) argued. In effect, managers have to come up with employee's evaluation system whereby each employees' performance is monitored and rewarded with promotion and other benefits, attached to performance. Because managers evaluate each employee performance, this may bring additional transaction costs in the firm in addition to administrative costs attached to running an organisation. Therefore, at certain times, the bureaucratic, performance evaluation

and information search costs related to internal organisation may be high when producing a certain good or service. Hence, the firm may opt to outsource the production of such a good through contracting or buy the good directly from the market.

Hence, the boundary of the firm, is determined by the trade-off, at the margin, between the transaction costs related to either using the market or using the firm (P. G. Klein, 2008; Williamson, 1985). Simply put, bearing on contract, the boundary of the firm is taken to be the point where internal organisation ends and the firm begins to buy goods and services through external contracting (Rowlinson, 1997; Sartorius & Kirsten, 2005; Williamson, 1985, pp. 86-89). Thereby, in TCE contracts are used to coordinate activities inside and outside the firm, with the aim of matching the right type of contract with the right activities being coordinated to minimise transaction costs (Sartorius & Kirsten, 2005). A mismatch leads to increased hazards and transaction costs.

Hence, the same reasons that Coase (1937) gave as to why at certain times, the firm is a better-suited governance mechanism than the market, are also applicable as to why at certain times, spot-market or outsourcing is less costly governance system than the firm. At certain times, a firm's production and organisational costs may become higher than when the good is procured over the market, for instance, when new technology owned by a rival firm significantly reduces production costs of a good. Therefore, the decision by parties in a transaction to either use the market-associated with to buy decision, or the firm-associated with to make decision, is a trade-off between the related costs of alternative governance arrangements (Williamson, 1985, 1996a).

Transaction costs are economised within the firm because actors in the firm have shared objectives and unified control which is lacking in the market. Problems associated with incomplete contract such as information asymmetry and opportunisms, are resolved through internal organization which harmonizes conflicting interests and provide for less costly adaptation (Shelanski & Klein, 1995; Williamson, 1975). However, as discussed above internal organisation has related administrative costs and bureaucratic inefficiencies that often plague internal organization. Because of the administrative costs internal organisation by the firm is usually the governance of last resort which parties turn to (Williamson, 1985) implying that spot-markets arrangements is the first option preferred down the continuum presented in Figure 6 in Chapter Two.

With TCE being a theory of vertical integration, the other forms of governance that TCE concerns itself with include markets, hybrids, and state bureaucracies among others (Williamson, 1985). Market, hybrid or hierarchy in TCE is viewed as suited for specific transactions and each has its own adaptational advantages and disadvantages. The three attributes of importance for describing governance structures are incentive intensity, administrative controls and contract law regime (Williamson, 2008b). Spot markets, hybrids and hierarchy differ with respect to these attributes as summarised in Table 7 below:

Table 7: Transactional Attributes of Markets, Hybrids and Hierarchies. Source: Williamson (2008b, p. 49)

Governance Attributes	Governance modes		
	Market	Hybrid	Hierarchy
Incentives	Prices as high-powered incentives	Less high-powered	Low-powered incentives
Administrative costs	None	Some	Much support by bureaucracy
Contract law	Legalistic	Contract as a framework	The firm is its own court of ultimate appeal

From the attributes given in Table 7, transactions can be organised in either of the above governance modes including other forms such as regulation, franchising and many other forms. Given incomplete contracts, the choice of one mode over another is based on the need to economise on transactions costs. The three discriminating attributes of the different governance modes of TCE, according to Williamson (1985, 2008b) include: incentive intensity, administrative controls and contract law.

Accordingly, as represented in Table 7, contract law differs between spot market and internal organisation. While contract law in the spot-market is legalistic in which courts system is used in the arbitration of conflicts, contract law in the firm is less legalistic in which disputes are internally resolved by managers. The legal system of dispute resolution is avoided in internal organisation because it is costly and time-consuming and involves third-party decision maker who must be made aware about the issues around the conflict (Joskow, 2008). Thereby, the firm is its ultimate court of appeal because the courts refuse to hear internal disputes (Williamson, 1985, 1998b). For instance, performance-related issues with employees are best

resolved internally rather than through the court system, because the court route has costs attached to it.

Whereupon, the spot market has adaptational incentive related to the price system, in hybrids and hierarchies, price system does not future as an adaptational incentive (Williamson, 2008b). In effect, spot-markets are coordinated through the ‘invisible hand’ of pricing while hybrids and hierarchies’ coordination involves the ‘visible hands’ of administrative command and control with coordination low in hybrids and high in hierarchies. Hence, the central adaptational advantage of hierarchies is command and control which enables coordination (Ménard, 2008). It is through control, that command and orders in firms are actualised, hence, cooperation between parties achieved. In essence, it is command and control which gives firms advantage over markets in the organisation of economic activities because decisions are centralised (Williamson, 1975).

For instance, in the FFV value chain, the application of the food standards is easier within an exporter-owned farm than a smallholder farm. In the exporter-owned farm, internal systems are put in place to ensure that the standards are complied with and technically qualified staff are employed to work in the farm. This attribute is lost when the exporter buys FFV from farmers because the exporter has no control over the farmers’ production processes. Hence, firms exist to coordinate activities for mutual gain through a single point of command, control and coordination which then spans outwards.

As such, processes such as audits are viewed as internal processes of dispute resolution in the firm in which relevant information is collected and processed to allow for decision making (Ménard, 2008). Williamson (1985) viewed the internal audit process in hierarchies as the framework through which evaluation and order are implemented and members who may renege on commitments monitored. The structure of the hierarchy as conceptualised by Williamson (1975) and adapted and modified for this study is as represented in Figure 7 below:

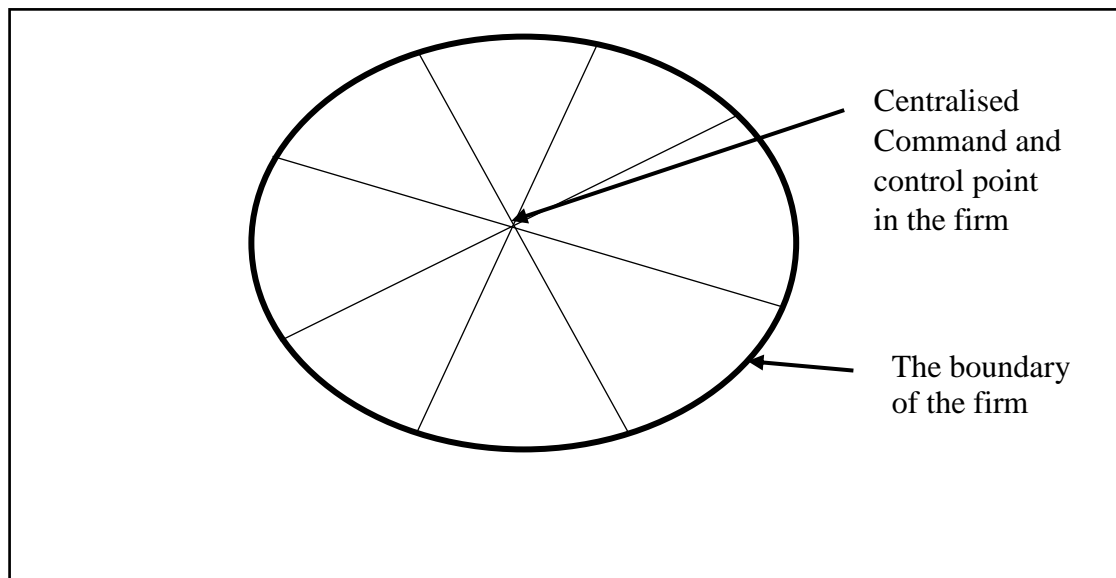


Figure 7: Conceptualised Command and Control Structure in a Hierarchy as Well as the Boundary of the Firm. Source: Researcher, 2017

As represented in Figure 7 above, the firm, has a central point of command and control which then spans outwards. While command is issued from the centre, control is effected outwards with orders being executed and cooperation achieved. For this reason, Williamson (1975) identified a problem in the command and control system in hierarchies in which control loss may occur as the firm expands its activities outwards. Williamson (1975, p. 95) defined control loss problem as follows:

“Spans of control can be progressively extended only by sacrificing attention to detail. Neither coordination economies nor effective monitoring can be achieved if capacity limits are exceeded”.

Thereby, as per the definition, control and command economies can be lost in vertical integration as production activities increases. Attaining, cooperation and control in a big organisation may be a challenge and this is related to control loss problem. According to P. G. Klein (2008), the control loss problem has been exacerbated by globalisation because regional and local differences limit the effectiveness of command and control regime by firms. The distance and uncertainty associated with international trade may amplify monitoring costs and make formal contracts difficult to write enforce (Macchiavello, 2010). Because transaction costs may increase as a firm attempts to coordinate such separate activities (Gereffi et al., 2005), Macchiavello argues that firms may opt to engage through relational contracts to economise on transaction costs. Relational contracts are informal agreements and unwritten

codes of conduct that powerfully affect the behaviours of individuals within firms (Baker, Gibbons, & Murphy, 2002).

Accordingly, as represented in Figure 7 above, the boundary of the firm is a transaction cost decision concerning which assets and activities the firm should make and which to access through the market (Williamson, 1985, pp. 96-98). In effect, the boundary of the firm depends both on technology and the organizational costs and benefits considerations related to various contracting being undertaken by the firm (P. G. Klein, 2008). Further to this, TCE holds that three main transactional attributes impacts on the best choice of governance as alluded to in Chapter One. These attributes are discussed below.

3.4. Transactional Attributes

With the above discussion, the emerging question is how TCE is empirically applied in research? According to Williamson (1981), TCE is applicable in three different levels of analysis. The first level is related to the general analysis of the structure of a venture and how different parts of the venture are related to each other. The second level of analysis, is concerned with the operations in the middle in which the inquiry is about the boundary of the firm in governance with the questions being about which activities should be performed in the firm and which should be outsourced and contracted by the firm.

The third level of inquiry, according to Williamson and which informed this study, is concerned with the overall governance structures and how the contract and the resulting transactions are organised. In this level of analysis, the contract is a governance issue and not a legal document thereby, different problems of governance take precedence including transactional attribute, human nature and the environment in which transactions occurs. Williamson (1975) and Williamson (1979) identified the three main attributes of transactions that affect and influences the choice of appropriate governance system by an entrepreneur as: asset specificity, uncertainty and the frequency of transactions. Moreover, Williamson (1975) also identified human factors, such as opportunism, that impacts on contracts. The transactional attributes of human nature and the transactions attributes are examined separately in the next section.

3.5 Transactional Attributes in Transaction Costs

As mentioned above, TCE focuses on explicating and uncovering the transactional attributes which may affect transactions and influence the need for adaption. The three attributes are uncertainty, the frequency of the transaction and asset specificity discussed below.

3.5.1 Transactional attribute of asset specificity

As discussed in Chapter One, at the heart of TCE argument is asset specificity which when absent, the attribute of uncertainty and frequency of the transaction are inconsequential. Absent asset specificity, the ideal transaction in law and economics is market competition (Ménard & Shirley, 2008). However, as asset specificity builds up, bilateral dependency between parties develop and in combination with uncertainty frictions in transactions occur. Therefore, asset specificity is the most important transactional attribute of why economic activities are organised in firms and not in markets (Williamson, 1985).

As defined in Chapter One, asset specificity is related to the investment that once committed, can only be put in alternative use at a lesser value in relation to its value in present use (Williamson, 1981, 1985). When asset specificity/relationship-specific assets are present, it results in what Williamson termed as the lock-in effect between agents, hence, bilateral dependency because the number of potential trading partners is reduced in transactions. This may lead to hold up²⁶ and opportunistic problems if one party seeks to appropriate quasi-rents (Martinez, 2002). Equally, the reduced number of buyers can also lead to small number bargaining problem whereby an opportunistic buyer introduces new demands on the seller, and hold-up problem if the seller refuses to concede to buyer demands.

Joskow (2008) provides the following illustration in relation to small number bargaining problem resulting from asset specificity. According to Joskow, prior to relationship-specific investment being made in a transaction between buyer A and seller B, buyer A and seller B have other numerous opportunities to trade with buyers and sellers C, D, E, F, G, and so on. However, if seller B invests in a specific equipment to support an order from buyer A, then the prior market competition involving buyers C, D, E, F and G had, ceases and lock-in-effect between buyer A and seller B emerges. Under this circumstance, seller B can only guarantee higher returns from the investment by entering into a continuous contractual exchange with buyer A. Outside of this arrangement, returns from specific assets are low and seller B is exposed to losses.

While inside the bilateral dependency arrangement, seller B has incentives to increase investments in specific assets to support the bilateral trading relationship. Equally, small numbers problem or bilateral monopoly bargaining position may occur if either party, especially buyer A, raises new demands on seller B. Accordingly, small numbers bargaining

²⁶ Described below.

situation results because previous large number of potential buyers or sellers is eliminated, so that only a small number of potential buyers remain who can guarantee sustained use of the invested asset at high returns (Joskow, 2008). Alternatively, a hold-up problem may occur if seller B refuses to sell the good to buyer A unless the buyer meets certain demands. Because of these frictions, TCE holds that in situations of high asset specificity, complete integration is the best arrangement to offset the frictions.

Asset specificity can be of different types (Williamson, 1985). These include: first, physical asset specificity, which includes equipment and machinery that are made to support an ongoing bilateral transaction such as a specialised machinery that is installed to produce a specific product to meet the buyer requirements. Second, site specificity, which is related to the immobile assets a supplier makes by locating the production site close to the buyer of the product in order to reduce transportation costs (Joskow, 2008). Because relocation costs can be high, site specificities create bilateral dependency in an exchange relationship, based on the useful life of the asset (Martinez, 2002). For instance, most Kenyan fresh produce exporters have situated their pack-houses at the JKIA in order to be close to quality inspectors from KEPHIS as well as have access to cargo handling facilities at the airport for quick access to the market.

Third, human asset specificity, which is the unique skills and knowledge acquired through education or learning by doing that makes it possible for an individual to efficiently produce a good or a service (Joskow, 2008). Human asset specificity may include a specialist surgeon or a structural engineer. Fourth, dedicated assets, which according to Joskow (2012) include the investments which are exclusively made by a seller for a specific buyer to enable the seller to produce a better-quality product for the buyer. In effect, a seller would not otherwise have made such investments but for the prospect of selling a significant amount of product to a particular buyer (Joskow, 2008). For example, if Mark and Spencer request a Kenyan exporter to cut and pack French beans in a certain way, the Kenyan exporter may install a special equipment and train staff to achieve this. Hence, if Marks and Spencer terminate the contract, the exporter is left with the equipment which if put to alternative use, may lead to losses.

Additionally, for this study, dedicated assets were related to the investments, such as training, inputs and technical assistance that exporters may make in order to support smallholder farmers' production. Fifth, Joskow (2008) identified intangible specific assets related to brand loyalty that accrues in time when a firm makes investments in advertisement, innovation,

product development and quality control. For instance, individuals' loyalty to Apple products because of their perceived quality can be associated with intangible specific assets. Sixth, Hobbs and Young (1999) identified commodity specificity related to specific characteristics of a good that makes it require specialised handling, production and marketing system. For instance, export vegetables, which are produced under strict GlobalGAP regime and requires specialised handling and quick access to the market can be associated with commodity specificity. In addition, export vegetables are often packaged under supermarkets regulations to meet their product differentiation strategies and this may require an exporter to invest in special equipment (Dolan & Humphrey, 2000).

Related to commodity specificity, Martinez (2002) identified temporal specificity in agricultural produce which is the perishability of these products. Temporal specificity refers to the timing of delivery and its effect on product value. For such products, the timing of delivery and the mode of transport must be exact or the produce value reduces because the colour, taste and moisture content is affected. For example, temporal specificities may arise when the buyer seeks to appropriate quasi-rents by delaying acceptance of a perishable product. The seller may then have difficulties finding an alternative buyer at short notice. For this reason. According to, Martinez, temporal specificity often exists in thin market situations where there are fewer buyers.

Lastly Williamson and Ouchi (1980) identified relational specificity, defined as when recurring transaction specific savings accrue at the interface between supplier and buyer as contracts are successively adapted to unfolding events, and as periodic contract renewal agreements are reached. Relational specificity is related to reputational effect in transactions whereby, specific language develops and nuances are signalled and received between the buyer and seller as institutional and personal trust relationship evolve (Sturgeon, 2002). Thereby, the buyer and the seller are inclined towards preserving the transactional relationship because it offers stability. This relational specificity has a time-frame attribute attached to it, whereby bilateral exchange relationship matures into a relationship of trust, strong ties and cultivation of personal relationships. This has been associated with the notion of socialisation of economic life proposed by Granovetter (1985).

For instance, a buyer, who has consistently interacted with a farmer over a period of three years, may begin to offer advance payments to farmers before delivery of produce whenever the farmer needs credit. It is expected that before the buyer enters into such an arrangement

with the farmer, the two have interacted over a period of time, and as such, a personal trust relationship has developed between the two leading to strong-ties because of prior positive behaviour from the farmer and the buyer. This is what economic sociologists have termed a reputational effect in economic activities (Granovetter, 1985). In contract theory, economists have looked at the effect of reputational effect and social norms in contract enforcement especially in the absence of formal contract enforcement systems.

Various studies (including Baker et al., 2002; Banerjee & Duflo, 2000; Landa, 1981) have looked at the role of reputation in trading relationships which forms the broader literature on relational/informal contracts. Notably, Macchiavello and Morjaria (2015b) have shown the value of reputation in situations where there is absence of formal contract enforcement systems. In their study of the Kenyan rose export sector, Macchiavello and Morjaria found that the Kenyan exporters and their European buyers relied on informal contractual mechanism including reputation and trust to guarantee transactions. In their study, Kenyan exporters prioritised foreign buyers over spot market buyers to protect reputation even when spot market prices were higher.

In a different study of the Chilean wine sector, Macchiavello (2010) found that wine exporters had to make high initial investments in order to establish a positive reputation with their UK buyers. The study found that the wine exporters even accrued credit in order to develop reputation, hence showing that initial costs for establishing reputation may be high. In the literature, informal contracting is a function of repeated interactions between traders where formal contract enforcement systems lack or are weak.

However, Landa (1981) in a seminal paper on nonmarket decision-making and economics of identity, showed that ethnicity mattered in the establishment of informal contracts and trading networks in her study of Chinese rubber merchants in Malaysia. Through fieldwork in Malaysia, Landa revealed that Chinese middlemen were not just a random collection of Chinese traders, instead they were linked in a complex network of personalized or 'particularistic' exchange relations to form an ethnically homogeneous middleman group. Therefore, non-economic factors such as ethnicity in Landa's study or repeated exchanges in Macchiavello and Morjaria and Baker et al studies, can impact on the organisation of economic activities.

When specific assets are present, transactions should be protected from hazards, such as opportunism, in order to reduce losses (Hobbs & Young, 1999; Ouchi, 1980; Williamson,

1988). Hence, as specific assets build up, vertical integration is preferred to protect the assets. In the Kenyan FFV value chain, several studies have previously analysed specific investments made by farmers and exporters especially after the introduction of standards (Dolan & Humphrey, 2000; Gereffi et al., 2005; Graffham et al., 2007). According to this scholarship, the introduction of food standards led to high levels of relationship-specific investments by farmers and the exporters, as they worked towards complying with the standards.

Investment in specific assets included, increased training of farmers and pack-house workers in order to upgrade their skills, specialised pack-house packaging equipment and chemicals such as chlorinated water and employment of technical assistants by the exporters to facilitate farmers compliance with GlobalGAP among other investments. However, the effect of such specific investments on transactional arrangement in the Kenyan value chain was not known. Additionally, the distribution of specific assets between the farmers and the exporters in the value chain was not known. As Key and Rungsten (1999) highlights, in agriculture, present specific assets, buyers are often reluctant to engage in a contractual relationship with farmers because increased risk of opportunism from farmers’.

In contrast, according to Key and Rungsten, for farmers in such situations, contract farming is preferred because contracts provide them with the market and asset security. For this research project, the aim was to identify the types of specific assets present in the value chain, their distribution between farmers and exporters’, the governance mechanism present to protect such assets and the impact of these assets on contractual relationships in the value chain. The next section discusses the transactional attribute of uncertainty.

3.5.2 Transactional attribute of uncertainty

All complex contracts are incomplete because of bounded rationality which limits parties from anticipating future occurrences and including them in the contract (Williamson, 1985). Moreover, TCE holds that because parties often have incomplete information, they face uncertainty on unforeseen events when writing contracts (Ménard & Shirley, 2008) . Attempts to acquire information about the future may result in high costs, hence, this is avoided and contracts are written based only on available information. Thereby, the contract is incomplete and may be affected by opportunistic parties.

Uncertainty refers to the unforeseen events and outcomes which creates volatility and ambiguity in transactions (Carson, Madhok, & Wu, 2006; Ménard & Shirley, 2008). Simply, uncertainty refers to the unknown events and occurrences in the transactional environment, for

instance weather patterns that may greatly impact on transactions. There are several types of uncertainties in transactions according to Williamson (1996b). First, are uncertainties related to communication problems which may affect decision-making process and planning. Second, uncertainty due to technological changes, unpredictable changes in consumer preferences and natural occurrences. Third, uncertainties arising from opportunistic behaviour which include non-disclosure, disguise, or distortions of information (Martinez, 2002). For instance, the threat of bounded rationality (discussed further below) under opportunistic conditions, may increase unexpected risks such as quality distortion or price increases due to hold-up conditions.

In agricultural, transactions often tend to be vulnerable to uncertainty because of the special nature of agriculture production (Allen & Lueck, 2008; Okello & Swinton, 2007). According to Allen and Lueck, agriculture is heavily linked to nature which can have a profound effect on production and this is often beyond farmer control. The natural events common in agriculture include: weather, soil structure, climate, pests and diseases among others. Martinez (2002) classified uncertainty in agri-food into four types including, first, environmental uncertainty related to the volatility of demand and supply and untimely communication between buyer and sellers. Grosh (1994, p. 86) identified this uncertainty in Kenyan FFV value chain, whereby in 1980s information asymmetry led to high supply for Asian vegetables in UK market when demand was low leading to 30-50 percent produce loss to Kenyan farmers.

Second, behavioural uncertainty is related to farmers' or buyers' strategic behaviour including nondisclosure, lying, guile and distortion of information. Third, technological uncertainty related to disruptive changes in farming technology. Fourth, quality uncertainty related to difficulties in verifying produce quality, size, colour and flavour. Okello and Swinton (2007) found evidence of these four types of uncertainties in Kenyan French bean production. For this reason, uncertainty may increase the avenues for exploitation through opportunism for as Allen and Lueck (2008) states nature may mask effort creating avenues for one to cheat. For instance, one party may behave opportunistically by claiming the effect of nature to have reduced or increased their production, thus putting forth new demands on a buyer or seller (Okello & Swinton, 2007).

In general, the nature and character of agricultural production such as weather, quality, perishability, size, colour and flavour of products, are often sources of uncertainty and in effect, it becomes problematic to coordinate and communicate these variables over spot market (Grosh, 1994; Kirsten & Sartorius, 2002; Minot, 1986). The unpredictability of these events

makes any attempts by farmers and buyers to write complete contracts expensive, hence, incomplete contract are preferred. The effect of uncertainty in transactions makes it difficult and costly for parties to write credible complete contracts that specify ex-ante how each party will behave when contingencies arise.

Given investments in specific assets, parties may respond to increasing uncertainty in two ways. First, parties may engage through relational contracts that rely on trust if strong-ties have developed through time as explained above. Buyers and sellers may put in place a simple document of expectations with limited information that specifies process through which future terms of trade will be determined. For instance, prices will be adjusted to reflect market prices in order to limit opportunism. Secondly, vertical integration may be preferred if uncertainty is high.

3.5.3 Transactional frequency

While market transaction involves strangers engaging in one-off exchanges (MacIntyre, 1981), hierarchies are made up of parties engaging in recurring transactions (Williamson, 1975). As discussed in Chapter One, Williamson (1985, p. 76) asserted that the frequency of transactions matters “because the more often it takes place, the more widely spread are the fixed costs (of) establishing a non-market governance system”. For instance Macchiavello’s (2010) study found that Chilean wine exporters made high initial investments in their businesses in order to establish positive reputation with UK buyers in their repeated exchanges. Initial investments may be high in repeated exchanges in order to offset the risk of opportunism.

For this reason, the frequency of transactions may introduce reputational effect in transactions, hence the incentive for parties to have internal governance system to offset reputational effect (Williamson, 2008b). Reputational effect in recurring transactions is related to the behaviour of parties because opportunistic parties are screened and avoided. Hence, infrequent exchanges are usually organised across the market interface as it is cost effective (Tadelis & Williamson, 2012). However, when the transaction is recurrent (and uncertainty and asset specificity increases) internal governance is needed because, according to Tadelis and Williamson, in recurrent transactions good reputation matters, hence, future transactions may be at risk of bad reputation.

Therefore, the cost for recurring transactions is the reputational effect in which a misbehaving party may find it difficult to enter into a transaction if they renege on promises made. In general, the three transactional attributes above are related and impact on governance arrangement.

However, asset specificity is the most important attribute that impacts on governance choice as earlier discussed. The study sought to explore how these three transactional attributes impacts on vertical coordination mechanism in Kenyan FFV value chain. In the next section, human and environmental transactional hazards are discussed.

3.6. Human and Environmental Hazards in Transactions

Apart from transactional attributes which greatly influence the choice of governance model, Williamson (1975) and Williamson (1985) also discussed certain human and environmental hazards which impact on the contract. These hazards include opportunism, bounded rationality and information impactedness as discussed below.

3.6.1 Opportunism in transactions

Because all complex contracts are incomplete, contracts can be exposed to ex-ante and ex-post opportunism from individuals (Ménard & Shirley, 2008). As defined in Chapter One, Williamson (1975) relates opportunism to self-seeking of a strategic kind, which an individual may undertake in order to profit at the expense of others. This may involve lying, withholding transaction specific information, manipulating information and failing to fulfil obligations related to a transaction (Williamson, 1985). In certain cases, according to Sturgeon (2002) even well-meaning self-interest pursuit may end up being opportunistic especially if the second party in the transaction is not aware of the first party activities because of information asymmetry. As such, opportunism is a moral hazard problem with destabilising effect on transactions because it increases contractual hazards, hence the need for costly safeguards (Carson et al., 2006).

Rubin (2008) noted that opportunism can range from simple actions such as an individual holding back on meeting an earlier agreed deal due to complex actions such as cheating by delivering low-quality goods. In addition, B. Klein (2000) asserted that hold up situations, as discussed above, also amounts to opportunism. As such, Rubin argues the main effect of opportunism is not the cost of cheating itself, nor the cost of safeguards, but the loss of social value/trust that leads to a loss of a potentially profitable deal. The literature has proposed various ways in which parties can safeguard against opportunism in transactions.

These include regulation, in which regulatory systems are put in place to check and stop opportunistic parties (Arrunada & Andonova, 2008). State regulation, through incentives and sanctions, especially can be effective to deter unattractive economic choices that offer short-term gains (Bates, 1989). The emergence of food standards in FFV value chain can be related

to state action to constrain opportunism in the value chain through the 1990 UK Food Act. The second way of constraining opportunism is through the internal organisation by the firm as earlier noted. This is because the command and control regime in a firm is a powerful means to manage opportunism (Ménard, 2008).

Third, contractual safeguards, such as penalties, severance payments for early termination of contracts and special purpose dispute resolution systems e.g. third-party mediation, can be effective against opportunism (Williamson, 1985). Fourth, complex long-term contracts can be used. However, such contracts are expensive to write, and hence, avoided (Joskow, 2008) In general, when opportunism abounds and safeguards are not put in place, the contract is vulnerable especially in high asset specificity situation. As such, according to Williamson (1985) when asset specificity is high and opportunism is also high but proper safeguards lack, the contracts lie in the Uncontrolled Hazard (UH) zone in the vertical coordination continuum. The UH zone, according to Williamson, is a notoriously inefficient zone because specific assets are exposed to opportunism. This zone in the transactional arrangement is shown in Figure 9 further below.

In agricultural transactions, Kirsten and Sartorius (2002) noted the problem of opportunism in which farmers may defect from contracts in order to take advantage of high spot markets prices. As Kirsten and Sartorius highlights, defecting farmers may claim production failure as the reason for the reduced quantity of produce that they deliver to their contracted buyer. For this reason, buyers are often reluctant to contract smallholder farmers' when specific investments have been made by the buyer as earlier discussed. In the Kenyan FFV export sector, Jaffee (1994), Ouma (2010) and Kariuki (2014) have each noted the problem of opportunism. This mainly includes farmers, middlemen and exporters defecting from contracts to engage with rival parties.

While farmers' opportunism is widely discussed in the literature, Jaffe, noted the opportunistic behaviour of some Kenyan exporters who seemed to encourage contracted smallholder farmers in a contract farming scheme to defect from their contracts by offering slightly higher prices. Transaction costs attribute such exporters' opportunistic behaviour to small number problem in the value chain. This can be conceptualised as follows. Take smallholders Farmer's Group Y producing snow peas for export. These farmers have a positive reputation because of their compliance with GlobalGAP. We assume the farmer group have been producing snow peas for the last 7 years, hence they have solid experience from accumulated knowledge and skills.

Accordingly, assume this farmer group is contracted to Exporter Z. In produce harvesting season, because of Farmer's Group Y positive reputation, other exporters may lure them with higher prices than the contract prices and Farmer Group Y may defect because of the high prices being offered by other exporters. And if Farmer group Y realises that there is a bidding war for their produce from other buyers, they may significantly raise their prices for Exporter Z. Hence, a hold-up situation occurs, whereby Exporter Z is expected to raise the contract prices to match the prevailing spot-market prices. Small number problem occurs here because at any given time, there are only a certain number of farmers with a reputation for producing quality products that meet GlobalGAP requirements.

According to Key and Rungsten (1999) problems such as this creates the need for buyers to screen farmers in order for buyers to identify non-opportunistic farmers. The screening adds transaction costs especially among smallholder farmers who tend to be many and dispersed. Buyers may avoid such farmers preferring non-opportunistic farmers' who tend to be large-scale (Kirsten & Sartorius, 2002).

3.6.2 Bounded rationality

Williamson (1998b), quoting Herbert Simon, defined bounded rationality as the human aspect of being rational but limited in rationality. According to Williamson, bounded rationality occurs because individuals have limited mental capacity to anticipate future happenings. Therefore, they face difficulties in anticipating risks, receiving, storing and retrieving information for decision making. Because of bounded rationality, parties in a transaction often have incomplete information, hence, uncertainty about future occurrences. As such, all complex contracts are unavoidably incomplete and transaction costs are incurred to acquire the missing information (Ménard, 2008; Williamson, 2008b).

Bounded rationality increases moral hazard problem, hence transaction costs of doing business increase (Sturgeon, 2002). In addition, bounded rationality means that parties will not have access to information equally, and those with access to information may end up being opportunistic. These problems would be solved by complete contracts, but in the real world of transactions, such contracts do not exist because they are costly to write (P. G. Klein, 2008). For this study, the aim was to explore the impact of these attributes on the nature of contracts and the prevailing structure of vertical coordination arrangement in the Kenyan FFV value chain.

3.6.3 Information impactedness

Williamson (1985) defined information impactedness as related to situations whereby the cost of one party in transactions accessing market information, is higher in relation to another party. This impinges on the contract according to Williamson (1975), and is deleterious when transactions occur in uncertain environment among individuals inclined to opportunism. When the three conditions of bounded rationality, uncertainty and opportunism are in place, information may not be readily and equally available to everyone in a transaction (Anderson & Gatignon, 2008). As such, differences in accessing of transaction specific information rises. Information impactedness, thus, is the measure of the degree to which transaction specific information is available to parties in a contractual relationship. Information impactedness may also occur within a firm when production is internalised and the costs of accessing information for instance about new technology, becomes expensive for the firm or a unit within the firm (Williamson, 1975).

Agri-food markets are known to have information problems especially related to the nature of food produce such as taste, size, and colour. Since not all parties often have access to such product value information (Grosh, 1994; Minot, 1986) information impactedness may result among trading partners. Consequently, one party may engage in costly search in order to obtain the right information about the quality of the produce. For example, a producer may sell low and high-quality products at the same price, thereby the buyer may have to deploy resources to search for high-quality goods and eliminate low-quality overpriced goods (Martinez, 2002). In African agriculture, it is known that information is often difficult and costly to obtain because of market structure and infrastructural problems. As a result, buyers often tend to take advantage of farmers when pricing commodities (Poulton, Dorward, & Kydd, 1998).

As such, Minot (1986) and Kirsten and Sartorius (2002) listed the two situations in agri-food markets when information problems often result. These include: when the buyer has more information about the production of the product than the farmer and when the buyer also knows more about the produce market, in terms of seasonality, quality and price changes, than the farmer. The party with access to such information may strategically use such information in transactions at the disadvantage of other parties. Therefore, information problems generate hazards in agricultural contracts and may make compliance with contracts hard and costly to monitor (Fafchamps, 2004). These partly explain the failure of contract farming in Africa even when the contract is often the best system of organising farmers' production and enabling them

to access markets. How the above attributes were applied and operationalised in the study is discussed in the next section.

3.7 Operationalisation of Transaction Costs in the Study

As discussed in Chapter Two, vertical coordination systems emerged in the Kenyan FFV value chain from 1990 as EU retailers increased their control in the value chain in order to mitigate against further food contamination problems (Dolan & Humphrey, 2000, 2004; Gereffi et al., 2005). As represented in Figure 5 in Chapter Two, the exogenous shock from food contamination led to governance arrangements with retailers centrally placed and with increased control. Spot, wholesale markets and middlemen were eliminated in the governance arrangement. Transaction costs assumption here is that the emergence of vertical coordination in the Kenyan value chain was triggered by the transactional attributes discussed above with vertical coordination being the best fit arrangement that moderated over the transactional hazards.

However, it was evident from the literature that less was known about the structure of vertical coordination and the nature of contracts and transactional arrangements in the value chain. Simply put, there was no evidence, in the extant literature, how transactions and contract in the Kenyan value chain are organised especially identification of various contracting points and the location of transactions in the vertical coordination continuum. In addition, it was not known how the transactional and contractual arrangement was affecting smallholder farmers' participation and stay in the value chain. As such, transaction costs was applied in this study as follows.

As in TCE, vertical coordination was taken to comprise all the governance arrangements in the value chain, within and outside the retailers' sphere of ownership including farmers' production systems, exporters' supply systems, importers activities and middlemen activities. The study regarded these activities as either owned by the retailers' or controlled by the retailers through outsourced contracting or outside the retailers' sphere of influence. As earlier discussed, TCE accepts outsourcing as one form of governance of economic activities that firms employ in order to concentrate on core activities (Coase, 1937; Majewski & Williamson, 2003). For this reason, firms often seek to maintain control over outsourced activities by introducing standards of production in order to reduce the need for direct monitoring of production (Williamson, 1975).

In the study, the food standards was taken to be one attribute of command and control regime of the retailers. The other included Ménard & Shirley, 2008 three central adaptational features of internal organisation control, cooperation, and communication which was conceptualised to span outwards from retailers to the exporters and the farmers. Hence, governance was conceptualised as involving retailers, exporters and the farmers appropriately matching contract with the right transactional attributes in order to economise on costs. In effect, the boundary of the firm was determined as the trade-off point from which outsourcing or make decision was preferred for transaction costs related reasons.

For the study, analysis of the boundary of the firm involved, exploring the various core production activities and outsourcing points in the value chain. This allowed the study to understand the structure of the coordination, explore how each contracting point was organised and the arrangement of transactions at each point of contracting. The study conceptualisation vertical coordination in the Kenyan FFV value chain, as represented in Figure 8 below. According to the Figure, the core productive activities are represented in the middle made-up of the retailers, exporters and farmers.

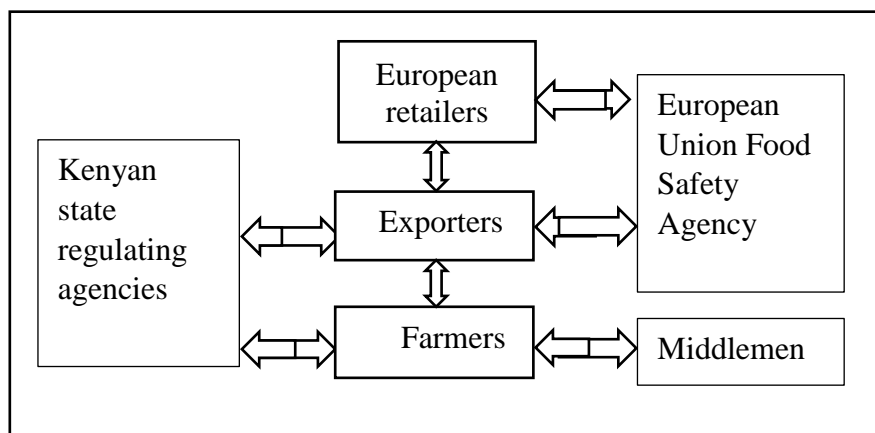


Figure 8: Conceptual Framework of the Vertical Coordination of Kenyan FFV Export Value Chain. Source: Researcher, 2018

As Figure 8 shows, the value chain was conceptualised as retailer’s centred with state regulatory agencies located outside the retailers’ sphere of influence. The state agencies were thought of as providing oversight over the retailer’s centred vertical coordination governance system. Consequently, the middlemen were conceptualised as located outside the vertical coordination system and operating in the value chain through backstage arrangement as discussed in Chapter Two. Accordingly, in order to understand the type of vertical coordination in the value chain, the earlier discussed transactional attributes and hazards were applied in the

analysis of the Kenyan FFV value chain matching the transactional attributes against the contracting type in order to explore the prevailing structure of vertical coordination in the value chain. The contracting type versus the attributes used in this analysis is presented in Table 8 below.

Table 8 Transactional Attributes Versus Contracting Type. Source: Kirsten and Sartorius (2002)

Attributes Contracting type	Asset specificity	Uncertainty	Information impactedness	Opportunism	Ability to walk away	Frequency	Contract enforcement system
Spot-market	Low	Low	Low	Low	Yes	Low	Legal
Marketing contract	High	High	High	High	Low	High	Legal/relat ional
Unified ownership	High	High	High	High	No	High	Internal
Unrelieved hazard zone	High	High	High	High	Yes	High	None

Table 8 represents the summary of the central points discussed in this chapter in relation to TCE and also as represented in Figure 6 in Chapter Two. The various types of contracting within the vertical integration continuum are captured from the spot-market, marketing/bilateral contracting which may represent joint partnerships, to unified ownership to the unrelieved hazard. The contracting type on the columns, is matched with the transactional attributes on the rows. For instance, spot-markets arrangements is matched against low asset specificity, uncertainty and information impactedness. Other types of contracting not captured in Table 9 include hybrids forms and franchising among others.

Hence, based on Williamson's (1998a) discriminating alignment hypothesis, transactions that are different in their attributes are matched with governance structure that effects transaction cost economising result. In this study, Table 8 provided the framework from which contract type was matched with the prevailing transactional attributes in the Kenyan FFV value chain, hence the structure of vertical coordination was revealed, whether it is spot market or bilateral contracting or the others in Table 9 above. If for instance transactional attributes of uncertainty, asset specificity and opportunism were low with the legal type of contracting in place and

parties having the ability to walk away from the contract, then contract type identified was spot market. Therefore, the type of contract safeguard in place in the value chain was also explored.

In addition, the study adopted Williamson (1985) simple contracting schema to further identify the positioning of transactions in the value chain in the vertical coordination continuum. As represented in Figure 9 below, in the contracting schema is a continuum of markets and hierarchy on opposite ends with other forms such as hybrid systems and unrelieved hazard zone in between. According to Williamson (2008a) Apex A in the Figure below corresponds to the neo-classical spot market transactions in which competition abounds and parties respond to price signals. In Apex A, according to Williamson, there are no specialised investments, therefore asset specificity is zero ($S=0$). Apex B represents the Unrelieved Hazard zone where asset specificity is high and hazards such as opportunism and uncertainty abound with no contractual safeguard in place.

Hence, in Apex B relationship-specific assets K is greater than zero ($K>0$) and are exposed to opportunism from transactional parties because there are no safeguards in place, hence, $S=0$. In Apex B transaction costs is high because parties are obliged to seek extra information about sellers, product quality and screen buyers in order to protect their investments. As such, in Node B transactions tends to be unstable and short-termed. At Apex C and D, according to Williamson, contractual safeguards are in place, hence $S >0$. The safeguards at Apex C, according to Williamson (1985), may include administrative support, regulation, interfirm support and other arrangements. However, Apex C, which represents hybrids transactions, is short-termed according to Williamson (2008a) because such transactions are only tenable if contract support is in place. If the support is withdrawn in Apex C, the transactional problems in Apex B emerge. The contracting schema is represented in Figure 9 below:

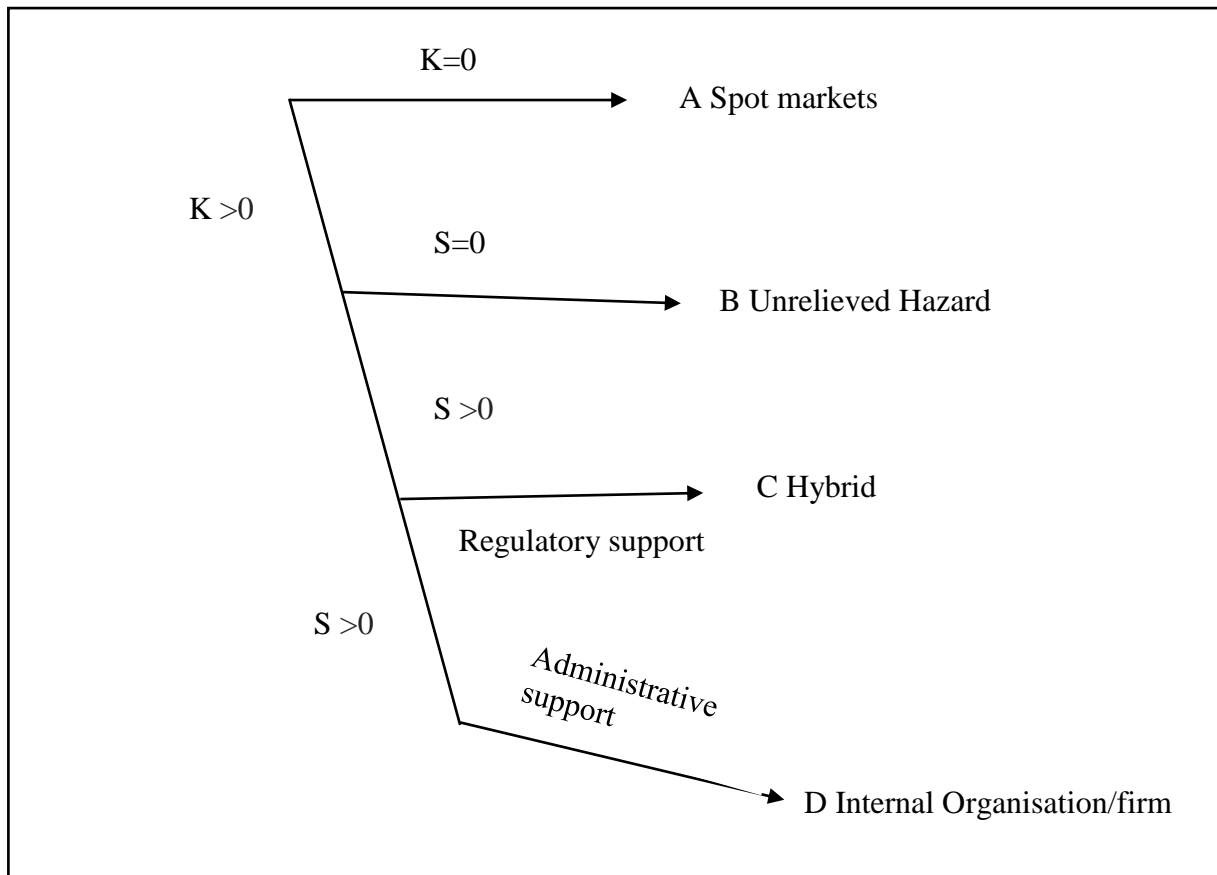


Figure 9: Simple Contracting Arrangement. Source: Williamson (2008a, p. 9)

As Figure 9 above shows, in Apex C because of the frequent costly contract breakdowns, parties may opt to shift transactions from Apex C to Apex D under unified ownership by the firm which eliminates these hazards. The bottom line is that there are benefits and costs of internal organization including administrative and bureaucratic costs as earlier discussed. Equally, internal organisation may eliminate information problems temporarily because in the long run, a firm may find it difficult to access external information on technology, innovation, prices and costs compared to spot market transactions (Joskow, 2012) as earlier discussed. Hence, Williamson (1998a) asserted that internal organisation by the firm at Apex D is often governance of last resort. For this reason, “try markets, try hybrids and have recourse to the firm only when all else fails” (Williamson, 2008a, p. 9).

Ultimately TCE holds that every transaction has transaction costs attached to it and the decision to use one form over another is based on the trade-off between the costs attached to the alternative form of arrangements (Joskow, 2008). The choice of the governance system also depends on the conditions of the exchange relationship between the contractual parties (Hobbs

& Young, 1999). For the study, Table 8 provided the information for matching contract type with transactional attributes within the different points of contracting while the schema in Figure 9 provided the basis for positioning the identified vertical coordination arrangement in the value chain. The next section discusses the regulation and compliance systems that were adopted for this study.

