

UNIVERSITY OF CAMBRIDGE

PhD Thesis

***“The power to flourish: Unearthing the roots of Kenyan
flower producers’ market access strategies.”***

Thesis submitted for the degree of Doctor of Philosophy

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ABSTRACT

“The power to flourish: Unearthing the roots of Kenyan flower producers’ market access strategies.”

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Powering Kenya’s agricultural economy, the Kenyan flower industry is prided as an example of successful African integration into global agricultural trade. Export markets are bifurcated due to a marked shift from the Dutch flower auctions and an increase in trade within ‘direct markets’ which includes supermarkets and florists. While flower production is dominated by a few vertically integrated, large scale flower farms (>100 ha), mid-scale (20-80 hectares) and small-scale (>0.25 hectares) flower farms which are the focus of the thesis, face a unique set of challenges in terms of navigating access to the more stable direct markets.

The overall narrative is that even in a buyer-driven market, Kenyan cut flower producers at the mid and small scale have agency, and they exercise their bargaining power for favourable export access by diversification and differentiation in strategies and networks. Two meta-narratives framing the sector coalesce around the development angle which showcases contestations around labour and environmental abuses and the political economy angle focusing on governance structures and power relations of production. This thesis goes deeper than these meta narratives by introducing micro-level, relational perspectives using the GPN framework, and asks what strategies Kenyan mid and small scale cut flower producers employ to navigate the shifts in export markets as producers diversify from the Dutch auctions towards supermarkets.

My findings identify diversification as the common factor in mid and small scale producers’ strategies for securing a range of lucrative export markets. Producers’ enhance their bargaining power to access diverse markets through adaptable production, relationally through collective action, and in the regulatory sphere by circumvention, compliance or contestation for more favourable ‘rules of the game’. Going beyond labour and environmental analyses, the thesis uniquely analyses the knowledge economy originating from the cut flower sector as an undertheorized aspect of its development impact.

***Consider the flowers: true only to the earth,
Yet we lend them a fate, from the borders of fate
And supervise their fadings, their little deaths.
How right that we should author their regret***

- Don Paterson, The Flowers

Declaration

This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration, except where specifically indicated in the text.

It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my thesis has already been submitted or is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

The thesis does not exceed the prescribed word limit as specified by the Faculty of Human Social and Political Sciences.

Signed

A handwritten signature in blue ink, appearing to read 'Nungari Mwangi', written in a cursive style.

Dated: November 7th, 2018

Nungari Mwangi, MPhil (Cantab.)
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LIST OF ACRONYMS AND ABBREVIATIONS

ACP	African Caribbean and Pacific
ADC	Agricultural Development Corporation
AFA	Agriculture and Food Authority
AEA	Agricultural Employers' Association
ANT	Actor Network Theory
BA	Bachelor of Arts
B2B	Business to Business
BOPP	British Ornamental Plant Producers
CAV	<i>Centraal Aalsmeer Auction</i>
CBA	Collective Bargaining Agreement
CBI	Centre for the Promotion of Imports from developing countries
CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
CROP NUTS	Crop Nutrition Laboratory Services
COTU	Central Organisation of Trade Unions
DBE	Development Bank of Ethiopia
DCK	<i>Dansk Chrysanthemum and Kultur</i>
DFG	Dutch Flower Group
EAC	East African Community
EAF	East African Flowers
EBA	Everything But Arms
ECC	Environmental and Combustion Consultants
EU	European Union
ETI	Ethical Trade Initiative
EPA	Economic Partnership Agreement
EPC	Export Promotion Council
EPZ	Export Promotion Zone
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investment
FFP	Fair Flower Fair Plants
FH	Flower Hub
FHS	FloraHolland Handling Services