3.8 Transaction Costs Approach and Regulation

Posner (1974, p. 1) defines regulation as “the taxes and subsidies of all sorts as well as explicit legislative and administrative controls over rates, entry, and other facets of economic activity” by the state. Hence, according to Goldberg (1976), economists generally look down upon the idea of regulation which if successful they claim is deleterious and if ineffective, a waste of resources. Therefore, how does TCE view regulation and how then can regulation be effected in TCE? First Goldberg (1976) then later Williamson (1976b) set out TCE based comparative analysis of the effectiveness and limitations of markets versus regulation as alternative institutions for governance of public utility systems. Goldberg and Williamson's analysis argued that for the reasons of opportunism, in long-term incomplete contracts, regulation may be necessary for public utility systems to offset incomplete contract problem.

Williamson's contention, according to Spiller (2013), was that even vertical integration in the public sector sometimes may not solve the problems of third-party and governmental opportunism, for instance arbitrary price increases of water and electricity utility provider or accounting malpractices in a firm. Thereby, Williamson (1976b) argued that the prevailing view that regulation is an ineffective way of organising economic activities was incorrect. Instead, based on his later developed Williamson's (1999, p. 316) remedialness criterion, in which a mode of governance for which there is no alternative superior with net gains is taken to be the best Williamson (1976b) argued that regulation can at times be superior if any proposed alternative has fewer net gains with respect to the specific activity.

Coase (1960) also analysed regulation from the point of a social problem. Coase developed what later became known as the Coase's theorem, which proposed four different ways of dealing with 'nuisances' such as noise pollution. The first solution to such problem according to Coase is market efficiency if transaction costs is zero. However, because transaction costs is never zero, Coase second solution was to use courts to enforce property rights, if market bargaining solution is less efficient because of transaction costs. Coase third solution was that the firms involved in the dispute should merge if transaction costs is sufficiently high with the

firm deriving the most gains buying the other. The fourth solution proposed by Coase is direct government regulation if transaction costs rise further even in a merger. The state, in this case, is a 'super firm' able to provide a solution at a lower cost than could a private firm.

Hence, in TCE and broader IOE, because transaction costs are never zero, governments can intervene to allocate property rights. We see Coase's arguments in the emergence of food standards whereby the 1990 Food Act placed legal liability of food contamination on the retailers in effect allowing them to regulate the food industry. This can be viewed as falling within Coase first solution to such problems whereby market bargaining is preferred. Later scholarship in TCE views regulation as effective in stopping moral hazard problems in incomplete contracts situations (Williamson, 1998b, p. 31). Thereby, opportunism, which Spiller and Tommasi (2008) view broadly as the incentives that may motivate individuals to expropriate rents out of private or public investments, may rise among individuals even in public bureaucracies. Therefore, TCE views regulation as potentially limiting opportunism in public and private space.

Thereby, Williamson (1976b) viewed regulation as a form of contracting between the regulator and regulatee in which, first cost-effective adaptations are introduced to the transaction without the need of haggling and second, the regulatee is guaranteed a fair rate of return from an investment by the regulator. Hence, it follows that TCE looks at regulation as a complex intertemporal policymaking discussion at a level away from transactions (Spiller & Tommasi, 2008) but necessary to protect transactions through restrictions and shielding agents' capricious treatment and being held hostage (Goldberg, 1976). Building on these Spiller (2013, p. 3) proposed Transaction Costs Regulation (TCR) as a governance system. This regulatory approach is discussed below as it was adopted for this study.

3.9 Transaction Costs Regulation

Spiller (2013) defines TCR as the interaction between the state and private sector with regulation being appropriate to govern hazards in such interactions²⁷. In other words, regulation is governance of interactions in public and private spheres and between these two spheres, in order to mitigate against organizational and contractual hazards. Spiller's TCR approach begins from the point of exploring and understanding hazards related to interactions in the private and

²⁷ According to Spiller, interaction here encapsulates transactions which is assumed to occur because of regulatory actions and other interactions that does not result to any transaction taking place.

public sphere. Accordingly, Spiller (2013) differentiates between TCR and two other common regulatory approaches in economics.

First is the Chicago School which according to Levy and Spiller (1994) accentuated the rent-seeking attributes of regulation, whereby the distributional advantages of the market is preferred over-regulation. In contrast, Spiller (2013) argued that TCR accepts that there are contractual hazards and institutional problems that the market cannot solve, hence regulation may be necessary. The second approach is what Spiller terms as the incentive approach which puts emphasis on pure incentives of the market and assumes that political actors are often passive and rent seekers. In this approach, provision of public goods may be viewed as the responsibility of the state but state actors may not often perform this function for various reasons, such as lack of capacity. Therefore, incentives increase for the market to perform such duties.

In contrast, Spiller argues that TCR is concerned not only with contracting systems with the best incentives, but also the institutional environment in which contracting occurs because institutions may have defects such as the state being overstretched or opportunistic. As such, Spiller's TCR approach emphasizes two dimensions of analysis in regulation; the institutional dimension and the behavioural dimension. The institutional dimension in TCR, is broadly concerned with the North (1990) rules of the game, on how institutions emerge, operate and evolve and how they ultimately shape regulation. Accordingly, this includes the determinants of regulatory entities, the politics, the regulatory environment and the regulatory performance (Spiller, 2013).

Of importance to TCR are the political and social institutions which not only restrain or enable political and administrative action, but also have an impact on the type of regulation that can be implemented (Levy & Spiller, 1994). Hence, regulation is perceived as a type of governance. Additionally, the institutional dimension accepts that the institutional environment determines the regulatory institutions that emerge, thereby, TCR implicitly highlights the institutional conditions under which incentive for regulation becomes possible and when it doesn't (Spiller, 2013).

The behavioural dimension in TCR, on the other hand, is concerned with regulation as a mechanism to limit moral hazards in private and public interactions. In this dimension, the emphasis is on contractual hazards which then demand an assessment of individual behaviour in their environments and within the existing institutions (Spiller, 2013). This may for instance

involve contextualising why opportunism may be high in certain environments and not others and why institutions are capable of preventing opportunism in one environment and not the other. In particular, in TCR state agents can also be opportunistic as the case of Kenyan agricultural boards discussed in Chapter Two. State opportunism may involve rent-seeking behaviour by state actors in which institutions of the state are strategically deployed to enhance/hinder certain activities in the private realm (Spiller, 1996).

Hence, while political and social institutions may positively constrain behaviour, they may also negatively impact on regulators behaviour by hindering regulatory flexibility (Spiller, 2013). As such, the two dimensions are not separate in the analysis of regulation, rather TCR holds that behavioural hazards are created and constrained by institutions depending on the prevailing institutional environment (Spiller, 2013). As indicated above, TCR views regulation as regulatory governance, hence, the complete absence of the state in regulation is not tenable (Spiller, 2013). This approach was adopted in this study to justify the application of the various regulatory approaches discussed below.

Regulation was taken as a subset of governance concerned with steering the flow of events and behaviour (J. Braithwaite, Coglianese, & Levi-Faur, 2007, p. 3). As with TCR, it was accepted that the state has a normative role in regulation through policies making, best practices setting and providing oversight over the private sector. It was also accepted that regulation may also include actors from the non-governmental organisations (NGO) in specific areas of their interest, for instance in regulating bad labour practices in the value chain. The study also accepted that state opportunism in regulation is possible with state opportunism conceptualised as related to rent-seeking behaviour by state actors and other negative actions that may hinder transactions. The next section briefly discusses the three different regulatory approaches as were adopted for this study.

3.9.1 Self-Regulation

Self-regulation is associated with the emergence of certifications and standards in the production process. The aim of standardisation and certification in the production process was to harmonise production systems in a sector or a country and globally (Job & Honaker, 2002). Hence, this type of regulation was borne out of firms responding to industry need of having harmonised production systems and goods. Majone (2008) associates the emergence of this type of regulation to the growth of free trade from the 1970s, whereby the need for standardised goods increased. In self-regulation, it is assumed that the market incentivises actors and firms

to self-comply with transnational practices, standards and certifications (Bartley, 2007; Job & Honaker, 2002). In effect, self-regulation is a market-based conditional system of regulation in which access to markets is based on willingness to voluntarily comply with standards.

When self-regulation is attained, the space for state engagement in regulation is minimised (Grabosky, 2017). Likewise, capacity building, training and education may play a central role in enabling firms and actors to self-regulate (Job & Honaker, 2002). However, self-regulation has been critiqued for its reliance on actors being rational to comply in order to take advantage of market opportunities. As such, in situations where such incentives do not exist or actors do not have the capacity to do so, self-regulation may fail. In addition, free-riding individuals may also create problems in self-regulatory systems because non-compliance by free-riders can be masked by the effort of complying individuals.

3.9.2 Meta-Regulation

The concept of meta-regulation has been associated with the idea of state oversight over private regulatory systems. Grabosky (2017) associated the rise of meta-regulation to three main factors that included; lack of state capacity to regulate the complex structures of globalisation, hence, relying on private regulation. Second, the vacuum left by state withdrawal due to neo-liberal reforms and the eventual rise of private regulators. Third, the diffusion of information and technology which increased the capacity of non-state actors to access knowledge and skills necessary for regulation. Meta-regulation is, therefore, associated with government agencies regulating the regulatory activities of private and civil society actors (J. Braithwaite, 2017). The state does this through specialised state institutions created to facilitate and enhance enforcement of rules.

In TCR, meta-regulation can be regarded as state action over private sector activities in order to stem their opportunism, for instance a state agency acting to prevent insider trading or accounting malpractices. In meta-regulation, the state remains at the centre of regulation and uses different policy and non-policy instruments, incentives and sanctions to monitor the activities of non-state regulators in order to deter their opportunism and rent-seeking (Ayres & Braithwaite, 1992; Grabosky, 2017). Self-regulation and network regulation can be grouped under meta-regulation, if the state is responsible for providing oversight over these regulatory domains forming what Ayres and Braithwaite (1992) termed as regulatory tripartism to account for the inter-connectedness in regulation.

3.9.3 Network regulation

The concept of network regulation was proposed by Drahos (2004) building on Ayres and Braithwaite (1992) pyramid of compliance approach within responsive regulation. In network regulation, non-state actors play a leading role in creating regulatory arrangements outside state jurisdiction and in some cases the networks transcend borders to incorporate different states, NGOs and firms (Maher, 2017). In network regulation, non-legal institutions within the state take precedence in regulation based on the idea of shared cultural and/or competitive interest. Maher stipulated that network regulation has three central tenets. First is the drive for information exchange between different actors in the network. Second is the need for coordination of enforcement and compliance strategies by the actors in the network. The third is the objective for harmonisation of systems based on the need of achieving voluntary convergence in regulation.

As a result of the convergence component, J. Braithwaite (2017) has argued that this regulation system is ideal for developing countries where state agencies may wish to fulfil their regulatory responsibilities but lack the capacity to do so. However, network regulation has been critiqued for embedding unequal power relationships across or within the network with the assumption that horizontal power relationship will emerge within the network (Maher, 2017). Likewise, creating and sustaining compliance within some networks may be a challenge, especially if networks are amorphous in nature with no clear membership criteria, shared norms, values and interest (Haas, 1992). For this study, these regulatory approaches were applied in order to answer research question two; the nature of regulatory and compliance systems in the Kenyan FFV value chain especially within the prevailing structure of vertical coordination. The next section introduces and discusses compliance strategies that were adopted for this research project.

3.10 Compliance Strategies

Parker and Nielsen (2017, p. 3) relate compliance to individuals attitudinal and behavioural responses to regulation. Compliance and regulation are often in dialectical unity with regulation being about controlling, steering and influencing and when individuals positively respond to regulations, they are said to comply. Hence, the bridge between regulations to compliance is enforcement which includes the methods used in regulation to elicit positive behavioural and attitudinal response (Parker & Nielsen, 2017). Regulation, enforcement and compliance occur within a regulatory community comprising of different sub-cultural groups with their own value, norms beliefs and processes (V. Braithwaite, 2017, p.

29). In the literature, different compliance systems have been proposed falling under either self-compliance in which individuals obey laws due to fear of sanctions and punishment or because obeying the law is the right thing to do (Murphy, 2017). Two main approaches to compliance were adopted in the study; mandatory and voluntary approach as discussed below.

3.10.1 Mandatory Compliance

This has its origin in criminology studies in which the focus of the regulator is to enforce rules to deter bad behaviour. This approach assumes that the regulatee is not willing to comply with rules, therefore, they must be forced to comply through use of force and sanctions or threat of force and sanctions (May, 2005). As such, this model of compliance has been associated with the traditional approach of top-down regulation (Grabosky, 1995). Even so, mandatory compliance is found in modern regulatory systems such as in food industry whereby compulsory standards have been introduced in order to deter food contaminations. In this approach, the regulatee complies because of fear of sanctions, for instance loss of market access. Likewise, legal mechanisms can be introduced to control behaviour with different regulatory agencies responsible for enforcement of rules (Murphy, 2017). This type of compliance has been associated with meta-regulation in which the state plays a central role, through its regulatory agencies to monitor and regulate activities of firms (May, 2005)

3.10.2 Voluntary compliance

Voluntary compliance is related to the view that it is morally right to obey laws (Tyler, 1990). Voluntary compliance involves individuals and firms acknowledging that it is their duty to comply with regulatory requirements irrespective of a regulator's presence. As such, voluntary compliance is viewed as a morally based normative approach to self-regulation. Three approaches to voluntary compliance have been proposed in the literature. The first is drawn from Becker (1968) on rationality in which the contention is that the instrumental need for self-gain in individuals results in voluntary compliance. Individuals are perceived to be rational actors who analyse the opportunities and risks attached to obeying or disobeying the law, hence an individual chooses to obey the law (Murphy, 2017).

However, rationality as a basis for compliance has been critiqued for its limitation in situations where there is no cost and benefits attached or areas of shared resources (Murphy, 2017). The second approach to voluntary compliance is associated with the idea of legitimacy. Legitimacy is related to the degree to which the regulatee holds/views the regulator as having the right to govern his/her behaviour (Murphy, 2017). In this approach, if individuals and firms view the

regulator as a legitimate entity, they comply with rules even if they do not like the laws prescribed. Hence, in legitimacy, relationships are paramount because how regulatees and the regulator perceive of each other, within a negotiated compliance space, determines legitimacy and trustworthiness (V. Braithwaite, 2017).

The third approach to voluntary compliance is the morally based perspective proposed by Tyler (1990). Tyler argued that regulatees comply with regulations because it is morally right to do so especially if the regulations align with their values. Individual and firms are viewed as committed moral actors motivated to comply with regulations in the absence of sanctions, threat and punishment (J. Braithwaite, 2017). These compliance approaches were used to interpret the Kenyan state, farmers and private sector actors' regulatory relationship and how this influenced compliance within the MP theory. In analysing the compliance system in Kenyan FFV value chain, the regulatory and enforcement systems were also exposed. The motivational postures regulatory theory is discussed below as is proposed by Ayres and Braithwaite (1992).

3.11 Motivational Postures within the Pyramid of Enforcement Strategies

The pyramid of enforcement strategies was proposed by Ian Ayres and John Braithwaite (1992) in their book: *Responsive Regulation; Transcending the Deregulation Debate*. In this, Ayres and Braithwaite, proposed an alternative regulation theory that transcended the theoretical divide in regulation at the time between pro-regulation and deregulation (Ayres & Braithwaite, 1992, p. 15). Ayres and Braithwaite concerned themselves with the question of what triggers regulation from the regulator and the subsequent response from the regulatee. They proposed a regulation approach based on responsiveness in which regulation would respond to the structure of the industry as actors get attuned to the needs of each other.

Responsive regulation focused on the how regulation can elicit compliance in firms and individuals outside the traditional dyad of punishment/sanction or reward (J. Braithwaite, 1985; Parker, 2013). Punishment as the first instrument to compliance was rejected with the means of bringing about compliance escalating up a pyramid from subtle instruments to severe ones like sanctions. Thus, Ayres and Braithwaite, introduced a choice factor in compliance by arguing that punishment in non-compliance should not always be the first choice, rather, persuasion because punishment may bring about resentment of the regulator by the regulatee. Ayres and Braithwaite (1992) proposed a pyramid of enforcement as represented in Figure 10 below:

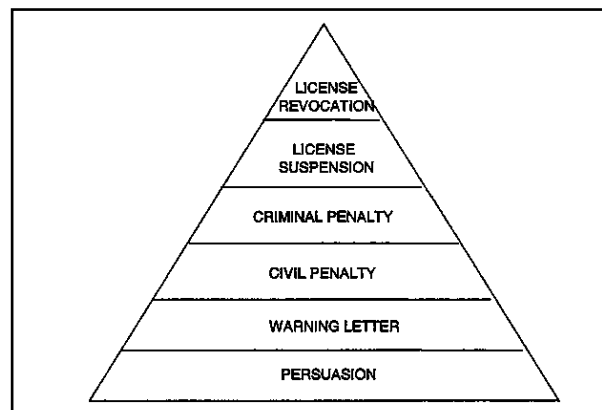


Figure 10: Enforcement Pyramid for Individually Regulated Economy. Source: Ayres and Braithwaite (1992, p. 35)

Figure 10 represents Ayres and Braithwaite position that enforcement actions ought to begin from subtle means, such as persuasion at the bottom of the pyramid, before force and sanctions are applied upwards in the pyramid. As the pyramid shows, if persuasion fails, the next step is a warning letter with sanctions escalating upwards to the apex of the pyramid where the license is revoked. Ayres and Braithwaite asserted that compliance breakdown is likely when a company has only one deterrence option rather than progressive sanctions. Over time, V. Braithwaite (2002a) improved Ayres and Braithwaite pyramid by including other factors which came to form the pyramid of MP. This is briefly discussed below as it was adopted for this study.

3.11.1 Motivational postures in the pyramid of enforcement

The concept of motivational postures was introduced by Valerie Braithwaite in the 2002 edited book *Taxing Democracy* which was based on a comprehensive study of Australians compliance with taxation requirements. Braithwaite and her colleagues studied the relationship between Australian Taxation Office (ATO) and taxpayers and how this relationship determined how the citizens complied with taxation requirements. In this, V. Braithwaite (2002a) incorporated the idea of relational values into compliance systems in which trust between the regulator, in this case ATO, and the regulatees, citizens, determined the processes and outcome to compliance. In the pyramid, compliance has two outages; process outage and outcome outage with the negotiated space between the regulator and regulatee determining legitimacy and trustworthiness between regulator and regulatee and thus compliance (V. Braithwaite, 2017)

Motivational postures was defined by V. Braithwaite, Braithwaite, Gibson, and Makkai (1994, p. 364) by as the “conglomerates of beliefs, attitudes, preferences, interests, and feelings that together communicate the degree to which an individual accepts the agenda of the regulator, in principle, and endorses the way in which the regulator functions and carries out duties on a daily basis.” In other words, Braithwaite et al explained that regulatees often hold several motivations related to compliance and exhibit a range of compliance positions which are known as motivational postures. The postures encapsulate the social distance between regulatees and regulators and can be related to particular coping mechanism adopted as protective mechanisms in response to the threats (Bartel & Barclay, 2011).

As such, MP in compliance, comprises relational and positional messages that a regulatee sends to the regulator about the control they have over him/her. The greater the social distance, the less effective is regulation and regulatory agencies bid to persuade regulatees to comply with regulations (V. Braithwaite, 2017). The social distance being communicated by regulatee in MP can either be to like or to defer to the regulating authority. Therefore, to V. Braithwaite (2017) a regulatee may like a regulator but not necessarily defer to their judgement, likewise a regulatee may defer to a regulator’s judgement but not necessarily like them. V. Braithwaite (2002a) proposed a pyramid of enforcement comprising of MP to reflect the complex relationships in regulation and compliance. The enforcement pyramid as proposed by Valarie Braithwaite is represented in Figure 11:

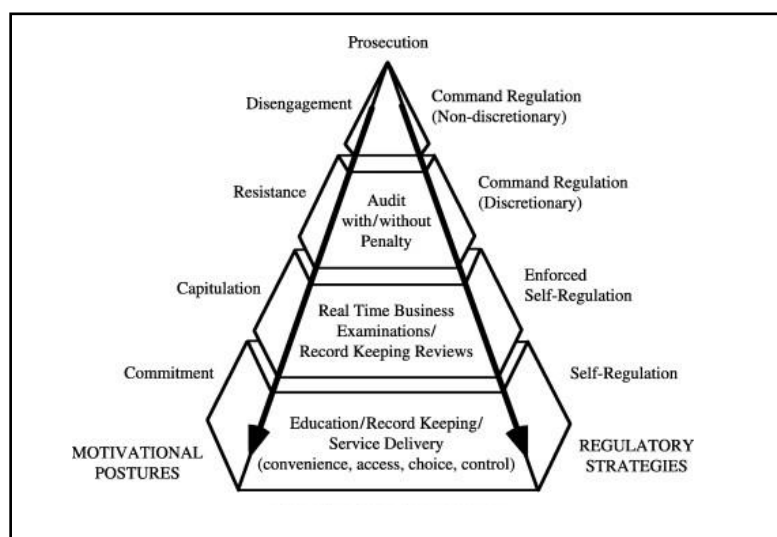


Figure 11: Pyramid of Enforcement Strategies. Source: V. Braithwaite (2002a, p. 3)

In general Valerie Braithwaite presents 5 types of MP within the enforcement pyramid. The postures include commitment, capitulation, resistance, disengagement and game-playing and these are briefly described below:

1. **Commitment:** This according to V. Braithwaite is an act of goodwill of the regulatee on the regulator communicating their willingness to act in accordance with the requirements from the regulator. In commitment, the regulatee likes the regulator and communicates with regulator by willingly complying.
2. **Capitulation:** This, according to V. Braithwaite (2017), occurs when the regulatee does not necessarily like the regulator but accepts the legitimacy of the regulating authority and thus defers to their authority. As such, Braithwaite has pointed out that commitment and capitulation are MP of regulatee deference to authority while the three below are of defiance.
3. **Resistance:** This according to V. Braithwaite (2002a) reflects the doubts that regulatees have over the regulator, hence, regulatee taking a stance of resistance towards the regulating authority. Resistance is a sign of dissatisfaction of the regulatee and a plea by the regulatee to the regulator to be fair and respectful (V. Braithwaite, 2017). The way resistance is successfully managed by the regulator determines if the MP evolves to disengagement or back to capitulation.
4. **Disengagement:** Disengagement and game playing, according to V. Braithwaite (2017), are stances that can be viewed as a threat to the authority. Disengagement MP, signals widespread resistance by regulatees in which they move to the point of challenging the authority of the regulator. At this point, according to V. Braithwaite (2017), the social distance between the regulatee and the regulator has increased because regulatees have taken the action of blocking the regulator.
5. **Game Playing:** In this MP, the regulatee is openly defying the regulator and thus the regulatee attitude to the law is negative and they manipulate the law to fit their purpose rather than obey it (V. Braithwaite, 2002a). In game-playing, the regulatee is actively looking for loopholes in regulation to effectively undermine the regulator's authority.

For this research project, these compliance approaches were applied to explore the smallholder farmers and the exporters' response to state regulation and GlobalGAP in order to understand

the relationship between the regulators and the regulatees and how the relationship informs compliance. As such, the approach allowed the study to activate TCR, hence, understand how and when farmers and exporters comply with regulation and when and why they resist regulation. Therefore, the application of MP, allowed this study to go beyond mere analysis of regulation and compliance, but also to explore the nature of relationships between regulatees and regulators and analyse if regulation in the value chain was responsive. Thereby, the study was able to explain why non-compliance to GlobalGAP may be prevalent at certain ends and not at others.

Moreover, the MP theory also allowed the study to explore the response of regulators to prevailing regulatory problems through analysis of escalation and de-escalation process in the pyramid. For instance, escalation of the farmers' MP from capitulation to resistance to disengagement was predicted as a function of state regulators passiveness to responding to farmers' complaints and dissatisfaction. Equally, the analysis of regulators and regulatees MP was instrumental in exploring the study big question; why smallholder farmers would participate in a value chain which seemingly excludes them i.e. look for presence or absence of responsive regulation in the value chain.

3.12 Summary of the Chapter's Key Arguments

This chapter has discussed the governance and regulatory frameworks that were adopted for this study to analyse the Kenyan FFV export value chain. The chapter began by discussing Oliver Williamson's TCE approach as a theory of vertical coordination. The chapter has argued that TCE, accepts that transactions have various transaction costs and organizational hazards attached to them and as such, an entrepreneur selects the governance arrangement that mitigates these hazards and the costs. At the heart of TCE argument is asset specificity which greatly affects the organisation of economic activities and choice of governance arrangement.

Governance forms in TCE include, markets, hybrids, hierarchies and other bureaucracies with each having their own advantages and disadvantage. The entrepreneur selects the best arrangement in an effort to reduce inefficiencies and costs associated with vertical integration being the governance of last resort. The chapter has also explained the conceptual framework that was used to analyse the structure of vertical coordination in the Kenyan FFV value chain. The chapter has also discussed TCR as the theoretical framework that was adopted to actualise various regulatory and compliance systems in the Kenyan value chain. In TCR, regulation is

conceptualised as a governance framework best suited in different transactional situations to moderate opportunism.

Moreover, TCR makes room for the state in governance and also accepts that state actors can also be opportunistic in their actions. In this, the chapter has operationalised the different regulatory and compliance approaches that were applied in the study including MP theory which views regulation is relationship based. The relationship is between the regulatee and the regulator with responsive regulation from the state regulator bringing about closer social distance between the regulator and the regulatee. The next chapter discusses the study research methodology that was used for data collection.

CHAPTER FOUR

THE STUDY RESEARCH METHODOLOGY

4.1 Introduction

Considering the study research questions, literature review and theoretical framework above, this chapter discusses the methodology and the methods that were adopted in the study to answer the research questions posed. This research project sought to explore the structure of vertical coordination and the nature of regulation in the Kenyan fruits and vegetable export sector. The research methods adopted for this study were set to explore and analyse smallholder farmers, state and non-state actors' interactions in the value chain within their own setting. The study participants included FFV smallholder export farmers, middlemen, small and large fresh produce exporting companies and their TA, CBs, NGOs, a Development Consultant and different public and private sector organisations. The number and characteristics of these research participants are described further below in the chapter.

Marandet (2012) asserted that a good research project should strive to distinguish itself by the choice of and use of methodology which then frames the methods, the ethical process, data collection and analysis processes, hence, the data explanatory power. In the study, the selection of the philosophical perspective, the methodology and the methods, was influenced by TCE as the study theoretical framework while actual data collection was framed within an inductive logical approach. From the beginning the idea was to put in place a research framework that would yield data to sufficiently answer the research questions posed as well as act within the dynamics of the practice of rural development.

The fieldwork took place in Kenya's rural and urban settings with a bottom-up strategy to data collection strategy adopted for the study. In this approach, the data collection process was in two main stages; the first stage comprised of the use of mixed methods to collect data from smallholder FFV farmers from 6 different counties²⁸. The second stage involved the use of qualitative methods to collect data from public and private organisations in urban settings of Nairobi and Thika towns. The criteria and justification for the selection of the method used, ethical issues encountered, sampling method applied and data analysis procedure is discussed in this chapter. The first part of the chapter discusses the study research methodology, before

²⁸ Kenya adopted a new constitution in 2010 ushering in a new system of governance, in which a devolved system was created comprising of 47 administrative units called counties with elected governors.

sampling process, data collection process, the logic of inquiry and fieldwork in practice are discussed.

4.2 The Study Research Methodology

Broadly speaking, the objectives of this research project, its theoretical framework, its epistemology, scope and the nature of the inquiry influenced the adoption of a mixed methods research methodology in data collection. The mixed methods approach was adopted with qualitative and quantitative research techniques, approaches, concepts and language combined to different degrees within the study (Johnson & Onwuegbuzie, 2004, p. 17). Mixed methods offered flexibility and enrich the data in regard to the application of different strategies and approaches (Johnson & Turner, 2003). As such, there was triangulation, complementarity and flexibility in data collection process enabling a broader perspective into the inquiry.

In applying mixed methods, the qualitative method, incorporating focus group discussions and interviews, was the primary data collection technique with a semi-structured questionnaire being secondary and strictly limited to stage one of data collection. To actualise mixed methods approach, Creswell's (2009) guide in choosing the right research design for mixed methods studies was adopted. Creswell proposed a two-step process to guide researchers in the choice of the use of mixed methods approach. The first step is concerned with when the mixing should occur. Creswell argued that the mixing can occur at any stage of the research i.e. at the beginning, middle or at the end or the mixing can be done concurrently throughout the research process.

For this study, the mixing occurred at the beginning of data collection as described further below. Similarly, Carvalho and White's (1997) three approaches of combining qualitative and quantitative methods in research, integrating, sequencing and merging, were adopted. These two approaches are explained as adopted for this study. First the mixing in the study took place at the first stage of data collection which involved the use of interviews, document analysis, focus group discussions, un-structured observation and a semi-structured questionnaire to collect data among the smallholder farmers. In the process, data collection tools were integrated, sequenced and merged in the field, with the semi-structured questionnaire used first, followed by the interviews/focus group discussions and document analysis and observation taking place simultaneously with the interviews/focus group discussions.

The second step that Creswell (2009) proposes in regard to mixed methods research design is concerned with how the mixing of qualitative and quantitative methods should be done i.e. the

right framework for integration that a researcher can settle on as Carvalho and White (1997) term it. According to Creswell, the mixing can either be strictly confined at one end of the continuum, kept separate on each end of the continuum, or combined in the middle of the continuum. Creswell, proposed various designs that a researcher can choose from within the mixed research methodology. Creswell's (2009) mixing design that was adopted for this study was the concurrent transformative design.

In this design, both the qualitative and quantitative data were collected simultaneously in the study. This involved interviews/focus group discussions and the use of the semi-structured questionnaire taking place in stage one of data collection. In stage one of fieldwork, first a semi-structured questionnaire was used to collect smallholder farmers' demographic and socio-economic data and other descriptive statistics of interest. The questionnaire was also used to collect smallholder farmers' other quantifiable data²⁹. Thereafter, interviews, observations and focus group discussions were used to collect qualitative data in stage one by further asking questions and interrogating the farmers' responses related to the questionnaire.

For instance, the questionnaire asked a question about farmers' training in year 1, 2 and 3 of FFV farming while the interviews and focus group discussions asked about the form this training took and the topics covered. The middlemen and TAs were also interviewed in stage one of data collection. In stage two of fieldwork, data collection involved the use of interviews and observation only to collect data from various organisations. The main method in this stage was interviewed, with observation used to support interviews. Therefore, the qualitative/quantitative mixing took place in stage one of fieldwork.

The reason for this use of quantitative method on the first part of data collection was informed by the need to triangulate farmers' responses, collect data on the smallholder farmers' socio-economic and demographic data and other descriptive statistics datasets of interest. For stage two, the main aim was to have in-depth discussions with individuals in key state and private agencies in the value chain on their role in the value chain and their relationships with the farmers. Initially the study had planned to use a survey to collect data from 150 smallholders, analyse the data and select a smaller sample of farmers to intensively study. However, it

²⁹ See Appendix 5 for the copy of the semi-structured questionnaire. Other data collection instruments are also attached in the appendix.

became clear that identifying smallholder farmers with diverse demographic and social-economic characteristics of interest to the study was not possible.

For instance, it was not possible to identify part-time farmers i.e. the farmers who worked full-time in formal employment and also farmed FFV because those whom I was pointed towards by gatekeepers had ceased growing FFV or were unavailable. As a result, this was replaced by adopting the mixed method approach described above whereby interviews/focus group discussion and the semi-structured questionnaire, were used simultaneously for each farmer in the study. To attain farmers' diversity, fieldwork was spread in 6 different counties in Kenya as described below. To operationalise transformative research design above, the study adopted a non-probability sampling process described in the next section.

4.3 The Study Sampling Process

The study adopted basic purposive mixed methods sampling process while snowballing was also adopted as a secondary approach. The basic purposive mixed methods sampling process is a non-probability sampling approach applicable to studies that do not aim to generalise findings to the entire population, but rather to attain depth in the data by choosing a relatively small number of participants to study intensively (Creswell, 2009; Mertens, 2014). Accordingly, the basic purposive mixed method sampling approach is used in mixed methods studies to pick information-rich participants who can give detailed information on the phenomenon of research interest.

Teddlie and Yu (2007) proposed a mixed methods sampling continuum guide that was adopted in the study, to guide in the choice of right sampling process for data collection. The continuum is represented in Figure 12 below:

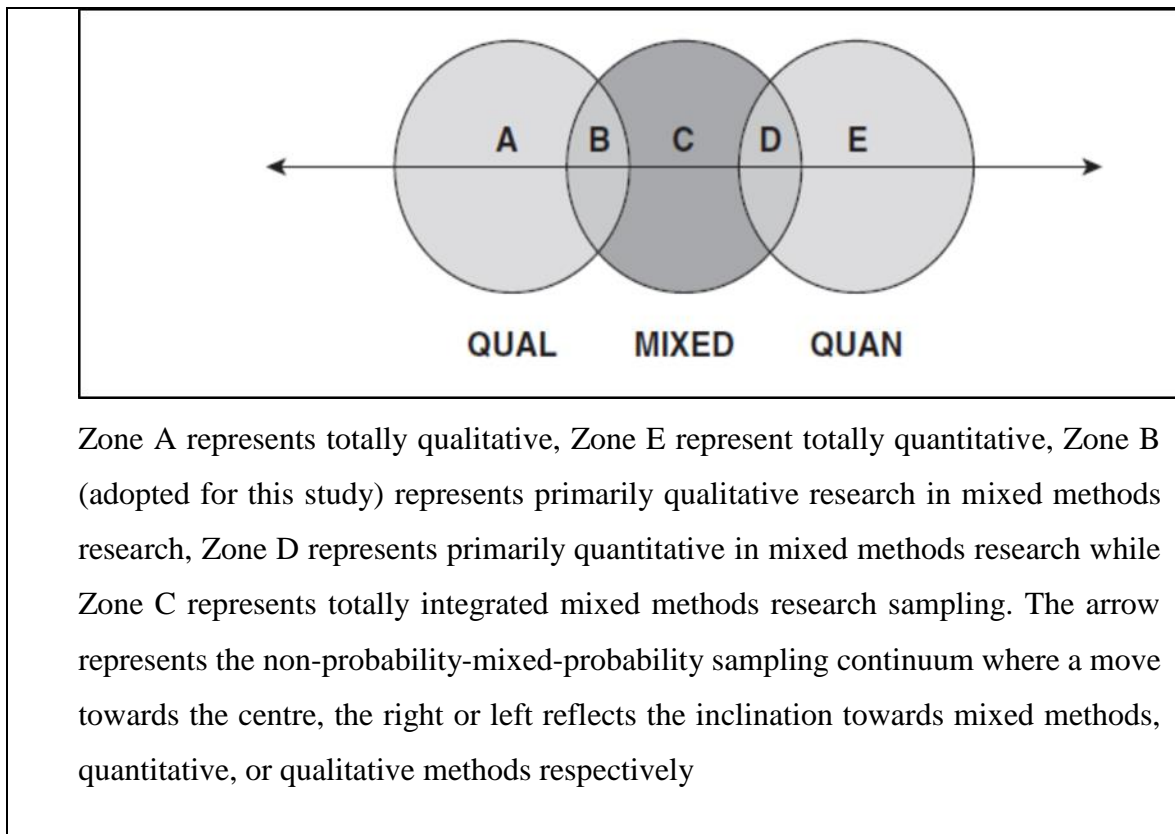


Figure 12: Basic Purposive Mixed Methods Sampling Continuum. Source: Teddlie (2005)

The sampling process adopted for this study fell within Zone B of the mixed methods research design continuum in Figure 12, whereby mixed methods primarily qualitative were adopted for the study. The basic purposive mixed methods sampling process was actualised by using gatekeepers to identify and select smallholder farmers with the desired characteristics for the study. However, challenges were encountered in using this sampling approach because some of the participants identified by the gatekeepers were found to have either migrated or dropped out of the FFV value chain. The study had also aimed at including smallholders with University or college degree and diplomas. However, it was not possible to identify a large sample of these farmers for the reasons given above. Again, there was no formal export FFV farmers' association in Kenya, whom one could approach to assist with farmers' identification.

Hence, the study's main gatekeepers were various exporters' and various organisations. Throughout fieldwork, there was back and forth interaction with various gatekeepers to continually populate the smallholder farmers' participants list. The sampling process for smallholder farmers took place in the following counties; Nandi, Bomet, Kirinyaga, Murang'a, Nyeri and Nairobi. The basic purposive sampling was operationalised as follows. First, contact

was made with various gatekeepers who were mainly individuals working in various organisations in Kenyan FFV sector including exporters, Solidaridad, HCD and FPEAK.

When meeting the gatekeepers, the required ethical process was followed with the researcher introducing himself and the research. Thereafter, conversations with the gatekeepers proceeded. After identification of the farmers, the researcher contacted the farmers through phone calls, the researcher introduced himself and the research project and then requested for the farmer's participation in the study. An appointment for face to face interaction was then set with the farmers. It was through these initial phone calls that it became clear that some of the smallholder farmers identified by the gatekeepers had ceased growing FFV, migrated or were simply unavailable.

This sampling process yielded 62 smallholder farmers' comprising 40 males and 22 females with varied demographic characteristics as described in Chapter Six of the thesis. The farmers sampled were in five smallholder farmer groups and there were also six individual farmers interviewed separately with three farmers in a group but interviewed separately and three not affiliated with any group. In the sampling process, priority was given to farmer groups with gender balance. Hence, the final sample contained smallholders with characteristics of interest to the study who were then intensively studied (Patton, 2002).

The second stage of fieldwork was based in Nairobi County and Thika town in Murang'a County. In the second stage, basic purpose sampling was used to directly identify various organisations of interest within the Kenyan FFV export value chain. The organisations sampled included five small and large exporting companies, state agencies including KEPHIS, HCD, PCPB and KALRO, private sector agencies FPEAK, AAK, two middlemen, two TA, two CBs, two NGOs Solidaridad and Agriprofocus and a Private Sector Consultant. Snowballing sampling process was also used in stage two, whereby participants in some organisation of interest referred the researcher to other organisations that were initially not included in the study. For instance, initially the following participants were not included in the study the Development Consultant, middlemen, TAs, Agriprofocus, PCPB, AAK and KALRO. However, other participants identified these actors as crucial for the study and they were incorporated into the study. The process of actual data collection is described below.

4.4 Development Fieldwork in Practice

Research ethics demands that a researcher should be aware of his/her positionality in the field, especially in rural development related research. Two types of positionality have been articulated in the literature; insider and outsider. The outsider position is regarded as when the researcher embarks on fieldwork in an area and culture unfamiliar to him/her such as foreign country or one's own country but in a different part with a unique sub-culture (Corbin-Dwyer & Buckle, 2009). Conversely, according to Corbin-Dwyer & Buckle, insider positionality is when a researcher conducts fieldwork in an area and population in which they are also members and share an identity.

Despite the dichotomies, Karnieli-Miller, Strier, and Pessach (2009) have stressed that the power relations and positionality in research are often in a continuum from a hierarchical power to egalitarianism with no clear-cut absolutes. As such the researcher often occupies the space between the insider-outsider positionality neither falling completely on one side nor the other (Corbin-Dwyer & Buckle, 2009). For this study, different positionality was adopted at different times and this was constantly negotiated from one time to another for successful completion of the fieldwork.

I began the fieldwork with an insider position for different reasons including the fieldwork was located in my home country Kenya, in a sector, agriculture, and County, Nandi, where I had previously worked. I was also an outsider in various ways including collecting data in some counties where I had previously never visited such as Murang'a, Bomet, Kirinyaga and Nyeri Counties, with different culture and language. However, I never found myself being too much of an outsider in these situations, because of the shared language of Swahili and identity. The first step in data collection was piloting of the semi-structured survey and interview instruments.

This was done in two stages. In the first stage, the semi-structured survey and interview guide instruments were piloted among 10 farmers in Nairobi. This was a random piloting in FPEAK offices in Nairobi when the researcher met a group of farmers while attending a meeting with a potential gatekeeper. This piloting was useful in the study as it identified the key theme of contract farming which eventually shaped the study going forward. The data from the first stage piloting were used to improve the instruments and immediately after the improved instruments were re-tested in Nandi County among three farmers to test its accuracy in a different environment located 300 kilometres (KM) from the first piloting site.

In the second piloting, minor corrections were done on the instruments involving merging of some questions to avoid repetition and re-writing other questions to make them clearer. Thus, the data in the second stage of piloting were included in the study. The piloting stage and the improvement of the instruments lasted for three weeks from late June to mid-July 2016. Thereafter, the sampling of smallholder farmers began as discussed in the previous section. With the assistance of gatekeepers, smallholder farmers in six counties of Nandi, Nairobi, Bomet, Nyeri, Kirinyaga and Murang'a were identified and selected for the study. The choice of the specific counties for fieldwork was based on the export crop being grown, the concentration of smallholder farmers and the locality of the area i.e. urban, rural or peri-urban as well as the presence of an ongoing or previous donor-funded FFV project in the area.

The fieldwork ethical process was adhered to, including applying for the research permit in June 2016 from the National Commission for Science Technology and Innovation, a Kenyan state agency responsible for regulating research. The ethical process was also followed before data collection began with the researcher first introducing himself and the study, the process of data collection, data handling process as well as the participants' rights before their consent was obtained. After this, the semi-structured questionnaire was then administered to the farmers individually, thereafter interviews or focus group discussion was done.

With the help of local gatekeepers in the field, who were made up of the TAs employed by the exporters, smallholder farmers were contacted individually or through group leaders. There are thousands of smallholder farmers in Kenyan FFV value chain, hence the ones who were finally interviewed were those who were readily available. Data collection proceeded in the order of Bomet, Kirinyaga, Nyeri, Murang'a and Nairobi³⁰ counties. The farmers were interviewed as individuals or in focus group discussions for farmers in groups. In Bomet County nine smallholder farmers' producing avocados and beneficiaries of a Dutch government-funded aid programme, Horticulture and Food Security Programme (HFSP) participated in a focus group discussion.

In Kirinyaga County, four focus group discussions were carried out among 23 farmers producing snow peas. In the same county two middlemen and one TA³¹ was interviewed. In

³⁰ See the Appendix for the maps of these Counties.

³¹ The Technical Assistants are employees of different exporting companies whose role is to monitor farmers and work with farmers towards compliance to the food standards. Their roles are discussed in detail in Chapter Six of the thesis.

Nyeri County, four focus group discussions were carried out among 24 French beans producing farmers. A farmer group in Nyeri County was also a previous beneficiary of the HFSP project. In addition, one French beans farmer not affiliated to a farmer group and one TA was also interviewed in Nyeri County. Lastly, two French bean growing farmers were interviewed in Murang'a and Nairobi Counties. In effect, the total number of participants in the first stage of the fieldwork was 62 farmers, two middlemen and two TA. This stage of data collection lasted for three months from mid-July to mid-October 2016. At the point of data saturation, focus group discussions and interviews among the farmers, stopped.

The second stage of fieldwork involved interviewing participants from different organisations. The first organisation interviewed were the fresh produce exporting companies. These companies were segregated into two groups: five small and large exporters respectively. The segregation was based on HCD categorisation of small exporting companies as the ones who exported less than three tonnes of produce per week while the large ones exported over three tonnes per week. Practically, the small exporters were made up of the companies who were using HCD pack-house facilities at JKIA. In contrast, the large exporters had their own pack-house facilities at JKIA.

Contacts with the small companies were made through HCD pack-house manager at JKIA who then introduced me to the various small companies' Quality Assurance (QA) managers. Eight small exporters were contacted for interviews. However, only five responded positively to the request. Unlike the small exporters, accessing the large exporters was difficult. Direct contact was made with twelve exporters but only five responded positively indicating their willingness to participate in the study. Additionally, four exporters were contacted through email but none responded to the emails and follow-up phone calls. Hence, only the five who responded positively were interviewed. Interviews were done with the QAs for the ten exporting companies. The small exporters were interviewed first mainly because of the ease of accessing them before the large ones were interviewed later. This stage of data collection took place from October to November 2016.

The next stage of the fieldwork involved data collection from the private sector organisations and the two NGOs. These organisations included; FPEAK, AAK, two CBs and two NGOs Solidaridad and Agriprofocus. Direct contacts were made with these organisations requesting their participation in the study. Thereafter, a convenient day, time and place was scheduled for interviews. For the CBs, contact was made with four CBs but only two responded positively.

For these organisations, interviews were done with the following personnel: production manager and a training facilitator for FPEAK, training manager for AAK, QA for the two CBs and Program Officers for the two NGOs. This part of data collection lasted for one month from late November to mid-December 2016.

The final fieldwork stage involved interviews with the public sector agencies comprising; KEPHIS, HCD, PCPB and KALRO and the Development Consultant. The process of making contacts with these agencies was as follows. First, I drafted a letter of introduction to the various directors of these agencies, where I introduced myself and the study while making a request for interviews. All the agencies responded positively except PCPB who declined participation in the study. Hence, the data from PCPB were informally collected from their staff at the Nairobi International Trade Fair, whereby general questions were asked about their role in the FFV sector. The first interview was with PCPB at the Nairobi International Trade Fair in October 2016, followed by HCD, KEPHIS and lastly KALRO. For the state agencies the following personnel were interviewed: two mid-level staff for PCPB, two senior scientists, a Socio-Economist and a Plant Breeder for KALRO, an Export Manager for HCD and a Senior Laboratory Officer for KEPHIS.

The last participant to be interviewed in the study, was a Private Sector Consultant who had worked in the sector as a legal officer for over twenty years first with various exporters, then Kenyan state agencies and later donor agencies. Thereby, the consultant had deep knowledge of the sector and she provided a historical and insider/outsider view of the sector through time. The last stage of data collection lasted for one and half months taking place in-between the other stages up to January 2017. For instance, interviews with PCPB were done in October 2016 in order to take advantage of their presence in the Nairobi International Trade Fair while interviews with the exporters were ongoing. The total number of research participants and their affiliations is summarised in Table 9 below.

Table 9: Study Final Data Collection Plan. Source: Fieldwork Notes, 2016-2017

Research participant	Instrument used	Organisation	Total
Smallholder farmers	<ul style="list-style-type: none"> • Interview schedule • Focus group discussion guide • Semi-structured questionnaire 	-	6 Farmers 9 Focus groups for 56 farmers 61 ³²
2 Middlemen	Focus group discussion	Private	1 focus group discussion
2 Technical Assistant	Interviews	Private	2 informal interviews
HCD, KALRO, KEPHIS, PCPB	Interview guide	State agencies	4 interviews with 6 participants; 2 participants each from KALRO and PCPB and 1 each from HCD and KEPHIS
FPEAK, 2 CBs, AAK, 1 Development Consultant & 10 exporters	Interview guide	Private sector agencies	16 interviews; 10 with exporters, 1 each with the 2 CBs, AAK and the Consultant and 2 with 2 participants from FPEAK
Solidaridad and Agriprofocus	Interview guide	NGOs	2 separate interviews

The total number of research participants³³ in the study was 88 because in some organisations such as PCPB, KALRO and FPEAK two people were interviewed. The fieldwork lasted for seven months from July 2016 to January 2017 with the distribution of the months in data collection as described above. Hence, comprehensive and adequate data was collected from the

³² While there were 62 farmers in the study, the questionnaire was used for the 61 farmers only because the 62nd farmer had dropped out the FFV value chain and was in the process of re-joining at the point of fieldwork. Hence, only the interview guide was used to collect data from this participant.

³³ A full list of the research participants plus their coding as used in the study to report results, is attached to Appendix 13.

main actors in the Kenyan FFV export sector. The next section briefly discusses the research instruments used for data collection as shown in Table 9.

4.5 Data Collection Instruments

The main data collection instruments were interview schedule, focus group discussion guide and a semi-structured questionnaire. All the instruments were developed before fieldwork with piloting and improvements done at the start of the fieldwork. The design of these instruments was based on the literature reviewed, the research questions, previous experience working in the agriculture sector in Kenya and feedback from supervisors. For the organisational instruments, the first interviews were deemed as piloting and, thereafter, the instrument was improved by deleting unnecessary questions and merging others. The data were recorded in a digital voice recorder which was later downloaded into a laptop and safely stored in Dropbox after every data collection exercise. The questionnaires were simply put in a safe place under lock and key.

4.6 Data Analysis Process

The data analysis was in two stages. First the interviews and focus group discussions recordings were transcribed. The transcription process began in the field and this helped in the improvement of the data collection instruments as the fieldwork progressed. Second, thematic analysis was used to analyse the transcribed interviews and focus group discussions. Thematic analysis has been defined by Braun and Clarke (2006, p. 79) as the “method for identifying, analyzing and reporting patterns within data”. This involved, first, an intense and repeated reading of the transcripts to identify emerging patterns which were pinpointed, examined, re-examined and the patterns recorded in a notebook to form the codes.

Some of the emerging patterns identified that formed the codes included seasonality of demand, trust, contract farming, opportunism, reject problem, information problem, exit and re-entry, middlemen, compliance and regulation among other patterns. Eventually, the emerging themes were identified from the patterns and related to the literature and the theoretical framework. This process entailed note taking and reading of the notes vis-à-vis the study questions, literature and theoretical framework. For the semi-structured questionnaire, coding was done and the data entered into the STATA software where the data were analysed. The empirical results from the data analysis are reported in Chapters Five, Six and Seven. The next section describes the inductive approach as adopted for this study in the fieldwork.

4.7 Logics of Inquiry; an Inductive Approach to Fieldwork

The study was designed within a bottom-up approach which involved data collection commencing with the smallholders then the other participants. The reason for this approach was twofold: first to enable the researcher to pose questions emanating from the farmers to the other actors; and, second, it was to operationalise an inductive logic of inquiry approach in the field which progresses from a general worldview to a narrower and specific worldview (N. Gilbert, 2001). The inductive approach to research involves a four-stage process including observation, analysis, inference and then confirmation (Holland & Campbell, 2005; Stainton-Rogers, 2002).

The structure of the fieldwork from the farmers to the other participants enabled a reflective process to be adopted with emerging questions and grey area narratives included in the instruments for the other participants deemed as able to answer such questions. As such, participants from the state agencies were the last study participants because they were perceived to have, hypothetically, key knowledge of the sector and at the top of the 'pyramid'. Through this approach, the interview guides for the various organisations, was continually populated with questions, revised and improved. Hence, gaps, grey areas and different opinions were being asked and later re-framed differently to different categories of participants in order to get clarifications and draw out answers in contested areas such as the produce rejection problem in the value chain.

Within the inductive approach, a reflective process was adopted to improve on the quality of the data collection instruments. This was done as follows: after every interview or focus group discussion, the recordings were played as the researcher listened to the deliberations and the instruments were then reviewed and revised to eliminate repeated questions and add new ones emanating from the discussions. For instance, probing questions deemed important were included in the instruments as main questions through this process. Hence, as data collection progressed emerging themes were captured and other questions re-framed to be clearer including those that had not been anticipated such as smallholder farmers' cyclic behaviour of exiting and re-entering the value chain. The reflexive process used in the study is as represented in Figure 13 below:

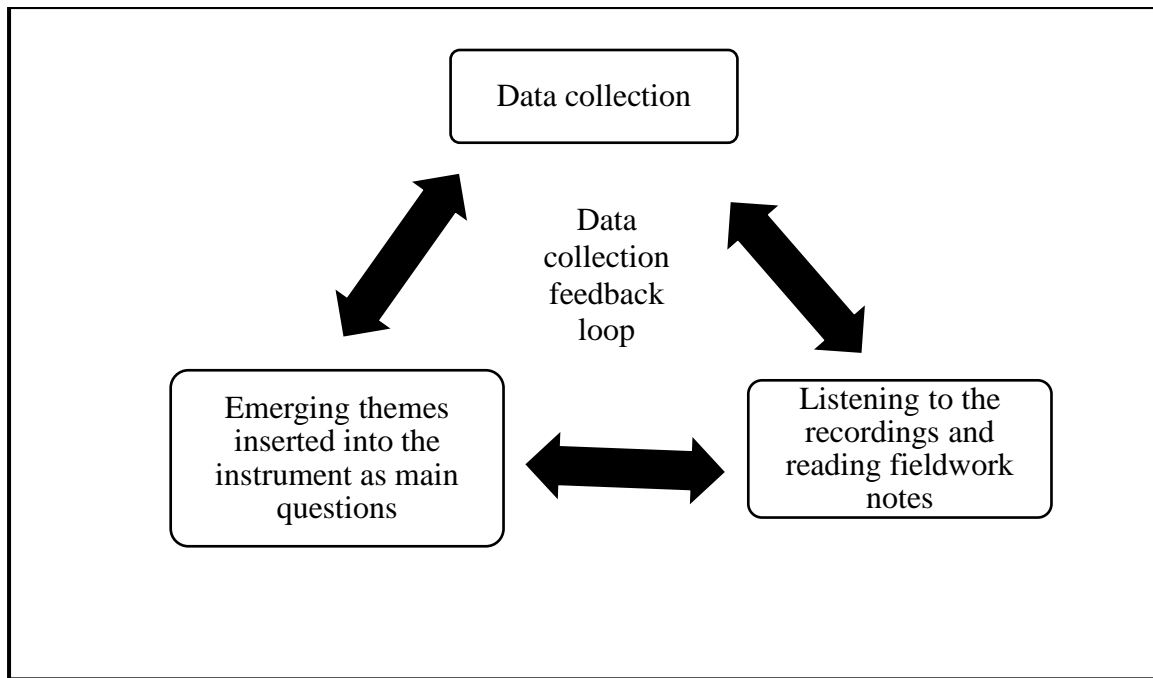


Figure 13: Data Collection Reflexive Process. Source: Fieldwork Notes, 2016-2017

As Figure 13 shows, the reflexive process allowed for a critical assessment of the data as the fieldwork progressed by engaging with the data and trying to make sense of it in order to allow for follow-ups and further probing on emerging themes. In principle, the use of inductive approach in research commences with observations and measurement which then shifts to identification of themes and patterns in the data, followed by the researcher forming an early tentative thesis that is explored further (Soiferman, 2010). Soiferman further maintains that in the inductive approach, the researcher does not approach the research situation with pre-set questions, but instead allows the questions to emerge and change as the researcher becomes familiar with what they are studying.

Data collection and analysis in inductive approach often run concurrently in a repetitive process that progresses from general themes to specific themes (Hodkinson, 1992). Hence, in contrast to a linear deductive³⁴ approach, the inductive approach can be a messy process of back and forth in data collection as the researcher seeks to make sense of emerging themes. The

³⁴ Deductive research approach which is the opposite of inductive approach, is theory driven and based on preconceptions and hypothesis drawn from theories (Stainton-Rogers, 2002). Deductive approach is top-down in which a researcher begins from theory to hypothesis formulation to data collection to test a theory thus adding onto it theory or contradicting it (Hodkinson, 1992). However, the two methods are not mutually exclusive and some studies can use both approaches at the same time (Creswell & Clark, 2007).

framework of the research logic and the location of inductive approach in the logical continuum as was applied in this study is represented in Figure 14 below:

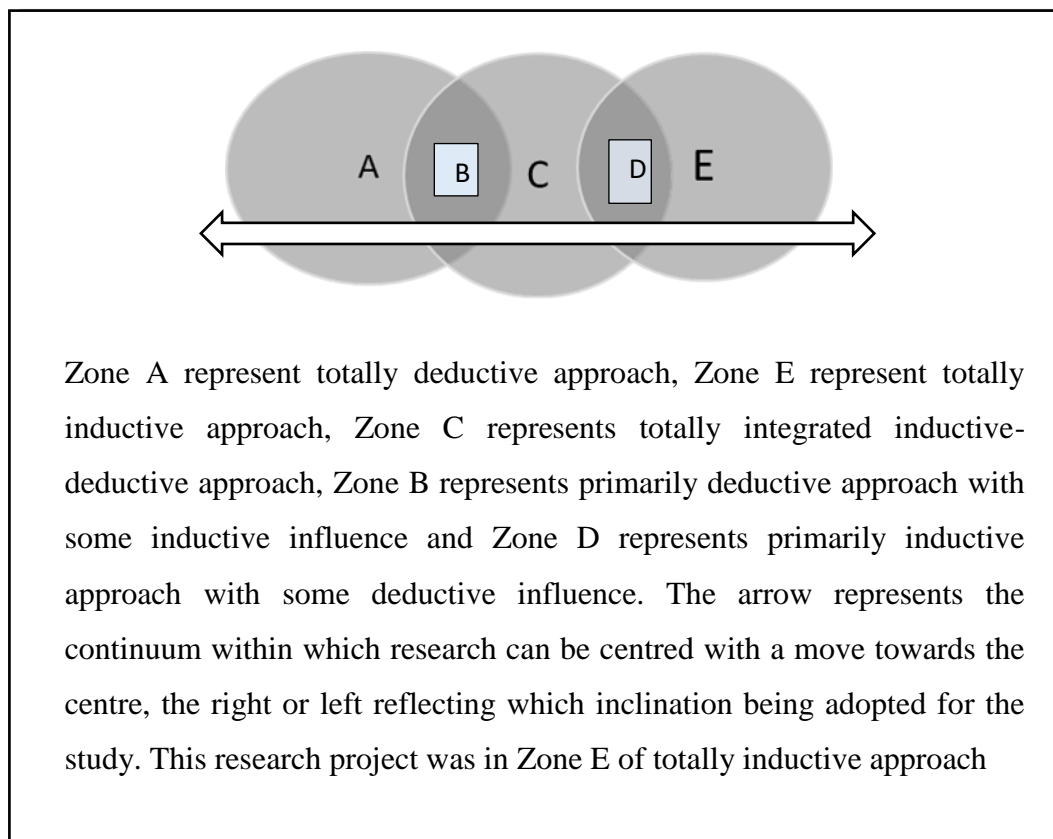


Figure 14: Research Logic of Inquiry Framework. Source: Fieldwork Notes, 2016-2017

As Figure 14 shows, the logic of inquiry lies within a continuum of deductive to inductive at opposite ends. For this study inductive approach was adopted allowing for testing of emerging study themes in the field and following up on gaps as described above. The next section discusses the fieldwork experience in Kenya in relation to ethics and the challenges encountered during data collection.

4.8 Fieldwork Difficulties Related to Researching Sensitive Areas

This research project was researching a sensitive area related to food standards and this meant that accessing some of the research participants was difficult. Sultana (2007) observed that successful data collection in social science research depends on the researcher establishing contacts with gatekeepers who often are the bridge of the researcher accessing research participants. As Sultana argues, it is often assumed that entry to the field is informed by

gatekeepers. However, in studies related to sensitive topics, even the gatekeepers may not be easily accessible. Therefore, data collection can be difficult especially if gatekeepers are not willing to help as was the case in this research project.

During this research project fieldwork planning, it was anticipated that several central actors within the Kenyan FFV value chain would be the gatekeepers. Thereby, these gatekeepers were approached for this purpose but they were not willing to help invoking confidentially codes of practice in their organisation. Dolan (2005) noted how negative press publicity about bad practices in Kenyan FFV sector led to increased donor programmes in the sector in order to mitigate bad practices. The same negative press publicity also contributed to the difficulty of accessing some gatekeepers and participants who indicated that information given would be published as a news article despite re-assurances of the opposite.

Consequently, the problem of securitisation of the Kenyan state, after increased terror attacks in recent years, also contributed to the problem of accessing gatekeepers. The securitisation of the state, has led to increased use of guards to police the entrance of public and private offices in Kenya where entry is restricted. One is expected to have a prior appointment before entry is allowed. However, booking appointments through emails or phone calls were usually unsuccessful as the emails were unanswered and the secretaries who answered the calls were reluctant to forward a call from a 'stranger' to the manager. For this study, the first gatekeepers were guards in uniform with batons. The guard determined who was allowed into the premises and who was not. As such, these guards were powerful unanticipated actors' in the fieldwork process.

The literature does not discuss such challenges, hence I had to find my own ways of getting around the problem of accessing the gatekeepers by first negotiating my way through the guards. This was achieved through persistence in which I consistently came to the same premises, where the guards were reluctant to allow me in, every single day to the point of wearing the guards out and eventually I was allowed in. The access problem, in most cases involved the large exporters who had their premises within well-guarded compounds with controlled access. For this research, access problem was overcome through persistent and good negotiation skills.

Even after gaining access into the exporters' premises, I had to contend with the company receptionist and then the secretary of the person of interest and in each case, I had to explain my intention over and over again. In some cases, the receptionist would block my access to the

secretary or I would go through the receptionists and then the secretary would block my access to the personnel of interest. In some difficult cases, breakthroughs were often achieved by making contacts with former colleagues with whom I had previously worked in the Ministry of Agriculture. I avoided using the approach unless it was absolutely necessary as a last resort to gain access to a research participant. However, even in some cases, my former colleagues were not able to get me access to the research participant of interest as was in the case of a CB who turned down a request from my former colleague. Nevertheless, other gatekeepers, such as some exporting companies, government agencies, FPEAK and the NGOs, were forthcoming with their assistance.

In data collection, in order to access the farmers, I first had to contact the exporters and then in the field, the TAs who had direct access with the farmers. While this approach was successful in accessing the farmers', it created problems during focus group discussions with some TAs insisting on staying behind in order to participate in the discussions. However, in all such cases, I gently and firmly requested the TAs to allow for privacy in the focus group discussions. Thereafter, after farmers' interviews and focus group discussions, I took the advantage of the TAs who were willing to talk and interviewed them. Because interviews with the two TAs, in the study, was done immediately after the farmers' interviews, I was able to sound out the TAs on questions the farmers were not capable of answering and sought clarifications on other areas the farmers were not clear about. This enriched the data and helped solve some grey area questions.

4.9 Summary of Key Arguments in the Chapter

This chapter has discussed the methods and the methodology that were used in this research project. Mixed methods was adopted for this research project to make an inference of the real world. This allowed for flexibility and reflexive process to be adopted for this study in data collection. For reflexivity, the research instruments were being improved in the process of data collection with emerging themes captured and tested through follow-up questions with different study participants. The chapter has also discussed the research methodology adopted for this study which was concurrent transformative design in which both the qualitative and quantitative data were collected simultaneously.

The data collection process was divided into two stages. Stage one involved data collection from smallholder farmers, middlemen and TAs guided by the concurrent transformative design approach. In stage one of data collection, interviews, focus group discussions and a semi-

structured questionnaire was used. In the second stage of data collection, the participants were from different public and private organisations and NGOs with interviews used to collect data. As such, in order to select these research participants, basic purposive sampling was operationalised in the study in which participants with desired characteristics were selected for the study.

Snowballing sampling was also used in stage two of data collection allowing for inclusion of other participants in the study who were not originally planned for. In total, there were 88 research participants in the study from six counties in Kenya. The chapter has also discussed the difficulties encountered during fieldwork especially related to gaining access to some gatekeepers and research participants and how this was overcome through persistence and negotiation. The next chapter is the first empirical results chapter, in which results on the structure of the vertical coordination of the Kenyan FFV value chain are reported.

CHAPTER FIVE

THE STRUCTURE AND NATURE OF VERTICAL COORDINATION IN THE KENYAN FRESH FRUITS AND VEGETABLE EXPORT SECTOR

5.1 Introduction

The study research question that is discussed in this chapter is: what is the structure and nature of vertical coordination in the Kenyan fresh fruits and vegetables export value chain? As alluded to in Chapter One, the Oxford University Press (2018) definition, of structure as the arrangement of relations between the parts of something complex and with nature being the inherent features, character, or qualities of something, was adopted for this study. The aim here was to unpack the arrangement of exchanges in the value chain between the different parties while also exploring the inherent features of the coordination structure in Kenyan FFV export value chain. This chapter, therefore, presents results of the overall arrangement of transactions and exchange relations within the vertical coordination framework of the Kenyan FFV value chain.

From the literature reviewed and discussed in Chapter Two, the Kenyan FFV export value chain is governed through a vertical coordination arrangement with the European retailers situated at the centre (Dolan & Humphrey, 2000, 2004; Okello, Narrod, & Roy, 2011). The centrality of the European retailers in the value chain is based on their control and power over other parties in relation to influencing the activities in the value chain. This involves influencing consumers' activities through product packaging, pricing and advertisement, on one end, and controlling exporters and farmers activities on the other end (Dolan & Humphrey, 2004; Dolan et al., 1999a; Harvey, 2007). Hence, the supermarket power in the value chain is viewed as being asymmetrical in relation to other actors as earlier discussed. Therefore, while the overall governance arrangement in the value chain was known, the structure and, especially, the nature of vertical coordination, in terms of outsourcing, contractual and transactional arrangement in the value chain, was unknown.

Hence, the concern of this chapter was to explore and analyse these gaps in the literature. In the following analysis, TCE was applied, whence governance was defined as the mechanism through which order is infused over conflicts in transactions in order for transactions to adapt to the best cost economising arrangement that brings mutual gains to the parties involved (Williamson, 1985). With TCE analysis of governance beginning from the point of scrutinising contractual arrangements, the same was adopted in this chapter. The chapter is organised as follows: the first part discusses the overall structure and nature of vertical coordination in the

value chain; the second, third and fourth part describe the characteristics of the various nodes of coordination; and the final part of the chapter describes some of the governance challenges identified in the value chain. First the structure and nature of vertical coordination is discussed

5.2 Antecedent: The Structure and Nature of Vertical Coordination of the Kenyan FFV Value Chain

Based on the TCE assertion that governance is the means through which order is infused in transactions, this study conceptualised emergence of vertical coordination as a transaction costs function of mitigating transactional hazards and economising on costs of governance. As the discussion in Chapter Two shows, the exogenous shock of food contamination led to vertical coordination arrangement emerging from 1990 motivated by the European retailers' need to directly control production and sourcing activities in the value chain. As represented in Figure 5, in Chapter Two, the resulting governance structure involved the retailers taking a central role in the value chain.

Through TCE, we re-examined the governance arrangement in Figure 5 in Chapter Two and the GCC framework governance literature described in Chapter Two vis-a-vis the study data. From the literature in Chapter Two, the contention was that vertical coordination in the Kenyan value chain resulted in tight coordination arrangements in the Kenyan value chain (Dolan & Humphrey, 2000; Humphrey, 2004). The study found the contention of tight coordination in the whole value chain to be imprecise as described below. Through the TCE make or buy decision, the structure of coordination was found to be through two main nodes of contracting related to the retailers buy decision and the exporters buy and make decisions. The two nodes were; the retailers-exporters node and the exporters-farmers node.

The structure of the coordination was as follows. The ten exporters in the study were found to be contracted to different EU retailers with the five large exporters contracted to UK, German, Irish and French retailers while the five small exporters were contracted to Germany, Irish and Belgium retailers. None of the small exporters was contracted to UK retailer because of the high levels of post-harvest and processing competencies required by the UK retailers which the small exporters lacked. This was narrated by the Participant from Small Exporter A:

“For now we cannot get a customer from the UK because they have very strict requirements that a small exporter like ours cannot meet. If you export to the UK you must have your own pack-house facility, and as you can see, we are using HCD ones. So before we start exporting to the UK, we must first invest in our own facilities which

we cannot manage for now. Maybe in the next 2 or 3 years when we move out of here, we can begin to export to the UK”.

Basically, all the five small exporters in the study were hiring out the HCD pack-house facilities at a fee. The facility was equipped with work tables and cold stores with a work schedule when each exporter was allowed to use the facility in order to accommodate as many exporters as possible. The arrangement was such that the small exporters were expected to transition to their own pack-house facilities after three years. This was explained by the Participant from State Agency A:

“That facility (the pack-house) is for any new small exporting company. It gives them the base to grow their business, because in the beginning they don’t have the resources and after three years they are expected to move out to their own premises. That way we are able to nurture and grow these exporters who are very important in this sector”.

Because they lacked their own pack-house facilities, the small exporters were mainly exporting their produce to those European countries with less vigorous packaging requirements such as Belgium, Ireland and Germany. Exporters and farmers were also contracted to each other whereby the 62 farmers were contracted to different large exporters including Large Exporter D in the study. At the same time, the five large exporters had fully integrated backwards to have their own farms in Kenya from which they grew FFV. Equally, the 5 large exporters had also integrated forward to own the FFV importing business in EU. This arrangement was explained by the Participant from Large Exporter C:

“Ideally we would like to grow our own produce from our farms to supply our customers because then you are sure of what you are selling. We actually have our own farms in various parts of Kenya that we use to produce French beans and snow peas but this is not enough for our customers. So, we are forced to get extra French beans, snow peas, baby corns and the other crops from the smallholders. Again, you cannot grow everything, so you have to buy from the smallholder whom we deal with through contracts. What I would say, and other exporters will tell you the same, is that it is not easy to deal with the smallholders but we do not have a choice here. If you want to increase the amount of produce and variety that you export, you have to contract the smallholders”.

The above statement, by the Participant from Large Exporter C, represented the position of the five large exporters in the study, and indeed other large exporters in Kenyan value chain, who operated a mixed model arrangement of growing their own FFV while also sourcing produce from farmers. The large exporters sourcing of produce from the smallholders was in order to allow the exporters to attain product diversity and volume demands from the retailers. This was corroborated by the Participant from State Agency A, who said the following:

“They (exporters) like to complain about these farmers’ (smallholders) but it is them (smallholders) who keep them in business. They get over 50 percent of their produce from these farmers’ (smallholders) and that is over 95 percent of these large (exporting) companies we are talking about here. So, they should appreciate them (smallholders) and work with them to improve their systems, not complain”.

This evidence was verified by the participant from Private Sector Organisation A, who said the following in relation to where the exporters sourced their produce from:

“I cannot give you the exact figures, you know there are new (exporting) companies being registered every day, others close shop and others merge. Again, these companies are many and not all of them are our members. But I can estimate from previous records that about 85-95 percent of the large (exporters) get produce from farmers. The exporters have their own farms but it is hard for them to meet market demands with produce from their farm only. So even those who own farms still have to contract smallholder farmers”.

At the same time, the three small exporters in the study, Small Exporters A, D and E, were found to be sourcing fresh produce exclusively from the smallholders while small exporters B and C were found to be sourcing FFV exclusively from their own farms. Therefore, there was no single vertical coordination trajectory in the retailers-exporters-farmers arrangements, instead, it was a mixed arrangement of simultaneous make and buy decisions for reasons explained below. For this reason, applying the lens of contract in TCE, we found that after the food contamination shock, vertical coordination structure of the Kenyan FFV value chain changed to nodal arrangement consisting of two main nodes; retailers-exporters node and exporters-farmers node of contracting. The arrangement is represented in Figure 15 below.

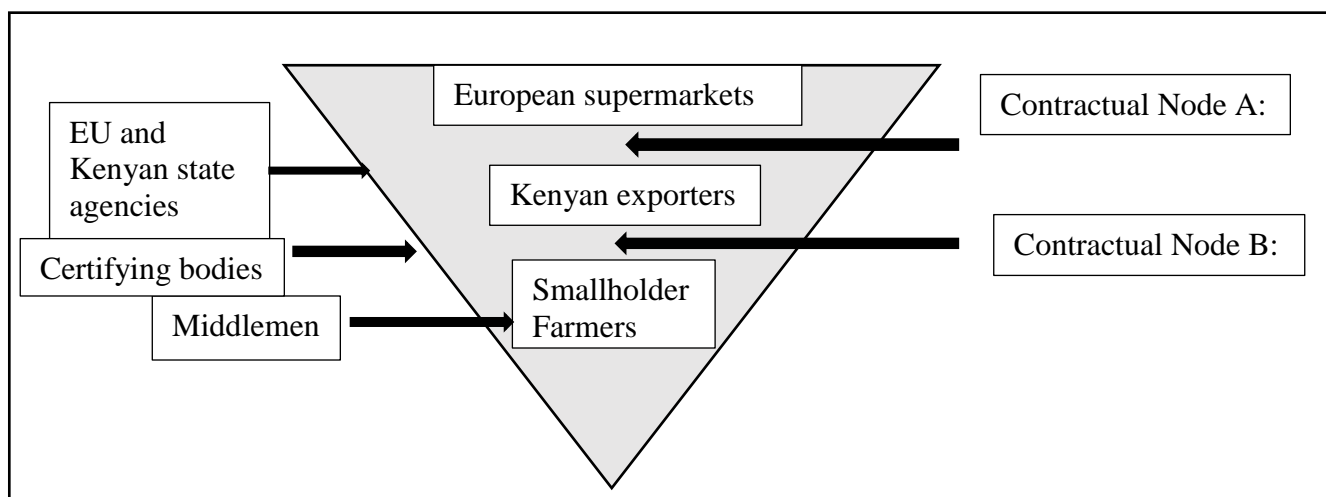


Figure 15: Conceptual Framework of the Structure of Vertical Integration of Kenyan FFV Export Value Chain. Source. Researcher, 2018

From Figure 15 above we identify two coordination nodes A and B. In the retailers-farmers node (henceforth Node A), EU retailers contracted the Kenyan exporters who in turn were either producing FFV from their own farms or contracted smallholder farmers (and large-scale farmers) to produce FFV. Hence, the second node of exporters-farmers (henceforth Node B), consisted of exporters contracting smallholders or growing FFV on their own farms. In order to explore the nature of the coordination, we further analysed why the exporters integrated backwards and also outsourced production to farmers.

First, we found bilateral contracting between retailers and exporters in Node A and exporters-farmers in Node B where full integration was not present. The contracts in Node A and B was found to be simple documents highly incomplete with bare minimal information about the transactions. We, therefore, invoke Macchiavello and Morjaria's (2015b) argument that the nature of bilateral contracting in Node A and B was relational contract with the written part being a document of expectations for the parties involved. In all likelihoods it was impossible to enforce any formal contracts first, because formal contract enforcement systems such as courts, were present but ineffective in Kenya.

Second, the perishability of the produce made it impossible for one party to sue the other and get the case resolved in time. Third, trading relationships with foreign buyers can be difficult to govern with written contracts enforceable in courts because of distance and uncertainty associated with international trade which may increase monitoring costs (Macchiavello, 2010). If the produce concerned is perishable and contractual imperfections exists with no contract enforcement system in place, monitoring costs can be high forcing parties to rely on

relationships predicated on repeated transactions (Macchiavello & Morjaria, 2015b). The Kenyan value chain was found to be the same with no contractual enforcement system. This was captured by the sentiment of Participant from Large Exporter E:

“On paper HCD should do these things (enforce contracts) but they don’t. I am not sure why they don’t do it because they tax us for every tonne of produce we export so they have money. We pay them and the least we expect from them is that they should help us manage the smallholders which of course they don’t. So, we try to resolve the problems on our own with our farmers by sitting down and ironing the differences. It will be a waste of time if we tried solving these problems through HCD”.

As the participant above narrates, the state regulator HCD was expected to moderate and enforce contractual problems in Node B, but they did not. Thereby, the farmers and exporters ironed out contractual problems through negotiation. Therefore, contracting in both Node A and B of the value chain was relational in nature governed by supply reliability reputation accrued through time as discussed further below. In the vertical coordination arrangement, there were other players consisting of CBs and EU and Kenyan state agencies such as KEPHIS and HCD who provided oversight over the nodal coordination arrangement. The oversight was only over food contamination problems as discussed in Chapter Seven.

In addition, we found middlemen in the value chain whose activities were disruptive to the retailers’ centred nodal coordination as they engaged with the farmers without contracts, thereby encouraging them to side sell produce as discussed below. In the vertical coordination, the firms³⁵ here included retailers, exporters, farmers and the middlemen. We found Node A to be tightly integrated, while node B was loosely integrated where the exporters engaged with the farmers. The integration in Node B was isolated and analysed and the contracting arrangement is as represented in Figure 16 below.

³⁵ The term firm is broadly applied in the empirical chapters to capture retailers, exporters, middlemen and farmers because all these actors are involved in economic activities.

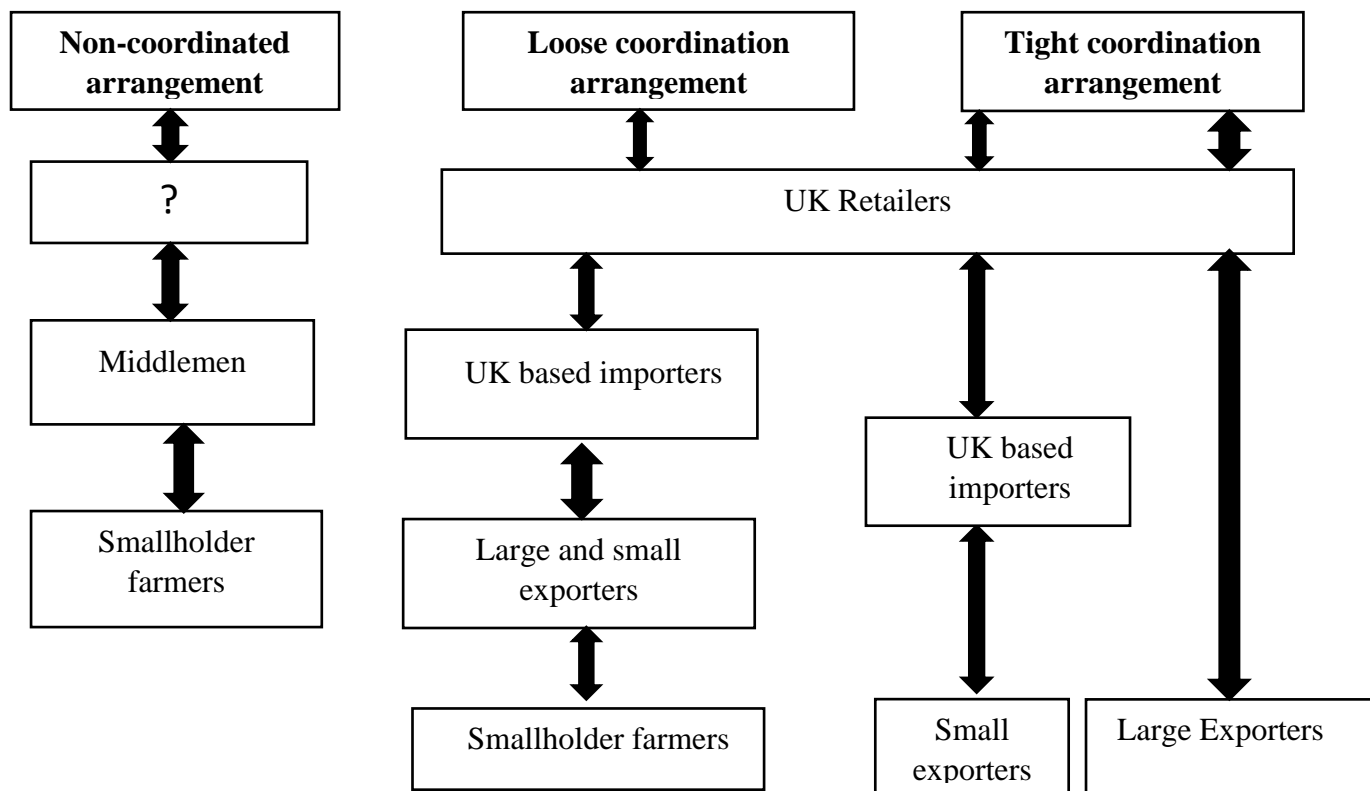


Figure 16: Node B Vertical Coordination Arrangements in Kenyan FFV Value Chain.

Three types of relational contracting arrangement were found in Node B consisting of non-coordinated that had middlemen, loose coordination and tight coordination. Tight, loose and non-coordinated arrangement in Figure 16 was predicated on the value of trading relationship in the two nodes; tight coordination was a trading relationship made up of positive good trading relationship from produce supply reliability reputation. Loose coordination trading relationship was because of poor trading relationship from lack of supply reliability, hence, negative reputation. The non-coordinated arrangement was made up of spot-market exchanges between the farmers and middlemen.

For instance, in the farmers-middlemen arrangement, exchanges took place over spot-markets, with no contract farming involved and transactions were not repetitive. Meanwhile the farmers-exporters transactions were repetitive but extremely volatile and short termed whereas retailers-exporters transactions were highly repetitive and long-term in nature.³⁶ Additionally, it was not clear how the middlemen accessed the export market as the exporters indicated that they were not buying produce from the middlemen although there was some evidence of

³⁶ These trading relationships are discussed in detail further below.

exporters-middlemen engagement as discussed in Chapter Six. Hence, the nature of vertical coordination arrangement that emerged in the value chain, was relationship determined. The large exporters fully integrated backwards and forward for relationship reasons and they contracted the smallholder farmers to supply them with produce for relationship reasons as discussed further below. In this exchange relationship, one supply reliability reputation was central.

The value of relationship in the value chain, was clearly captured by the comments by Large Exporter C above who explained their preference of having their own farms but they contracted smallholders for the purpose of meeting supply demands from the retailers. For this reason, the five large and two small exporters integrated backwards in order to maintain a positive supply reputation with their European buyers by avoiding risks, such as food contamination problems, attached to contracting smallholders. Hence, an exporter gained a positive reputation for being risk-free by fully integrating backwards and controlling their own production process. This was narrated by Large Exporter A:

“Them (smallholders) are a gamble. We use them but you have to be very careful because they deliver to you crops and you may end up rejecting all of it because the farmer sprayed it with restricted chemicals. At the time you are rejecting everything, your customer in Europe is waiting for the order and you have nothing to deliver to them. Do you think the customer will renew your contract next time? No they won't!”

It was evident that the smallholder farmers were viewed as a risk to reputation by the exporters. But the exporters engaged with them for the reason of meeting supply and crop diversity orders from their EU customers in order to acquire and maintain valued supply reliability reputation. This was a rational choice by the exporters; a choice between increased risks of food contamination from smallholders and a positive reputation in supply reliability. However, as Dolan and Humphrey (2000) argues, there is an additional advantage of contracting smallholder farmers to produce FFV crops. According to Dolan and Humphrey, smallholder farmers have a high comparative advantage in the production of certain FFV crops such as French beans which are labour-intensive and do not require mechanised production because smallholder farmers can deploy family labour.

Therefore, the exporters' choice of contracting smallholders came with high transaction costs on the exporters who had to make investments on the smallholders' production systems, in order to reduce food contamination risks as discussed further in Chapter Six. But it also came

with the benefit of a greater comparative advantage of these farmers' ability to deploy family labour to produce a great variety of produce. Hence, the exporters' choice of using smallholder farmers came at a high transaction cost but also the benefit of accessing increased volume and diversity output. This finding partly explains how smallholder farmers have been able to participate in this value chain that is seemingly structured to exclude them. Maintaining positive supply relationship was the key, the exporters' bid to have supply reliability, made them engage with the smallholder and bear high transaction costs of upgrading smallholders' systems.

This finding resonates with Macchiavello and Morjaria (2015b) who found that European buyers valued supply reliability from their Kenyan rose farmers. According to Macchiavello and Morjaria, supply reliability established a supplier positive reputation in the value chain, and this was the only way that contract was enforced in the absence of property rights regime. As discussed further below and in Chapter Six, the study found that transaction costs played a key role in the coordination arrangement and relationship contracting that emerged. The initial costs of an exporter establishing a relationship with a retailer were high, from the physical assets needed, but eventually stabilised as reputation developed through supply reliability.

The initial capital for establishing relationship was comparatively higher when an exporter had to engage with a UK retailer rather than with other European retailers. For instance, when supplying UK retailers, an exporter had to put in place their own pack-house facility and other equipment, and not hire one from HCD as explained above. It was for this reason that the small exporters were not engaging with any UK retailers as Small Exporter A above had explained. Accordingly, coordination costs, related to monitoring costs, was found to increase as a party position increased relative to the retailers i.e. as the value of relationship decreased monitoring costs increased.

We assume a repetitive trading relationship, represented by concentric circles network proposed by Landa (1981, p. 353). The concentric circles are arranged as follows; the circle at the centre represents retailers', the following circle represents exporters, then the farmers, then middlemen located at the furthest end as represented in Figure 17 below.

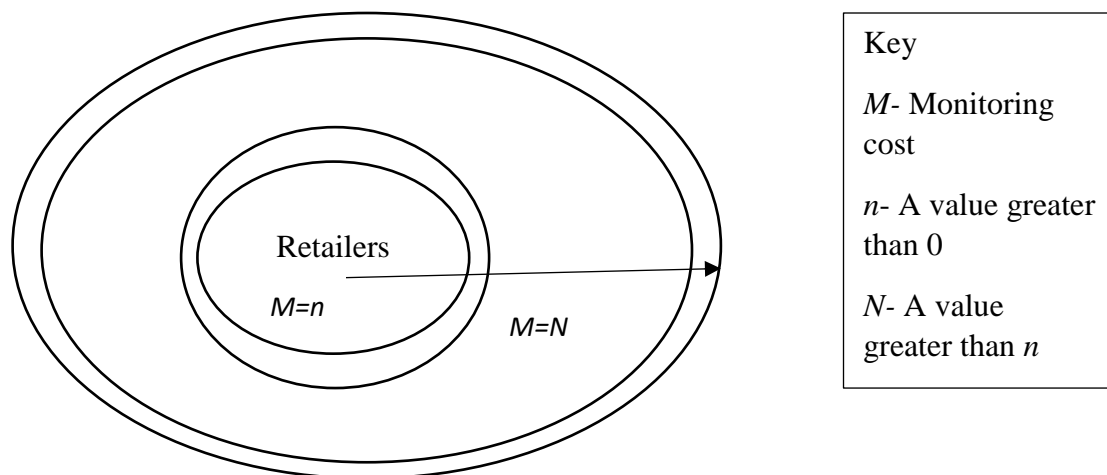


Figure 17 Conceptualisation of the Value of Trading Relationship and Coordination Costs in Kenyan FFV Value Chain. Source: Landa (1981) and Modified for this Study

In Figure 17, the arrow from the centre represents the direction of increase in coordination costs from $M=n$ at the retailers end to $M=N$ at the farmer's end. We adopt the argument that transaction costs can never be zero as Coase (1960) argued, hence at the retailer's end monitoring costs are present but low. While the distance between the concentric circles represents the degree of value in the trading relationship, the larger the distance between two circles the lower the value in a trading relationship and the higher the coordination costs. The value of two parties trading relationship is acquired through supply reliability. Hence, transaction costs and value of the relationship is inversely related in the repetitive exchanges, with low relational value leading to high monitoring costs.

From the above, the exporters' farmers' concentric circles distance is large, hence low relational value and corresponding high coordination costs. Meanwhile, smallholders-middlemen concentric circles distance is small and coordination costs were low because this was a non-repetitive exchange taking place across spot-markets. The concentric circle's arrangement is a further representation of the three coordination arrangements in Figure 16 above. Moving outwards coordination costs increased in the form of monitoring costs and other investments such as input supply where non-market exchanges took place.

This finding fits into Williamson's (1985, p. 76) contention that the frequency of transactions matters "because the more often (transactions) takes place, the more widely spread are the fixed costs (of) establishing a non-market governance system". The two contracting Nodes of A and

B are further discussed below, with Node A of EU supermarkets-exporters discussed before Node B is discussed.

5.3 Supermarkets-Exporters Contracting Node

As indicated above, the transactional interactions between the retailers and exporters was found to be tight, moderated by high relational value accrued from supply reliability. Coordination was defined as the interventions that make participants in a transaction act towards a common goal (Poulton et al., 2004). In order to analyse the degree of the value of relationships in Nodes A and B, we applied the three central features of internal coordination including control, cooperation and communication as proposed by Ménard & Shirley, 2008. Taking into consideration that food contamination problem was and still is a governance problem, effective command and control regime was necessary to control food risk in Node A and B of the vertical coordination.

Ménard & Shirley, 2008 argue that control makes command and communication possible by providing the mechanism through which orders are implemented and cooperation achieved to limit the need of monitoring bilateral trading relationship. A straightforward recast of Ménard & Shirley, 2008 analysis in the study, showed control, communication and cooperation was present in Node A albeit informed by relationship and not vertical integration. We found high relationship specificity in Node A associated with recurring transaction specific savings accruing at the interface between the retailers and the exporters as contracts were successively adapted to unfolding events, and as periodic contract renewal agreements were reached (Williamson & Ouchi, 1980).

As discussed in Chapter Three, relationship specificity is related to reputational effect in transactions whereby, specific language develops and nuances are signalled and received between a buyer and seller as institutional and personal trust relationship evolve (Sturgeon, 2002). We associated relational specificity in Node A on the long-term, durable and stable relational contracting between the retailers and exporters. As previously described, the retailers and exporters had in place written contracts which were found to be simple and highly incomplete. While every contract is often incomplete, the degree of incompleteness matters. In this case, the retailers-exporters contract had bare-minimal information, hence, our contention that the written document was a contract of expectations with the real contracting being relational.

We analysed the length of the relational contracting between the exporters and the retailers. The study found that the average contractual engagement between the exporters' and retailers was five years for the small exporters and seven years for the large exporters. Therefore, contracts in this node were longer and stable. In a real sense, the contracts between the exporters and the retailers was one year in length with annual contract renewal if the exporter's performance, such as supply reliability, met the retailers' expectations in the duration of the contract. This contractual arrangement was the same for the large and small exporters. This was narrated by the Participant from Large Exporter E:

“Nobody can give you a contract that is two or three years in length. What if you do not deliver or fail to meet some of the requirements, what is the buyer supposed to do? The contracts are short, one year in length and at the end of the year, the retailers will review your performance, and they either renew it or not, if you did not perform. So you have to work hard so that they renew the contract. It is not hard for the contract to be renewed as long as you deliver. We have had the same retailer for the last eight years. You just deliver and it is renewed”.

The same evidence was corroborated by the Participant from Small exporter B:

“If somebody will give us a contract that is five years in length, we might be tempted to sleep on the job! The contract is always one year in length to make you work hard for them to renew it. And that is what we do, we work hard and every year the buyer renews it”.

From the two narratives above it is evident that contract renewal was based on performance, and clearly, the retailers preferred such short-term contracts tied to performance as a governance strategy where contract enforcement system was not in place. The exporters were expected to meet delivery, volume and standards demands which informed retailers' contract renewal or not. Hence, because of the retailer's monopsony/oligopsony in the value chain, asymmetric trading relationship resulted, whereby the exporters stay in the value chain was determined by meeting and maintaining supply reliability.

The retailers-exporters long-term contractual engagement signalled a strong bilateral character (Williamson, 1981) forged through time, whereby Sturgeon's (2002) reputational effect developed as specific language and nuances were signalled and received between the retailers and exporters. Therefore, command, communication and control was present in Node A. First, the exporters self-complied to regulation because this, according to the 10 exporters, generated

the required positive reputation, which ensured contract renewal. It was a cause and effect relationship in which the one-year contracts, led to exporters' putting in the effort to meet retailers' demands, and when the demands were met, positive reputational capital was generated leading to the retailers renewing the contracts. This was captured by the narrative from Large Exporter A:

“Our model of operation is different from the farmers. Exporters do not need to be monitored by their customers as we monitor farmers before they comply with rules. Every exporter knows why they are in this business and so they comply without monitoring and this is good for you because every supermarket will want to work with you”

The exporters' self-compliance indicated cooperation, thereby a low monitoring regime. The retailers' requirements for compliance with food standards escalated downwards to the exporters then onto the farmers. Since, contract renewal and access to market was based on the exporters meeting these demands, there was self-compliance. We found exporters self-compliance attached to transaction costs reasons. Consider a situation whereby the retailers had to monitor the exporters, the retailers would have had to bear high monitoring costs and for TCE reasons, the retailers would either have had to fully integrate to produce their own FFV or terminate the contract and look for an alternative seller not requiring monitoring.