FLP	Flower Label Program
FOSS	Floriculture Ornamental Sustainability Standard
FPEAK	Fresh Produce Exporters Association of Kenya
FSI	Floriculture Sustainability Initiative
GCC	Global Commodity Chain
GDP	Gross Domestic Product
GIZ	<i>Gesellschaft für Internationale Zusammenarbeit</i>
GlobalGAP	Global Good Agricultural Practices
GOK	Government of Kenya
GVC	Global Value Chain
GPN	Global Production Network
GSP	Generalised Scheme of Preferences
HA	Hectares
HCD	Horticulture Crops Directorate
HEBI	Horticultural Ethical Business Initiative
HR	Human Resources
HTS	Horticulture Traceability System
ICC	International Code of Conduct
IDS	Institute of Development Studies
IIED	International Institute for Environment and Development
IFTEX	International Floriculture Trade Expo
INGO	International Non-Governmental Organisation
IPL	International Procurement & Logistics
IPR	Intellectual Property Rights
IT	Information Technology
KALRO	Kenya Agricultural and Livestock Research Organization
KARI	Kenya Agricultural Research Institute
KEBS	Kenya Bureau of Standards
KEFHAU	Kenya Export Floriculture, Horticulture and Allied Workers Union
KEPHIS	Kenya Plant Health Inspectorate Services
KFC	Kenya Flower Council
KHRC	Kenya Human Rights Commission
KIA	Kenya Investment Authority
KIPI	Kenya Industrial Property Institute

KIPO	Kenya Industrial Property Organization
KOA	<i>Kopen Op Afstand</i>
KPAWU	Kenya Plantation and Agricultural Workers Union
KRA	Kenya Revenue Authority
KSh	Kenya Shillings
LANAWRUA	Lake Naivasha Water Resource Users Association
LNRA	Lake Naivasha Riparian Association
MAR	Market Access Regulations
MBA	Master of Business Administration
MITI	Ministry of International Trade and Industry
MPS	<i>Milieu Project Sierteelt</i>
MRL	Maximum Residue Levels
NACOSTI	National Commission of Science, Technology and Innovation
NBMSTR	New Business Models for Sustainable Trading Relationships
NIE	New Institutional Economics
NEMA	National Environment Management Agency
NFM	Nairobi Flower Market
NHF	Naivasha Horticultural Fair
NTNC	National Trade Negotiations Council
PBR	Plant Breeders' Rights
PVP	Plant Variety Protection
R&D	Research and Design
SEDEX	Supplier Ethical Data Exchange
SMETA	Sedex Members Ethical Trade Audit
TFA	Tele Flower Auction
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UAE	United Arab Emirates
UPOV	International Union for the Protection of New Varieties of Plants
USA	United States of America
VAT	Value Added Tax
VBA	<i>Verenigde Bloemenveilingen Aalsmeer</i>
WRA	Water Resources Authority
WRUA	Water Resource Users Association
WST	World Systems Theory

WTO

World Trade Organisation

WWW

Women Working Worldwide

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DEDICATION

To my mother and father who raised me to trust in God, and to those who have gone before us with respect, love and admiration.

And

*“For you: anthophilous, lover of flowers,
green roses, chrysanthemums, lilies: retrophilia,
philocaly, philomath... — all this love,
of the past, of beauty, of knowledge...”*

- Reginald Dwayne Betts

1. Growing flowers in shifting sands: An introduction to the Kenyan cut flower industry

1.1. Research questions and focus

From the moment the Kenyan rose is planted, it begins its transformation into a commodity that is painstakingly designed to evoke spontaneity and romance in accordance with the demands of export markets. Kenyan cut flower producers have been actively shifting markets under pressure from a devalued euro¹ and collapsed rouble², stagnating demand in Europe and increasing global supply, looming tariffs due to uncertainties around negotiations on the Economic Partnership Agreement, increasingly narrow profit margins and producers' desire for greater bargaining power. They strategically shift from the Dutch flower auction to supermarkets, from traditional markets in North and Western Europe to non-traditional markets in East Asia, Australia, and the UAE and from physical trading to e-commerce or remote sales.