Hence, as Macchiavello and Morjaria (2015b) argue, the retailers and exporters valued acquiring and maintaining positive supply reliability reputation because this reduced transaction costs related to monitoring and establishing new exchange relationship with a different buyer/seller. Some monitoring of exporters' activities took place through the CBs and retailers' annual evaluation of exporters' compliance to BRC and GlobalGAP. The monitoring can be related to CBs and retailers' assessment of exporters' self-compliance as was confirmed by the Participant from the Small Exporter A:

“Why would I wait for the CB to come here and tell me how to do my business? The owner (of the company) invested to make a profit and we cannot put that at risk through non-compliance. We independently ensure everything is up to date and the CB's role is to confirm that. It is rare for an exporter to fail certification and if they fail it is more of a mistake than an intentional action”.

The same was explained by the Participant from Large Exporter B:

“Of course, we are assessed once in a while, I would say once a year by the (European) retailers and the CB. They come around here look at our pack-house activities, our workers and how we comply with BRC and the other standards. The main thing that is assessed is that you have systems in place that allows you to check for non-compliance among the farmers. At this level, our role is to spot farmers non-compliance to stop”

Each of the 10 exporters in the study had QA managers with quality supervisors under them, whose role was to constantly check on the compliance systems within the pack-house as produce packaging progressed. The QA managers and the quality supervisors were trained personnel with relevant university degrees especially for the large exporters who had the resources to employ such personnel. For the small exporters, it was found that their QA managers were individuals with low education but with high learning by doing skills accumulated through years of working in the pack-houses. For this reason, the QA managers and the CBs relationship and role can be related to financial accountants and auditors in a company.

Whereas an accountant is responsible for daily financial transactions and bookkeeping in a company, an auditor can do the same roles but their main role is to review the work of the accountant to ensure financial transparency. The relationship between the CBs and the QA managers can be related to the accountant-auditor role with the QAs being internally based to keep track on compliance while the CBs freelanced to monitor QAs work. Hence, exporters' self-compliance was attained indicating cooperation between them and the retailers.

The second key attribute in Node A, related to tight integration, was communication effectiveness. In node A, it was found that communication flow was good between the retailers and the exporters. The retailers passed on market information to exporters in order for the exporters to upgrade their production systems and meet changing market demands. Such information was mainly related to product quality and quantity demands as well as market changes in relation to a particular product. There were differences in the length of produce orders issued between the UK and other EU retailers. The UK retailers operated through annual order books and product specifications with their exporters' which was liable to daily or weekly adjustments depending on the market condition.

In contrast, other European retailers operated through quarterly orders books which were also adjustable. For instance, exporters would give out daily and weekly market changes of a particular product to allow the exporters to respond appropriately. This was evident from the narratives from the ten exporters in the study as put forth by Large Exporter C:

“There are different ways that we work with the (European) retailers. Remember that each retailer has their own way of doing things. There are those who would normally give you short-term orders specifications like the Germans and the French retailers and then there are those who prefer long-term orders like the British retailers. Of course based on this, we prefer the British retailers with their long-term specifications because you can then plan your work in advance. But even the British sometimes change their orders in the season depending on how the market is operating at any given time and they communicate this to us and we quickly plan and respond to these changes”.

Additionally, the Participant from Small Exporter B concurred with the above statement by explaining their operations as follows:

“We have somebody (a staff member) whose specific role is to communicate with our clients in advance so that we know what they need and then we respond to their request. We do this daily so that in case there is any change or new demand from them, we can respond quickly. We are normally given long-term orders by the buyers but there are daily and weekly changes in details like quality, quantity, size or colour and we have to be prepared to respond. Anything can happen in the market and you need somebody with an ear on the ground to listen and let you know in advance of what is coming. You don't want to be caught with your guard down”.

As the narratives above show, although in some instances the information received by the retailers was disruptive through new demands from the supermarkets, it shows that there was effective information flow from retailers to the exporters allowing them to respond to market changes.

The above discussion shows the presence of relationship contracting between the exporters and retailers. The study found relationship contracting predicated on reputation albeit asymmetrical in nature. As Macchiavello and Morjaria (2015b) argue, the absence of formal contract enforcement system in perishable product markets, may often lead to two problems. First, the buyer might refuse to pay the seller once the delivery is made and second, the seller might fail to deliver the quantity of produce agreed with the buyer. Accordingly, because of

such frictions, buyers and sellers rely on relational contracts to overcome these frictions. Importantly, as Macchiavello and Morjaria argue, time component is key in such trading relationship as trust and value increases with age as supply reliability leads to positive reputation revealed over time.

We found the same for the Kenyan FFV export sector whereby, the retailers could have reneged on making payment for delivered produce while the exporters could have failed to make expected deliveries. These problems were avoided through repeated interactions that were sustained by reputation on both parties, stable supply by exporters and, presumably, timely payments by the exporters. While the study did not measure for distribution of transaction costs between the exporters and retailers, it was evident that the exporters bore high transaction costs in this exchange relationship especially as they had to deal with the smallholders as discussed next and in Chapter Six. The next section briefly discusses contracting arrangement in Node B of the value chain.

5.4 Exporters-Smallholder Farmers' Contracting Node

As previously mentioned, Muchiri (2010) estimated that smallholder farmers' account for 40-50 percent of the total exported FFV from Kenya. Despite their large number and importance in the sector, different studies see Okello and Swinton (2007), Okello et al. (2011), and Graffham et al. (2007), have shown that the contractual relationship between the farmers and the exporters is often volatile. Unlike Node A, Node B had loose coordination regime as measured through the nature of the trading relationship. The smallholder farmers engaged with the exporters through contract and the middlemen through spot-market.

Similar to Node A, it was found that the farmers and exporters had a written contract that was simple and incomplete with limited transactional information. However, both parties took the contract to be formal and expected the regulator to provide enforcement mechanism which did not take place as previously described. Hence, like in Node A, we claim that the written contract³⁷ was simply a document of expectation between the farmers and exporters. Applying Ménard & Shirley, 2008 three adaptational features of vertical integration, control, cooperation and communication, the study found that these were absent in Node B because of the nature of the trading relationship. As previously discussed, control makes command possible by

³⁷ We discuss in detail the farmers-exporters contracting in Chapter Six.

providing the mechanism through which orders are implemented and cooperation achieved, accordingly, minimal contract monitoring is needed.

Unlike Node A, relational specificity in Node B was absent. The farmers-exporters contracting was found to be ephemeral with an average span of a few months and in some cases lasting less than the three months of the production cycle. As we discuss in the next chapter, the smallholder frequently walked out of contracts when there were disagreements. Hence, while Sturgeon's (2002) reputational effect developed between the farmers and exporters, it was negative reputation which lowered the value of their trading relationship. This was narrated by the Large Exporter D:

“Everybody has problems with the smallholders. They are very difficult to deal with and it is a risk you take when you contract them. They will sell the produce to middlemen, they will not comply with GlobalGAP and then if you return the produce to them because of non-compliance, they walk away. Actually sometimes, they just walk away as long as they have harvested their produce and delivered it to you. Then you as the buyer, you have an order to meet and the farmers have walked away, so you are left stranded”.

The volatile nature of farmers and the exporters' contractual relationship was one of the main themes in the data. The study found that 49 farmers had previously walked away from contracts and the 62 farmers in the study indicated their willingness to walk away³⁸ from the contract in case the exporter failed to meet contractual obligation. Hence, the exporters-farmers short contractual relationship inhibited the signalling and nuances that were to key to exchange relationship developing. As discussed in Chapters Six and Seven, the smallholders were found to be high risk either from their non-compliance to GlobalGAP or their opportunistic behaviour through side selling produce to middlemen.

To solve the problem of farmers' negative reputation which could have impacted on the exporters-retailers relationship, the exporters increased monitoring of farmers through TAs whose role was to supervise the farmers' production systems. The exporters also provided

³⁸ Why the farmers found it easy to walk away from the contracts is discussed in detail in Chapter Seven

certified inputs to the smallholders in order to guarantee supply of standardised high-quality produce. This was explained by the Participant from Large Exporter C:

“All of us (exporters) have the TAs in the field. Any serious (exporting) company has to employ these people (TAs) to keep a close eye on the farmers so that they don't sell their produce to middlemen and also to help them with GlobalGAP process. It is an extra expense on us, but it is the only way we successfully deal with these farmers. If you don't do it, you will lose half of your produce”.

All the 8 exporters, 5 large and 3 small who were sourcing their produce from the smallholder, indicated that they had employed TAs to monitor the farmers. Therefore, unlike Node A, cooperation was lacking in Node B and hence, compliance was enforced through monitoring.

Second, the problem of opportunism was prevalent in this node among the smallholders which also necessitated monitoring by the exporters. It was found that the middlemen and the farmers, engaged through spot-market arrangements. In high demand season, the middlemen offered higher prices to the farmers', which induced them to side sell produce. With the exporters providing the farmers with inputs, training, paying for their GlobalGAP compliance, employing TAs, among other investments, it was clear that the exporters' transaction costs and specific investments on the farmers was high and often put at risk of side selling or food contamination. Hence, we analysed why the exporters would incur such high transaction costs and high risks of contracting smallholders.

This was mainly because the exporters found it necessary to maintain a positive reputation with retailers' through supply reliability as earlier described. This was earlier narrated by Large Exporter A, Large Exporter C, State Agency A and Private Agency A above. In order to meet retailers' orders, the exporters contracted the smallholders. This was clearly captured by the Participant from Small Exporter C:

“We cannot go back to smallholder again. A few years ago, we burnt our fingers. They (smallholders) made us lose a contract because the produce was found to have high levels of contamination and the retailer pulled out of the contract. By that time, we had already paid them (smallholders') for the delivery and we had also supplied them with inputs. You rather produce a small quantity for the buyer on your farm and be safe than engage the smallholders' and get in problems”.

This exporter was not contracted to any smallholder at the time of fieldwork because of the previous experience. However, it was clear that the exporters contracted the smallholders in order to increase volume and produce diversity for delivery to retailers. This was at a high cost as discussed in the next chapter. Therefore, to make or buy decision in the value chain was transaction costs determined whereby, each party, especially the retailers and exporters had the choice of having to either contract supply or integrate backwards in order maintain a reliable supply system at lower transaction costs. Accordingly, for the exporters the to buy or make decisions was based on the need to accrue low transaction costs of either integrating backwards at low transaction costs and risks or contracting smallholder farmers at high transaction costs and risks.

Whichever decision chosen was impacted by the need for an exporter to either maintain supply reliability or fail to maintain supply reliability and lose the contract. With the retailers having oligopsonistic trading power in the value chain, each exporter had to compete with other exporters for the ‘privilege’ of supplying the retailers. Hence, because the retailers relied on supply reliability to renew the contract, each exporter had to ‘stand out’ in the crowd of many exporters through gaining positive supply reputation in order to access the market. Thereby, higher costs would be incurred by an exporter to either rebuild supply relationship with an existing exporter if supply reliability is not met or establish new supply relationship with a different retailer.

Thereby, smallholders were contracted by the exporters at high transaction costs, driven by the exporters need to maintain positive supply relationship with retailers, but presumably lower transaction costs than the transaction cost of having to establish a new trading relationship because of negative reputation. In a market that was thin, with the European retailers controlling entry, negative reputation on the exporters would have been costly because they would have been locked out of the value chain. Therefore, for the exporters the best alternative was to contract smallholders in order to maintain access to the value chain. The next section reports the results on the state agencies’ role in the governance of the value chain.

5.5 Public Agencies in the Governance of Kenyan FFV Export Sector

In this section, we briefly describe the role of the state in the governance of the value chain with a detailed analysis of the state role discussed in Chapter Seven. In Coase (1960) theorem, transaction costs and distribution of gains determines if the state is effective in solving problems in transactions. In Node A and B we have found that transaction costs were higher

than zero and increasingly higher in node B, but presumably the gains of relational contacting were higher than the disputes being resolved by the state. Additionally, we have also shown that there was no clear judicial mechanism to enforce property rights, hence, relational contracting prevailed.

We found the state role in governance, related to providing oversight over the retailer's centred nodal arrangement, to contain food contamination problems. The key public agencies in governance included European Food Standards Authority (EFSA) and Kenyan state agencies including; HCD, KEPHIS, KALRO and PCPB. While HCD, KEPHIS and PCPB had direct roles in the sector, KALRO's role was related to research and participation in a network regulatory body called Horticulture Competent Authority Structure (HCAS). The private organisations in the study included FPEAK and AAK. Two systems of governance were identified, public governance through EFSA-Kenyan state agencies and network governance as briefly discussed in the section below.

5.5.1 EFSA-Kenyan state agencies node of governance

The main role of state agencies in the sector was to provide oversight over GlobalGAP and BRC compliance systems for the exporters' and farmers. The evolving role of the state agencies in the sector through time was captured by the Participant from State Agency A as follows:

“When GlobalGap came into force from 2003, at that time it was EurepGAP, we had a clear role to play in ensuring that the exporters and the farmers followed the required regulations. When GlobalGAP was introduced, everybody was doing what was required of them and then along the way some farmers and (exporting) companies began to cherry pick what to comply with and what not to comply with. So they were not taking GlobalGAP seriously and because of this, in 2013 we had a major problem of chemical contamination because of the selective compliance with GlobalGAP. So we came in and began to enforce some of the requirements like ensuring that every exporter had a contract with their farmers. I would then say that our main role is to regulate these (exporting) companies in the sector and to also protect the farmers. We are also in charge of policymaking because the (exporting) companies cannot engage with EU at the policy level but we can. Our role has not changed in time, we work with the (exporting) companies and the farmers to ensure that the sector runs well because, when it runs well, it is for the good of everybody”.

The above narrative and emerging themes in the study show that the state agencies were mainly involved in providing regulatory oversight over the exporters, farmers and middlemen towards compliance with GlobalGAP and BRC. Although GlobalGAP was supposed to have institutionalised contract farming in the local node of the value chain, the narrative above shows that not all the exporters were following through with this requirement. A survey by Ouma (2010) found that 80 percent of exporters in his study had introduced contract farming while 20 percent had not. Therefore, it is possible that exporters' adoption of contract farming was often in ad hoc arrangements to suit their business especially as we have seen that contracting smallholders came at high costs.

In the study, 62 farmers and the 8 exporters involved with smallholder farmers indicated that they had contractual relationships. After 2013 as discussed in the Chapter Seven, there was increased regulation from the state agencies in relation to the adoption of contract farming. The contracts used by the exporters' and farmers were based on a template that had been made by the state agency HCD. Each exporter adopted the contract by adding their details and the farmers' information in the contract. According to Participants from State Agency A and B, the contract template was introduced in 2013 after a chemical contamination problem on Kenyan produce as part of the wider regulatory changes introduced as discussed further in the Chapter Seven. The next section briefly discusses network governance framework found in the sector.

5.5.2 Network governance in Kenyan fresh produce export sector

In 2013 there was a major chemical contamination problem in the Kenyan FFV sector when French beans and peas in pods were intercepted at the entry point of the EU market with high levels of chemical residue exceeding the required maximum limit, often referred to as Maximum Residue Level (MRL). MRL comprises a situation whence the maximum amount of chemical residue allowed on a produce is exceeded. Random inspections are frequently carried out in EU markets at the import point to detect any breach of this requirement. Because of the 2013 MRL incidence, restrictions³⁹ were placed on Kenyan fresh produce imports by EFSA.

³⁹ When restrictions are in place, it leads to a requirement that 10 percent of any fresh produce consignment from Kenya must be inspected and tested before being allowed into the EU market. The test often takes place at the importation point at the cost of the exporter. This may cause delays because the test result has to be seen before the product is allowed into EU.

One key regulatory outcome from the crisis was the formation of a private and public agency regulatory body called HCAS. The body was formed to fill an existing vacuum related to the private-public governance platform in the sector to allow for deliberations and collaborative actions. Before the establishment of HCAS, the private and public agencies related through formal networks which created delays when an action was required. This was narrated by the Participant 2 from Private Sector Agency A:

“Let me say that HCAS helps. I mean it is still the same government people you meet there but at least you talk to them outside the formal structures so your problem can be looked at fast, compared to using the formal channels of writing a letter”.

What is evident from the results, as the Participant above explains, was that HCAS was creating informal networks of governance between the state and private agencies bringing some efficiency in response to problems. The public sector members in HCAS included HCD, KEPHIS, PCPB and KALRO while the private sector members were FPEAK and AAK. The formation of HCAS itself was as a result of funding and prompting from EFSA. According to the results, EFSA aimed for the formation of HCAS to create an inter-agency platform that would allow private and public actors to deliberate on the sector, anticipate problems, review them and take actions where necessary before problems precipitated into crisis as explained by Participant from State Regulatory Agency C.

“The competent authority (HCAS) is a good forum where some of the problems we have discussed get ironed out easily and quickly. I am saying easily and quickly because when the authority meets all the senior people in the sector are present and so decisions are arrived at quickly compared to using the normal channels to solve these problems which can take months”.

Before the formation of HCAS, there was no permanent forum which allowed the private and public sector actors to directly engage continuously. As the narrative above shows, HCAS provided such a platform for governance. Governance in HCAS was mainly through informal systems of peer pressure and influence especially in areas where it was problematic for the state agencies to act upon because of their contested nature. For instance, issues touching on a company’s profit or profile were often contested and difficult to govern because the companies resisted state regulation through the court system. The relevance of HCAS in regulation of the sector is detailed in Chapter Seven. The next section briefly outlines the governance challenges that were present in the sector

5. 6 Challenges to the governance of Kenyan fresh produce export sector

Our study revealed several problems related to governance of the Kenyan FFV value chain. Some of the problems have been discussed above such as opportunism in Node B. In addition, there were other problems related to state agencies' role in the governance of the value chain. These included, low budgetary allocation and lack of legal mandate for the state agencies to enforce rules and monitor contracts to actualise governance. One main problem was the low budgetary allocation for all the four state agencies in the study. While this was not a new problem, the evidence shows that from 2013 the problem had exacerbated due to competition for resources from county governments after their creation in 2013. The creation of devolved units of government, according to the participants, had resulted in the diversion of funds from the central government to the devolved units. This was narrated by the participant from State Regulatory Agency B:

“We have had budgetary problems previously in fact I cannot think of any year that we have been allocated the funding we requested for by the treasury. I think that is normal even in other countries. The current problem is that in the last two years our budget has been reduced and in fact this year, we are yet to receive any funds to run our activities. I would say in the last two years it has been bad for us and everybody. So there is no way we can fully implement our mandate unless we get the money! So we have been forced to fill this funding gap through other means such as surcharging the exporters (through an export levy fee). Previously, we never charged the exporters' for vetting them, now we do”.

Accordingly, the Participant from State Agency D narrated the same problem as follows:

“Look at our stand (in the annual agricultural show in Nairobi) it looks different now if you compare to the previous years! Previously, the stand would be packed with all kinds of exhibits and our staff would be here in numbers, now it is just the two of us here. Things are different and difficult and they have been like this for the past two years. We would like to do more and engage with farmers and other stakeholders in the field, but that needs money which we don't have”.

It was evident that the funding problem was affecting the agencies' abilities to engage directly with farmers and as a result, they relied on the exporters to regulate farmers and carry out other activities such as training of farmers. In addition, HCD and other state agencies, were not involved in fieldwork activities such as monitoring of contracts to prevent the farmers being

exploited and to moderate contractual disputes between the farmers and the exporters. In the study, only one group of farmers, Group C, indicated that they had had previous direct contact with HCD, the rest had not.

Secondly, it was evident that there was a problem of compartmentalisation of governance among the state agencies arising from funding problems. Apart from HCAS, each agency sought to carry out its roles with limited cooperation with other state agencies in the sector. The four state agencies in the study indicated that the only forum that brought them together was HCAS and beyond HCAS, each agency was confined to its space of operation even when collaboration was necessary for the better governance of the sector. This was explained by the Participant from State Agency D:

“Look I cannot tell you more because of the sensitivity of these issues. Our mandate is clear in these areas and we do our best within our mandate. If there are problems occurring in relation to managing farmers, exporters and the middlemen, that is not our problem, it’s the other agency. That is their role and they should own up”.

The same narrative was repeated by the Participant from State Agency B:

“Unfortunately, our mandate is at the top-end of the value chain. At the lower levels of the value chain we have the other agencies to monitor middlemen and the farmers. Let’s assume that we wanted to get involved in the lower level, you know we can’t because we don’t even have the money! So we have to confine ourselves to where our mandate is so that we can utilise the limited resources for the best”.

The effect of the reduced funding was a reliance on state agencies on donor agencies which created unnecessary conflicts. While donor funding was necessary for these agencies in view of the reduced budgets, it was having the effect of creating mistrust and competition, hence extending compartmentalisation and non-cooperativeness. This was narrated by the participant from State Agency C:

“If somebody tells you that they are not relying on the donors they are lying. We all are that is the truth. If you go to HCD or KEPHIS or PCPB or KALRO you will find facilities constructed by the EU or USAID and the same organisations are also funding their activities. The problem is others get more money but they don’t want us to participate in their activities. If you get more money, it means you have extra activities

and you should allow other agencies to come in and help especially now that the government has reduced our funding”.

The participant from Private Sector Organisation A confirmed the mistrust among the organisation as follows:

“The donors are also extending problems in the sector as if we did not have enough issues to deal with. It’s like they always prefer other organisations over others. If you look at how the traceability App⁴⁰ was developed, one of the donors simply decided to work with one agency in the entire process and the rest were left out. Then during the launching of the App last week, they invited everybody to the ceremony. How do they expect us to support the App if they left us out (and other agencies) during its development? I can tell you that the App will not be here for long and the same thing happened with KenyaGAP”.

As is discussed in Chapter Seven, the donor preference for some agencies over others was in itself creating mistrust, competition and conflicts among the private and public agencies.

Thirdly, the agencies required to regulate the sector such as HCD, were found to lack a strong legal mandate to enforce rules on contracts and other restrictions that were necessary for the sector. As a result, contract enforcement was problematic in the sector. These agencies were supposedly responsible for contract enforcement but they lacked the tools to effectively sanction contract breaches especially among the farmers. Hence, contract breaches were left unpunished encouraging further breaches. This was explained by the Participant from State Agency A:

“These things are not as easy as you make it sound. We can suspend an exporter’s license but how do we do this with the farmers? We can de-register a farmer group, but these farmers can simply form another group with a different name and register or even grow the (French) beans as an individual. So some of these problems require changes to our mandate so that we have more (legal) authority to place a fine on a company or farmer found to be breaching rules”.

⁴⁰ The traceability APP was a new mobile phone application launched in 2016 during the PhD fieldwork funded by USAID. The APP was intended to enhance traceability in the value chain by replacing the manual record keeping by the farmers.

The result of the weak legal mandate by the state agencies, especially HCD, and the low funding regime, was increased reliance on licensing to regulate the sector as discussed in Chapter Seven. However, even licensing needed enforcement systems which were found to be lacking except when there was a crisis such as MRL.

5.7 Summary of Key Arguments in the Chapter

This chapter has discussed the structure and nature of vertical coordination in the Kenyan FFV export value chain. It has been reported that the structure of vertical coordination was nodal in the Kenyan FFV value chain. The nodes of vertical coordination in the value chain were found to be Node A of retailer-exporter contracting and Node B of exporter-farmer contracting. Additionally, the study found bilateral contracting in both nodes. While there was a simple written contract between the retailers and exporters, and the exporters and farmers, the chapter has argued that the contract was a document governing expectation. Thereby, the nature of coordination was through relational contracts.

In this, Node A was found to be stable mainly due to high relational specificity because the retailers and the exporters were found to have longer transactional relationship resulting to strong ties. As a result, cooperation, control and communication was effective in Node A and monitoring costs were low. Reputation was found to be key to contract enforcement in Node A especially with no clear contract enforcement mechanism in place. Nevertheless, the retailers-exporters transactional relationship was found to be highly asymmetrical with the retailers having control and power over the exporters.

In contrast, Node B was found to be highly unstable and volatile with low relational value. Unlike Node A, in Node B relational specificity was absent because of short-term contractual engagement between the farmers and the exporters. As a result, the farmers-exporters relationship did not evolve from exchange relationship to relationships of strong ties and trust. We have also reported that monitoring costs were high in Node B with the exporters bearing high costs in order to maintain supply reliability with the retailers. Hence, the cost of reputation was high especially for the exporters. The chapter has also discussed the role of state agencies in the governance of the sector, which was found was to provide oversight over the retailers' centred node. The next chapter discusses in detail transactional arrangement in Node B.

CHAPTER SIX

THE COST OF RELATIONSHIPS: ANALYSIS OF EXPORTERS-FARMERS TRANSACTIONS

6.1 Introduction

The previous chapter has discussed the structure and the nature of vertical coordination in the Kenyan FFV value chain, whereby it was shown that the structure of coordination was nodal with relationship contracting being ubiquitous. With formal contract enforcement systems absent, it was found that the retailers and exporters relied on reputation predicated on supply reliability to enforce the contract. We also argued that it was costly to maintain supply reliability in the value chain especially for the exporters. This chapter analyses in detail the cost of exporters gaining a positive reputation in the value chain by analysing the exporters-farmers transactions. The transactional and contractual relationships in Node B are examined further in relation to the prevailing transactional hazards, the transactional relationships involving exporters, farmers and the middlemen and the contractual relationship between exporters and farmers.

The study research question examined and discussed in this chapter is: what is the nature and cost of relational contracting between the exporters and farmers in the Kenyan FFV export value chain? So far, we have alluded, in the previous chapter, to the nature of transactions and contracting between farmers and exporters as relational. In this chapter, we analyse this further by examining the transaction costs related to exporter's organisation of smallholder farmers' production and marketing. Smallholder farmers' social-economic and demographic data are also reported and analysed in this chapter.

The chapter is organised as follows: first the smallholder farmers' demographic and social-economic characteristics are reported. Thereafter, the chapter analyses contract farming in the value chain in relation to Wolz and Kirsch's (1999) typology of agricultural contracts discussed in Chapter Two. The chapter then discusses the different contractual hazards in Node B of the value chain, before the transactional arrangement is analysed. The final part of the chapter presents a short case study of an emerging relational contractual arrangement in the value chain involving large-scale farmers. Throughout these discussions, we show how costly it was for the exporters to maintain a positive reputation with the retailers in the value chain.

6.2 Antecedent: The Study Smallholder Farmers Socio-Economic Characteristics

We begin by presenting the smallholder demographic and socio-economic data. The general profile of the smallholder farmer participants in the study is presented in Table 10. As Table

10 shows, out of the 62 smallholder farmers in the study, 40 and 22 were male and female, respectively. The age among the participants varied with 21 farmers falling within the age bracket of 38-47 and a further 22 farmers falling within the age bracket of 48-57. The other farmers' age groupings are represented in Table 10. In terms of educational qualification, most of the farmers, 36, had primary qualifications while 11 farmers had either university degree or college diploma. There were three farmers with a university degree. These three farmers in the study were not members of any farmer group. Similarly, there was a single farmer without any educational qualification, while 13 farmers had a secondary level education. The study farmers' characteristics are captured in Table 10.

Table 10: Study Smallholder Farmers Demographic Data

Variable	Category	Frequency
County	Nyeri	24
	Kirinyaga	23
	Murang'a	1
	Nandi	4
	Bomet	9
	Nairobi	1
Gender	Male	40
	Female	22
Age	18-27	2
	28-37	6
	38-47	21
	48-57	22
	58-67	9
	Over 67	1
Educational level	None	1
	Primary	36
	Secondary	13
	Middle level college	9
	Bachelor's degree	3
Belong to group	Yes	59
	No	3
Years in FFV farming	0-3	49
	4-6	8
	6 and over	4
Export crop	Avocados	9
	French beans	29
	Snow peas	24

As Table 10 shows, 59 farmers in the study were in smallholder farmer groups with their distribution within the six study counties as described in Chapter Four. In terms of years of farming fresh produce, 49 farmers had between 0-3 years of FFV farming, eight farmers had

between 4-6 years of FFV farming while four farmers had over six years of FFV farming. The Table also shows the distribution of export crops that the farmers grew with 29 farmers producing French beans, 24 farmers' snow peas and 9 farmers producing avocados. As the Table shows, the exporters' preferred means of organising the farmers for production and marketing was through smallholder groups. The farmer groups were found to offer the exporters economies of scale in relation to the costs of training farmers, the supply of farm inputs, bulk supply of produce and deployment of TAs.

Nevertheless, the three individual farmers were found not to have TA support, presumably because it would be costly to hire a TA for each of them but again these farmers had university degrees hence, better technical skills as discussed further below. The study, found that the farmer groups had put in place high entry fees, for new members. The average entry fee for new members for the five groups was found to be KES 40,000.⁴¹ In these groups, the farmers indicated that the fee was a calculation of the average total costs that each farmer had invested in group activities in the group's lifetime. The investment included a group registration fee, licensing fee, training costs, costs related to the construction of physical assets and other investments.

While it was unclear why the farmer groups had put in place entry barriers, Markelova and Mwangi (2010) and Key, Sadoulet, and Janvry (2000) have alluded to the production and marketing benefits associated with producer groups which may motivate these groups to put in place entry fees. Williamson (1975) also observed that peer groups can sometimes put in place high entry fees to screen new members in order to reduce the hazards of opportunism. Membership of producer groups' often benefits from, access to local markets and high-value crop markets, market information and new technologies. The same was observed for the farmers in this study.

First it was clear that for the 59 farmers in the study, the farmer groups provided them with the opportunity to participate in the FFV value chain. Second, the entry fee was also in place to screen new group members, especially to deter hazardous individuals who were viewed as trouble-makers. This was narrated by Farmer 2 in Farmer Group E:

⁴¹ This is about £ 285 fee for any new farmer who wants to join the farmer group.

“We have seen groups collapsing around us here in the village for a long time. We even have some of our family members who were members of a group which collapsed and we know they were the problem. You find that a group was running well and all of a sudden, some new member joins the group and then problems and wrangling begins. There are people who are known trouble-makers and wherever they go the group breaks up. So, we do not want such people in our group since we know them. So, the group decided to put in place some costs to attract only serious farmers. You know somebody who is willing to pay this money is serious and they also have to compensate the group for the work already done. If we just open the gates, everybody will get in including the trouble-makers”.

The same narrative was corroborated by Farmer 7 in Farmer Group C:

“We know the troublemakers in the village and some of them are our relatives. It is difficult for you to turn your relative away if they want to join the group. But if you put some (entry) costs, then you can tell them to pay the amount the group wants and if they cannot pay, that should keep them away and they will not blame you.”

The troublemaking was associated with increased group wrangles over finances and leadership. Therefore, it was possible that the high entry fees for these groups was to screen and keep away hazardous members. In addition, the entry fee was also a buy-in for any new member i.e. every new member had to buy group shares in order to become a ‘shareholder’. As earlier indicated, the three individual farmers, who were not members of any smallholder farmers group, had university degrees with two in full-time formal employment, while one had resigned from formal employment to practise FFV farming on a full-time basis. The other nine farmers with a college education were found to be retired civil servants, hence practising FFV farming in their retirement.

While the number of highly educated individual farmers in the study was low, due to the earlier narrated problem of accessing these farmers, the three farmers and the smallholder farmer groups make-up, give some evidence on which type of farmers often belong to smallholder groups in FFV farming. It was evident that FFV groups were made up of smallholder farmers with low educational qualifications. For transaction cost reasons, it was less costly for the exporters to train and monitor the smallholders in their groups apart from the benefit of bulk production of FFV. In comparison, the three farmers with a university degree were found to have no prior training from the exporters. Equally, it was found that these three farmers did not

have access to TAs and the three farmers did not require financial support to construct their own physical facilities in order to comply with GlobalGAP.

For this reason, the measure of relationship-specific investments and transaction costs the exporters made on the smallholders, was comparatively lower for the three individual farmers in relation to the smallholders' groups. Hence, it is possible that the exporters contracted the three farmers with university education because of the low transaction costs incurred in organising them because these farmers did not have the benefit of supplying FFV in bulk at the individual level. Although 49 farmers had between 0-3 years of FFV farming, the study found that 48 farmers in the study had a cumulative average of seven years of FFV farming. This, as the study found, was because some of the farmers with 0-3 years of FFV farming had previously dropped out from the value chain due to various reasons ranging from contractual problems to increased rejection by exporters.

Hence, out of the 62 farmers in the study, 48 had previously dropped out of the value chain and eventually re-entered the value chain at a later date. In addition, there was a single farmer who was on the verge of re-joining the value chain at the time of fieldwork after previously dropping out. Thus, the total number of farmers in the study who had re-entered the value chain was 49. In the study, the average number of years of farmers staying in FFV farming was found to be seven years. Meanwhile, Kariuki (2014) had earlier found that the average number of smallholder farmers stay in FFV farming was thirteen. Notably, Kariuki's study did not explain why the average cumulative FFV farming years for these farmers is high while it is known that smallholder farmers' stay in the value chain is often short because of the exclusionary mechanism in place. This study, explains this puzzle further below. First the type of contract farming in the value chain is analysed.

6.3 Contract Farming in Kenyan FFV Export Value Chain

While complex contracts are often incomplete (Williamson, 1991) in agriculture because of increased uncertainty related to the unpredictability of the physical and natural environment, the risks and costs of writing complete contracts often increase (Allen & Lueck, 2008; Okello et al., 2011). As discussed in Chapter Five, the contract template between farmers and the exporters was found to be simple and highly incomplete. The contract was a two-page document with very basic information including; the farmers' and exporters' personal information and the produce price. Hence, the level of incompleteness of the contract was high

because transactional information in the written contract was less than transactional information that was left out. This increased contractual instability is explained below.

The contract between the farmers and exporters was in two parts; the first part was the written document that had less information and, second, the unwritten part which had more transactional information than the written part. A review of several farmers contract showed that the contract had their and exporters' personal information, the day of produce delivery and their signatures. Hence, we contend that the written contract was simply a document of farmers and exporters expectations and was un-enforceable for various reasons.

First, the contract was too simple, with much information, such as spot-market price increases which impacted on transactions, left out. Little and Watts (1994) termed such information, often unwritten in the contract but nevertheless impacting on the contract, as the non-contractual part of the contract. In the study, transactional information left out of written contract but critical included farm input provisioning, farmer training and TA provisioning by the exporters. Second, the written contract was not enforceable because of the weak property rights regime in Kenya, as discussed in the previous chapter.

Third, the nature of the fresh produce made contract enforcement difficult because arbitration, if it were possible, would take time while the produce has already been disposed of. As described in the previous chapter, the exporters and farmers both perceived the written contract as formal and they expected that it would be enforced by the regulator HCD. This was not possible as HCD, as it was structured and, had limited financial, capacity, and legal mandate to enforce contracts as described in Chapter Five. Therefore, the written contract was simply a document of expectations with the real contract between farmers and exporters being relational. This was because the relational contract was more detailed than the written one and better captured the complexity of exporters-farmers transactions and determined FFV production and marketing process.

Equally, the relational contract was also found to contain farmers' and exporters' beliefs and expectation such as values and norms of trust and openness. This was indirectly alluded to by Farmer 3 in Farmer Group B who said the following:

“When the exporters were recruiting us, they were very good and they promised us a lot of good things, and most of us farmers believed them and joined this farming. But eventually their true colour came out. You know it's like a cat which eventually exposes

its claws ready to scratch you. So, you find that our trust in them is not as high as it previously was because they have not delivered on what they promised”.

The same narrative was repeated by Farmer 5 in Farmer Group D who said:

“We stopped growing (French) beans for two years as a group and later we decided to begin growing (French) beans again. We looked for a different (exporting) company this time round and found this good one. But this time we did not just listen to their sweet promises but we also had the issues we wanted them to provide guarantee. From our previous experience we had learnt how to deal with these exporters and so before we signed the contract we sat down with them and agreed on what we wanted them to offer us in terms of prices and rejects and they had to guarantee us this. This business is full of cunning people and even us (farmers), we have learnt to be cunning in order to survive”

While Farmer 5 in Group D indicated that the produce rejects problem and spot-market increases were regulated in the written contract, this was not the case as the researcher examined the contract and found it to lack these details. Rather these details were verbally agreed upon by the farmer group and the exporter. As such, the farmers had expectations and views on how the exporters should treat them as they entered into verbal agreements. This was found among the 62 farmers in the study who expressed strongly held beliefs and expectation on the exporters and, when not met, this increased the friction in the contractual relationship between the farmers and the exporters.

For instance, the study found that the problem of opportunism was partially driven by the information impactedness problem. The farmers somehow expected that the exporters were to provide them with market information. Because the exporters’ failed to do this, the middlemen exploited this gap by providing information to farmers, and in the process earning farmers’ trust. This was explained by the Individual Farmer 3 in the study:

“We don’t like the brokers (middlemen), but they also help us to get market information. The exporter does not care about this, he just sends the truck (to pick the produce) every Thursday. But we want to know what is happening in Nairobi. So if a broker comes along with this information why would I not listen to them? At least I get to know if the prices have gone up or down. If the (exporting) company will (frequently) tell us what is happening in Nairobi, nobody would touch a broker”.

The same information was corroborated by Participant Individual Farmer 1 who said the following:

“I know it is wrong to sell my produce to the brokers but you know what, they are useful in providing market information. My exporter does not inform me about what is happening in the market I only get to know about this from brokers. So, I am forced to reciprocate to the brokers by selling to them some of my produce”.

These two statements were representative of one of the most repeated narratives among the 62 farmers in the study. Interestingly, in the written contracts that the researcher examined, there was no stipulation that the exporters would provide the farmers with market information. However, this did not deter farmers from expecting that the exporters would provide them with such information. Because this not happen, the farmers engaged with the brokers. This gives further evidence that the contract between the farmers and the exporters was relational although in some cases one party’s expectations were unknown to the other. This arrangement of having a simple written document of expectations interacting with detailed relational contract impacted on by expectations unknown to the other party, led to an unstable relational contract without a clear enforcement mechanism because of various reasons.

First, having a clear enforcement mechanism was difficult to put in place because some farmer held beliefs, such as provisioning of market information, was not known to the exporters. Therefore, the exporters failed to make available what they were not aware of. In this case the exporters were unaware that the farmers expected them to provide market information, hence they did not. This mismatch of expectations made it difficult for each party to interpret and meet the other party’s expectations. Secondly, as discussed below, the farmers easily walked out of transactions which impacted negatively on the evolution of trading relationship towards a deeper relationship of value and trust.

Third, unlike the retailers, the exporters lacked market power which they could deploy to manage the smallholder farmers. As discussed in Chapter Five, because of their oligopsony, the retailers had overall control of the value chain and they could easily block an exporter who failed to meet required supply demands from the market. While the exporters were expected to transactionally manage the smallholder farmers’ this was difficult, as narrated by the Participant from Private Sector Organisation A:

“Our members are directly responsible for organising farmers and I would say they are responsible for all the farmers’ activities in the value chain. It is not true that the retailers are the ones who are responsible for the farmers. How can they be when they are located in Europe? Locally, the exporters are the kings. They (retailers) control the market yes, but down here it is the exporters who are the big players. Even the middlemen cannot just export their produce to EU, they have to go through the exporters, even if their presence is bad for the value chain. So, this makes the exporters work very difficult and costly, because they have to manage all these people down here”

Despite this expectation, the exporters lacked the regulatory fiat to either incentivise or sanction the farmers’ hazardous behaviour. Equally, the exporters had to compete with the middlemen for the same farmers produce and this made it difficult for the exporters to have exclusivity over Node B as the retailers had in Node A. Hence, if the exporters failed to provide a service to the farmers, the middlemen provided the service. If the exporters offered low prices, the middlemen countered with a higher price. As such, asymmetric competition existed in favour of the farmers. Thus, supply reliability as a contract enforcement mechanism was impossible in Node B. Hence, the previously alluded to loose coordination in Node B is evidenced in exporters’-farmers’ transactional engagement.

The study further explored distribution of specific investment among the farmers and the exporters in order to understand the cost on the exporters to establish relational contracting with the retailers. In the previous chapter, we argued that the exporters contracted smallholder farmers in order to maintain supply reliability with their contracted retailers. We argued then that to maintain supply reliability came at a high cost to the exporters’ especially in their contracting of smallholders. Hence, in this chapter we identified several specific assets in the value chain, as given by Joskow (2008) and Martinez (2002).

First, were dedicated assets those that the exporters’ provided to the farmers’ in order to improve the farmer's production capacity to meet the required market standards. Without these assets, the farmers were incapable of producing FFV to meet market demands. Thereby, dedicated assets were value-improving assets. These included exporters’ investment on farmer recruitment, training and capacity building on the technicality of food standards, the provisioning of farm inputs for standardised production, hiring and deployment of TAs for technical advice and monitoring of contracts as well as paying for the farmers GlobalGAP audit and certification. This was explained by the Participant from Large Exporter C:

“We invest a lot on the farmers in terms of organising them, training them and providing technical advice. In fact, most of the exporting companies also pay the certification fee for the producers. We do all these things for them but still sometimes you make losses because the smallholder producers can be a problem. Some are good but most are a problem, because they will use banned chemicals and even sell their produce to brokers. If we had our way we would keep away from them but we need the produce so we have to use them one way or another. You invest in them but you have to put up with a lot of issues and problems from them. We rarely get the same problems from the large producers”.

Second, we found commodity specificity both on the exporters and farmers, related to the nature of the export vegetable, which required fast access to the market resulting in the exporters and farmers being dependant on retailers and exporters respectively for market access. While the exporters had no problem with this, of stable and durable relational contracting in Node A, because of ephemeral nature of the contract in Node B, the farmers were often exposed to the risk of losing market access in the production season. If the exporters pulled out of the contract in the harvesting season, then the farmers had to find an alternative buyer which was difficult because of the prevalent information problem. However, the farmers’ market dependence was found to be temporal, present only in the crop production season. Commodity specificity impacted on the exporters’, as any produce quality value lost, increased the probability of the retailers rejecting the produce, hence affecting their contractual relationship with the retailers.

Third, we identified physical asset specificity related to the exporters’ investments in their own equipment such as machinery and different specialised chemicals such as chlorinated water and special hand wash soaps for the pack-house workers as Dolan and Humphrey (2000) had found. The distribution of physical asset specificity was not uniform among the ten exporters in the study. The five large exporters had their own pack-house facilities; therefore, the cost of investment was higher. The small exporters in contrast, used HCD pack-house facilities at a cost, therefore lower investments costs. The large exporters’ higher costs of investments gave them a comparative advantage in terms of market access compared to the small exporters’ who could not access UK market because of higher capacity requirements.

Fourth, we found site specificity among the 10 exporters, based on the fact that their pack-house facilities were located at the Jomo Kenyatta International Airport (JKIA) in order to have

close proximity to airfreight services at JKIA for quick access to the market. Equally, the exporters' location at the airport gave them easy access to quality inspectors from the state agency KEPHIS who had to inspect the produce before the export electronic certificate from the Electronic Certification System (ECS) was issued. Without the certificate, the exporters could not export their products and any delay in issuing the certificate affected the produce quality, thereby increasing the probability of the retailers rejecting the produce.

Fifth, we identified human asset specificity based on learning by doing and training skills on the 62 farmers and pack-house workers. The farmers and pack-house workers training were often organized and paid for by the exporters. As presented in Table 11 in Chapter Seven, the study explored the average number of expert training provided for the farmers by the exporters in a three-year period. The training was distributed as follows; an average of eight in the first year, four in year two and two in the third year. Although this training was found to be impact upon the farmers, our analysis shows that learning by doing was especially critical because it upgraded farmers' skills such as their ability to comply with GlobalGAP. One key and repeated theme in the results among the farmers was, "We have learnt that". This was a clear indication that the farmers were acquiring skills along the way especially in relation to production and marketing skills.

As earlier indicated, 49 farmers were found to have a cumulative average stay of seven years in the FFV value chain. The farmers seven years' experience was not linear, instead it was often interrupted with certain periods when they exited the value chain. We found that the 49 farmers' production skills was improved compared to the 13 farmers with a stay of 0-3 years in the value chain. For instance, Individual Farmer 3 with 6 years stay in the value chain said the following in relation to this:

"The stage of harvest is very important. The colouring of the beans is not as important as the stage of growth when harvesting. The stage of the maturity should be uniform so that the harvest is standard. There should not be any seed inside the pod at the time of harvesting the beans. So, the two most important things are the size of the beans and the state of maturity. At first these small things are not easy for a farmer to know even if you are taught and previously I made a lot of mistakes. But as I continually did it, I learnt and it has become easier".

As the farmer above narrates, the important learning by doing skills gained by the 49 farmers was GlobalGAP compliance ability and marketing skills whereby, the 49 farmers were found

to impose their requirements on the contracts as Farmer 5 in Farmer Group D above had narrated.

We relate the importance of learning by doing skills of the 49 farmers to the following example. Consider Individual Farmers 1 and 3 in the study, for instance, contracted to Large Exporter A. Farmer 1 has just been recruited by Exporter A while Farmer 3 has been in the value chain for the past six years. Thereby, Farmer 1 knowledge of FFV production is only through training skills while Farmer 3 has gained skills through training and learning by doing. Hence, the optimal outcome for Exporter A is to contract Farmer 3 because he/she requires less to no training which lowers transaction costs related to training while Farmer 1 needs increased training in order to produce FFV that meets market requirements, hence higher transaction costs on the exporter.

The study did not find evidence of physical, site and dedicated asset specificity from the contracted farmers. Rather, most investment on the 62 farmers in the study was made by either the exporters or previous donor support programmes. Apart from the farmers' investment in land which could be re-deployed to alternative use, Farmers, Group C and E, were found to be beneficiaries of the Dutch government-funded Horticulture and Food Security Programme (HFSP). The HFSP programme provided financial support to farmers towards the construction of physical facilities such as sorting sheds and chemical stores. Additionally, it was possible for the farmers to redeploy the sorting sheds and chemical stores to others to use at a profit.