This thesis focusses on how small and mid-scale Kenyan producers navigate the shift in export markets bifurcated between the traditional trade stronghold of the Dutch auction system and powerfully emerging 'direct markets' which are typically supermarkets and large retailers. Production is also bifurcated between the dominant 20-25 large scale, vertically integrated producers (< 80 ha) which produce approximately 75% of total cut flower exports (Hortiwis & FlowerWatch, 2012:21) on the one hand, and the mid-scale farms (20-80 hectares)³ and small-scale (0.125 to 3 hectares)⁴ flower farms which are the focus of the thesis. The basic structure of the Kenyan flower industry is summarised in table 1.1. below⁵. Mid and small scale farms

¹ This was mentioned in reference to the Euro crisis and the uncertainty about a Greek exit from the Eurozone

² The collapse of the rouble took effect in the second half of 2014 due to economic sanctions due to Russian's annexation of Crimea and military intervention in the Ukraine, and the drop in crude oil prices.

³ The Kenya Human Rights Commission report (2012) provides a slightly different scaling. Large farms are considered to be above 70 hectares, medium farms 22 – 69 hectares and small below 22 hectares. The FAO does not provide a global standardized system for scaling.

⁴ Dolan et al. (2002:16) categorise smallholders as those with 0.25 – 2 hectares of land. Bolo (2012: 26) uses KARI's (2003) categorization that small scale farmers produce on farms averaging between 0.125 ha to 1ha in size. Based on field work, this thesis adopts the scale of 0.125 to 3 hectares to categorise smallholders.

⁵ The large-scale producers category in table 1.1. is included and will remain a point of reference in characterising the Kenyan flower industry. However, the focus of this thesis is on mid and small scale flower farms.

face specific challenges in terms of navigating access to the more stable direct markets, which elicits a diverse set of strategies to enhance their bargaining power and competitiveness in an industry that is dominated by giants.

Basic structure of the Kenyan flower industry

Category	Approximate production area and flower variety	Typical features of production
Large scale producers	<ul style="list-style-type: none"> • More than 80 hectares of greenhouse and open-field production • Sophisticated infrastructure • Mainly roses, carnations, chrysanthemums and hypericum varieties 	<ul style="list-style-type: none"> • Vertically integrated and very technologically sophisticated • They manage their own export operations • Diversified markets including direct sales to supermarkets • Large employers (600 – 6000 staff) • 20-25 producers account for up to 75 percent of exports (Hortiwise & FlowerWatch 2012)
Mid-scale producers	<ul style="list-style-type: none"> • 20-80 hectares of greenhouse and open-field production • Sophisticated infrastructure • Mostly roses and some open field varieties such as hypericum 	<ul style="list-style-type: none"> • Partner with consolidator-exporters to handle export • Supply the auction but increasingly shifting to direct markets • May buy some varieties from outgrowers • Employ on average 500 workers • Account for 20-25 percent of exports
Small holder producers	<ul style="list-style-type: none"> • 0.125 to 3 hectares of summer flowers (open field crops) also known as ‘fillers’ • Most popular varieties are arabicum, moby dick, tuberose, craspedia, ammi visnaga, eryngium among others 	<ul style="list-style-type: none"> • Organised as outgrowers in ‘contractual collectives’ or otherwise ‘collectives of convenience’ • Product sold through auctions and Nairobi Flower Market • Low input system with very little investment • Mostly family labour • Account for 5-13 percent of exports (Fintrac 2010)

Table 1.1.

Source: Dolan, Opondo, & Smith (2002:16).