From the above investments made by the exporters on farmers, it is clear that relational contracting had transferred most costs of GlobalGAP compliance onto the exporters as they aimed at maintaining stable supply with the retailers. This finding explains several puzzles in the Kenyan FFV value chain. First it explains why the cost of establishing and maintaining relational contract with the retailers was high on the exporters. Second, it explains the ease of smallholder farmers pulling out of contracts. The smallholder farmers incurred minimal losses whenever they walked out of contracts because their level of investment on FFV production was low compared to the exporters.

Third, it partly explains the exporters' preference to engage with medium-and large-scale farmers. Large-scale farmers are known to have the comparative advantage of being able to invest in their own processing, transport and marketing systems in comparison to smallholders (Sebastian, 2009); Okello et al. (2011). Comparative analysis of one large and small FFV export farmers in Kenya confirmed this in which they found that the large farmer self-invested

on GlobalGAP compliance facilities without exporters' support while the smallholder, relied on the exporters. In this study, this was explained by the Participant from Large Exporter C:

“You have to know that nobody likes to work with the small producers. We are just doing it because we have no other option. If we get 50-100 medium and large farmers, I can confidently tell you that will drop the small producers. A large producer knows why he/she is in the business so we don't train them and we do not give them inputs. In fact, they hire their own technical people to help them with GlobalGAP so we don't hire TAs for them. You don't spend money on the large farmers and yet you get a higher output with fewer risks. For the smallholders, it is the opposite, you put in more money, you face a lot of risks and the output is low. This is the reality for all these exporters here (at the airport) face”.

This narrative was common among the ten exporters in the study. According to the exporters', in addition to the high transaction costs of contracting smallholders, there was the additional risk of the produce being contaminated with chemicals. Thereby, large farmers were preferred. Fourth, the finding explains the main study puzzle of how smallholder farmers are able to participate in the FFV value chain that supposedly has high entry and stay barriers. Simply, the high entry and stay costs and barriers have been taken over by the exporters, hence the smallholders could enter, stay and exit the value chain as the discussion above has shown.

Based on the above discussion, and results reported in Chapter Seven, it is clear that the exporters had high control over the smallholder production decisions. We' therefore, identify buyer full-control relational contract between the farmers and exporters as categorised by Wolz and Kirsch (1999). The exporters not only provided the farmers with inputs and technical support but they also supervised production and marketing processes and decisions although at high transaction costs. Therefore, we argue that the buyer full-control relational contract was the only way the exporters could sustain supply reliability in their contractual engagement with the retailers. The next section discusses the three transactional hazards that were found to impact on the exporters-farmers relational contracting.

6.4 The Nature of Contractual Instability in Node B of the Value Chain

In the above section, we have discussed how the exporters' incurred high transaction costs in their contracting of the smallholders. In this section, contractual problems related to opportunism and information problem are discussed showing evidence of the impreciseness of the argument of tight integration in the literature alluded to in Chapter Five.

6.4.1 The moral hazard of opportunism

In Chapter Three, opportunism was defined as the lack of candour in transactions related to self-interest seeking with guile including cheating, stealing, non-disclosure or incomplete disclosure of information among other negative traits (Williamson, 1975, p. 9). Opportunism was found to be prevalent in Node B of the value chain both at farmer level and at exporters' level. Various studies in the Kenyan FFV export sector have shown the prevalence of opportunism among smallholder farmers in the Kenyan FFV export sector including Okello et al. (2011), Ouma (2010) and Jaffee (1994). These scholarships identified smallholder farmers' opportunistic behaviour of side selling produce to middlemen over spot-market. In this study, we found opportunism at two levels.

First, contracted smallholders were found to side sell some of their produce to middlemen through spot market arrangements as the earlier studies found. This was often encouraged by the middlemen who took advantage of the farmers' information problem to win the farmer's confidence by providing market information. The middlemen were found to be selective in their information provisioning by providing price information to farmers only in periods when spot-market prices were higher than contract prices. In other periods, mostly in low demand season, when contract prices were higher, middlemen activity was found to be low to non-existent. Therefore, spot-market arrangements in the value chain were seasonally driven by price changes.

The farmers partially defected from contracts by selling some of their produce to the middlemen while also delivering produce to the exporters. In the study, 34 smallholder farmers indicated that they had previously (and were still engaged) in marketing some of their produce to the middlemen whenever spot-market prices were higher than the contract prices. This was explained by Individual Farmer 1 in the study:

“What happened was that the prices had gone up and the exporter had refused to adjust the prices as stated in the contract. So, I decided to sell some of my produce to some middleman in the area who had informed me that the produce prices had gone up in Nairobi. When the exporter asked me why my delivery had reduced in volume, I told him that there was disease infestation which had affected the crops. Of course, they (exporter) later came to learn the truth about what was happening and they adjusted the prices upwards”.

The same narrative was corroborated by the exporters in the study as summarised by the Participant from Small Exporter A who said the following:

“They (middlemen) are a problem to every exporter in the industry. They deal with our farmers and buy the produce from them at higher prices. What they (middlemen) don’t know is that by the time the produce is mature, the company has spent a lot of resources in providing training and input to the farmers then they (middlemen) appear from nowhere and buy the produce. It is a great cost to us when such things happen and they (HCD) cannot help”.

Individual Farmer 1 narration confirms relational contracting in the value chain because the written contract did not have a stipulation on prices adjustment when spot-market prices increased. The expectation for price adjustment was found among the 62 farmers in the study. In the written contracts that the researcher examined, produce prices were fixed for the one-year duration of the contract. Any provision for price adjustments would have negatively impacted the farmers in periods when spot-market prices were lower than contract prices. Therefore, the fixed contractual prices was clearly of benefit to the farmers.

The second level of opportunism was found to be related to the exporters who bought produce from farmers contracted to rival exporters in high demand season. This was clearly narrated by the Development Consultant in the study:

“Even them (exporters) are engaged in this (opportunism). They get these middlemen and give them money to go and buy produce from farmers at a better price. They do when demand in Europe is high and so the prices are also high. They (exporters) are also in this dirty business and the farmers get confused when they hear these stories since the same exporter is giving them low prices while using a middleman to buy the produce at a higher price.”

Similarly, the Participant from State Agency A narrated the same as follows:

“The truth is that even the exporters are also involved in buying produce from farmers contracted to other exporters. They (exporters) are rivals and that is why they do not like each other and they rarely work together, because they steal each other’s produce”.

Jaffee (1994) found the same in his case study of contract farming in Kenya FFV sector where he found that some exporters were engaged in buying produce from farmers contracted to rival exporters. Jaffee’s study found that the exporters ‘poaching’ of produce from rival exporters

eventually led to the collapse of the contract farming scheme. In this study, we found that in high produce demand season, produce prices were often high and this contributed to the exporters' behaviour. According to the Development Consultant and the state agencies, the exporters targeted rival exporters' farmers because they were GlobalGAP certified, hence reduced contamination risks. This was explained by the Development consultant as follows:

“They (exporters) use middlemen to get produce from the GlobalGAP certified farmers so that it does not backfire on them in the market. And they are very clever not to do it directly, so they use the middlemen”.

Although not directly alluded to, other study participants also mentioned that the middlemen often sold their produce to the exporters. This was explained by the participant from State Agency B:

“Of course, they cannot accept that they buy produce from the middlemen, because if we find out or if their buyer finds out, they will be out of business. But the reality is that the middlemen sell their produce to some of those exporters”.

We find the same reason for supply reliability in the retailers-exporters' relational contracting, as the reason why the exporters were raiding rival farmers for produce in high demand season. We stipulate this in the following example. Suppose in a high demand season, which often coincides with the European autumn and winter season, a retailer suddenly raises the volume of produce orders from a Kenyan exporter at high prices. In order to protect their supply reliability, the exporter would most likely engage in raiding other exporters' smallholders in order to meet the supply demand while also avoiding the risk of food contamination. The middlemen were found to be conduits to this as the two narratives above shows. This finding partly explains the prevalence of middlemen in the value chain even after post-1990 coordination arrangement when it was expected that they would be eliminated as the exporters often used them to get produce.

Ouma (2010) called this middlemen-exporters transactional engagement as through backstage arrangement. This incentive for such backstage arrangements can be related to TCE small-number bargaining problem. As defined in Chapter Three, Joskow (2008) explained that the small-number bargaining problem occurs when specific investments are made, and a previous competitive bargaining situation is transformed into a situation where only a small number of actors are involved. The same can be extrapolated to capture the exporters-middlemen backstage arrangements in high demand season. Take Farmer Groups A and E who were

growing French beans and snow peas, respectively, and were both contracted to Large Exporter A. Suppose an impact of bad weather from March-June 2017 in other snow peas and French beans producing countries affected these crops, hence affecting deliveries to UK supermarkets.

Because of the reduced supply from other sources, UK retailers may then make a request to the Kenyan exporters to double the volume of French beans and snow peas deliveries. However, at any given time, Large Exporter A can only export a fixed volume of French beans and snow peas since the exporter is contracted to Farmer Group A, E and others who can only produce a certain maximum volume of snow peas and French beans in a season. Hence, Large Exporter A may then decide to contact some middlemen to procure snow peas and French beans for them from GlobalGAP certified farmers only. Meanwhile other farmers in the value chain producing French beans and snow peas are already contracted to different exporters.

Hence, snow peas and French beans farmers may all of a sudden experience increased demand for produce from different buyers at higher prices. As Williamson (1975) predicts, a bidding war results in which different exporters, use the middlemen as conduits to buy produce at higher prices. Meanwhile, Farmer Group A and E, because of the bidding war, may raise their prices or put new demands on Large Exporter A. If the exporter refused to meet the farmer's demands, a hold-up problem results whereby contracted transactions failed to take place.

This phenomenon affects the exporters and farmers trust relationship, as Macchiavello and Morjaria (2015a) also found in their study of Rwandan coffee industry. According to Macchiavello and Morjaria, when there was competition for coffee beans, the farmers benefited through higher returns but this negatively impacted on relational contracts between them and their contracted buyers as side selling led to trust being lost. In this study, the factor of competition, negatively affected the durability and stability of contract farming in the FFV value chain.

6.4.2 The contractual problem of information impactedness

As defined in Chapter Three, information impactedness is a condition in which rationally bounded parties, already inclined to opportunism and operating under uncertainty, experience differences in accessing transaction specific information (Williamson, 1975). Information impactedness is the measure of the degree to which transaction information is known to some parties in a contract relationship but not to others. Minot (1986) and Kirsten and Sartorius (2002) listed the two adverse-selection problems in agri-food markets that emanates from information impactedness problem. This includes when the buyer has more information about

the production of the product than the farmer and when the buyer also knows more about the produce market, in terms of seasonality, quality and price changes, than the farmer. The same problem can result if the farmer has more information than the buyer.

In this study, the above problem of exporters' opportunism clearly shows the information problem in the value chain. When the exporters deployed the middlemen to buy produce from the farmers, the farmers only came to know about increased demand when there were several buyers competing for their produce. Hence, at any given time, the exporters had more information about the produce market than the farmers. One question that was consistently asked of the 62 farmers in the study was related to their source of market information at the contract writing stage. The results show that the 62 farmers had no reliable source of market information. The farmers accepted or rejected the prices offered by exporters based on their calculation of the break-even point. This was captured by Farmer Participant 5 in Farmer Group A:

“We don't know anything to do with market prices. As long as the prices being offered by the exporter allows us to make some profit, we are okay with that”.

As such, the study found that the farmers' source of market information was either other farmers or the middlemen. This was explained by Farmer Participant 5 in Farmer Group A:

“I believe that when you were coming here you saw how isolated we are from the main road and even the nearest (local shopping) centre from here is far. So, there is no way we can get information about price changes easily from Nairobi! There is no way we can know what is happening there (Nairobi) except by listening to the radio or watching TV. So we don't know anything to do with the prices. As long as prices being offered by the exporter allows us to make some profit, we are okay with that”.

Most of the fieldwork areas, except Nairobi, were rural-based with poor road conditions. Although 53 farmers in the study indicated that they made the effort of contacting other farmers to compare prices, this was mostly done to counter check if the prices being offered by the exporters was the correct market price. This was revealed by Individual Farmer 2 in the study who said the following:

“As a farmer in a place like this, I have no other way of getting information about the prices of (French) beans. The exporter is my source of information. Sometimes I also call the farmers that I know in Mwea and Laikipia to check if the prices that I am being given (by the exporter) is true or if I am being cheated. If I am being cheated I protest”.

The counter checking of prices from other farmers was found to contribute to farmers’ side selling of produce. This was because the prices in different areas were often different depending on the distance from Nairobi and the condition of the roads in the area. For instance, in the course of the fieldwork, the prices of French beans in Kirinyaga County was Kenya Shillings (KES) 70 per kilogram but in Nandi County it was KES 50 per kilogram because Nandi is 310 Km away from Nairobi in comparison to Kirinyaga which is 120 Km. Hence, if the Nandi farmers relied on price information from Kirinyaga farmers, they would be inclined towards engaging with middlemen. As a result, the farmers often did not have correct knowledge about the true picture of the market.

An example of the information problem was related to a major chemical contamination problem in 2013. While the exporters were well-informed of the problem, the farmers were not. The study found that only a single farmer, Individual Farmer 1, had knowledge of the 2013 MRL incident. But even for this farmer, her source of information on MRL problem was from a middleman when the volume of rejects she was getting back from the exporters had increased unprecedentedly. This farmer said the following in relation to this:

“In 2013 there was a time when the rejects increased all of a sudden. You know everything was fine and then one day the exporter brought back nearly all my produce as rejects. This continued for a while and I started to wonder what the problem was. So when I asked the exporter, they told me that my produce had problems and had not met the required quality. But one day I casually talked to a middleman and asked him if he had any idea what was going on. He told me that there was a big problem at the airport and that is why there was a lot of rejects all over Kenya. I then confronted the exporter about this and he accepted that there was a problem. When the exporter owned up, I pulled out of the contract”.

The overall effect of exporters’ information non-disclosure to farmers was that it forged closer connections between farmers and middlemen in the value chain. In such fast-paced markets, where changes occur rapidly and uncertainty is a factor, actors often strive to solve information problem by forging connections (Laurel & Powell, 2010). This was evident as some farmers

indicated that they were willing to stick to contractual engagement with an exporter if the exporter availed market information to them and agreed to adjust prices at a later date. This was narrated by Individual Farmer 1:

“I don’t want to deal with the middleman, and for the last 6 months I have kept off them because the current buyer (exporter) is good. We talk and he tells me when prices are going up and we agree that at the end of the contract he will adjust the prices up to cater for this. So even if the middleman comes and gives me KES 10 more for my (French) beans I turn him down. Why would I want to jeopardise my relationship with the exporter who is good?”

The same narrative was repeated by Individual farmer 4:

“The problem is that the exporter is not telling the truth when the price changes so I also do the same and work with the middlemen. If the exporter was to come and tell me “the prices for French beans have gone up by KES 15 but we will deal with this when we are renewing the contract” I will not deal with the middlemen. So my problem is that the exporter is not honest, so why should I be?”

The above narrative was found among 12 farmers in the study indicating that exporters’ information disclosure contributed to the development of stable relational contracts. The effect of these contractual hazards on the transactions in the Node B of the value chain is discussed below.

6.5 Contractual Hazards and Smallholder farmers Exit-Re-entry in Kenyan FFV

Export Value chain

Previous studies including Graffham et al. (2007), United Nations Conference on Trade and Development (2008), Dolan and Humphrey (2000) and others, have confirmed the decline of Kenyan smallholder farmers’ participation in the value chain. Graffham et al, in particular, found that by 2006 over 60 percent of Kenyan smallholder producers had dropped out of the value chain due to the difficulties related to compliance with food standards. While the decline in the number of smallholder farmers’ in the Kenyan FFV value chain has been known, what was unknown was that some farmers who exit, re-enter the value chain as this study found. The puzzle was why were some farmers re-entering the value chain?

As earlier indicated, 49 farmers in the study had a cumulative average of seven years stay in the value chain. The 49 farmers were found to have exited the value chain for various reasons

ranging from contractual problems to increase in MRL incidences which led to increased produce rejections. The study found that the presence of contract farming in FFV value chain was the main reason why the farmers who exited the value chain re-entered the value chain. Although contract farming itself was not as stable as previously discussed, Kenyan non-export agricultural markets are known to be in a far worse state as discussed below. The farmers' exit-re-entry behaviour was confirmed by the Development Practitioner participant in the study who said the following about Mwea area (Kirinyaga County):

“We found that farmers' keep moving in and out of the French beans value chain. It was a strange discovery for us, I mean we did not anticipate it! Those of them who had stopped planting (French) beans some years back told us they had decided to try again. I mean we all know that farmers keep moving out of this farming but why would they want to come back? You will find that out of 5000 farmers in an area only 3000 are active at a time. The other (inactive) 2000 are the ones who drop out eventually. They are all active at first then something happens and then they become inactive and then they drop out! And that is why the (exporting) companies are always in the business of recruiting new farmers”.

One of the main questions that the study asked the farmers was their reason for joining FFV export farming. To this, 57 farmers indicated that their initial reason for joining the value chain was due to better prices offered, while five farmers indicated contract farming as their main reason for joining the value chain. The same question was repeated to the farmers in relation to why they were still in FFV value chain despite the many problems they had listed. In relation to this question, 41 farmers listed the contract as the main reason for their continued stay while 21 farmers indicated that better prices was the main reason. Thereby, over time, contract farming was becoming important to the farmers mainly because of the market guarantee it provided. This was explained by Farmer 5 in Farmer's Group D:

“In the local market for bananas and tomatoes, it is individuals [buyers] from Nairobi who buy the produce. These buyers usually set their own prices and there is nothing you can do about it. And if the buyer from Nairobi does not show up, then you have to deal with the middlemen whose prices are very low. And as you can see this is a banana and tomatoes producing area, so all of us in this area harvest tomatoes and bananas at the same time so the prices are usually very low. So, you are not sure you will get the market (for the bananas and tomatoes). And when the buyers come they treat us very

badly. They would say, “this banana is shrivelled so I will pay you KES 100 and this one is small I will pay KES 50”. You end up selling your produce at a low price because you do not have other options. But for French beans, there is a contract with the companies and we know the prices at the time we are planting our crops and when we harvest, the buyer comes to collect the produce at their own cost”.

The same was corroborated by Individual Farmer 1 in the study:

“When you have tried the export market, with all its problems, you realise that it is better than the local one. There are so many middlemen in the local market who buys the produce at their own prices and there is nobody to protect you. Actually, in the local market you are not sure if there will be a buyer and you have to go out there to look for them”.

As such, the contract provided market security for the farmers which was lacking in the non-export food crops markets in Kenya. Unlike the FFV value chain which had contract farming, the Kenyan non-export market was found to be poorly organised with the farmers receiving little to no technical assistance, high degree of post-harvest losses, low produce prices in peak seasons, pest and diseases infestations and low seed quality (Lenné et al., 2005; Neven & Reardon, 2004). The market infrastructure is also underdeveloped with farmers facing constraints related to poor infrastructure, high transport costs and poorly organized marketing systems (Fafchamps, 2004; Fafchamps & Minten, 2001).

Because of these problems, contract farming in the FFV value chain, especially because of exporters’ commitment to maintaining supply reliability with retailers, market guarantee to the farmers was reducing transaction costs related to market search. This proved to be attractive to the farmers who had previously dropped out of FFV value chain for the local food crops markets. Importantly, the exporters covered most of the transaction costs in the FFV sector, and this was an incentive for the farmers to re-join the value chain. The smallholder farmers were found to be simultaneously growing non-export crops such as tomatoes, bananas, carrots, maize, beans and cabbages with the FFV. When they dropped out of the FFV value chain, they fully concentrated on the non-export crops for the local market. However, the poor state of the non-export market, made some of these farmers re-enter the FFV value chain.

On re-entering the FFV value chain, produce prices were still important to these farmers, even for the 41 farmers who had indicated that contract farming was their main incentive. However, their experience of high transaction costs in a disorganised non-export market also played a

key role in driving them back to FFV value chain. This was explained by the Individual Farmer 3 in the study:

“If I were to produce tomatoes here, first I will have to look for the technical information myself and that would force me to pay somebody to do that. Then I will also have to look for a buyer from the town or transport the tomatoes myself to the market. And you have seen how the roads here are in a bad condition, so even if I manage to access the market in Eldoret town, half the tomatoes will be squashed. And if the buyer decides to come to my farm, he/she will not take everything, they might take a few Kgs and leave the rest behind and they will give me problems because they will set their own price. It is different with the (French) beans market. We have a contract and the buyer has always been on time to pick the produce and we don't haggle over prices so my mind is at peace. So, if you look at all these benefits, even you (the researcher) will go for the (French) beans”.

Hence, the FFV value chain offered better economic incentives for the farmers, in terms of contract farming, stable prices and low transaction costs in comparison to the non-export market. The smallholder farmers who exited the value chain found it easier to do so because of the asymmetric distribution of specific investments as earlier described. As such, when the smallholders exited the value chain, they did so at minimum loss. Next, we analyse the contractual location of the farmers-exporters' relational contracting in the vertical coordination continuum.

6.6 Organisation of Farmers-Exporters Transactions

The above analysis has shown that farmers-exporters transactions were often vulnerable to different contractual hazards. In addition, it has been evidenced that the exporters' bore high transaction costs in their contract with the farmers in order to attain stable supply system with the retailers. In general, the farmers-exporters' relational contracting lacked the reputational effect which was necessary to provide transactional stability. Importantly, because of the weak legal mechanism in Kenya, enforcement of property rights was impossible, hence we found that the exporters had invested in specific assets yet there were no contractual safeguards in place against moral hazard of opportunism.

We recast Williamson's (1985) argument that contractual safeguards are a necessity when specific investments have been made. We argue that the same safeguard is necessary even in relational contracting situations. Ideally, the reputational effect is the best relational contract

safeguard, for instance supply reliability in Node A of the value chain. Because supply reliability was lacking in Node B, we adopt Williamson's argument that measures such as penalties, severance payment for pre-mature termination of contract and creation of special purpose governance dispute resolution systems such as third-party mediation over disputes, may have been necessary. In addition, regulation by the state could also have checked and inhibited opportunistic parties (Arrunada & Andonova, 2008) by deterring unattractive economic choices that offered short-term gains (Bates, 1989) for either the farmers or the exporters. However, such measures were found lacking in the value chain.

As the regulator, HCD was expected to provide contractual safeguard through regulatory mechanisms such as licensing. However, the study found that they were not performing this role partly because HCD lacked the mandate and partly enforcing relational contracting would have been difficult. Additionally, the structure of the value chain, containing thousands of smallholder farmers, made impossible any potential contract enforcement by the financially constrained HCD. Equally, any smallholder farmer who breached the contract could easily have exited the value chain and joined the value chain through a different smallholder group. Thus, state agencies regulatory tools such as licensing were only effective against the exporters but not the farmers. Paradoxically, it was the farmers who needed increased control as opportunism was rife at their end.

We apply Williamson's (2008a, p. 9) discriminating alignment hypothesis, in which transactions which differ in their attributes should align to the governance systems which differ in their strength and weakness, to complete our transaction cost economising result. We do this through Williamson's (2008a) contracting schema in Figure 18 below. In order to complete this, a brief recap of the importance of asset specificity is given with the example of Farmer Group A and E who were growing French beans and snow peas, respectively, for Large Exporter A. As mentioned earlier, these smallholder farmers were not only growing FFV crops but also local market produce such as potatoes, bananas, maize, kales, beans, cabbages and food crops. Farmer Groups A and E were also growing potatoes, tomatoes, cabbages and kale for the local market.

Unlike the non-export market, the FFV value chain had contract farming. We have also discussed the presence and distribution of specific assets in the value chain. In this case, Large Exporter A had made various investments on their own pack-house facilities and on Farmer Group A and E. We have also discussed the presence of various hazards between the farmers

and the exporters especially opportunism. Thereby, specific investments were in place, transactional hazards high, while contractual safeguards were lacking. Hence, as the discussion above has shown, the relational contracting between the farmers and exporters was often exposed to hazards.

Evaluating the exporters-farmers transactional attributes against the contracting type as represented in Table 8 in Chapter Three, as given by Kirsten and Sartorius (2002), the following questions can be derived as related to the contracting between the farmers and exporters in Node B of the Kenyan FFV value chain.

1. Was asset specificity high in Node B?
2. Were there contractual and transactional uncertainty in Node B?
3. Was there information impactedness problem in Node B?
4. Was opportunism ubiquitous in Node B?
5. Did the parties in the contract, farmers and exporters, have the ability to walk away from the contract?
6. Were transactions repetitive?

The questions are answered based on the example of Farmer Group A and E above and are applicable to the 8 exporters and 62 farmers contracted to each other. Based on the discussion above, the answer to all the above questions is yes; asset specificity was found, uncertainty, information problems and opportunism were present, the farmers easily walked away from contracts and the exporters-farmers transaction were repetitive. A comparative analysis shows that the exporters-farmers relational bilateral contracting was based at the unrelieved hazard zone of vertical coordination continuum as represented in Figure 18 of Williamson's simple contractual schema below.

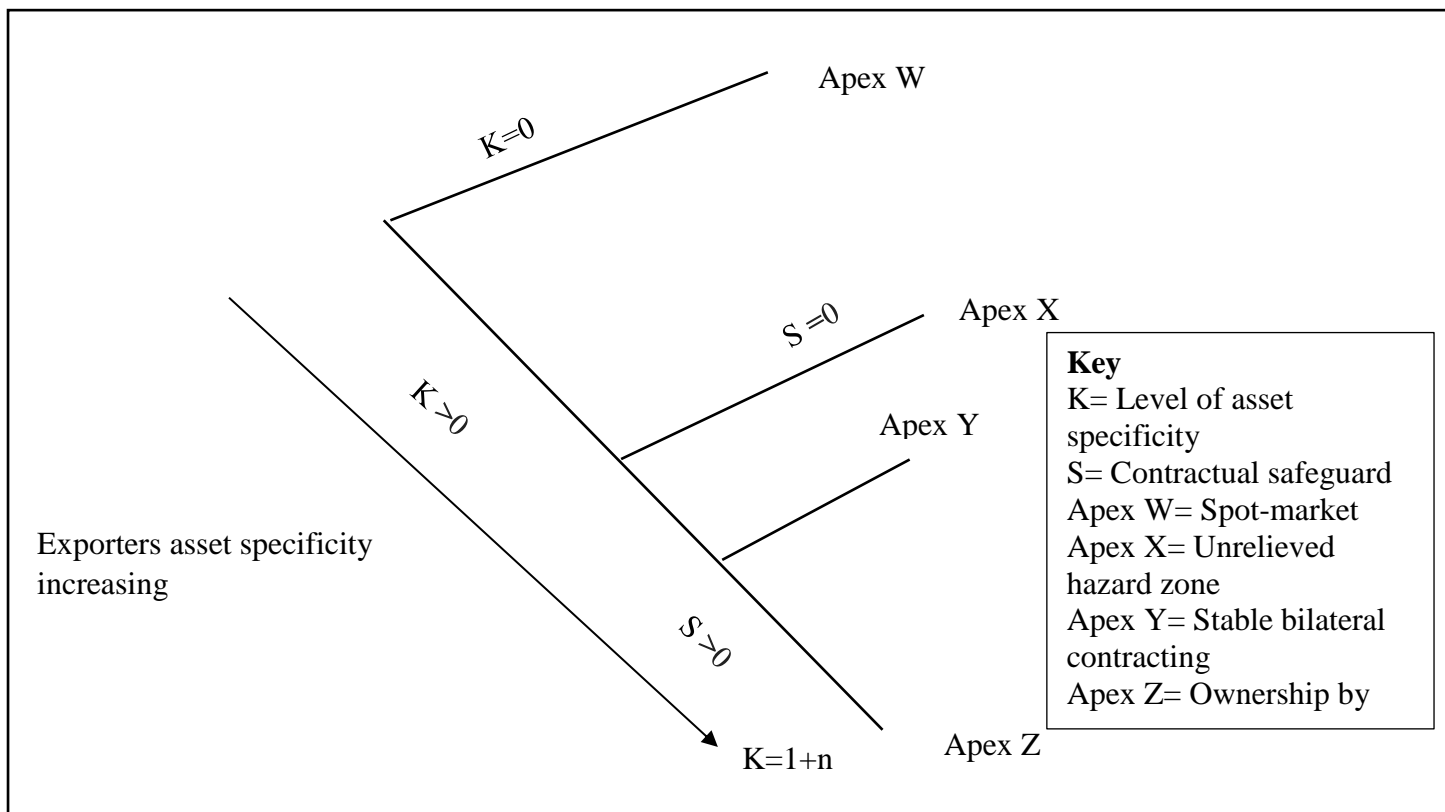


Figure 18 Conceptualised Schema of Kenyan FFV Smallholder Farmers Contracting Spots. Source. Williamson (2008) and Modified for this Study

Based on the example of Farmer Group A and E above then, these farmers’ bilateral contracting with Large Exporter A was at the unrelieved hazard zone X. At the same time, Farmer Group A and E, non-export transactions can be placed on spot-market Apex W where $K=0$ implying that specific assets were not present, hence, $S=0$ because contractual safeguards were not necessary. However, going forward, as Figure 18 shows, asset specificity increased with $K > 0$ (asset specificity is more than zero). Despite asset specificity increasing, there were no contractual safeguards in place in Apex X, hence $S=0$ while $K>0$. Thereby, the exporters-farmers bilateral contracting in the Node B of the value chain was situated at Apex Y. At the same time, smallholder farmers-middlemen transactions can be said to be located in Apex W in the above schema because these transactions took place over the spot-market interface and the middlemen did not invest in any specific assets.

The result of the transactions being in the unrelieved hazard zone was that bilateral contracts between the farmers and the exporters were highly volatile and unstable. As Williamson (1985, p. 36) argues, this zone is notoriously inefficient because of the risks to which the contract is exposed. Complete integration at Apex Z represents the five large and two small exporters who

had integrated backwards to have their own FFV farms. The full backward integration provided protection for the exporters' made specific investments. As such, because of the hazards in Apex X, the breakeven price of FFV is higher in Apex X than the breakeven price in Apex Y and Z according to Williamson (2008a) because of the increased transactional hazards in Apex Y.

Hence, in Apex X, the farmers and the exporters had two options; either to put contractual safeguards by adding an extra layer of support to deter hazards or to transfer the transactions to full integration (Williamson, 1998b). Apex Y represented the exporters-retailers contracting in Node A of the value chain which was found to be stable due to reputational effect. Hence, reputational effect accruing from supply reliability provided the stability and safeguard from any specific investment made. For the smallholder farmers' in the study, because of crops diversification, their non-export transactions were based at spot-market Apex W of spot markets.

However, when risks and losses increased, the farmers exited the unrelieved hazard zone Apex X and fully concentrated on non-export crops at Apex W. But again, some farmers of the farmers who had earlier exited the value chain re-entered FFV value chain at the unrelieved hazard zone Apex W if reputational effect was still lacking. This cycle represented the smallholder farmers observed exit-re-entry behaviour in the value chain as represented in Figure 19 below.

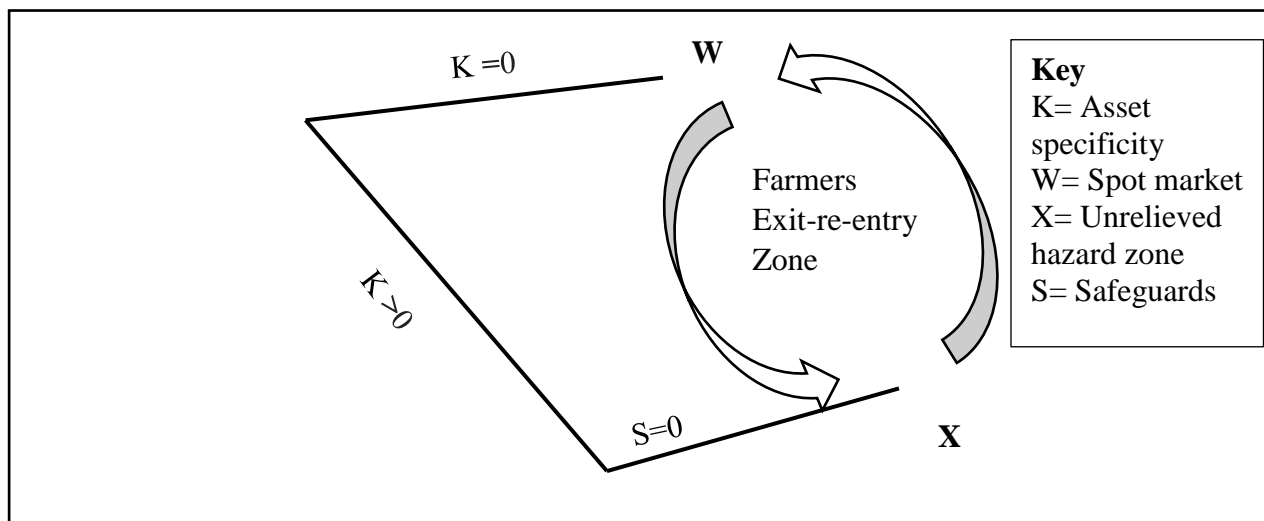


Figure 19 Conceptualised Schema of Study Smallholder FFV Farmers Exit-Entry Behaviour. Source: Williamson (2008) and Modified for this Study

Therefore, the study argues that smallholder farmers' transactions in the Kenyan FFV value chain were between Apex W of non-export crops and Apex X of FFV export crops. The arrangement above confirms the unstable nature of relationship contracting between the exporters and smallholders in the Kenyan value chain for, as Macchiavello and Morjaria (2015b) found in the Kenyan export rose sector, valuable reputation increased with age of relations. For the smallholder farmers, their exit disrupted the age factor in their contractual relationship with the exporters'. In addition, this smallholder's behaviour also explains their participation in the value chain with high and stay entry barriers. The farmers could easily walk away without incurring losses.

We found that the assumed high entry barriers of transaction costs, technological and skills investments, was borne by the exporters. Hence, the farmers were recruited, trained and provided for inputs by the exporters and whenever risks increased, the smallholders exited the value chain disrupting development of stable exchange relationship. Thus, while we searched for smallholder technology and costs entry barriers we found that such barriers were being taken care of by the exporters. Our findings show that the exporters facilitated the smallholder farmers entry and stay in the value chain in order to maintain stable supply relationship with the retailers. Because of the high costs and risks involved transacting with smallholders, we found that some exporters had begun to 'outsource' the management of smallholder farmers to large-scale farmers whom they called 'lead farmers'. This model of management is discussed below.

6.6.1 Outsourced management of smallholder producers in Kenyan FFV export sector

Because of the unstable nature of the contracts and high transactions costs in Node B of the Kenyan FFV export sector, there were two cases in the study in which some exporters had begun to outsource the management of smallholder farmers to large-scale farmers within the locality of their contracted smallholder farmers. This arrangement was found to be practised by Large Exporter B and among Individual Farmers 3, 4 and 5 who belonged to the same farmer group. According to these participants, the arrangement was as follows. The exporter searched for a medium and large-scale farmer in an area with a high concentration of smallholder farmers. The exporter then entered into a contract with the medium or large-scale farmer to supply the exporter with FFV.

After this, the exporter encouraged the contracted large-or-medium-scale farmers to engage with the smallholder farmers in their area of operation in order to increase the volume of

produce being delivered. If the exporter already had smallholder farmers in such an area, then they transferred the management of these farmers to the 'lead' farmer. Hence, it was the responsibility of the large and medium-scale farmers, thereafter, to recruit smallholders. Meanwhile, the exporter provided the necessary support to these lead farmers by availing to them training materials and input to supply to the smallholder farmers contracted to them. This was explained by the Participant from Large Exporter B:

“We are growing tired with the smallholders (farmers) so right now we are experimenting with a new way of managing them. We do not want the risk of having to deal with them, so what we trying to do in areas like Mwea is to get a lead farmer (large/medium scale farmer) in a particular area and then we transfer the smallholder farmers to them. We expect them to manage these farmers and ensure that they comply with GlobalGAP. All we do is provide the support from a distance like training and providing inputs for the (smallholder) farmers. But it is their (lead farmer) responsibility to manage them (smallholders) and ensure that quality is met. In the few places we have tried this, it is working very well and we are reducing the risks and costs of having to deal with these farmers”.

As the narrative above shows, the exporter was doing this in order to reduce both the risks and transaction costs of having to deal directly with the smallholder farmers. The exporters supplied inputs to the lead farmers to supply to the smallholders in order to maintain uniformity of products. They also provided training to the smallholders. However, monitoring costs were transferred to the lead farmers especially with the presumption that the existing social capital⁴², which Fine (2004) defines as norms and values such as trust and reciprocity, between the lead farmers and the smallholders would provide the missing reputational effect on the contract. We found this among the three individual Farmers 3, 4 and 5 who were in a group, but were contracted to a large farmers' cooperative society who were also involved in growing of FFV produce for a certain exporter. According to these farmers, the cooperative society had been growing FFV over the years and they were responsible for the day to day management of these smallholders. The arrangement was explained by Individual Farmer 5:

⁴² Lin (1999, p. 30) further defines social capital as investments in social relations with expected returns. This includes interactions and networking that are expected to generate positive rewards.

“We are in a long chain. There is the buyer (exporter), then the cooperative then us. So we work through the cooperative and we report all the problems to them. When we report a problem, the chairman (of the cooperative) will then come and inspect the problem on our farms and look for the solution. If there is any training, it is the chairman (of the cooperative) who informs us and we have to go to their place to be trained. And when we harvest the (French) beans the buyer (exporter) comes and collect the produce from us. That is how it works”.

The study interpreted this arrangement as exporters attempt to stabilise relational contracts in Node B moderated by social capital between large-scale farmers and smallholders. This arrangement presumably reduced transaction costs and food contamination risk from the smallholders with the benefits transferred to the exporters. Adopting Landa (1981) concentric circles arrangement of network trading, we find that transaction costs reduced on the exporters as lead farmers are introduced. This arrangement is conceptualised as represented in Figure 20 below:

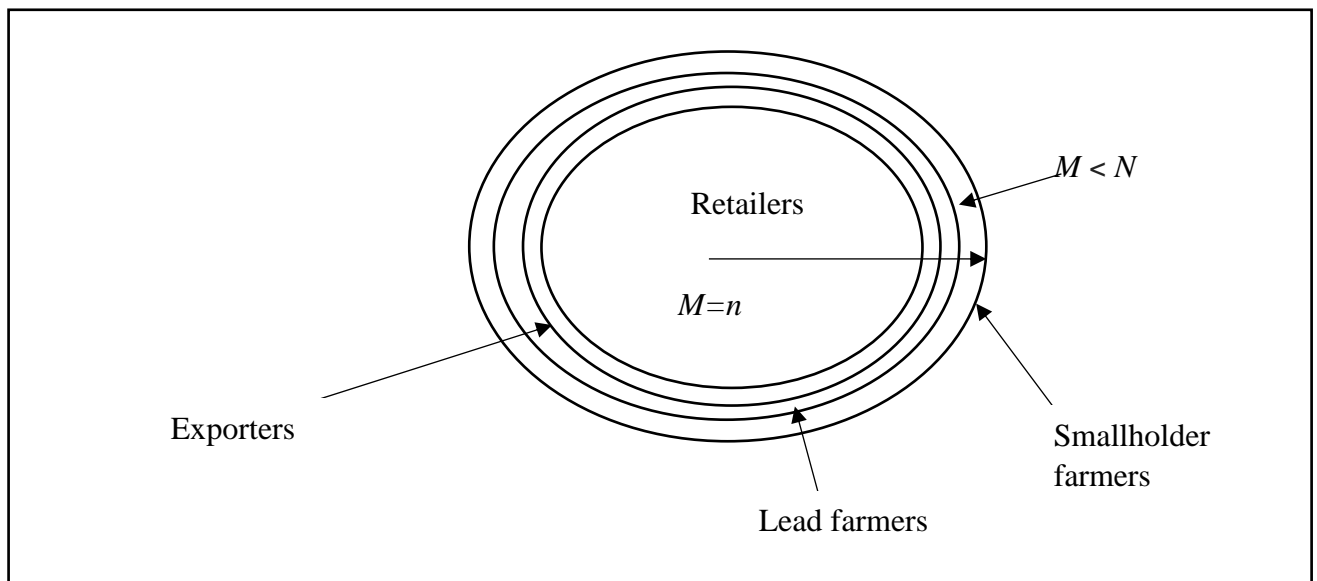


Figure 20: Conceptualised Study Exporters'-Lead Farmers'-Smallholder Farmers' Contracting Arrangement in Kenyan FFV Export Sector. Source: Landa (1981) and Modified for this Study

As Figure 20 shows, the introduction of lead farmers moderated the exporters’ monitoring costs as the lead farmers monitored the smallholders. With the lead farmers we conceptualise that the relational distance between the exporters-lead farmers-smallholder farmers is reduced

compared to the same relationship in Figure 17 in Chapter Five. Hence, while monitoring costs $m=N$ in Figure 17 where lead farmers are absent, with the introduction of lead farmers, we anticipate that $m < N$ on the exporters as monitoring costs reduce. Hence, we find the inverse relationship between transactions costs and the value of trading relationship present here. In this case, transaction costs related to monitoring should be low on the exporters as the value of their relationship with lead farmers' increases.

As earlier argued and as Okello and Swinton's (2007) study showed, it is expected that the level of exporters investments on the lead farmers should be lower in comparison to transaction costs related to smallholder farmers contracting. Hence, we argue that this new arrangement is a function of transaction costs especially to enable the exporters to maintain stable supply reliability with the retailers at lower transaction costs and food contamination risks. However, this arrangement needs to be further examined especially in relation to contractual stability, relational specificity, the costs of organising it and the emerging transactional arrangement.

6.7 Summary of Key Arguments in the Chapter

This chapter sought to answer the study research question related to the nature and costs of exporters-farmers contracting and transactions in the Kenyan FFV value chain. As such, the chapter has discussed the type of contracting that prevails over the farmers-exporters transactions which have been reported to be exporter's full-control contract. In this case, the contract was relational exporter's full control whereby the written contract was simply a document containing exporters-farmers expectations. The chapter has also discussed the various specific investments that were found in Node B of the value chain. It has been shown that the distribution of specific assets and transaction costs was asymmetrical; high on the exporters and low on the smallholders.

The chapter has also shown that transactional hazards were present in the exporters-farmers transactions yet contractual safeguards were absent. To some extent, the safeguards missing were in the form of reputational effects because of the smallholders' short stay in the value chain. Other forms of regulatory support such as sanctions and penalties and third-party monitoring of contracts were also absent. Therefore, we have argued that exporters-farmers transactions were located at the unrelieved hazard zone of transaction costs contracting. Because of this, we have shown that smallholders had a cyclic transactional behaviour in the value chain in which they exited and re-entered the value chain at will.

The last part of the chapter has given a brief case study of a new contracting arrangement in the value chain whereby, exporters contracted lead farmers to manage the smallholders. We have argued that this arrangement was a function of the exporters attempt to stabilise transaction in Node B of the value chain and reduce transaction costs and risk factors involved in contracting the smallholders. Lastly, we have reported that the high entry cost barriers that made it hard for smallholders to participate in the value chain, often discussed in the literature, were often taken care of by the exporters. This arrangement, made it easier for the smallholder farmers to participate in the value chain and also exit the value chain. The next chapter discusses the regulatory and compliance systems in the value chain.

CHAPTER SEVEN

REGULATION AND COMPLIANCE SYSTEMS IN THE KENYAN FRESH FRUITS AND VEGETABLE EXPORT SECTOR

7.1 Introduction

The previous two chapters have presented and discussed results on the structure and nature of vertical coordination in the Kenyan FFV export value chain with the structure found to be nodal and contracts being relational in nature. This chapter is concerned with the analysis of the regulatory and compliance systems that have emerged within the retailer centred vertical coordination arrangement. The research question discussed in this chapter is: What is the structure and nature of regulatory and compliance systems in the Kenyan FFV export value chain in relation to vertical coordination arrangement? Therefore, the aim of this chapter is to analyse and explore, first, the regulatory systems in the Kenyan FFV export sector and second, the compliance systems in the value chain. As discussed in Chapter three, regulation was taken to be concerned with steering the flow of events or the actualisation of rules of governance (J. Braithwaite et al., 2007).

The regulatory and compliance systems discussed in this chapter, were found at Node B of the value chain where farmers-exporters transactions were unstable. The argument adopted in this chapter is that because of the contractual and transactional problems, such as food contamination risks, in Node B regulation was necessary. For Node A of the value chain, command and control regime, actualised cooperation, hence self-regulation was achieved among the exporters. For Node B, the three adaptational features of control, cooperation and communication were absent, hence regulation was necessary. Analysis of regulation in this chapter is through TCR as proposed by Spiller (2013) in which regulation of economic activities is taken to be possible and necessary in some situations.

As discussed in the previous chapter, inefficiency and transaction costs were high in Node B and if the exporters were to fully regulate the smallholders, then transaction costs would have risen further. Hence, state regulation was necessary in the form of Coase's (1960) 'super firm' providing regulatory solutions at lower transaction cost and greater gains. In this chapter TCR was actualised through various regulatory approaches as discussed in Chapter Three. Principally, though, the main theoretical framework applied in this chapter is the motivational postures theory of regulation and compliance. The chapter is organised as follows; the first part discusses the regulatory impetus that arose out of the 2013 MRL problem, the second part

discusses the regulatory systems in the value chain, then the compliance systems, including the farmers' and exporters' motivational postures, are discussed.