Updated with author’s analysis on farm scales, varieties and features

With this scenario in mind, this thesis sets out by asking the question: “What strategies do Kenyan cut flower producer networks use in seeking greater bargaining power amidst shifts in export markets?” which seeks to shed light on the nature of the practices and relationships that make up producer strategies as they seek access in changing export markets in Europe and beyond. For mid-scale flower producers, it is a question of competitiveness and achieving stable relationships with buyers in export markets, which translates into becoming a preferred supplier to large retailers. From the perspective of small-scale cut flower producers, it is a question of access, survival and resilience in very choppy market waters. Further, for smallholder farmers it is a question of security of livelihoods as they typically grow summer flowers

as part of a diversification strategy from traditional horticulture or export cash crops like tea. The thesis question probes into the agency of cut flower farmers in minimising coordination and transaction costs (particularly information costs) in a buyer-driven market where the Dutch auction and supermarkets greatly influence the governance of the value chain.

My interest in the lives of mid and small-scale flower farms was spurred by a comment from a European industry official⁶ early on in my field work who said, “*I doubt whether any farms smaller than sixty hectares will survive in this industry.*” My ambition was to fill out the contours of the inner life of mid and small scale flower farms noting their embeddedness in the Kenyan economy and in the globalised European aesthetic commodity culture. Narratives of the politics, culture and economy of the flower industry have largely been the preserve of European scholars⁷ such as Gebhardt’s (2014) ethnographic account of the making of Dutch flower culture. This thesis seeks to amplify the voice and power of producers situated in the Global South by narrating how they survive, thrive and position themselves in the global flower trade.

The first sub-question evaluates the suitability of the Global Production Networks theory to analyse the landscape of actors in the cut flower industry, their relationships and development implications. This question guides the development of the thesis’ analytical framework in chapter three.

Thesis sub-question 1: To what extent does the Global Production Networks framework explain how cut flower producers adapt to shifts in end markets?

- a) To what extent does GPN theory explain the interests and position of the variety of actors in the Kenyan cut flower production network in line with the shifts in end markets?
- b) To what extent does GPN theory help us to understand the strategies of actors as they bargain for market access?
- c) What are the strengths and limitations of GPN theory in explaining the development implications for the localities where the Kenyan cut flower network is embedded?

⁶ Anonymized. A receiver-manager of a large-scale flower farm in Naivasha.

⁷ The body of literature on the political economy of the cut flower trade is explored in the literature review, chapter 2.

The second sub-question foregrounds practices and experiences of cut flower producer networks in adapting to the shifts in end markets discussed above, as well as to local production challenges.

Thesis sub-question 2: What are the experiences of Kenyan cut flower producer networks in seeking greater bargaining power in European export markets?

- a. How do cut flower producer networks manoeuvre local production challenges to gain greater bargaining power in export markets?
- b. What is the role of intermediary firms in positioning cut flower producers in the changing export markets?
- c. What are the institutional pressures / constraints that cut flower producer networks face in seeking greater bargaining power in new export markets?

The third sub-question discusses the development impact of the industry. It is premised on the critical but little recognised understanding that the flower industry is very knowledge intensive. Therefore, producers' capabilities to adapt to changes in end markets are dependent on the generation, management and use of various forms of knowledge. This engages GPN 2.0's relational concepts 'value capture' and 'strategic coupling'.

Thesis sub-question 3: What is the nature of the interaction between cut flower producers' activities and Kenya's knowledge economy?

- a) To what extent do producer networks introduce new technologies and methods of production?
- b) How has the flower industry contributed to the systems of knowledge management in Kenya? e.g., development of Intellectual Property Protections
- c) To what extent are there linkages between producer networks and Kenyan systems of knowledge production/management?

As will be explored in the literature review chapter, the development impact of the flower industry has been studied with regard to labour questions, environmental (mis)management as well as the significance of its contribution to foreign exchange. The research provides a unique knowledge-centred perspective that explores how the industry couples with the local economy.