7.2 Antecedent: The 2013 MRL Effect on Regulation of the Kenyan FFV Value Chain

As previously alluded to, there was a major chemical contamination crisis affecting Kenyan French beans and peas in pods in 2013. This occurred when tests at the port of entry in Europe, led to the discovery of high levels of banned chemical elements in these products. As a result, there was an escalation of notification from European Food Safety Authority (EFSA) and EU retailers to KEPHIS. This contamination problem, as the previous ones, was labelled as MRL crisis since it stemmed out of chemical elements on the produce exceeding the maximum residue levels (MRL) required on a product. Whenever MRL is exceeded, notification by EFSA or a retailer follows when they contact KEPHIS to notify them of detection of a banned chemical on a certain exporter's produce.

After notification, KEPHIS then acts by suspending the culpable exporter's Electronic Certification System (ECS) which is the certificate that allows exporters to access the export market. When an exporters' ECS is suspended, the exporter is banned from the export market until the ban is lifted. The escalation of notifications from 2013 is captured in Figure 21 below, whence there were 56 notifications in 2013. The notifications gradually declined after 2013 as Figure 21 shows:

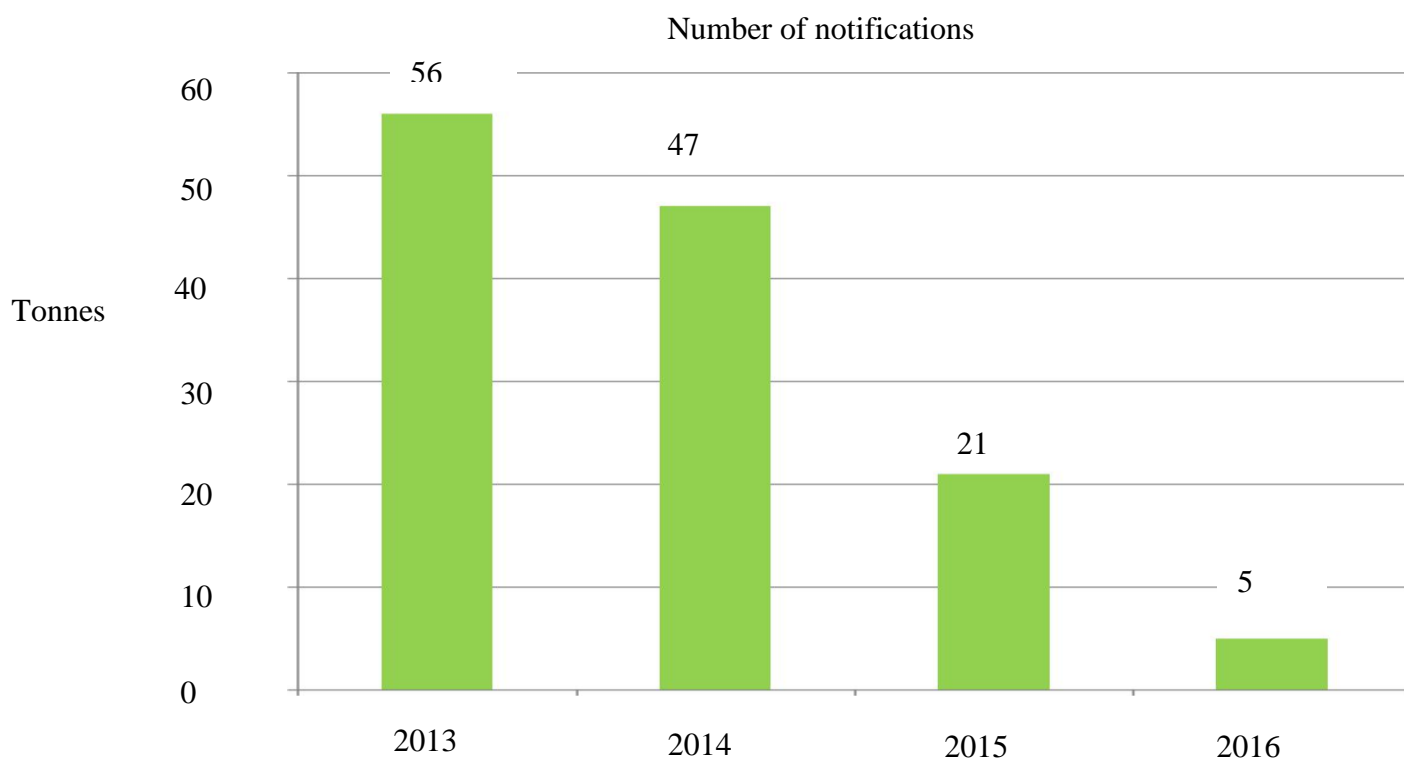


Figure 21 Escalation of MRL Notifications in Kenyan French Beans and Peas in Pods from 2013- 2016. Source: KEPHIS (2016)

Figure 21 shows that the number of notifications was high in 2013 for French beans and peas in pods resulting in the MRL crisis. After 2013, notifications gradually declined to five in 2016. The MRL incidence provided the impetus for regulatory changes in the Kenyan FFV export sector. Although some novel regulatory systems, such as network regulation through HCAS, were instituted as discussed in Chapter Five, the changes initiated were largely related to escalation of regulation in order to prevent a relapse of non-compliance by the exporters and farmers. From the results, it was evident that there had been previous MRL incidences in the Kenyan value chain as narrated by the Participant from State regulatory agency A:

“We still have a lot of work to do in order to stop these problems re-occurring especially MRL incidences. We lose a lot every time these things occur. So we have to see how we can ensure another MRL does not occur or even ensure the next one is not as big as the 2013 one. As much as we have improved the systems after 2013, I am not sure it is enough to contain further MRL incidences. If you look back you will realise that such things have always happened after several years although we are hoping we can be able to detect a problem and stop it before it becomes big”.

While relapses seemed to be a common problem in the value chain, it was also an indication of the weak regulatory systems in place. Jaffee's (2003) study highlighted previous MRL incidences in the Kenyan value chain, although at a minimal scale. According to Jaffee, MRL has been a factor in the Kenyan FFV value chain even before the introduction of the standards. After the 2013 MRL incidence, the state agencies, including PCPB, HCD and KEPHIS, were found to have initiated regulatory changes in order to provide oversight over exporters' and middlemen's activities. This was a different mechanism of controlling MRL because as Jaffee (2003) notes, previously it was the importers and the UK retailers who were mainly concerned with controlling MRL in Kenyan value chain through increased monitoring and testing of produce.

The driver for these changes was found to come from the European agency EFSA. The main change that occurred in relation to regulation after 2013 was related to increased management of exporters through licensing in order to actualise contract farming. Moreover, HCD initiated licensing of middlemen in order to formalise and regulate their activities in the value chain. The general view advanced by the exporters and the state agencies in the study was that contamination problems were prevalent because of the failures to manage smallholder producers and middlemen as narrated by the participant from State Regulatory Agency A:

“We were using GlobalGAP but in the actual sense nobody was complying with these rules. If the farmers and middlemen were complying with GlobalGAP, then we would not have had the MRL issue in 2013. So the contracts were not being enforced and nobody was looking at the middlemen activities. The rules can be there but if nobody is following them then they are useless. So we had to change how we do things to avoid another MRL incidence. We started licensing of middlemen to monitor their activities and to ensure they followed the required rules”.

The same was narrated by the Participant from State Agency B:

“In the last two years we have tried to change how we manage the middlemen. We now license them and we expect them to comply with GlobalGAP and also have contracts with their farmers. Previously we were not doing this and there was laxity among the middlemen and farmers which created problems in the sector. It is still difficult to manage the middlemen since most of them do not have offices but we hope we can manage to control them”.

The increased monitoring of the exporters and middlemen was expected to escalate downwards to the smallholder farmers through the exporters and middlemen. Before these changes, the exporters renewed their business licenses after every five years and this created regulatory gaps related to monitoring of exporters. In addition, the middlemen were not being licensed, therefore, it was not possible to monitor and regulate their activities. Additionally, there was (and still is) the problem of alternative fresh produce export markets to Middle Eastern countries where compliance with GlobalGAP was/is not needed. Some exporters exploited this Middle East gap to 'sneak in' uncertified produce to EU via the Middle East as narrated by the participant from State Regulatory Agency A:

“Remember that some countries such as Dubai and Saudi Arabia and others in the Middle East do not have these requirements on GlobalGAP. So we discovered that it was being used as a window by some exporters to get uncertified produce to EU through the Middle East. This was around 2009-2012 and thereabouts. So, we changed how things are done and from 2013 everybody, regardless of where they are exporting their produce, must be GlobalGAP certified”.

The combination of these problems brought about two main changes in regulation. The first change was related to bringing forward license renewal period for exporters from five years to annual. This was done in order to allow the regulators, HCD, PCPB and KEPHIS, to monitor the exporters' compliance with rules related to contract farming and compliance with GlobalGAP. Previously with the five-year gap, follow-ups and monitoring of exporters' activities to compliance was not being done, and according to the participant above, it was difficult to keep track of the exporters' activities. With the changes, the exporters were required to solve any outstanding contractual or transactional problem with their farmers, before their license is renewed. The increased monitoring of exporters could have catalysed adoption of contract farming in the value chain.

The second change was related to the formalisation of middlemen's activities in the value chain through licensing. From 2013, the middlemen were required to apply for a business license from HCD and, like the exporters, they were required to renew their licenses annually. The middlemen were also required to engage in contract farming with their farmers as well as ensure that their farmers complied with GlobalGAP. This was narrated by the Participant from State Regulatory Agency B:

“The changes were necessary to allow us to respond to the MRL incidence. You know MRL communicates to us that there are problems in the system. So, we initiated some reforms beginning with exporters renewing their licenses annually. Previously they used to do this after 5 years and some of them would disappear only to resurface after 5 years. We also started licensing of middlemen so that we could monitor their activities. I cannot say if these changes are enough to prevent another MRL issue but I think it is a step in the right direction”.

What was evident was that these regulatory changes were put in place to actualise some of the GlobalGAP requirements that were already in place but not being complied with or complied with in ad hoc manner. As discussed in the previous chapters, contract farming was an expensive undertaking for the exporters, hence they adopted it in an ad hoc arrangement where necessary. In this case, the state regulation positively influenced adoption of contract farming in the value chain by constraining exporters’ discretionary behaviour. However, while the middlemen were formally incorporated into the value chain via licensing, the study viewed their licensing as a backstage arrangement of formalising their entry into the value chain.

In all senses, the middlemen’s access to the export market was through the exporters whom they competed and collaborated with at different times as previously discussed. In public, the middlemen were not allowed access to the export market, but they did so privately through backstage arrangements. Their licensing did not change this, hence the backstage formalisation of middlemen activities in the value chain. Additionally, the middlemen were not following through with the licensing requirement of contract farming.

Two middlemen were interviewed for this study and they indicated that they had their own contracted farmers and they marketed their produce to HCD licensed buyers in Nairobi. The two middlemen also claimed they were buying produce from GlobalGAP certified farmers. However, through observation, it was evident that the two middlemen were soliciting for produce from the smallholder farmer participants in the focus group discussion who were contracted to an exporter. This was corroborated by the farmer participants and their TA who participated in the study.

Equally, it was not clear how the middlemen in the value chain accessed the export market. The two middlemen indicated that they marketed their produce to a licensed buyer whom they claimed is an exporter. According to the state agencies, the middlemen marketed their produce to Middle Eastern countries, exporters or the local market. However, the 10 exporters in the study, indicated that none of them bought produce from the middlemen. Meanwhile the Development Practitioner, narrated that the exporters would often use the middlemen to source for produce from rival exporters in high demand seasons as previously narrated. As such, middlemen access to the export market was not clear, thus, the non-coordinated arrangement represented in Figure 16 in Chapter Two.

As Busch (2007) notes, backstage activities in value chains are often difficult to note, requiring one to go to the field to study them. This is clearly captured in the above narrative, whereby even after data collection, it was still not clear how the middlemen accessed the export market. Different answers were given by different participants for the same question. However, evidence strongly pointed to the middlemen engagement with the exporters through backstage arrangements. Evidently then, the licensing of middlemen did not formally integrate them into the retailers centred nodal coordination arrangement. Instead, the middlemen's place in the value chain was through backstage arrangements where they competed and collaborated with exporters at different times.

Furthermore, HCD licensing of the middlemen could have exacerbated MRL problems in the value chain for, as Ouma (2010) notes, backstage arrangements often compromise what counts as quality. The escalation of regulation after the 2013 MRL incidence was conceptualised in Figure 22 below.

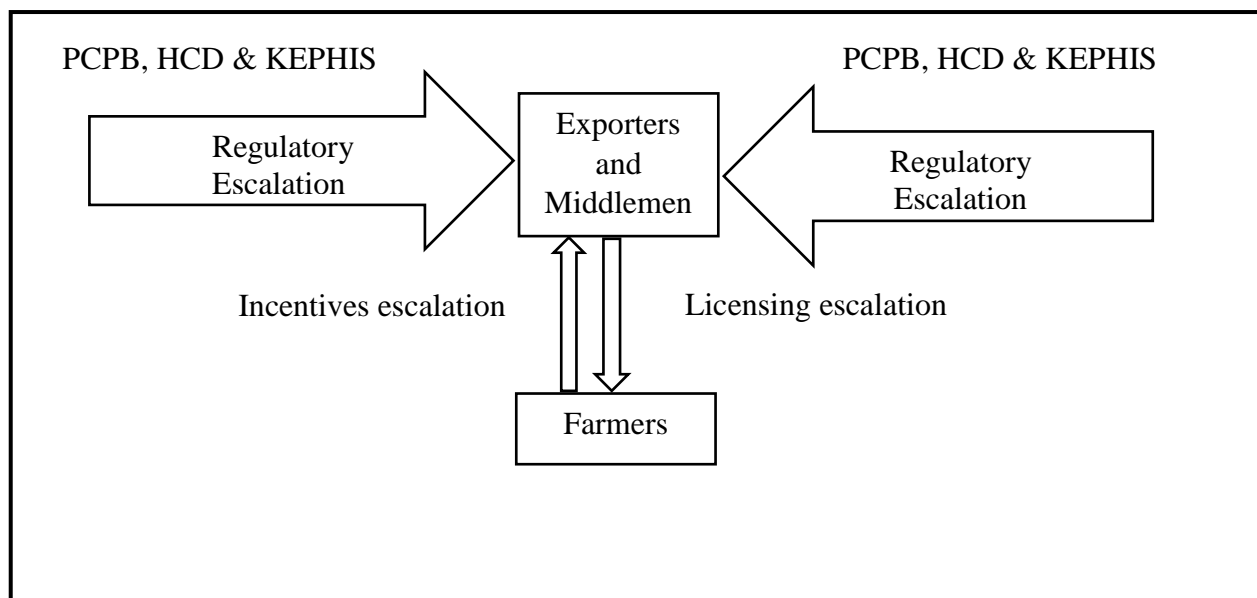


Figure 22: Conceptualised Regulatory Escalation in Kenyan FFV Sector from 2013.

Figure 22 captures regulatory escalation after the 2013 MRL incidence, whereby sanctions escalated horizontally to the exporters and middlemen and vertically to the farmers from the exporters and middlemen. The sanctions consisted of licensing and suspension of ECS as discussed further below. The incentives escalated upwards in the form of market access. The next section discusses the overall structure of regulation in the Kenyan FFV export sector.

7.3 Regulation Systems in the Kenyan FFV Value Chain

As indicated in the introduction to the chapter, vertical coordination patterns in the value chain generated similar patterns of regulation. Regulation was, therefore, top-down in nature with two main pathways: the retailers to exporters to farmers pathway and the pathway of EFSA to Kenyan state agencies to exporters. There was also a third regulatory pathway that co-joined the two regulatory pathways in the form of network regulation through HCAS. All three pathways converged onto the exporters making exporters the main avenue to the regulation of smallholder farmers in the Kenyan FFV value chain.

Meanwhile, there was no regulatory interaction between retailers and the middlemen in the value chain because the middlemen were considered ‘outsiders’ in the retailer centred vertical coordination arrangement. The general structure of regulation in the value chain was conceptualised as represented in Figure 23:

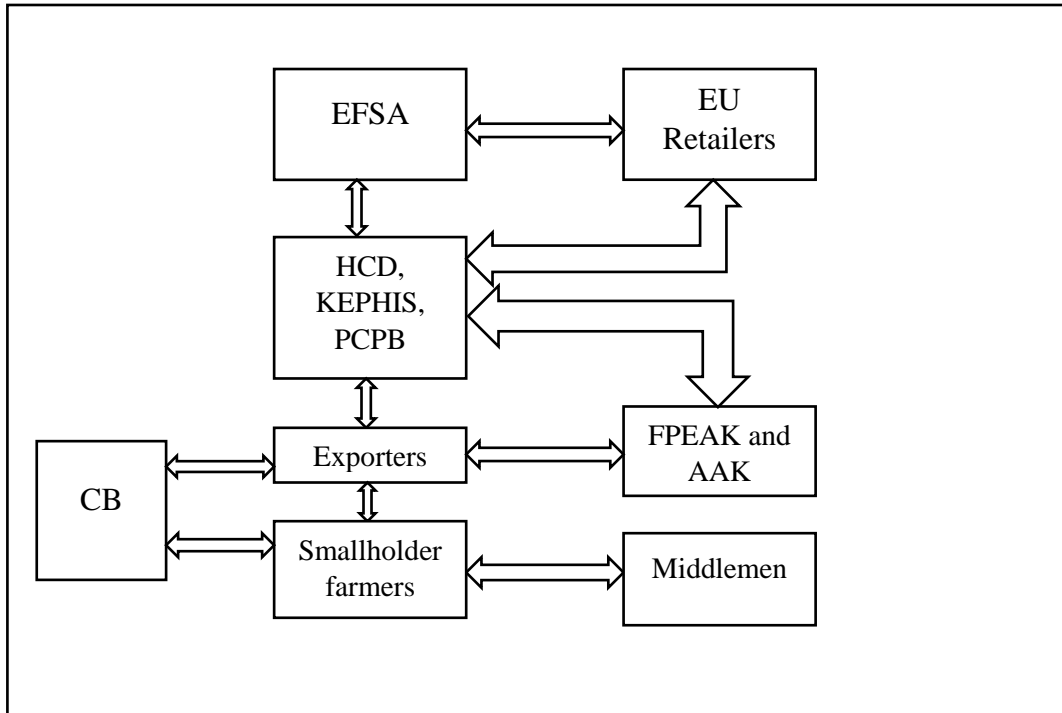


Figure 23: The Regulatory Pathways in Kenyan FFV Export Value Chain

As Figure 23 shows, regulation generally escalated downwards from the state agencies onto exporters then to the farmers. Within this regulatory community, other parties involved in the regulation were Certifying Bodies who were responsible for audits and certification of the farmers and exporters. The middlemen place in regulation, was through licensing by HCD as discussed above. The middlemen were not audited and certified for GlobalGAP and BRC by CBs as they were outside the retailers’ sphere of influence. The three regulatory pathways are discussed below.

7.3.1 Exporters-farmers regulatory sphere

The regulatory instruments in this pathway consisted of the food standards, GlobalGAP and BRC, with access to the market being both a regulatory sanction and incentive depending on how it was applied. Compliance with the standards was an incentive to exporters-retailers supply reliability mechanism and also a sanction when food contamination was found because then the exporter was blocked from accessing the market and the positive reputation affected. For the retailers, the standards allowed them to achieve product supply consistency in the value chain.

Because of transactional stability in Node A and the high relational value between the retailers and exporters, the exporters self-regulated as previously discussed. However, there was an annual unannounced audit on the exporters’ facilities by the retailers and general audits by the

CBs. These audits by the retailers and the CBs were mainly aimed at ensuring that the exporters had the ability to self-regulate and also regulate the farmers as discussed further below. Therefore, this regulation pathway was for Node B. The major difference between this regulatory pathway and the state centred regulation was the focus of regulation. The exporter centred regulation focused on the visible and immediate compliance-related problems, such as farmers' safe use of chemicals to deter MRL and produce quality parameters. Meanwhile, the state regulation provided long-term oversight over the exporter's pathway, such as policy reforms and new regulation approaches as discussed above.

Thereby, in the Kenyan value chain, there was no regulatory competition between the two main pathways, rather, the pathways supported each other at different periods. For instance, in periods of MRL crisis the exporters' pathway relied on the state pathway to restore the business confidence for their products. This was explained by the Participant from State Regulatory Agency C:

“They (the private sector exporters, AAK and FPEAK) are sometimes very selfish and self-centred especially when everything is calm. In such moments they do not need us, but when things go bad it is us who come to their rescue. When incidences like MRL occurs, we go the extra mile to ensure that the affected exporters are accepted back in the market. I wish the blame game would stop because if they (the exporters) lose we also lose”.

The private sector actors also acknowledged the relevance of the state agencies when there was a crisis in the value chain. This was narrated by the Participant from Small Exporter E:

“I only wish they (PCPB, HCD and KEPHIS) would be very active everyday as they always are when these problems come up. I think if they were active throughout, then some of these problems would not arise in the first place”.

The main actors in the exporters' regulatory pathway were the exporters, CBs and farmers. The operationalisation of this regulatory pathway was as follows. First the exporters recruited the smallholder farmers in various localities in Kenya with whom they then entered into contractual arrangement with. The recruited farmers were then trained by the exporters on various aspects of GlobalGAP such as safe use of chemicals, record keeping and different technical aspects of crop production. The farmers training schedule was found to be intensive in year one of recruitment and, thereafter, the intensity reduced. The topics covered in the

training also changed from broad topics in year one to specifics in subsequent years as represented in Table 11 below.

Table 11: Smallholder Farmers Training Schedule in Kenyan FFV Export Sector.
Source: Fieldwork Data, 2016

Year	Average Number of training	Key training areas
1	8	<ul style="list-style-type: none"> • Safe use of chemicals • Harvesting and post-harvest management • General plant husbandry • Fertiliser application • Crop irrigation techniques • Filing and record keeping • GlobalGAP audit process • Farming as a business • Occupational health and Safety • Farmer group management • Contract farming
2	4	<ul style="list-style-type: none"> • Occupational health and Safety • Safe use of chemicals • Harvesting and sorting process • General plant husbandry
3	2	<ul style="list-style-type: none"> • Safe use of chemicals • Harvesting and post-harvest management

As Table 11 shows, in year one, the training focused on general and broad issues related to growing of FFV crops and GlobalGAP compliance systems. The training in year two focused more on the GlobalGAP compliance processes and thereafter, training focused on the problematic areas related to compliance with GlobalGAP. Farmer training was not being done exclusively by the exporters, rather the exporters hired and paid for different experts in different fields to carry out the training. This was explained by the Participant from Small Exporter A:

“We invest a lot on our farmers’ training and capacity building because we use different organisations and experts to teach the farmers on different subjects about the production of these crops. We often hire chemical and seed manufacturing companies and they don’t come cheap. In a year we can carry out five trainings and this is at our own costs.

The farmers do not pay for anything. So, before a farmer can independently grow the crops, we would have spent a lot of money on him/her”.

The narrative above was the general trend in the value chain, in which the exporters were responsible for all farmer training. Previously, following the introduction of the food standards, farmer training was mainly funded by various donors (Dolan, 2005). In recent years, donor programmes are focused on different problems in the value chain such as increasing smallholders’ capacity to diversify production and improved market access.

After the farmers’ training and contracting, the farmers were then expected to comply with GlobalGAP standards in their crop production systems. Thereafter, the exporters monitored the farmers’ production systems through the technical assistants. The TAs role included the day-to-day management and decision making on pest and disease control on the farms, record keeping and providing technical assistance for the farmers through training in problematic areas. The TAs were university or college⁴³ educated individuals with degrees in an agriculture-related field. The two TAs in the study had university degrees in agriculture and environment science and they had also undergone training from the exporters before their deployment to the field.

Later when the crops were a few weeks to maturity, the farmer's audit and certification process by the CBs was initiated by the exporters to assess farmers’ compliance with GlobalGAP. For the 62 farmers in the study, it was the exporting companies which initiated the process of farmers’ compliance by contacting the relevant CBs and paying for the farmer's audit fees. The auditing of the farmers was found to be to be at two levels; at the individual level and group level. At the group level, the CBs audited a sample of farmers within the large group of farmers by randomly selecting a few farmers corresponding to the square root of the total number of farmers in the group. For example, in Farmer Group E which had 30 farmers, the approximate value of the square root is 5.

Thereby, 5 farmers in the group were randomly selected by the CBs for individual auditing of their record keeping system, crop production criteria and use of chemicals on the farm among other GlobalGAP requirements. After this process, the CB audited the entire farmer group’s common facilities such as produce collection and sorting sheds, chemical stores and bathrooms.

⁴³ In Kenya colleges are diploma offering institutions and they include regional and national polytechnics.

If for instance Farmers Group E were found to be compliant with GlobalGAP at individual and group level, GlobalGAP certification was issued allowing the farmers to begin exporting their produce. In contrast, if non-compliance on a single issue such as poor record keeping was identified, certification was held back with the farmers given two weeks period to rectify the problem and provide proof of compliance before certification was issued. This was narrated by the participant from Certifying Body A:

“Certification is a straightforward process. When we go to the field we know what we are assessing since we have done this many time before. Think of us as gatekeepers, nothing goes to the market before we audit and certify it. No producer or exporter is allowed to export without GlobalGAP. So, to export to Europe they come to us directly or the exporters will contacts us to audit their farmers. If the farmers are complying with everything in GlobalGAP, we issue certification. If they are not and their systems are in a bad state or even one thing is missing, we carry out follow up audits after giving them time to rectify the problem. Rarely do we find that farmers have complied in the first visitation, so we always have to go back and re-assess”.

The same process was followed in the auditing and certification of individual farmers who were not members of a farmer group. The cost for farmers’ certification by the CBs averaged about £1200 per year. Since this cost was high for the smallholder farmers, it was the exporters who covered the cost. Hence, any free riding and opportunism by farmers, through engaging with the middlemen, had a great effect on the exporters. The large exporters particularly, covered the full costs for smallholders’ certification, whilst the small exporters split certification cost with their farmers in varying ratio. This process of audit and certification was done annually by the CBs to ensure compliance was being maintained at all times.

Additionally, the CBs also carried out random unannounced audits and inspection on the farmers’ production systems after earlier certification had been issued to ensure compliance with GlobalGAP was consistent throughout the production period. For this reason the CBs were found to be providing certification and oversight over farmers’ and exporters’ activities, especially since the exporters-farmers transactions had low relational value. Thereby, although often invisible in the value chain, the CBs were powerful gatekeepers to the market. The same process of audit and certification was repeated at the exporters’ pack houses by the CBs, to audit for compliance to BRC and the various UK retailers’ standards.

In addition, there were also unannounced annual audits by the European retailers, mostly British retailers, on the exporters' facilities. The auditing, monitoring and certification process, was expected to eventually bring about self-regulation among the farmers, but it did not. The exporters had the financial and human resource capacity to enable self-regulation as they employed highly trained personnel in the form of QA managers to ensure internal compliance was adhered to as discussed in Chapter Five. The exporters were also vulnerable to negative reputational effect on the value chain if non-compliance was detected by the retailers. As discussed in Chapter Five, negative reputation was costly as positive reputation was the only contract enforcement system in the value chain. Hence, this incentivised self-regulation on the exporters. This was narrated by the Participant from Small Exporter B:

“We have to follow all those standards as much as we may not like them because if we don't, then we lose the market. We have no other option but to abide with whatever the retailers wants from us. I don't think the farmers view it the same way as us. I think for them they are just doing it because their neighbour, cousin or brother was producing French beans and they saw how much money he/she was making and then he/she decided to try his/her luck. For us it is business for the farmers it is trial and error”.

The same narrative was substantiated by the Participant from Large Exporter B:

“Why would I not follow these rules when it is what keeps me in business? These standards are what enables us to access the market. If you don't follow them you are locked out and it is you who loses. For the farmers, they don't see it that way, for them they can lose some money from French beans but he/she still has a cow or chicken which is bringing in money”.

Hence, for the exporters non-compliance with the standards was a factor of unintentional overlaps. In contrast, the farmers' self-regulation was often not attained because of different factors such as socio-economic factors of low education, which potentially reduced the farmers' technical ability to adopt the standards. As Table 10 in Chapter Six shows, 36 farmers were found to have either no education or primary level qualification implying low levels of education among some smallholders. Without learning by doing skills, it is highly likely that these 36 smallholders had low capacity for adopting food standards. Equally, the smallholders had low financial capacity to hire qualified personnel to facilitate their compliance.

In the study, 52 farmers indicated that the costliest component of compliance was safe use of chemicals. In this case, this involved farmers purchase and use of the recommended chemicals,

which they claimed were expensive in comparison to the restricted chemicals. The price disparity between recommended chemicals and banned chemicals partly explains the MRL relapse problem in the value chain. The study found that the farmers often applied banned and restricted chemicals because they were relatively affordable and, presumably, more effective than the recommended chemicals. This was narrated by Individual Farmer C:

“You know during the rainy season, there are a lot of diseases like rust and blights affecting the French beans. If we use the recommended chemicals they sometimes do not work (not effective). Since I don’t want to lose my crops, I sometimes apply the banned chemicals secretly because they are effective and cheaper. So long as the Pre-Harvest Interval (PHI) is ok, the exporter will not know. I don’t want to do this, but I don’t want to lose my crops to diseases either”.

The above narrative was found among 22 participant farmers while the 40 farmers did not provide a clear answer in relation to how they managed to control the increased infestation of pest and diseases in the rainy season. Hence, it is possible that some of the 40 farmers were also using banned chemicals. It is known that smallholder farmers often have increased incentives to misuse chemicals in production especially when it is costly for the buyers to detect the chemicals (Key & Rungsten, 1999). According to Key and Rungsten, this problem is what often prompts buyers to integrate backwards to produce FFV from their own farms, if monitoring mechanism is weak.

The other regulatory challenge in this pathway was related to the produce reject problem in the value chain. The produce rejects problem was found to be high in the low demand season when prices were depressed. According to the farmers, rejects from the exporters increased in the low demand season as the exporters attempted to avoid losses by transferring the extra produce in the market to the farmers. In the exporters-retailers transactional arrangement, the exporters paid the farmers only after the produce had been packed for shipping. Any rejected produce was not paid for by the exporters. It was found that in low demand season, in order to offset losses the exporters returned most produce as rejects to the farmers, hence avoiding paying the farmers. This was narrated by Participant Farmer 6 in Farmer Group C:

“As a group we thought that the rejects were high because of the problems on our side you know like some of us were not doing a good job on their farms. But we started wondering why it was only during certain periods that the rejects were increasing and in other times everything was okay. You know like half of our produce would be

rejected at certain times of the year and when we would ask the exporters, they would blame us for this. But then we asked around and we came to learn from a middleman that there were periods when demand is low in Nairobi so rejects would increase. The exporter had not told us this”.

In the fieldwork period, the problem of produce rejects was found to be a major source of conflict between the farmer and the exporters. At various times before or after focus group discussions, the researcher observed heated discussions between the farmers and the TAs in relation to the volume of rejected produce that the farmers were receiving from the exporters. Interestingly, the fieldwork coincided with the low demand season, therefore it is highly likely that the exporters used rejects as a market control strategy. The effect of this was that it further antagonised the exporters-farmers’ contractual relationship increasing the relational distance between them. Despite such challenges, this regulatory node was found to be effective in bringing about compliance especially because the state agencies lacked the resources to regulate the sector. The next section discusses the state agencies sphere of regulation.

7.3.2 EFSA-Kenyan state agencies regulatory Sphere

This regulatory pathway can be related to Grabosky’s (2017) concept of meta-regulation, whereby in these study different supranational and Kenyan state agencies provided oversight over the exporters’ regulatory pathway. While in the exporters’ regulatory pathway, regulation instruments were limited, in this pathway the regulators had at their disposal legal authority, policies, formal rules, mandate and licensing. However, the most common regulatory instrument deployed by the state agencies was found to be licensing. The Kenyan state regulatory agencies were KEPHIS, KALRO, HCD and PCPB. These agencies had different roles in the sector in relation to regulation based on their mandate. The state agencies, KEPHIS, HCD and PCPB were all established under different Kenyan Parliamentary Acts including: KEPHIS Act No. 54 of 2012, PCPB Act 346 of 1983 and HCD Act 318 of 1967 as described in Chapter Two.

However, in 2014 the structure of HCD changed which was found to have constrained its ability to operate efficiently. As discussed in Chapter Two, in 2014 several agriculture boards including HCDA, were merged to form a super-agency called AFA. With this, the former HCDA ceased to be an independent body, instead it became a department under AFA as HCD drawing its mandate and authority from a broad mandate in AFA. Hence, in comparison to KEPHIS and PCPB, HCD was found to be relatively weak yet with the same duties and roles

as before the merger. KEPHIS and PCPB had more legal authority and mandate since they were independent bodies in comparison to HCD which lost its independence in 2014. This was narrated by the Participant from State Agency A:

“I would say it is too early to assess the effect of these changes to our mandate. But again in the last 2 years, things have been different here since we are in a bigger bureaucracy. (For instance) We have less financial resources since we have to share with others and even sometimes we beg in order to get money to carry out our activities. Previously this was not the case. If you also look at (the fact that) we have to consult before we make decisions and we draw our mandate from the AFA Act and not our own Act, maybe we are a little weak now”.

Despite the changes, HCD was still the primary regulator of the horticultural sector and provided oversight over exporters, farmers and middlemen activities. On its own, HCD was relatively weaker, but because of the collective regulatory space in the sector that incorporated PCPB and KEPHIS, regulation was actualised. This was narrated by the participant from State Regulatory Agency B:

“We do not work separately, we work with the others. HCAS is an example of how we work together in the sector. Everybody has their mandate in which they focus on but we also try to reach out to the other side. Look at it this way, if everybody just does their part in the sector, then so many things will not be done. It is hard but we try to work together, communicate and hold meetings frequently to solve problems and before we make a major decision, like withdrawing an exporter license, we have to consult the other organisations”.

Outside, HCAS, the collaboration in regulation was mainly through the process of licensing of exporters in which, although HCD was responsible for this activity, KEPHIS and PCPB, provided support by carrying out background checks on their area of responsibility on the exporter. For instance, PCPB would carry out checks on an exporter compliance with safe use of chemicals while KEPHIS would inspect the produce before it is exported. This was described as follows by the Participant from State Agency A:

“When the exporters and the brokers are renewing their licences, we have to carry out checks on their activities before the license is issued. We go through our documents to review if there was a complaint lodged against them by a farmer and we also send their

details to KEPHIS and PCPB to also assess them. We have to collaborate because maybe KEPHIS has something on an exporter that we don't have and they have to make us aware of it before we renew the licence”.

The main regulatory instruments employed by Kenyan state agencies consisted of the business licence issued by HCD and export licence called Electronic Certification System issued by KEPHIS. As previously described, the ECS is an online export certification system operated by KEPHIS that allowed exporters to export fresh produce. The ECS is more or less the produce 'visa' that allows an exporter's produce to be accepted at the port of entry. Before any consignment is exported, KEPHIS activates the exporter's ECS, after inspecting the produce, in order to allow the consignment to be accepted at the port of entry in the importing country.

The Kenyan state agencies had different roles to play in regulation of the value chain. KEPHIS was found to be the main agency responsible for auditing and assessing exporters' capability to self-regulate and regulate farmers' compliance with GlobalGAP. In this, KEPHIS was mainly responsible for ensuring that sanitary and phytosanitary issues related to the food standards and crop production were being met by the exporters. As previously narrated by the Participant from State Agency B, KEPHIS was mainly active at the exporters' end of the value chain by auditing, testing and certifying the export consignment for compliance to sanitary and phytosanitary requirements.

In contrast, PCPB was found to be responsible for auditing exporters' compliance to safe use of chemicals. Equally, PCPB licensed chemical manufacturers and pesticide sellers and audited their premises to ensure compliance with chemical manufacturing and selling regulations. Meanwhile, HCD was responsible for issuing business licensing to exporters and middlemen and regulating the business side of their activities like contract farming. In general, HCD, was the main face of FFV regulation in Kenya, responsible for policy making and the business side of the sector. Lastly, KALRO was responsible for research and innovation. Therefore, HCD used business license to regulate the value chain while KEPHIS used ECS.

At the higher level, EFSA was the EU body responsible for food safety regulation and policymaking. As such, EFSA used market access both as a sanction or incentive to regulate. EFSA main role was to provide oversight over Kenyan states agencies regulation capability while the Kenyan state agencies provided oversight over the exporters' capacity to adopt BRC in their facilities and enforce GlobalGAP among farmers. EFSA regulated by applying pressure

on the Kenyan state agencies, when at various times, they blocked or threatened to block Kenyan produce access to the market. Hence, there were two regulatory trajectories in this sphere: the first trajectory consisted of EFSA-KEPHIS-exporters and the second trajectory consisted of retailers-KEPHIS- exporters in what is called a notification system.

The first trajectory was mainly visible and active when there were incident of non-compliance, such as the 2013 MRL incident. Hence, the role of this regulatory trajectory was, first, to restore confidence in Kenyan FFV produce to pre-crisis level by identifying and correcting the source of non-compliance and secondly to monitor the exporters' regulatory capability in order to prevent MRL relapse. As such, EFSA and KEPHIS were not directly regulating the exporters' compliance to food standards, since the exporters self-complied, rather they provided oversight over exporters' capability to self-regulate and regulate the farmers for compliance. This was explained by the participant from State Regulatory Agency B:

“Our main role is to ensure that the brokers and exporters follow the regulations required of them. We are especially interested in exporters' systems and capability. Do they have the systems in place to detect MRL and other problems in the sector before such problems are reflected in the market? That is what we constantly test and audit for”.

The same narrative was confirmed by the Participant from State Regulatory Agency C:

“It does not matter if a company (exporter) has never had problems, our role is to constantly ensure that their systems are watertight to detect non-compliance by the farmers early enough before the produce reaches the market. If a case of non-compliance is detected in the market, then it means the (culpable) exporter systems has problems that need to be rectified because the exporter should have detected this before the produce is exported”.

The first trajectory in the pathway was actualised as follows. When there was an interception of contaminated produce, exceeding the required MRL or the produce had a foreign molecule, EFSA issued a notification of non-compliance by contacting KEPHIS with the information on the exporter whose produce had the problem. KEPHIS, therefore, was the point of contact between EFSA and the Kenyan state in relation to compliance with food standards. After this, KEPHIS, suspended the culpable exporter's ECS, thereby, restricting the exporter's access to the market. Once this exporter's ECS was suspended, KEPHIS collaborated with the exporter

to trace and identify the source of non-compliance among their farmers. This was done through the traceability system established through GlobalGAP.

In the traceability system, each farmer had a Unique Identification Number (UIN) which was derived as follows. First, each farmer had his/her farm divided into several smaller blocks each with a specific number. In each production season, the farmers were required to grow export crops in specific one or two blocks depending on the number of blocks the farmer had on their farm. For instance, a farmer whose land was divided into two blocks, was required to grow FFV in one block while leaving the other block fallow, to use for the second season of crop production in order to meet the crop rotation requirement of GlobalGAP.

After harvesting the crops, each farmer packed the produce from each specific block into specific crates provided by the exporter. The UIN was, thus, a factor of the farmer's personal details, the farm details and the block number on which the crop was grown. The crates were then labelled with the farmer's UIN. During packaging of produce at the exporters' pack-houses, the UIN was transferred into barcodes. Hence, in the event of contamination, it was possible to trace each product back to the responsible farmer, farm and block. This was explained by the Participant from Certifying Body A:

“The traceability system works to identify the specific farmer who is the source of the problem in the value chain. Every farmer has specific details which differ from other farmers and all this information is transferred to the barcode which is attached to the produce. If there is a problem a simple scan reveals the farmer who is the source of the problem. This way the retailers are able to identify where the problem is”.

The traceability system allowed the specific farm and block with the problem to be identified. After identification of the farm or farms with the problem, production was suspended on that farm and across all the farmers contracted to the exporter. Hence, non-compliance was very costly, since it affected the exporter and other ‘innocent’ farmers contracted to the exporter i.e. collective sanction. Thereafter, KEPHIS, HCD and PCPB carried out audits on the farm to identify the problem at the farm level and provide a solution. At the farm level, non-compliance was mainly related to the farmer's use of a restricted or banned chemical; therefore, the spraying records were audited.

Meanwhile at the exporter's pack house, KEPHIS, also carried out audits to identify the regulatory overlaps that failed to identify farmers' non-compliance. Therefore, the audit of exporters' pack-house facilities was to test the exporters' capability to regulate for non-

compliance among the farmers, because in most cases, non-compliance was mainly from the farmers. According to the results, it was in times of crisis that the state regulators were active and the existing compartmentalisation of duties was abandoned. This was explained by the participant from State Regulatory Agency B:

“When such things happen, everybody is up and running. All those walls I told you about are broken and there is no HCD, KEPHIS or PCPB. That is the time we work together to identify the problem and solve it because if we lose the market, our jobs are on the line”.

When the auditing was complete and the problem identified and resolved, the non-complying exporter ECS was restored and the farmers resumed growing of FFV. This process was found to last for several months with the timeframe for re-activating ECS varying depending on the degree of non-compliance and risks identified. If the risks were high, then more time was needed to identify the risks, re-train the farmers and resolve the contamination problem. The Participant from Large Exporter E narrated how they had been previously affected by this:

“We were blocked last year by KEPHIS. They found some foreign molecule in our produce in the European market. I think it was about 0.1% of our consignment but the entire consignment was rejected then KEPHIS blocked our ECS. The audit process was long, you know the government can be slow and before we had our ECS restored it was six months. You can imagine the amount of business we and our farmers lost for those six months! We are still recovering from those losses”.

The same was narrated by the Participant from State Agency A:

“Occasionally we do have problems like the 2013 one which of course requires a comprehensive solution from everyone. But this one off non-compliance problems we solve them as they come. But still an exporter has to go through audits and assessment before the license is restored. The time frame in which ECS is reactivated is determined by the problems we find during audits. If we find the exporter’s system is bad then that takes time to solve before the ECS is restored”.

As Large Exporter E narrates above, non-compliance was costly to the exporters’ reputation in the market and it is expected that even after resuming exports, it took a while for the exporter-retailers trust to be restored. In serious cases of non-compliance, such as the 2013 MRL incidence, EFSA also participated in auditing of Kenyan state agencies’ regulatory capabilities

as well as exporters' regulatory systems. Thereby, in such instances, EFSA provided direct regulatory oversight over Kenyan state agencies systems as was explained by the participant from State Agency B:

“If the interceptions are bad like in 2013, then EFSA brings in their personnel to inspect and audit our systems and other government agencies systems. They want to know why we could not detect the problem in the first place”.

This structure of regulation fits into Grabosky's (2017) meta-regulation system, whereby private regulation is regulated by public agencies. In the Kenyan case, EFSA regulated the Kenyan state agencies' regulatory capabilities and the Kenyan state agencies in turn, provided regulatory oversight over the exporters' regulatory capability. This arrangement limited the state direct intervention in Node B of the value chain, therefore confirming to the often-attested narrative of the limited role of Kenyan state agencies in the FFV sector that has allowed for its growth. Crucially, within TCR, the state is accepted to turn on the spotlight on opportunism in the private sector regulators which in this case was the non-compliance problems in Node B.

The second regulatory trajectory in this pathway was the retailers-KEPHIS-exporters trajectory in which notification for non-compliance came from the retailers instead of EFSA. Notification in this trajectory was issued when there was limited MRL interceptions for instance in 2016 when there were 5 notifications as represented in Figure 21 above. When this notification was received by KEPHIS, their response was similar to the one described under trajectory one above. At the Kenyan level, the main instrument for regulation was suspension of ECS and business licence by KEPHIS and HCD, respectively.

The Participant from HCD indicated that the suspension of an exporters' business licence was rare, with dialogue and consultation being used before the licence suspended in cases of extreme non-compliance. Consequently, ECS was only suspended when high levels of notification were received such as in 2013. Therefore, sanctions and penalties were not often the first response to non-compliance as explained by the Participant from State Agency B:

“We suspend ECS just when it is necessary and things are bad. We first try dialogue and consultation with the exporters and in most cases, we work closely with them. So, we are always aware that they have a problem which we resolve together. Again, the exporters know we have ECS which we can use against them, so they comply. The sector is important and employs a lot of Kenyans so we cannot just go about blocking exporters from the market unnecessarily”.

At the global level, the instrument for regulation was the market as an incentive to motivate self-regulation and sanction when bans or restrictions were placed on Kenyan produce by EFSA. Although tariffs have not been used previously as a sanction, in recent years the EU has threatened to freeze duty-free access to the EU market for Kenyan produce because of trade disputes with the East Africa Community (EAC) member states. The dispute is related to the signing of the Economic Partnership Agreement between EU and the EAC member states. While Kenya and Rwanda ratified the agreement in 2016, the other states Burundi, Tanzania, and Uganda have been reluctant to do so, hence the threat of tariffs.

The retailers also sanctioned non-compliance by transferring the cost of disposing of contaminated produce to the exporters. When contamination was found on an exporter's consignment, the disposal was at the exporters' cost which was often high, hence, the exporters had to ensure that their systems were capable of detecting non-compliance before the produce entered the export market. This was narrated by the Participant from Large Exporter E who said the following:

“Our produce (previously) had contamination problem in the market (in the UK) and we had to pay for its disposal in the UK which was costly. So, we try to avoid such incidences by being vigilant at the pack-house.”

The regulatory arrangement for these two pathways was conceptualised in Figure 24 below:

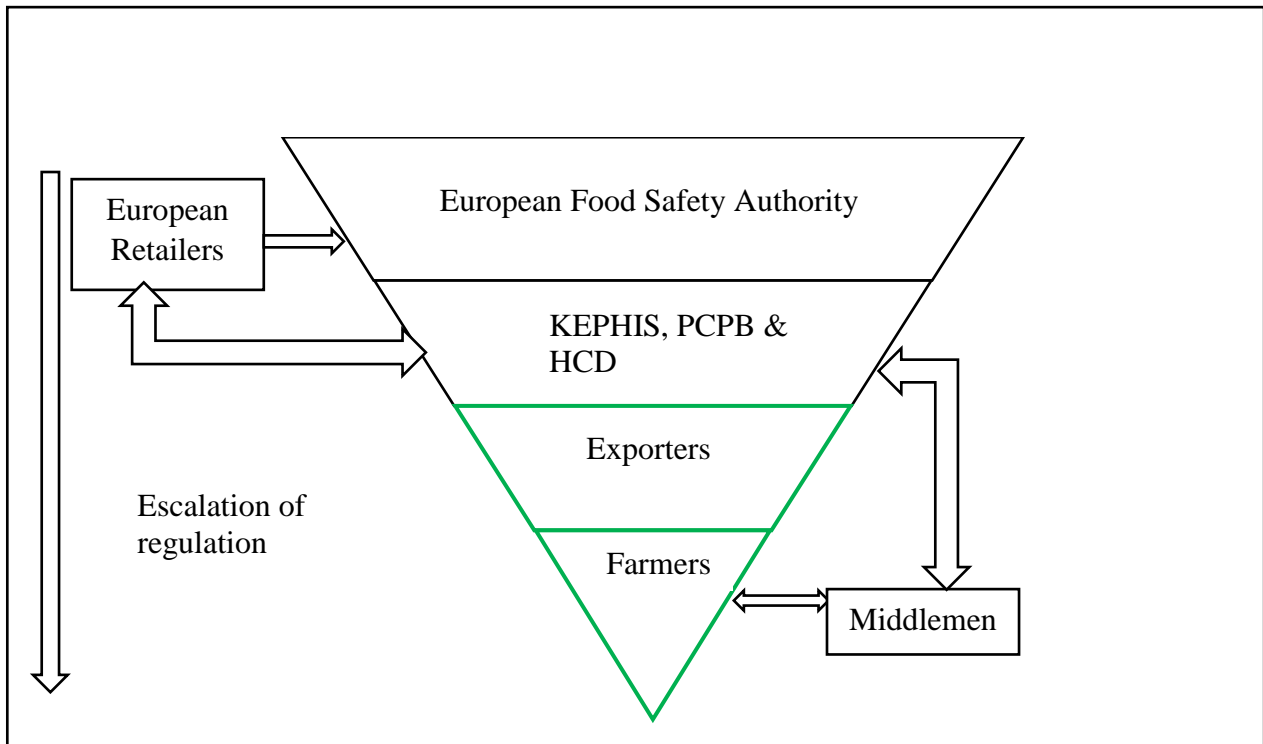


Figure 24: Conceptualised State and Non-State regulatory Spheres in Kenyan FFV Export Value Chain

In Figure 24, the first regulatory pathway of exporters-farmers, is represented by the green coloured triangles while the second regulatory pathway is represented by the whole schema. As the Figure shows, the middlemen were outside both regulatory spheres and their contact with both spheres was through the state agencies and the farmers. Therefore, even with state licensing, the middlemen were still largely outside the main regulatory arrangements that fitted within the retailers centred nodal vertical coordination system. The next section discusses network regulatory system in the value chain.

7.3.3 Network regulation in Kenyan FFV Export Sector

As discussed in Chapter Three, in network regulation, the regulator and regulatee work together within the same regulatory space (Bevir, 2013; Drahos, 2017). Chapter Five briefly discussed the emergence of HCAS which allowed for network governance in the Kenyan FFV value chain. While the two regulatory pathways above were vertical in nature and reliant on sanctions, this pathway was horizontal in nature and relied on relationships governed by trust, reciprocity, peer influence and persuasion. Transaction cost regulation holds that informal systems of regulation can be appropriate in resolving conflicts that can be difficult to formally resolve (Joskow, 2008), for instance through the judicial system. Equally, network regulation

can also be effective in economising of bounded rationality among agents, hence eliminating free riders and opportunistic parties (Williamson, 1975).

Because of the 2013 MRL incident and, restrictions⁴⁴ placed thereof, on Kenyan fresh produce by EFSA, one key regulatory change from the crisis was the formation of a private and public agencies regulatory body called HCAS. This body was formed in order to fill the vacuum related to a private-public governance platform in the sector to allow for deliberations and collaborative actions. Hence, network regulation was within HCAS. HCAS operated through bi-monthly meetings where the members deliberated on emerging problems and collective decisions were agreed upon. This was explained by the Participant from State Regulatory Agency C as below:

“I would not call HCAS a talk shop. Somebody can view it as a talk shop but when a crisis occurs that is when you see its relevance. In such cases, it helps in cutting and reducing the red tape in decision making then the crisis can be solved in time. Before HCAS was there, the back and forth between us (state agencies) and them (private agencies) created some of the problems in the sector. A small problem would develop to a big one because consultation is ongoing through the bureaucracy. In HCAS we meet, discuss a problem, agree on a way forward and everybody disperses to implement what has been agreed upon”.

The effectiveness of HCAS in regulation was in addressing problems in contested areas. An example related to this was through the following case. In November 2014 PCPB placed a unilateral ban on all chemicals with dimethoate⁴⁵ as the active ingredient. Chemicals with dimethoate were viewed to be responsible for the 2013 MRL problem in the Kenyan FFV sector, hence the ban. Because the ban affected the chemical manufacturers who then resisted

⁴⁴ When restrictions are in place, it leads to a requirement that 10 percent of any fresh produce consignment from Kenya must be inspected and tested before being allowed into the EU market. The test often takes place at the importation point at the cost of the exporter. This cause delays because the tests result has to be back before the product is allowed within the EU.

⁴⁵ Dimethoate is an Active Ingredient (AI) on pesticides that results in chemicals having a longer Pre-Harvest Interval (PHI). Hence, if used farmers need to wait for a certain period of time, before they can harvest the produce. Dimethoate causes problems in the FFV sector because most farmers do not wait for the recommended PHI interval resulting in high amount of chemicals residues in fresh produce.

this through a judicial process resulting in the ban being suspended by the court. This was narrated by the Participant from Private Sector Organisation B:

“We don’t have a problem with PCPB doing their role we just felt that the ban was unfair to our business and remember that they (PCPB) did not consult us. So, we went to the court to stop it because they should at least have given us a (grace) period in order for our members to sell their stock of chemicals with dimethoate before the ban is put in place. But the government did not do that, they just went ahead and placed the ban. So we had to resist it in order to protect our businesses”.

However, after the formation of HCAS, the issue was deliberated in HCAS and resolved. In HCAS, the state agreed not to appeal the lifting of the ban and downgraded the ban to a restriction⁴⁶ and the chemical manufacturers reciprocated by volunteering to train smallholder producers on safe use of chemicals at their costs. Hence, in HCAS decisions were collectively arrived at with members’ views and interest being taken into consideration in relation to governing the sector as explained by the participant from Private Sector Organisation B:

“In HCAS we influence decisions one way or another. If we feel that there is something that needs to go in a certain direction, we recommend it. We have been able to influence policy direction favourable to our business but we also make sure that whatever we recommend as a policy do not affect the export sector eventually. To us it is an important forum where everybody deliberates on issues and we all agree on the steps to be taken”.

The same narrative was repeated by the Participant from State Agency B:

“There is no way they (private sector) can complain about what happens in the sector. We are with them in HCAS every month and it is up to them to raise these issues in HCAS. We have worked with them to solve so many problems in the sector and if there are one or two areas that decisions backfire I think we are all to blame not just us or other government agencies. We all participated in arriving at that decision!”

⁴⁶ A restriction implies that the chemical is allowed in Kenya but under strict regulations such as a ban on its use on food crops but its usage allowed on non-food crops, such as sisal. However, this has not provided the required solution because farmers are able to buy the chemical for use in food crops.

However, some exporters indicated that they were not supportive of the restriction and instead, they preferred a ban. This was narrated by the Participant from Large Exporter B:

“Whatever name they give it, restriction or monitoring, it is not working! The farmers can still access the produce over the counter and that is causing us problems. The best solution is to ban it and take it out of the market”.

It was evident that farmers could still access the restricted chemicals from various chemical sellers. This pointed to the overall weakness of HCAS in regulation, especially because the state agencies lacked the capacity to enforce the agreed policy actions. HCAS also used peer pressure to regulate. This was found to be done through FPEAK and AAK which were asked to influence and apply pressure on their members to comply with HCAS policies. FPEAK and AAK represented their members’ position in HCAS and communicated regulatory decisions from HCAS to their members. Hence, FPEAK and AAK applied pressure on their members to comply with HCAS regulations. In the case when a member refused to comply, FPEAK and AAK reported back to HCD and KEPHIS who then used licensing or ECS to bring compliance. This was explained by the Participant from Private Sector Organisation B:

If one of our members has a problem, HCD, PCPB and KEPHIS will contact us and inform us that this member of yours has a problem related to this or that (for instance contract breach with a group of farmers). We then call the member and hold discussions with them on this and ask them to rectify the problem. In most cases they do, and if they have a genuine reason why they breached the contract we communicate back to HCD and KEPHIS and they (HCD) follow up with the farmer. But if the member was the source of the problem and they refuse to comply, we inform HCD and KEPHIS and they then take action on the member”.

Thereby, sanction as the first instrument of regulation was not used, rather peer pressure and negotiation were used. In this pathway, there was some degree of verticality related to the relationship between HCAS and EFSA. As a founder and funder of HCAS, EFSA required HCAS to submit meeting reports to it in order to provide oversight over HCAS activities. However, EFSA was found to have limited influence over HCAS, instead it provided oversight over HCAS frequency of meetings and used the reports to follow up on issues at the EU end. This was explained by the Participant from State Regulatory Agency C:

“The report we submit to EFSA is a requirement because they are the ones who started this thing and they also fund it. They (EFSA) don’t influence what we discuss, they just want a report to follow up on problems on their end of the value chain”.

Meanwhile, the farmers, middlemen and the small exporters were found not to be members of HCAS and this limited the effectiveness of HCAS in regulation. There was no association of export farmers in Kenya to participate in HCAS. Although FPEAK claimed to represent farmers and small exporters, it was mainly made up of the large exporters who were funding it and made up its board of directors. Therefore, it represented the position of the large exporters in HCAS. Meanwhile, the middlemen had an association called Kenya Association of Fruits and Vegetables Exporters (KEFE).⁴⁷ The KEFE association was found to be inactive and invisible in the value chain and was only formed to meet the regulatory requirements from the state agencies. Additionally, it was evident that there were mistrust and hostility between FPEAK and exporters on one side and the middlemen on the other. Hence it was not feasible for KEFE to fit inside HCAS.

Network regulation has been critiqued for embedding un-equal power relationships within the network with its assumption of horizontal power relationships (Maher, 2017). In the case of HCAS, the state agencies wielded more power compared to the private agencies and it was not clear how much influence FPEAK and AAK had within HCAS. Similarly, EFSA was funding HCAS and it was evident that they wielded power over the members of HCAS. Likewise, it was evident that creating and sustaining compliance within HCAS was a challenge because of its amorphous nature with no representation from farmers and the middlemen. An example was the tensions between the middlemen and the exporters which hindered KEFE from participating in HCAS. This made farmers and exporters’ compliance with HCAS regulations impossible.

The main benefit of HCAS in the regulation of the value chain was enabling self-regulation in the sector. FPEAK and AAK were able to regulate exporters and the chemical manufacturers respectively through peer pressure and influence. The threat of sanctions from the state contributed to self-regulation because FPEAK and AAK made their members aware that non-

⁴⁷ To control middlemen activities, around 2013 the exporters lobbied state agencies to have all fresh produce exporters in Kenya, to be members of a registered such as FPEAK. The exporters had expected the middlemen would join FPEAK where they could control them. However, the middlemen registered their own association KEFE to meet the regulatory requirement and maintain their independence from the exporters.

compliance would be sanctioned by the state agencies. For this reason, the study relates the regulatory relationship within HCAS to V. Braithwaite's (2017) notion of regulatory tripartism in which regulation exist within different state and non-state agencies with regulation attained without escalation of sanctions. The regulatory pathway through HCAS was conceptualised as represented in Figure 25 below:

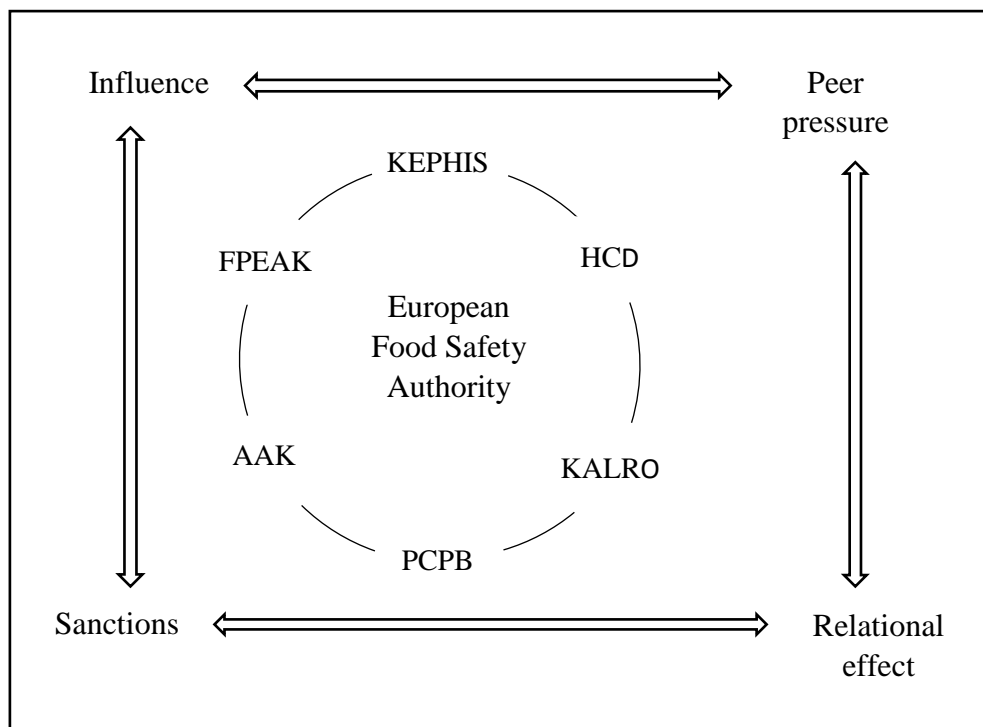


Figure 25: Conceptualised Network Governance in Kenyan FFV Export Value Chain.

As Figure 25 shows, different tools including peer pressure, influence and sanctions were used in HCAS. In addition, EFSA, was located in the middle of the different Kenyan agencies to supervise their activities and, presumably, prevent opportunism. The next section discusses the compliance systems alluded to above in detail especially in relation to MP theory.

7.4 Exporters-Smallholder Farmers Compliance Systems in the Kenyan Fruits and Vegetable Export Sector

As defined in Chapter Three, compliance is the attitudinal and behavioural response of individuals and firms to regulation (Parker & Nielsen, 2017). Compliance is attained when firms and individuals adhere to regulatory requirements willingly or through enforcement strategies advanced by the regulator. Hence, regulation and compliance are the dialectical opposite of each other mirroring the association between the regulator and regulatee. Applying motivational postures theory, it was found that there was no single compliance strategy among

the farmers and the exporters. The compliance systems among the farmers and the exporters is analysed below.

7.4.1 Fresh produce exporters' compliance strategies

As previously discussed in this thesis, the exporters were found to self-regulate and this was related to the high relational specificity between exporters and the retailers in Chapter Five. Additionally, exporters' self-regulation was a rational decision, for it was only through self-regulation that it was possible to maintain a positive reputation with the retailers. In this Chapter, the study argues that the nature of regulation and compliance reflected the structure of vertical coordination in the value chain. As such, applying MP theory, it was evident that the high relational value between the exporters and retailers was also reflected in their MP. Hence, exporters' self-regulation led to self-compliance.

Accordingly, the potential loss from sanctions by EFSA and state agencies, provided the impetus for the exporters to voluntarily comply with the standards and other regulation. This was explained by the Participant from Small Exporter B:

“When it comes to the standards, whether it is BRC or GlobalGAP we do not have an option to comply or not. You cannot choose, that is out of your reach! The moment you decide that you want to engage in this business, then you clearly know that you will have to comply with all the standards in the industry. And why would you not comply when non-compliance will affect your own business? Nobody forced you to start the business so you have to comply. So, the standards come from them (retailers) but it is good for us because it allows us to access their markets”.

Additionally, as discussed in Chapters Five and Six supply reliability was central to the exporters maintaining their place in the value chain. Hence, voluntary compliance among the exporters was evident based on their rational need of accessing the market.

Only one exporter in the study was found to have previously had non-compliance problems related to the 2013 MRL crisis. Because of voluntary compliance, the relationship and motivational posture between the exporters and the regulators was varied but increasingly of capitulation. In MP theory, a regulatee's motivational posture reflects the social distance between the regulatee and the regulator and whether or not the regulatee accepts the agenda of the regulator. Because the prevailing enforcement strategy determines the regulatee's motivational posture, for the exporters, retailers-exporters high relational value led to self-regulation and self-compliance among the exporters. Hence, increased deference, goodwill and

cooperation in regulation was found among the exporters. As the concentric circles in Figures 17 and 20 in Chapters Five and Six, respectively show, the exporters-retailers had high contractual relationship value, and this was also reflected in their regulatory relationship.

Therefore, because of their high relational value, the exporters' motivational posture was found to be of commitment when interacting with the retailers. As V. Braithwaite (2000) explains, commitment MP occurs when a regulatee acts in goodwill to the regulator communicating their willingness to act in accordance with the requirements from the regulator. Thereby, the regulatee likes the regulator and communicates with the regulator by willingly complying. We found this among the exporters-retailers relationship as detailed in the discussions above.

However, because the exporters also related with the state agencies in the regulatory environment, they also exhibited capitulation motivational posture. In their regulatory relationship with the state agencies, regulation was enforced through licensing and ECS. In addition, the regulatory relationship between the exporters and the retailers were often conflicted and the exporters did not approve of the regulator's actions. For instance, the exporters did not approve of the licensing of the middlemen and the restriction placed on dimethoate chemicals as discussed above. While the exporters accepted that the state played a key role in enabling them to access the export market, hence they complied with regulation, they did not necessarily like state regulators.

For, instance the exporters needed ECS from KEPHIS in order to export their produce, hence they had to comply with KEPHIS regulations as much as their relationship with KEPHIS was antagonistic. The other motivational postures of resistance, disengagement and game-playing were not found among the exporters. Additionally, we found Ayres and Braithwaite's (1992) responsive regulation in the exporters-state agencies regulatory relationship. In this, sanction was not the first instrument applied by the state agencies to bring compliance, instead dialogue, consultation, peer pressure and influence were used first before sanctions were applied if all these failed. As discussed above, suspension of exporters' business licences was rare, and the ECS was only suspended when high levels of MRL notification was received as in 2013.

To that end, the exporters' motivational posture was either commitment when relating with the retailers, indicating the exporters-retailers' high contractual and regulatory relational value. Conversely, while relating with state agencies, capitulation motivational posture was evident, indicating the exporters' acceptance of the legitimacy of the state agencies while not

necessarily having a high value in regulatory relationship. The observed exporters' motivational posture is represented in Figure 26 below.

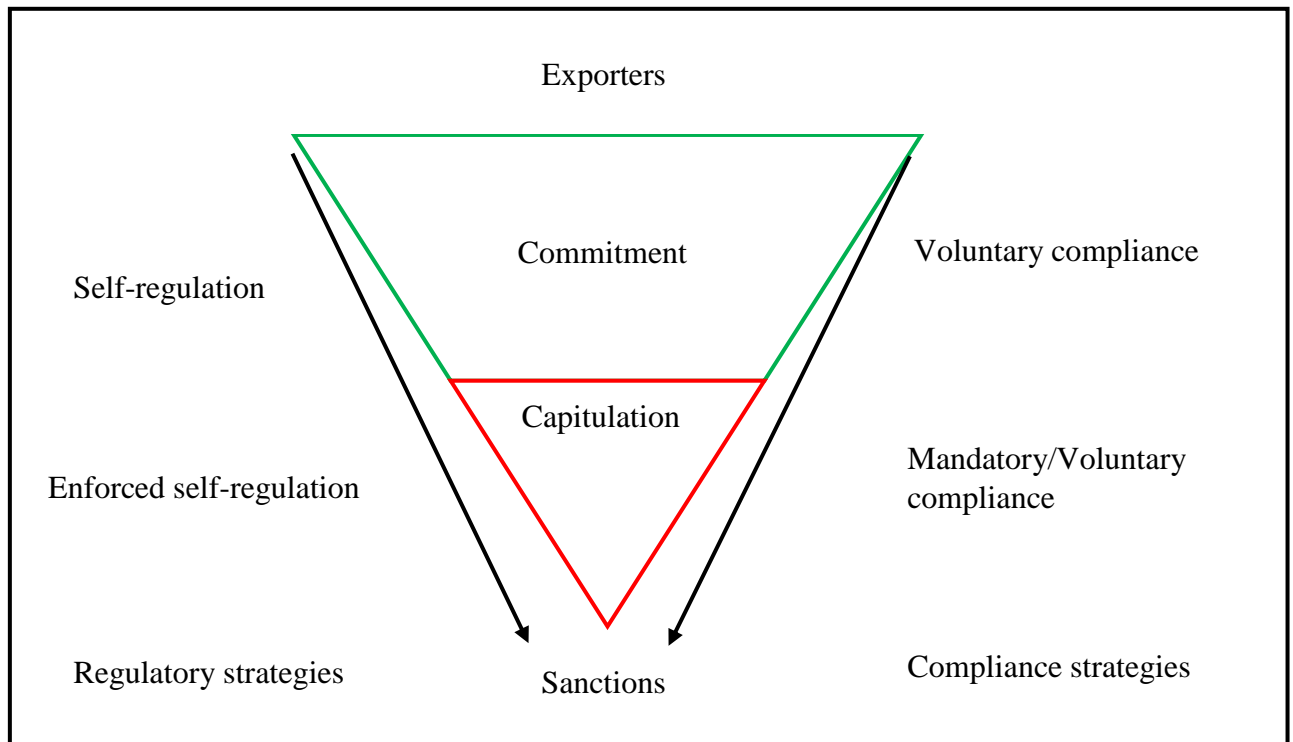


Figure 26: Conceptualised Exporters'-State Agencies-Retailers Motivational Postures.
Source: V. Braithwaite (2002a, p. 3)

As represented in Figure 26, the green triangle is related to the exporters-retailers MP of commitment where the value of regulatory relationship was high while the red triangle shows the exporters-state agencies MP of capitulation as discussed above. The next section discusses the farmers MP.

7.4.2 Smallholder farmers' compliance strategies in the fresh produce export value chain

While the exporter's compliance was voluntary, for the farmers compliance was enforced by the exporters. In Chapter Three, farmers' GlobalGAP and KenyaGAP compliance strategies in the sector were discussed as proposed by Carey (2008). The four compliance strategies were tested in the study and the result is below.

1. Option 1: Individual farmer certification against GlobalGAP where an individual farmer goes through auditing and certification process by a CB. In the study, there were only three farmer participants who were non-members of any farmer group. The certification process by the CB for these individual farmers was initiated by the

exporters. In this process, an exporter contacted the relevant CBs to audit the individual farmers for compliance with GlobalGAP as previously described. Because the auditing costs were high, it seemed that the exporters engaged with individual farmers who had a high educational level, to reduce the transaction costs involved as previously described.

Option 2: Group certification against GlobalGAP in which a farmer group is audited by CBs for GlobalGAP and certified for compliance. This was the common route to compliance in the study because most of the smallholder participants in the study were in farmer groups. Like in option one, the exporters were responsible for triggering the farmers' auditing and certification process as previously described. Because the exporters were responsible for triggering farmers' certification, 29 farmers indicated that were not aware of the GlobalGAP standard.

The farmers' lack of awareness of GlobalGAP was related to its name but not the processes and requirements since all the farmers could easily relate to the GlobalGAP requirements. The reason for this was twofold; first, because compliance was largely outsourced as discussed further below and, second, because the exporters were packaging GlobalGAP practices as necessary agricultural practices for good farming beyond FFV. This was narrated by Farmer 6 in Farmer Group E:

“As a group we have never heard of that thing (GlobalGAP). But I can tell you we are aware of what the (exporting) company requires from us on our farms. We have been properly trained and we have the TA to help us on our farms”.

While there was no reason given why the exporters were packaging GlobalGAP as necessary agricultural practices, it was possible that the previous conflicts related to smallholders' compliance with EurepGAP (the precursor to GlobalGAP) which may have contributed to this re-packaging. Previously smallholders have had compliance problems which led to 60 percent of them exiting the sector by 2006 (Graffham et al., 2007); hence, it is likely that the exporters were packaging GlobalGAP as necessary for overall farming and not just FFV to improve farmers' compliance.

2. Option 3 & 4: Individual and group certification against KenyaGAP. These two routes to certification were absent in the value chain because KenyaGAP standard was found to be dormant in the value chain. While KenyaGAP was an attempt to institutionalise horizontal governance and regulation in the sector (Mayer & Milberg, 2013), the

attempt was found to have failed because of a poor formulation strategy of non-inclusivity. This was narrated by the Participant from Certifying Body A:

“On paper we were required to audit for KenyaGAP but on the ground the standard is non-existent. I believe FPEAK alienated other players in the sector when it was coming up with the standard so there was no consultation. And again, it is a power thing, the Europeans own the market so why should they trust a Kenyan standard to be used to produce food that consumed in their market?”

The same narrative was repeated by the Development Practitioner Participant:

“KenyaGAP died the moment (donor) funding ran out. The auditors were trained, but remember the certification is a cost and the farmers will go for what the market wants. The market wants GlobalGAP and for KenyaGAP to be taken by farmers, the market must demand it but it did not. FPEAK also made a mistake, as a member organisation, the big boys (exporters) came together, formed a standard in which they were to audit themselves, certify themselves and they expect the rest to accept that? There was no independence on KenyaGAP and so the confidence in it was lost. The standard itself was okay but the formulation process was wrong”.

The poor formulation strategy of KenyaGAP, and because it was not market-driven may have led to its dormancy as the study found. The study found that none of the exporters’ or farmers used it on their systems. Hence, the idea of localising GlobalGAP to fit into KenyaGAP had failed as Ouma (2010) also found. The farmers’ motivational postures, as found by the study, are discussed below.

7.4.2.1 Outsourced compliance in the Kenyan fresh produce export sector

In order to reduce the risk of smallholders’ non-compliance which was a recurrent threat to their supply reliability, the study found that the exporters were using different trained personnel to facilitate farmers’ compliance. These trained personnels included the TAs and specially trained harvesting and spray teams. Therefore, it was evident that the farmers’ compliance with GlobalGAP had been outsourced to these individuals, and especially the areas that were perceived to be risk prone. The TAs were employees of different exporting companies and were responsible for the day-to-day management and enforcement of GlobalGAP among the farmers. In the study all the five farmer groups had a TA and the 8 exporters sourcing produce

from farmers also had TAs. However, the three individual farmers did not have an association with any TA.

The TA's main role included monitoring of farmers to limit their contacts with middlemen and to facilitate their compliance with GlobalGAP. While the TAs have been part of the Kenyan value chain since the introduction of standards, the exporters indicated that they had up-scaled their hiring after the 2013 MRL incidence to minimise the risk of relapses. This was narrated by the Participant from Large Exporter C:

“The TAs are an additional cost but any serious exporter right now must have them. They are helping us manage the small producers on the ground to reduce cases of MRL. Previously you could ignore this, but now”.

There were two outsourcing pathways evident in the study. The first pathway for outsourced compliance was related to the use of TAs to monitor, control and manage the smallholder farmers' production systems. The TAs were found to be integrated into the farmers' day-to-day production systems in which they were responsible for overall decision making and compliance with GlobalGAP. The TAs were found to be responsible for farmers within a large area, in some cases several hundreds of farmers, hence, reducing their effectiveness. The duties of the TAs included visiting each farmer to monitor their crops, giving instructions in relation to crop production, diagnosis for pests and diseases, prescribing chemicals to be applied and record keeping for each farmer.

In addition, the TAs were responsible for providing oversight over the farmers' central chemical storage facilities where fertilisers and chemicals were kept. The TAs were found to keep an inventory at the central storage for chemicals, seeds and fertilisers and the farmers' access to these inputs, was strictly controlled by the TAs. This was observed by the researcher, in which after a focus group discussion with Farmer Groups B and D the TAs began to issue chemicals to farmers from a central store. In addition, a central office was in place for the five farmers groups where the farmers' files were located, and as the farmers explained, the TAs were responsible for making entries in the files.

The second pathway for outsourced compliance was related to the exporters increased use of trained personnel teams in the villages, who were responsible for spraying, harvesting and sorting of produce among the farmers. While the TAs were responsible for production decision making, the trained personnel implemented these decisions. It was found that each farmer group had access to trained individuals who were responsible for the handling of chemicals

and spraying duties on their farms. These individuals were found to be locally recruited and trained young men. The recruitment was done by farmers and exporters while the training on safe use of chemicals was done by AAK on behalf of the exporters.

As such, whenever a farmer had pest incidence, the TA would first be informed by the farmer, the TA then inspected the farm to diagnose the pest after which the TA prescribed the right chemical. The spray team was then called and issued with the chemicals by the TA. The mixing of the chemical was done at a central place, in most cases at the central stores where the bathrooms were located. The spray team then proceeded to the affected farm to apply the chemical after which they came back to the central place to take a bath as required under GlobalGAP. Hence, the farmers were not handling chemicals at any stage. However, as narrated earlier, some farmers, still managed to ‘sneak’ in their own chemicals to spray their crops when the recommended ones were not effective especially because the TAs were found to be monitoring hundreds of farmers.

In addition, there were also trained individuals, mostly females, who were responsible for harvesting and sorting of the produce to meet the exporters’ requirements. While the use of these trained individuals reduced food contamination risks, it was evident that it escalated tensions between the farmers and exporters through the rejects problem. This was because the farmers claimed that since these individuals were trained by the exporters, the volume of rejects coming back from the exporters should be less. This was narrated by Farmer 4 in Farmer Group B:

“We cannot understand why rejects are increasing and these people who sort the French beans were trained by the exporter. There must be something going on up there that is not good for us. If the exporter trained these ladies (the sorter) then there should not be any reject from Nairobi!”

The spray and harvesting personnel were being paid by the farmers from their income and, thereby, side selling of produce was costly as it denied the group the necessary income. The result of the outsourcing was that farmers’ roles in the farm were limited to the cultivation of fields, sowing and weeding. In the literature, this is largely viewed as one effect of contract farming, in which farmers’ decision making has been taken away from them through industrialisation of agriculture (Clapp, 1994; Little, 1994; Little & Watts, 1994). This finding further gives evidence that exporter full-control contract was in place in the value chain, albeit relational in nature.

Hence, what type of motivational postures did the farmers exhibit? Unlike the exporters, the farmers' regulation was enforced, hence their exhibited MP was also enforcement. The farmers' MP was found to be commitment at a few times, mostly capitulation and resistance depending on how the regulators handled the farmers' expectations. The farmers' main MP was of commitment, whereby they accepted the legitimacy of the exporters but did not necessarily like them. Like their contractual relationship, the regulatory relationship between the exporters and the farmers was found to be fractious and volatile. The exporters did not trust the farmers and as a result, they hired the TAs to monitor their activities. The farmers also did not trust the exporters as has been discussed throughout the empirical chapters. Nevertheless, the monetary benefits attached to FFV farming, the market guarantee and because the exporters paid for these farmers' participation in the value chain, the farmers complied.

Meanwhile, when the farmers' expectations were not fully met, for instance increased reject problems or if the exporters failed to increase contract prices to reflect spot market prices as the farmers expected, the farmers exhibited MP of resistance. In most cases, the farmers first raised their complaints with the exporters through the TA or the produce pick-up personnel. If the exporters failed to respond to the farmers' complaints, the farmers' MP escalated to resistance from capitulation. For instance, the farmers would escalate side selling of produce to middlemen in order to force the exporters to increase prices. In commitment MP, the regulatory distance between the farmers and the exporters was high and in resistance MP, the distance increased considerably. The farmers' MP in relation to regulation in the value chain was conceptualised in Figure 27 below.

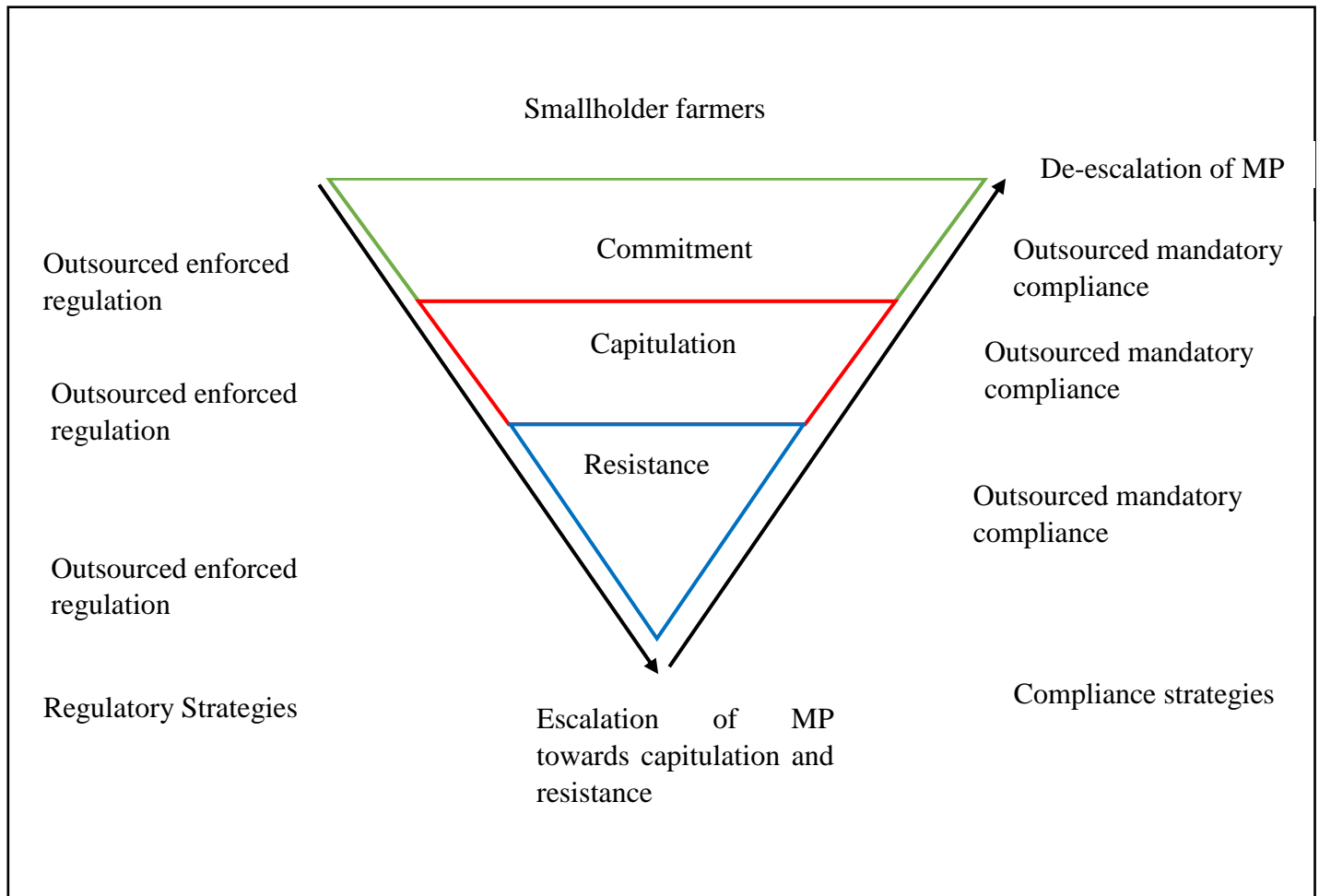


Figure 27 Conceptualised Smallholder Farmers-Exporters Motivational Postures in Kenyan FFV Export Value Chain. Source: V. Braithwaite (2002a, p. 3)

Resistance MP in Figure 27 above is represented by the blue triangle. This is when the farmers were dissatisfied with the exporters and demanded fairness and respect by engaging with the middlemen to signal to the exporters their dissatisfaction. If the exporters failed to respond to farmers' demands, then most likely at the resistance MP, the farmers exited the value chain. Hence, farmers' resistance MP was a signal of the breakdown of trust between them and the exporters increasing the relational distance between them. Therefore, responsive regulation from the exporters, can stem the farmers' exit of the value chain. The exporters' management of farmers' resistance, determined if the farmers reverted back to capitulation MP or exited the value chain altogether.

Meanwhile, commitment MP was only alluded to by 12 farmers who had indicated that they were now in a better relationship with their exporters because the exporters were responding to their price adjustment and produce rejects demands as described in Chapter Five. This was narrated by Individual Farmer 1:

“I don’t want to deal with the middleman anymore. In the last 6 months I have kept off them because the current buyer (exporter) is good. We talk and he tells me when prices increase and we agree that at the end of the contract he will adjust the prices up to cater for this. So even if the middleman comes and gives me KES 10 more for my (French) beans I turn him down. Why would I want to jeopardise my relationship with this exporter who is good?”

Accordingly, commitment MP was not prevalent between the exporters and farmers, except among the 12 farmers where it was emerging in the duration of the fieldwork. From the 12 farmers, it was clear that their exporters’ response to their complaints reduced the relational distance between them and failure to respond increased the distance.

7.5 Summary of Key Arguments

This chapter has discussed the nature of regulatory and compliance systems in the Kenyan FFV export value chain. Just like the structure of vertical coordination, regulation was found to be through three main pathways; exporter-farmers, state regulatory and network regulation. The exporter-farmers pathway was the most active regulatory pathway in the value chain and it functioned to actualise the farmers’ compliance with GlobalGAP. The state regulatory pathway was found to fall within a meta-regulation regime, whereby, the state agencies provided oversight of the exporters’ capability to self-regulate and to regulate the farmers.

Meanwhile, EFSA provided overall regulatory oversight over the Kenyan state agencies. In these two pathways, regulation generally escalated to the exporters then to the farmers. In addition, the main regulatory tools used to bring compliance included market access by EFSA and licensing and ECS by the Kenyan state agencies. The chapter has also discussed the network regulatory pathway which was found to be effective in regulating areas and issues that the private and the public actors contested. This included the dimethoate chemical problem in the value chain. The final part of the chapter has described the exporters’ and farmers’ compliance and motivational postures.

The exporters were found to exhibit a motivational posture similar to their close contractual relationship with the retailers. The exporters' self-complied to regulation, hence they exhibited the MP of commitment while relating with the retailers. When relating with the Kenyan state agencies, the exporters exhibited the MP of capitulation because their regulatory relationship was contested and fractious. Meanwhile the farmers' compliance was mainly enforced and as such they exhibited the MP of capitulation, whereby they complied for economic benefits and market guarantee reasons. However, the farmers also exhibited the resistance MP which the study interpreted as the point at which the farmers exited the value chain because of transactional and regulatory relationship breakdown with the exporters. The next chapter presents a summary of the study key findings and the overall discussion.

CHAPTER EIGHT

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

8.1 Introduction

This research was concerned with analysis of the structure and nature of vertical coordination, regulation and compliance systems in the Kenyan FFV export value chain. The study explored in detail transactional and contractual arrangements between the exporters and farmers in the value chain. The thesis has presented empirical results from fieldwork guided by three research questions that are addressed in Chapters Five, Six and Seven. In particular, Chapter Five discussed the overall structure and nature of vertical coordination in the value chain, Chapter Six discussed the nature and cost of relational contracting between the farmers and the exporters, while Chapter Seven discussed regulation and compliance systems in the value chain.

This final chapter draws together the findings from the three empirical chapters to present a summary of key arguments, contribution to literature and research and policy recommendations. We also explore the study's guiding question of how smallholder farmers have managed to participate in the FFV value chain that is supposedly structured to exclude them. The three research questions of concern to the study were:

- 1) What is the structure and nature of vertical coordination in the Kenyan FFV export value chain?
- 2) What is the nature and cost of relational contracting between exporters and farmers in the Kenyan FFV export value chain?
- 3) What is the structure and nature of regulatory and compliance systems in the Kenyan FFV export value chain in relation to vertical coordination arrangements?

The study's theoretical framework included Oliver Williamson's transaction costs economics and John Braithwaite and Valerie Braithwaite's motivational postures theories to respectively analyse the structure and nature of vertical coordination and regulation and compliance systems in the Kenyan FFV value chain. To answer the three research questions, the study used mixed methods research design. To operationalise the mixed methods approach, the transformative concurrent mixed methods research design was adopted in the study with simple purposive sampling used to select the research participants.

The study's research participants included 62 smallholder farmers, 2 middlemen, 2 technical assistants, 10 exporters, 4 Kenyan state agencies, 2 standards certifying bodies, 2 private sector organisations, 2 NGOs and a Development Consultant. The study findings contribute to the empirical literature on the organisation of relational contracts between firms as discussed further below. The chapter is organised as follows: the first part summarises the key arguments in the three empirical chapters, the second part discusses the claims to originality; and the final part gives research and policy recommendations and thesis conclusions.

8.2 Antecedent: Summary of Study Key Findings

How do firms decide which goods and services to produce in-house and which ones to procure through the market? According to Oliver Williamson's work, under incomplete contract conditions the in-house production or outside procurement decision by a firm is based on the level of asset specificity. As Forbes and Lederman (2009) highlight, numerous empirical studies have tested Williamson's hypothesis focusing on the effect of asset specificity on vertical integration and have found a positive relationship. In this study, our focus was contract organisation under a regime of weak property rights mechanisms. We analysed the overall structure and nature of contractual organisation in the Kenyan FFV export value chain through transaction costs economics. Here, we explored the make or buy decisions in the value chain by analysing what incentivized the make or buy decision?

As discussed, in Chapter Five, the overall structure of vertical coordination was found to be nodal in terms of a mixed arrangement: simultaneously, to make and buy operating in the value chain. We found that some exporters integrated forward and backwards to own FFV importation businesses in the EU whilst also owning FFV production farms in Kenya. At the same time, the study found that the same exporters also procured fresh produce from smallholders' farmers through contract farming. The study argued that there was a nodal vertical coordination arrangement in the value chain. Hence, two puzzles arose from the mixed coordination arrangement by the exporters. The first puzzle was why were the exporters having this mixed coordination arrangement and the second was why was this arrangement nodal?

As Landa (1981) argued, at the heart of property rights theory is that laws and institutions are central in promoting efficient production systems by governing contractual relations through constraints on contractual breaches. As previously stated, a clearly defined property rights regime allows firms to deploy a variety of means to organise production including the make or buy decision described above (Key & Rungsten, 1999; Sartorius & Kirsten, 2005). In this

study, it was clear that there were no contract enforcement systems in place for various reasons. First, Kenya, in general, has weak legal institutions capable of governing and enforcing contract law. Second, assuming that contract law was in place and strong, the perishability of the produce made it difficult for one party to sue the other and get the case resolved in time.

Third, as Macchiavello (2010) argued, written contracts can sometimes be difficult to govern because distance and uncertainty associated with international trade may amplify transaction costs attached to monitoring making formal contracts difficult to write and enforce. Thereby, for transaction costs reasons, enforcing such contracts may be costly, hence avoided. Therefore, while the retailers-exporters and exporters-farmers had a written contract in place, the study has argued that because of the enforcement problems given above and the nature of the written contract being incomplete, the written contract was a document of expectation with a relational contract prevailing over the value chain.

The question was, what type of market failure was forms of vertical coordination in the value chain trying to fix? The relational nature of the contract revealed the weaknesses in the governance system: namely moral hazard problem, information problem and weak contract law. Hence, nodal vertical coordination arrangement in the value chain was found to be fixing the problem of contract enforcement mechanism that was absent in the value chain. In this case, the retailers, exporters and farmers used relational contracts in their transactions, with an informal system of supply reliability providing a contractual enforcement mechanism.

As such, similar to Macchiavello and Morjaria's (2015b) argument that empirical studies have shown that in relational contracting, future rents are often necessary to deter short-term opportunism, we found the same. In this study, the value of a stable supply relationship was central to contract enforcement and it impacted on specific investments made and transaction costs borne by specific parties. Stable produce supply systems generated positive reputation especially for the exporters. As such for the first puzzle raised above, the exporters integrated backwards and also procured produce from the smallholder in order to maintain a positive reputation with the retailers through a stable supply relationship.

By integrating backwards, the retailers avoided the moral hazard problem associated with opportunism, food contamination risks and the high transaction costs of procuring FFV from the smallholders. Meanwhile, the retailers procured FFV from smallholders, at high transaction costs and uncertainty, in order to attain and maintain required produce volume and diversity as required by the retailers. On their own farms, the exporters lacked the capacity to produce the

required produce volume and diversity to meet retailers' demands. Therefore, the exporters' make or buy decision in the value chain was transaction costs driven. In this case, in order to minimise transaction costs related to contract monitoring and enforcement and to protect reputational specificity, some exporters integrated backwards and forward to own FFV growing and importation businesses.

At the same time, in order to maintain a positive reputation in the value chain through stable supply, the exporters also procured FFV from smallholders at high transaction costs. As previously discussed, the mixed model governance arrangement by the exporters was a rational choice between the comparative advantage of having a negative reputation accruing from failure to meet supply demands vis a vis a positive reputation of supply reliability. Both vertical coordination approaches were selected by the retailers, full integration and contracted procurement, because the overall transaction costs were lower than transaction costs related to having to build a new supply network if the current one was lost or ruined by a bad reputation.

Hence, the payoff for procuring FFV from smallholders at presumably high transaction costs was comparatively lower than the long-term costs of having to re-establish a negative reputation and build new trading networks. Thereby, the boundary of the firm, was exporters' transaction costs trade-off of producing FFV from their own farms and at the firm's boundary, procuring produce from smallholder farmers.

For the second puzzle, the arrangement was nodal because there were two main nodes of coordination; retailers-exporters and exporters-farmers. Additionally, we also found different forms of integration in the exporters-farmers node; tight, loose and uncoordinated arrangements. The retailers-exporters transactional relationship was found to be tight with M'énard and Shirley's (2008) three central adaptational features of internal organisation control, cooperation, and communication present. These adaptational features helped stabilise the retailers-exporters transactions. In contrast, the adaptational features were absent in the exporters-farmers transactional relationship, hence their transactional relationship was ephemeral.

In view of these findings, we argued in Chapter Six that it was costly for the exporters to maintain a positive reputation in the value chain because they had to contract smallholders at a high cost. Nevertheless, it was comparatively costlier for them to have a negative reputation in the value chain. Hence, the arrangement with lower transaction costs was selected, the mixed arrangement discussed above. To that end, we argue that in monopsonic/oligopsonic trading

relationships, where a formal contract enforcement system is absent, the less powerful party in the transaction accrues higher transaction costs in order to gain and retain entry. Because in the monopsonic and oligopsonic conditions, buyers are often fewer than the sellers, and the asymmetry creates competition among the sellers for access to the few sellers.

The buyers' competition is exacerbated when the property rights regime is weak and the sellers have to compete among themselves to gain entry and stay in the value chain. In the Kenyan value chain, the mismatch between the few EU retailers and the numerous Kenyan, and indeed global FFV exporters, contributed to Kenyan exporters incurring high transaction costs in order to maintain supply reliability. This finding is implicitly captured by Macchiavello and Morjaria's (2015b) study of the Kenyan rose export sector whereby the Kenyan rose farms put high premiums on maintaining a positive trading relationship with their buyers. As such, when an exogenous shock occurred in 2007, the rose farms chose to forego higher prices in spot markets in order to maintain a good reputation with their contracted buyers at lower prices. Equally, Macchiavello and Morjaria (2015a) found that monopsonic rents by buyers were central to sustaining relational contracts in the Rwandan coffee sector.

We also analysed regulatory systems in the value chain. As discussed in Chapter Seven, regulation was found to be structured into three main pathways including exporters-farmers, state regulatory pathway and network regulation in Node B of the value chain. Importantly, we also analysed the exporters' and farmers' motivational postures to regulation. The exporters were found to exhibit similar MP to their contractual relationship with the retailers, in this case commitment posture whereby the exporters self-regulated and complied with regulatory requirements. The exporters were also found to exhibit capitulation MP when interacting with the Kenyan state agencies. On the contrary, the farmers mainly exhibited MP of capitulation in their regulatory relationship with the exporters while also exhibiting MP of resistance and commitment at different times. Based on these results, the study made three claims to originality as discussed below.

8.3 The Study's Three Claims to Originality

In view of the results discussed in Chapters Five, Six and Seven, three claims to originality are made in the study in relation to the research questions and the results. The three claims are: 1) comprehensive use of Oliver Williamson's TCE approach to analysing the structure and nature of vertical coordination of the Kenyan FFV export value chain, 2) that the cost of maintaining positive supply relations in the value chain was high for the exporters with the farmers-

exporters transactions situated at the uncontrolled hazard zone of vertical coordination and 3) regulation was necessary for the farmers-exporters transaction because of the loose integration. These three claims are briefly discussed below.

8.3.1 Claim One: Comprehensive application of Oliver Williamson TCE approach to analyse the Kenyan FFV export sector

Since Coase's (1937) seminal paper, organisational economists have explored how a firm's production structure affects efficient productivity. In this, economists have identified two main drivers of integration according to Alfaro, Conconi, Fadinger, and Newman (2016). First is supply-side factors including asset specificity, technological changes and supply shock. Second, economists have identified demand-side factors such as market thickness or thinness, demand elasticity and terms of trade as impacting on a firm's decision to integrate or not. Hence, a large volume of literature has emerged over the years that has analysed the trade-off decision between to buy and to make decisions by firms including for price reasons and production efficiency as summarised by Lafontaine and Slade (2007).

Previous studies of the Kenyan FFV value chain have mostly applied Gereffi's (1994) GCC approach to analysing the governance arrangement. One such important study is by Dolan and Humphrey (2000), who empirically applied GCC in the Kenyan value chain and identified a buyer-driven governance framework. In their study, Dolan and Humphrey highlighted how European retailers have been able to exercise control over production and marketing systems in the Kenyan FFV value chain with retailers determining the type of product produced as well as the quality systems and location and structure of the production processes. One key finding from Dolan and Humphrey's study, was confirming the oligopsonic nature of the FFV value chain.

As such, the general argument from Dolan and Humphrey's study, and indeed wider scholarship, is that the Kenyan value chain is tightly coordinated by the retailers for quality reasons. Hence, integration is due to supply side factors of eliminating supply shocks attached to food contamination. The tight coordination thesis of previous scholarship was based on the argument that the retailers sought to control the value chain in order to reduce food contamination risks. This necessitated formulation of food standards for better coordination of production with each point of production unified under the retailers' control. Thereby, the FFV industry, while made up of a continuum of different suppliers, in a real sense is under centralised retailers' control.

However, our study, first, found that tight coordination in the value chain was limited in Node A and absent in Node B of the value chain. Hence, we argued that the notion of tight coordination in the whole value chain is imprecise. As discussed in Chapters Five and Seven, Node B was loosely integrated lacking the three central features of control, communication and cooperation. Equally, Node B was exposed to the moral hazard problem of opportunism. For this reason, there was increased monitoring in Node B of the value chain by the exporters. Hence, we invoke Williamson's (1975) control loss problem in Node B whereby, as Williamson argues, control was lost in Node B as activities expanded and the capacity limit was exceeded. Control loss in Node B was confirmed by the absence of Ménard and Shirley's (2008) three features of vertical integration, control, cooperation and communication.

Secondly, we argue that integration in the value chain was supply-side driven, but unlike earlier scholarship, asset specificity and economising on transaction costs was key. The exporters were central to the form of governance arrangement that prevailed in the value chain. We found that their choice of one over another was a function of a governance arrangement that would reduce the cost of establishing a new supply network. Hence, full integration was selected because it offered protection for specific assets and offered greater consumer, retailer and exporter welfare benefits. For the consumer, exporters' full integration offered the benefit of reduced food contamination risks. For the retailers, exporters' full integration offered the benefit of positive reputation to their consumers related to selling risk-free food and lower costs of monitoring the exporters. For the exporters, full integration offered the benefit of positive supplier reputation of being risk-free.

However, the exporters also contracted smallholders to produce FFV. We found that this decision was also supply-side driven, in this case to reduce supply shock of failing to deliver volume and produce diversity orders from the retailers. Hence, the smallholder farmers were contracted at high transaction costs in order to avoid higher transaction costs of having to rebuild a bad reputation or establish a new supply network. As P. G. Klein (2008) argues contracting works to economise transaction costs when the best transactional arrangement that economises on costs is selected. In this case bilateral contracting with the farmers. Hence, bearing on the contract, the boundary of the firm was taken to be the point where internal organisation by the exporters ended and the exporters began to buy FFV through contract farming (Rowlinson, 1997; Sartorius & Kirsten, 2005; Williamson, 1985). The same was taken for the retailers and the farmers.

8.3.2 Claim two: that gaining and maintaining supply relationships was costly with exporters-farmers transactions situated at the uncontrolled hazard zone

In our analysis, we have shown that a contractual enforcement system was absent in the value chain. As such, the retailers, farmers and exporters relied on relational contracts with reputational effect, through supply reliability, being central to contract enforcement. Various studies have shown the value of reputation in the relational contracting situation. For instance, Banerjee and Duflo (2000) found that in the Indian software industry where contracts were incomplete, enforcement was problematic and reputation through reliable supply was central to property rights regime. In the African agricultural markets context, Fafchamps (2004) and Fafchamps & Minten (1999, 2001) have shown the value of relationships in buyer-seller transactions where market institutions are often weak or non-existent.

In addition, Rosch et al. (2015) have argued that in markets with imperfect contract enforcement, parties will use informal, relational contracts to generate incentives, such as supply reliability, for both parties to adhere to contract terms within long-term relationships. The study by Rosch et al. (2015) focused on the entry barriers for farmers in the Kenyan French beans export market in which they identified market search frictions as an entry barrier to relational contracts. Earlier on Posner (1980) had elucidated the reciprocal trading relationship in what he called 'primitive societies' where contract law was non-existent. According to Posner, development of intimate trading relationship in these societies was predicated on repeated interactions between them.

We find the same argument holds true in modern societies whereby, as Macchiavello (2010) and Macchiavello & Morjaria (2015a, 2015b) have shown, the value of trading relationships increased within repeated transactions, especially when a property rights regime was absent. In particular, as Macchiavello (2010) argues, it is often difficult to write and enforce agricultural contracts on quality and consistency parameters, hence parties will avoid such contracts and instead rely on reputation as the key institutional arrangement for contract enforcement. Having said that, Landa (1981) found that trust was central in sustaining exchange relationships between Chinese rubber merchants in Malaysia.

As Landa found trust in the trading relationship, led to the formation of what she called a 'particularistic' network of Ethnically Homogeneous Middleman Group (EHMG), made up of Chinese merchants. The EHMG network, according to Landa, functioned to constrain the moral hazard problem in contracts, hence the network served as an alternative to contract law

because a property rights regime was absent. Additionally, the EHMG arrangement, according to Landa, economised on transaction costs and information asymmetry problems. Based on these our main contribution to this relational contract literature is that gaining and maintaining a reputation in an oligopsonic/monopsonic exchange relationship is asymmetric with the weaker party having to bear higher costs of entry and stay in the trading relationship.

In the study, we found that it was costly for the exporters to transact with the farmers, nevertheless they did it in order to maintain a stable supply for the retailers. It was clear that it was the exporters who had to go all the way to maintain stable supply in the exchange relationship with the retailers and the farmers. For the retailers-exporters exchanges, the cost of reputation was estimated to be high at the start of the transactions whereby, the exporters had to put in place the required systems and show that they could match retailers' expectations. However, in time, these costs, stabilised.

In contrast, for the exporters-smallholders, exchanges, the cost of reputation was found to be high throughout the exchange relationship because the farmers exited the value chain and new farmers had to be frequently recruited and trained. Equally, the risks of food contamination were high among the farmers, hence the monitoring systems and training had to be maintained throughout the exchange relationship. Hence, transaction costs and value of relationship were inversely related in the repetitive exchanges, with low relational value leading to high transaction costs and vice versa. However, the cost of re-establishing reputation and new supply networks from severed trading exchanges was found to be higher than the transaction costs of contracting smallholders.

This was because the retailers and exporters relied on supply reliability to enforce contracts. Thereby, each exporter had to 'stand out' among the many available exporters in order to qualify to access and remain in the market. Failure to meet a retailer's supply demands, could lead to an export being replaced by a different one. These findings explain why the smallholder farmers are able to participate in the value chain. The exporters were willing to bear production and marketing costs on their behalf in order to meet supply reliability. We have shown in Chapter Six that the exporters paid for smallholder production and marketing costs, hence lessening cost, technology and skills barriers for smallholders.

On the other hand, smallholder farmers' decisions to participate in the value chain were often driven by the market guarantee, higher produce prices and because the exporters bore the production and marketing cost for them. Because of the asymmetric distribution of transaction

costs, the smallholders easily exited the value chain costing the exporters future deliveries and the investments they made in the farmers. Hence, we found Popkin's (1980) rational peasants, but unlike Popkin's rational peasant, the smallholders were risk averse and only participated in gainful and risky gambles for a short period before exiting the value chain when the risks increased.

Because the farmers easily walked out of contracts, hence endangering the exporters' specific investments, we argued that exporters-farmers relational contracting was at the unrelieved hazard zone. According to Williamson (1985) the unrelieved hazard zone is a notoriously inefficient zone as captured by the exporters-farmers transactions in the value chain. Hence, the study's second contribution to the literature was the analysis of exporters-farmers transactions as being within the unrelieved hazard zone of TCE.

However, the application of TCE in the study also revealed its limitations in empirically analysing contractual and vertical coordination problems especially in a developing country context. The limitation was related to the application of TCE to analyse the problem of opportunism in transactions. While TCE is a theoretically rich approach for analysing the problem of opportunism in transactions between two resource-rich firms, for instance Tesco and Cadbury, we found TCE unable to account for opportunism driven by poverty and deprivation. In the study, it was clear that the smallholder farmers were looking for any extra income available from whichever source, and this contributed to their opportunism.

Grosh (1994) supports this contention by highlighting that risk-averse farmers often care about income variability and not contractual relationships. As such, according to Grosh, if spot-market prices rise above contract prices, farmers will often renege on their contracts and go for the spot-market prices. Grosh further stated that such behaviour is often common in agricultural markets where middlemen activities are often ubiquitous. For this reason, in applying TCE in the study, we found that its focus on opportunism as related to cheating or self-seeking could not explain a rational action driven by deprivation and poverty.

8.3.3 Claim three: that regulation was necessary for the farmers-exporters transaction because of loose integration.

Regulation, was taken to have a superior cost and risks economising result, in certain cases, than the next alternative, for instance markets, especially in incomplete contracts situations (Williamson, 1976b). Within transaction costs, Spiller's (2013) transaction cost regulation was adopted, whence, regulation was accepted as a form of governance able to mitigate

transactional malfeasance and hazards within organisations. Hence, our main contribution was twofold. First, we analysed the regulatory systems in the Kenyan value chain, which according to our understanding, had not been done before. While there is voluminous literature on the governance system in the Kenyan FFV value chain, we found a gap in relation to the regulatory systems.

Our analysis found that the prevailing regulatory system mirrored the governance system. Therefore, as Ayres and Braithwaite (1992) point out regulation and compliance are often multi-faceted and relational. In this case, regulation in the value chain was in three pathways including exporters-farmers, state agencies pathway and network regulation as discussed above. Our second contribution was the analysis of the farmers and exporters' response to regulation through V. Braithwaite et al. (1994) and J. Braithwaite's (1985) motivational postures theory. Accordingly, we found that the farmers and exporters responded differently to regulation driven by their transactional relationship. The exporters' motivational postures were positive because they self-regulated and complied, hence commitment and capitulation MP were exhibited.

In contrast, the smallholder farmers' regulatory relationship with the exporters was enforced. Thereby, the smallholders' motivational posture was mainly capitulation and sometimes resistance and commitment. Importantly, in the exporters-farmers regulatory relationship, resistance MP was found to be the point at which the smallholder farmers exited the value chain if exporters failed to respond to their plea for help. For instance, we found that if the exporters did not respond to the farmers' dissatisfaction with the produce reject problem or adjustment of contract prices to reflect spot market prices, the farmers engaged with the middlemen.

Even then if regulatory problems increased, like the 2013 MRL problem, and the exporters failed to positively respond to farmers' concerns, the farmers exited the value chain. Hence, we conceptualised farmers' exit of the value chain at resistance MP to be driven by perfect storm conditions. In perfect storm conditions, regulatory risk, such as the rejects problem, and governance risks, such as higher spot-market prices, increased at the same time leading to the smallholders exiting the value chain. This gives further evidence of the smallholders being rational and risk-averse. The study found MP theory to be theoretically rich in explaining regulatees' economic motivations for compliance with regulation.

8.4 Research and Policy Recommendations

Based on the above discussion, we draw the following policy and research recommendations. The main policy recommendation from the study is the need for increased funding for the state agencies in the sector including HCD, KEPHIS, KALRO and PCPB to allow for their increased engagement in the sector in order to actualise their mandate. As empirical results show, state regulation that was needed for contractual support was absent, as a formal contract enforcement mechanism was absent. The study found that from 2013, financing of state agencies had been severely curtailed due to financing of the devolved governments. While the increased financing of state agencies may not necessarily have led to better regulation, it is expected to increase their engagement in the sector.

Licensing and other entry restrictions may facilitate contractual enforcement, for instance increased monitoring of the middlemen and where possible de-registering of the middlemen who buy produce from contracted farmers. Increased regulation by state agencies may be an easier alternative to achieve in improving the property rights regime in Kenya than say, improving the judicial systems. Increased supervision by regulators may help bring order to the value chain as Paige (1998) highlights in his study of the Costa Rican coffee sector where the regulator was effective in monitoring transactions.

The second policy recommendation is related to the contractual arrangement between the farmers and the exporters. The farmers-exporters contract was found to be one year in duration. Because of this, the contract was often vulnerable to price changes in the spot-market. It was clear that the spot-market price changes were aligned to the seasonal demand cycle in Europe that was dependent on the European weather cycle. In the European autumn, winter and early spring months from October to April, the demand for Kenyan FFV was found to be high leading to higher FFV spot-market prices. In the spring and summer months of May-September, the demand for Kenyan FFV reduced and the spot-market prices were also low. As such, the study recommends that the contracts can be tied to this demand-supply cycle in order to reduce the incentive of spot-market price on smallholder farmers' side-selling.

While this may not completely stem farmers' defections from contracts, it may help stabilise the relational contracts by eliminating side-selling opportunities. This is in line with Williamson's (1976a) argument that short cycle contracts have the benefits of being adaptive to hazards and economising on bounded rationality. For areas for further research, the study recommends the following areas to be explored further. First is the new outsourcing

arrangement that was found between the exporters, lead farmers and smallholders as an emerging arrangement of organising the smallholders by the exporters. This arrangement needs to be examined further in terms of its effectiveness in stabilising transactions, the distribution of costs and gains in the arrangement and the institutional support for such arrangements. In addition, a quantitative comparative analysis of the costs of relational contracting in Node A and B is recommended.

8.5 Conclusion

Mackintosh (1977) correctly predicted an explosion of research output in the field of fresh produce value chain research. Over the years, there has been a large volume of scholarly outputs on the African, and of interest to this study, the Kenyan FFV value chain. Despite the large literature output from various scholars, there was a gap in the literature that inspired this study. The gap was related to the study's guiding question of, if there are high entry and stay barriers in the value chain then how and why do the smallholder farmers continue to participate in the FFV value chain? Through analysis of the exporters to buy and make decisions, we found the asymmetric distribution of specific assets and transaction costs disfavoured the exporters, made it possible for smallholders to participate in the value chain.

Hence, while the study sought for exclusionary systems in the value chain, we found a value chain structured on relationships because formal contract enforcement systems were absent. Hence, the exporters were willing to bear most costs on behalf of the farmers in order to maintain stable supply relationship with the retailers. This made it possible for the smallholders to enter into the value chain and, at certain times, exit at little or no cost. The study found that contract farming had transferred transaction costs of FFV production onto the exporters enabling this. Importantly, coordination and regulation in the value chain was found to be relationship driven and any improvement in the functioning of the value chain, hinged on the improvement of relationships within.

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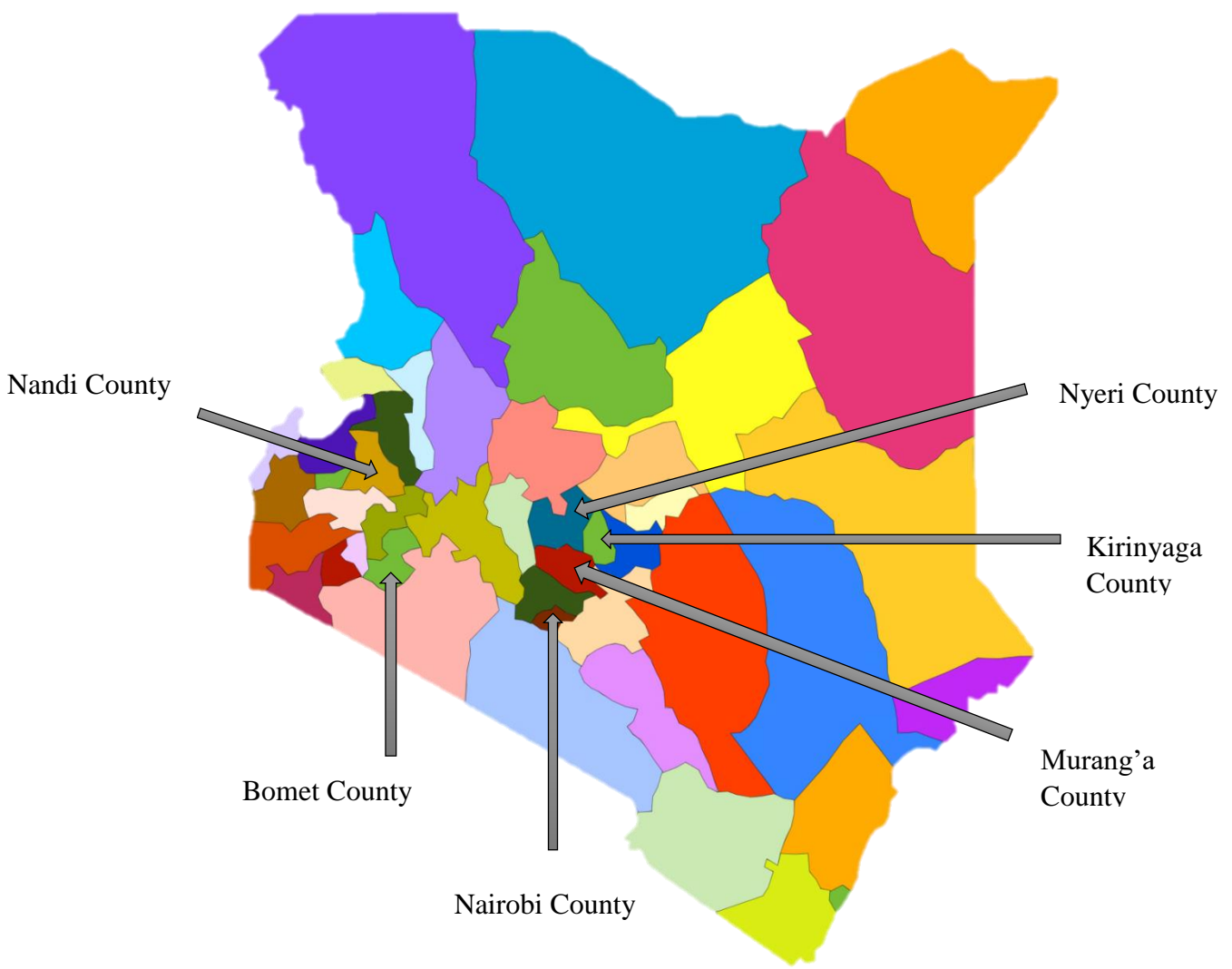
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APPENDIX 1: Map of Kenya with the 6 Study Counties



APPENDIX 2: Research Permit

THIS IS TO CERTIFY THAT:

MR. FREDRICK AJWANG ODHIAMBO
of THE OPEN UNIVERSITY, 24-0 Milton
Keynes, has been permitted to conduct
research in All Counties

on the topic: GOVERNING A VALUE
CHAIN. PRIVATE FOOD STANDARDS AS
AGENCY OF GOVERNANCE. THE CASE OF
FRESH FRUITS AND VEGETABLES IN
KENYA

for the period ending:
20th June,2017

Permit No : NACOSTI/P/16/29007/11974

Date Of Issue : 20th June,2016

Fee Received :Ksh 2000



.....
Applicant's
Signature


Director General
National Commission for Science,
Technology & Innovation

APPENDIX 3: The Open University Ethics Approval Letter

Human Research Ethics Committee (HREC)

From Duncan Banks, Deputy Chair
The Open University Human Research Ethics Committee
Email duncan.banks@open.ac.uk
Extension (6) 59198



To Fredrick Odhiambo, FSTEM
Project title Private food standards as agency of power. The case of fresh fruits and vegetables exports sector in Kenya.
HREC ref HREC/2016/2274/Odhiambo/1
AMS ref

Memorandum

Date application submitted: 10/05/16
Date of HREC response : 13/05/16

This memorandum is to confirm that the research protocol for the above-named research project, as submitted to the OU HREC for ethics review, has been given a favourable opinion by the HREC Review Panel.

Please note the following:

1. You are responsible for notifying the HREC immediately of any information received by you, or of which you become aware which would cast doubt on, or alter, any information contained in the original application, or a later amendment which would raise questions about the safety and/or continued conduct of the research.
2. It is essential that any proposed amendments to the research are sent to the HREC for review, so they can be recorded and a favourable opinion given prior to any changes being implemented (except only in cases of emergency when the welfare of the participant or researcher is or may be effected).
3. You are authorised to present this memorandum to outside bodies such as NHS Research Ethics Committees in support of any application for future research clearance. Also, where there is an external ethics review, a copy of the application and outcome should be sent to the HREC.
4. OU research ethics review procedures are fully compliant with the majority of grant awarding bodies and where they exist, their frameworks for research ethics.
5. At the conclusion of your project, by the date you have stated in your application, you are required to provide the Committee with a final report to reflect how the project has progressed, and importantly whether any ethics issues arose and how they were dealt with. A copy of the final report template can be found on the research ethics website - http://www.open.ac.uk/research/ethics/human-research/human-research-ethics-full-review-process-and-proforma#final_report

Best regards,

Dr Duncan Banks, Deputy Chair

The Open University Human Research Ethics Committee

<http://www.open.ac.uk/research/ethics/>

www.open.ac.uk/research/ethics/

January 2015

APPENDIX 4: Smallholder Farmers Interview Guide

Background

1. Tell me a little about yourself and your farming?
2. How many years have you done farming?
3. What are some of the things that you enjoy most about being a farmer, how about challenges?

FFV Farming

4. Ok why did you decide to start growing the vegetables/fruits for export, which year, crops?
5. Did you choose these crops yourself or did someone choose it for you?
6. Describe for me how you joined this type of farming? (if you were recruited how did this happen)
7. Which standard are you currently using in your farm?
8. How was it in the beginning using these standards?
9. How about now?
10. How much does it cost to comply?
11. What is the most costly aspect of the standard?
12. Describe for me the whole process you went through before you started using the standard?
13. How did you find the whole process? (easy, difficult)
14. How long did these processes take before you could finally and comfortably use the standard?
15. Tell me about the trainings you went through, how many were they and how frequent?
16. Who generally was doing the trainings?
17. What were the trainings about, was there any practicals involved?
18. How about along the years, did the trainings/capacity building continue? (If so how frequent)
19. Did you pay any money for the trainings?
20. So after trainings you started growing the crops and applying the standards immediately?
21. What were you being trained on in year 1, 2 and 3?
22. Please describe for me the process of using the standards in one cycle of growing your crops?
23. Did anybody monitor your progress? (if so how frequent)
24. Tell me about the record keeping requirement, how do you do this?
25. What specifically do you record? (how often is this)

26. What happens to the records?
27. What are the some of the challenges of complying with the standards, please describe them to me?
28. How do you manage these challenges?
29. So do you think you now fully understand the standards, you can comfortably comply with them without any further trainings (If yes explain)?
30. In one year growing cycle, how many people/organizations do you deal with?
31. Who does the record keeping and other requirements?
32. Who does the marketing? (If different from the one doing the above, why?)

Contract farming

33. Tell me about the contract, how does it work?
34. Who decides what goes in the contract?
35. How about the price, who decides what is the right price?
36. How do you access information about the price?
37. How would you judge your relationship with the buyer through the contract?
38. Have you ever pulled out of the contract and why? (How did it end up)
39. If you have a problem with the buyer about the contract, who do you go to and what happens?
40. What would make you pull out of the contract?
41. What would you want to see included in the contract?

Marketing

42. Let's talk about the marketing. How do you go about marketing these export crops? Describe the process for me.
43. After harvesting what happens?
44. How many people/organizations do you have to deal with in your marketing?
45. I have heard that sometimes the produce becomes rejected. Has your been rejected before by the buyer and if so how many times in the last 1 year?
46. What is the most common reason that you have been given for rejection of your produce over the years?
47. What do you do with the rejected produce?
48. Do you think (over the years) have become better in knowing the best quality of your produce that the buyer wants?
49. Have you ever changed a buyer of your produce over the years? If so why?

50. How about the middlemen tell me about them please?

Auditing

51. I have heard that there are inspections done to farms such as yours. Is this the case?

52. If this is the case explain to me your experience in regard to this?

53. How frequent is this? (in the 1st year, 2nd year and so on)

54. Are you given notice before the auditing takes place? (if so what is the notice period)

55. Are your questions/queries/concerns/feedback taken into consideration by the auditor? If so how do you know?

Negotiation

56. How do you manage your relationship with the following; the trainers, the buyers, the auditors and others not mentioned here?

57. Is there any channel for you to air your grievances or complaints and if so to who and what happens?

58. Along the years you have done this farming, what has changed the most? (positive and negative)

59. Over the years have there be changes in these requirements and if so what are they and how are they communicated?

60. Tell me about the government agencies that you deal with.

61. You have told me about all these problems, why are you doing this farming then?

62. Is there anything else you would want to talk about that we have not discussed?

APPENDIX 5: Smallholder Farmers Semi-Structured Questionnaire

Questionnaire Code: County.....

1. Gender: (a) Male { } (b) Female { }
2. Age: **(Tick as appropriate)**
18-27 { } 28-37 { }
38-47 { } 48-57 { }
58-67 { } 67 and above { }
3. Highest education level attained/completed: **(Tick as appropriate)**
Primary { } Master's degree { }
Secondary { } Doctorate { }
Tertiary- middle level college { } None { }
Bachelor's degree { }
4. What is your primary occupation? **(Tick as appropriate)**
Farmer { } Domestic Worker { }
Professional { } Housewife /husband { }
Business man/woman { } Student { }
Labourer { } Other (Specify).....
5. Do you belong to any smallholder horticulture farming group? **(Tick as appropriate)**
Yes { }
No { }
6. What is the total area of all the land used for horticultural purposes?
0-2 Acres { }
2-4 Acres { }
4 and above acres **(Specify)**
7. Which horticultural crops are you currently growing for export market?
..... **(List)**
8. What other non-horticultural crops are you currently growing? **(Specify)**
9. Who is the current buyer of your produce?
..... **(List)**
10. Which year did you start growing horticultural export crops? **(If known)**
.....
11. Which standard do you currently use as a requirement by the buyer of your produce? **(Tick as appropriate)**
GlobalGAP { }

KenyaGAP { }

Don't know { }

12. Have you previously been affiliated with any other standard apart from the one you are currently using? **(Tick as appropriate)**

Yes { }

No { }

13. If yes why did you stop being affiliated with it?

..... **(Specify)**

14. Which year did you start using the current standard?

..... **(Specify if known)**

15. Can you list some of the requirements of the standard you are currently using?

.....

16. Did you undergo trainings before starting using the current standard?

Yes { }

No { }

17. If yes how many trainings did you undergo in the first year of using the standards?

1-5 { }

11-15 { }

6-10 { }

16 and over { }

None { }

18. How about subsequent year 2 how many trainings?

1-5 { }

11-15 { }

6-10 { }

16 and over { }

None { }

19. How about subsequent year 3 how many trainings?

1-5 { }

11-15 { }

6-10 { }

16 and over { }

None { }

20. In the first year, how many farm audits were carried out in your firm?

..... **(Specify)**

21. How about in the second year, how many farm audits have been done? **(Circle one)**

..... **(Specify)**

22. How many farm audits and inspection have been done in 3 years and over?

..... **(Specify)**

23. Has your produce been rejected by the buyer in the last two years? **(Tick as appropriate)**
 Yes { }
 No { }
24. On a scale of 1-5 have you been satisfied with the reasons given for the rejection of your produce by the buyer at any given time? **(Tick one)**
 Disagreed with the reasons { }
 Partly agree with the reasons { }
 Fully agreed with the reasons { }
25. Did the buyer clearly explain to you why your produce was being rejected? **(Tick one)**
 Yes { }
 No { }
26. If so then has the produce rejection helped you better comply with the standards? **(Tick one)**
 Yes { }
 No { }
27. If the rejection are frequent, why then do you still continue in this type of farming? **(Specify)**

28. Which other non-financial benefits have you gotten from complying with the standards? List **three benefits** from the most important to the least. **(Specify)**

29. How will you rate your interaction with the exporter/buyer? **(Tick one)**
 Balanced { }
 I feel that I have control over decisions { }
 No the exporter has control over decisions { }
 Don't know { }
30. If the exporter has control what decisions do they control? **(Specify)**

31. If you have control what decisions do you control? **(Specify)**

32. Based on your response to question 28, looking back over the years has your relationship with the exporter been the same or has it has changed? **(Tick one)**
 Remained the same { }
 Changed { }
 Don't know { }
- 32 If it has changed what has changed? **(Tick one)**
 I feel the exporter control has increased { }
 I fell that my control over decisions has increased { }

I don't know { }

33. How do you get market information? (Specify)

.....

APPENDIX 6: Certifying Body Interview Guide

1. I am interested in knowing the history of this organisation. Could you kindly describe to me your history and business background?
2. Tell me how a single day in the office in this organisation is like.
3. What is the company generally involved with?
4. Let's talk about farming activities that the company is involved with. What generally is your connection to farming?
5. What specific roles do you play in farming business in Kenya? Kindly describe them for me
6. And what is your role in the horticulture farming? Are you involved with the GAPs, and if so in what ways?
7. How does auditing of farmers takes place? Kindly describe the process for me.
8. What do you look for in a farm?
9. Are there exams and tests and practicals for the farmer?
10. If no how do you know one is ready to comply?
11. Who initiates the auditing process? The farmer, the exporter or some other body?
12. Do they have to pay for this service? (How much?)
13. What are the important aspects of the audit process and how the do you certify a farmer as complying with the GAP?
14. Which GAPs are you involved with?
15. How often do you do this? For instance in a year cycle of growing a certain crop, how often do you audit a farmer?
16. Assuming a famer fails the audit what happens?
17. Do you go back in-between a season to verify if the farmer is complying and following the regulations? If so how many times in a season?
18. Do you give notice before you visit the farm? If no why, if yes why?

19. Assuming a farmer gets certified and then you visit somewhere in the season and you find that he/she is not following the regulations. What happens?
20. What would be your checklist when auditing a farm? What would it include?
21. Is there any link between your businesses with the supermarkets for instance Tesco? If so what is the link?
22. What is the link between this organisation with the exporters, HCDA, FPEAK?
23. How about your link with HCD, KEPHIS, KALRO, AAK?
24. Whom do you report to eventually in regard to the certification process of each farmer?
25. Do you share the audit and compliance report with anybody and if so who?
26. What eventually happens to the audit reports?
27. Who owns the reports?
28. Can farmers request to access the reports and you give them? If no why?
29. Is there any feedback to the farmers from the audits? (If so how does this takes place?)
30. Along the way which type of farmers are easiest to deal with and why? (Clarify....educated, non-educated, male, female, old, young) if a certain group why?
31. What eventually do you do with all the reports you keep on the farmers' that you audit?
32. Do you follow the same audit process for small, medium and large farmers? (If it differs, what is different and why?)
33. Is there any other importance that you think is important that I have left out?

APPENDIX 7: Exporters Interview Guide

1. Tell me about your export business. For how long has this business been around?
2. Who are the owners, if it is okay?
3. How about yourself, for how long have you done this job?
4. Tell me about some of the challenges in this business especially over the years.
5. How about the good things, what are they?
6. Can we talk about the food standards please? Tell me about them.
7. How do they relate to your business?
8. Which one do you comply with?
9. I want to talk about the GlobalGAP standards, tell me about them. Like what you know about them
10. Do the farmers you buy your produce from have to comply with the same standard as you? (if yes or no why)
11. Where do you mostly sell your produce to? (Which country, retailer?)
12. Whom do you deal with in exporting the produce? (What are their role?)
13. If you can recall can you describe to me when these standards began how it was for your business?
14. How did you get to know about the GAP and go about complying in the early days?
Describe for me the process you went through for compliance
15. Before the GAPs which measure were you using to determine quality produce from farmers?
16. How much do you think the compliance process costed you in those early days?
17. How about now, how much do you spend in a year to meet the compliance requirements?
18. And who are your customers by the way?
19. How do you relate with them through the standards?
20. How about the certifying organisations, how do you relate with them?

Recruiting farmers

21. I want to talk about how you buy your produce from farmers. How do you go about it?
Please describe it for me
22. How do you identify the farmers growing these crops? (Did you recruit them to this type of farming, if so how and why?)

23. Do you have discussions with these farmers during recruitment and do you they have time to answer questions? (How long does a normal recruitment of farmers averagely take?)
24. After recruiting the farmers what happens next?
25. What if you go through all these and the farmers opt not to do this farming, what do you do? (or if they drop out after one season what do you do)
26. Are you in any way involved in the trainings of the farmers and if so in what ways?
27. If you are not involved in training and recruitment of farmers, at what point do you begin interacting with the farmers?
28. Do you tell the farmers which crops to grow or they are free to choose whatever crop? (If yes why?)
29. Why do you prefer these crops from farmers and not others?

Contract farming

30. Can we talk about the contract please, tell me how your company goes about it
31. Before the contract, what use to happen?
32. Who decides what goes in the contract and what does not?
33. How long has your company been involved in contract farming?
34. Do all your farmers have contracts?
35. What are the main issues that you often disagree with the farmers in relation to contracts?
36. How do you resolve these problems?
37. Do you think contract farming has been good for your business?
38. What is the role of other government agencies in contract?
39. What is your opinion of the middlemen?
40. What in your opinion would be the best way to deal with them?

Buying produce

41. Who transports the produce from the farm and who pays for it?
42. Describe for me the process of buying produce from a farmer? (What happens, what do you look for?)
43. How do you get to know the produce in the farms are ready for buying/collection?
44. If I may ask you directly how do you define a quality capsicum/French bean?
45. Is there a document that helps you determine if the produce meets the requirements? (If so what is the document and who produced it?)
46. What are the most important things you look for in a produce and why?

47. What if they do not meet the requirements what happens?
48. Do you inspect each crate of produce before you buy?
49. How long does this take?
50. Do you measure the length of a produce for instance French beans, carrots and if so what do you use and what is the recommended size?
51. If a farmers produce is rejected does he/she still pay for transport costs? (in case the farmers pay for transport)
52. What is the most common reason for rejection of a farmers produce?
53. Do you give farmers feedback on why you are rejecting the produce?
54. Assuming this one farmer you have dealt with for last 2-3 years and you have rejected his/her produce over time, has the rejection reduced over time, increased or remained the same?
55. Is there a certain type of farmer you prefer buying produce from? If so what type of farmer and why?
56. In the case there is some new requirement for a produce, do you inform the farmers? If so how?
57. In case the new requirement comes in the middle of a planting season when farmers are ready to harvest their produce, what happens to the produce?
58. Is there any time you have bought a produce without regarding the standard? If so why? (How often, who authorizes this?)
59. Do you deal with farmers equally? (is there preference between rural farmers and urban ones, literate and illiterate especially when recruiting and buying produce)
60. Tell me the differences between a farmer who has been in this business for one year and one who has been there for say 3 years and above. (in terms of quality of product and overall performance)
61. Has a farmer you recruited ever grown produce and then sold to a different exporter? If so how did you deal with this?
62. Do you take time to look at the farmers' record if they have followed the requirements like spraying regime? If no why, if yes why?
63. Have you ever bought a produce from a farmer who complies with a different standard? (If so why?)
64. Assuming a farmer brought to you a produce with very good physical characteristic yet he/she is not affiliated to any standards will you buy the produce? If so why?

65. Do you know about KenyaGAP?

66. Is there anything else important that you think I should know that I have not asked about?

APPENDIX 8: Private Organisations Interview Guide

1. Briefly tell me about the history of this organisation?
2. Why was it founded?
3. Who are the main actors within?
4. How do you fund your activities?
5. What are your main roles within the fruits and vegetables sector in Kenya?
6. Do you have any direct contacts with smallholder farmers, and if so in what areas?
7. Tell me about the GlobalGAP standards, what are your roles within this standards?
8. Are you involved in its implementation and if so how and where?
9. Was your organisation part GlobalGAP formulation and if so how?
10. What is your role in the value chain?
11. How do you work with: farmers, exporters, retailers, government agencies, NGOs?
12. Okay tell me about KenyaGAP, how did it come about?
13. Did your organisation play a role in it?
14. Who were the main players in its formulation?
15. How about after its formulation, how are you involved?
16. Whom did you consult in the process of its formulation?
17. Who funded the process and why?
18. Who are the main actors in KenyaGAP?
19. Who are the main users of this GAP? (Large or small farmers)
20. What does a farmers has to do in order to start using this standard?
21. Do they pay any money in order to use the GAP? (How much would this be, how frequent)
22. Assuming a farmer has qualified to use KenyaGAP, what happens next? (Any trainings, who does the trainings? How long are the trainings? Do the farmers pay for the trainings? After trainings what next?)
23. Who does the follow up to ensure the farmers comply with the GAP? (Do they pay for this?)
24. Are the requirements for farmers in KenyaGAP different from GlobalGAP? (If similar, then why did we need another standard?)
25. Is there any way that KenyaGAP relate to GlobalGAP? (If so how and where?)
26. Can a farmer comply with both standards at the same time?

27. What are benefits of using KenyaGAP compared to GlobalGAP?
28. How about challenges of using KenyaGAP in comparison to GlobalGAP?
29. How do these two GAPs work in tandem/opposition to each other?
30. Are there differences between these two GAPs in terms of requirements on farmers?
31. How do you work with the CBs?
32. Is there any feedback mechanism that you have put in place to get farmers opinion/complaints about this standard?
33. Do those opinions get considered and if so how?
34. I have been told about HCAS, what is your role in it?
35. Is there anything else we have not discussed?

APPENDIX 9: Non-Governmental Organisation Interview Guide

1. Tell me briefly about your organisation?
2. What are the main areas that you operate within?
3. Ok tell me about your role in the fresh fruits and vegetables sector in Kenya?
4. How long have you been involved in the sector?
5. Why this sector?
6. Who do you mainly deal with?
7. Which projects have you been involved with over the years?
8. In which areas in Kenya?
9. Why those areas?
10. Who were the main beneficiaries?
11. Why them?
12. What has the success of these projects been?
13. How do you measure success?
14. What was the long term strategy for the project?
15. Is there anything we have not discussed that is important?

APPENDIX 10: Public Organisations Interview Guide

1. I would like to know the role of your in the horticultural sector
2. And what is your role in relation to other government agencies (private agencies)?
3. Has these roles changed over the years?
4. Are there any conflicts between your roles and the other government agencies?
5. How do you support and complement each other?
6. How do you relate with the farmers, exporters, retailers?
7. Tell me about contract farming, how did it come about?
8. What role do you lay in contract farming?
9. Okay what role do you play in the compliance of GlobalGap, BRC and other standards?
10. How do you enforce/ensure compliance?
11. I was informed that the E.U. supermarket actually trust you to enforce the Gap, how is this possible?
12. In your opinion who really has more control in the FFV sector?
13. I am not sure you know about KenyaGap, what is its' relevance of KenyaGap since the exporters I have talked to seem not to be keen on it
14. Do you guys participate in the formulation of these standards? BRC, Gap.....
15. How do you work in relation the supermarkets in European Union? Do you report to them in any way?
16. I have been told that you randomly take a sample of export vegetables to test for chemical residues but the results comes out after a week. What is the relevance of the results if my produce has already left for EU
17. Why can't these chemicals banned in the GlobalGap just be banned in Kenya to make everything easy?
18. Do you work with the chemical manufactures?
19. What if my produce has high MRL, what happens?
20. What happens to the exporter/farmer with such a case?
21. Do the E.U. supermarkets assess your facilities for testing for chemical residues?
22. Do you guys work in collaboration with PCBP & AAK?
23. Some exporters have complained about the charges that you charge for their produce, they feel you do not do enough to merit the charges, what is your response on this
24. Why do you think farmers do this farming with all these problems?

APPENDIX 12: Development Consultant interview Guide

1. Tell me about yourself please and how you got into this work.
2. How long have you done this work you are currently involved with?
3. Tell me about your work in the horticulture sector?
4. What specifically do you do in the sector?
5. For how long have you done this?
6. What changes have you seen taking place in the sector over the years, now that you are a veteran?
7. What would you advise a smallholder farmer based on your experience?
8. How about the exporters?
9. How about the donors?
10. What do you think is the main problem in the sector?
11. Ok and who is not doing his/her work properly in the sector that has led to the many problems?
12. Do you know about the contracts?
13. Were they thee previously?
14. If you were given the opportunity to recommend solution to the problems what would they be?
15. Tell me about the middlemen, where do you think they sell their produce?
16. Let us talk about KenyaGAP, do you know about it?
17. Why do you think farmers do this farming in spite of the problems?

APPENDIX 13: Participants Coding List

State agencies

HCD: State regulatory agency A

KEPHIS: State regulatory agency B

KALRO: State Regulatory Agency C

PCPB: State Regulatory Agency D

Private sector

Private Sector org A: FPEAK:

Private Sector Org B: AAK

Certifying Body A: BTK

Certifying Body B: FSN

NGOs

Development Consultant:

Solidaridad: NGO A

Agriprofocus: NGO B

Large Exporters

Large exporter A: KT

Large Exporter B: EG

Large Exporter C: SR

Large Exporter D: MF

Large Exporter E: SN

Small Exporters

Small exporter A: MT

Small Exporter B: CL

Small Exporter C: PO

Small Exporter D: CH

Small Exporter E: RT

Others

Technical Assistant

Middleman A and B

Farmers

Farmer Group A: Mwea Group 1

Farmer Group B: Mwea Group 2

Farmer Group C: Bomet Group

Farmer Group D: Mwea Group 3

Farmer Group E: Nyeri Group

Individual Farmer 1: JC

Individual Farmer 2: PW

Individual Farmer 3: AS

Individual Farmer 4: DC

Individual farmer 5: JK

Individual Farmer 6: DM