1.2. Thesis structure

This thesis analyses players, strategies and institutional interactions in the Kenyan flower industry, centred around three nodes – flower farms as relational sites of production, the link to export markets through wholesaler intermediaries (which this thesis refers to as consolidator-exporters for the purposes of clarity), and the web of governance that paves the way to European export markets. Despite the technical detail on production, this is neither a thesis on agronomy, nor on political ecology though it acknowledges both angles in the literature review⁸. Centred on the Global Production Networks theory, this thesis is situated at the intersection of the politics and economics of trade in high value horticulture from a producer perspective. True to the multi-disciplinary character of Development Studies, it is influenced by perspectives from International Development, Economic Geography, Agricultural economics, Agrarian studies, and Business, Trade and planning policy.

Chapter two details the empirical and theoretical literature review. It identifies two main strands of empirical literature analysing the cut flower sector characterised as the development policy literature and critical political economy literature. The chapter goes on to engage the theoretical literature including a justification of the choice of the Global Production Network as the framework of analysis, institutional theories on the firm from a relational perspective, the literature on bargaining power and lastly on the knowledge economy. These chapters foreground my analytical framework which is explained in chapter three, and is constructed around the updated version of Global Production Networks theory (GPN 2.0). The framework builds out three key themes - strategies, networks and implications for development in the knowledge economy - which are evidenced in the two subsequent empirical chapters. Chapter four then discusses my field work methodology which entailed a mixed methods approach and has aspects of grounded theory. It also summarises the challenges of conducting field work in the flower industry, which is a relatively opaque and reticent industry, under a discussion on positionality and reciprocity with field work participants⁹. In chapter five,

⁸ It is not an agronomic thesis because I do not discuss in any depth plant physiology, plant genetics or soil science and the science and technology used to enhance production besides mentioning a basic mentioning of flower varieties and hydroponic systems. It differs from political ecology because I explicitly do not focus on politicizing the environmental issues and phenomena encountered in the cut flower sector, which much of the academic literature sampled in the literature review does.

⁹ The field work methodology chapter borrows from Mwangi, N. (2018) in Johnstone, L. (ed.) “‘Good that you are one of us’: Positionality and Reciprocity in conducting field work in Kenya’s flower industry’

I provide a technical background of how to grow and sell a Kenyan flower exploring the roles and relationships of the key actors in the cut flower production network. Chapters six and seven discuss the empirical findings from mid-scale and small-scale cut flower producers respectively. These chapters highlight two key aspects of the producers' engagement in the production network – their intra-firm strategies and the complexity of their inter-firm relationships particularly with consolidator-exporters as the most critical intermediaries for market access. Chapter eight details the extra-firm relationships within the Kenyan cut flower industry. It highlights contestations between the flower industry, the state and voluntary private initiatives as governance institutions for the virtually contract-free industry, and identifies modes of bargaining by producers. In conclusion, chapter nine synthesises the findings of the thesis and outlines my contributions to knowledge as well as some ideas for future research.

1.3. Overview of the flower industry and development in Kenya

Kenya has proven to be Europe's cornucopia of flowers, providing approximately 38% of cut flower imports to the European Union and being the biggest exporter mainly to Holland and the UK (KFC statistics). The sub-sector is Kenya's second highest earner of foreign exchange in Agriculture after tea (KFC). It is also the driver of growth in horticulture, a key agricultural sub-sector, contributing approximately 70% of the total value of horticultural exports, and it contributes approximately 1.45% to national GDP (Ifedapo & Esposito, 2018:335). In 2017, the industry posted a record Ksh 82.2 billion (approximately \$815 million) in export earnings which was a 20 percent increase from 2016 at Ksh 70.8 Billion (approximately \$702 million). This revenue was attributed to 159,961 metric tonnes of cut flower exports compared to 133,668 tonnes shipped to European markets in 2016 ([Daily Nation](#))¹⁰. The industry has recorded steady growth in volume and value as shown the graphs below. The Kenya Flower Council expects even greater growth in the future with the opening of direct freight routes to the US in October 2018 ([VOA](#)¹¹; [ITC, 2016](#))¹². China has also become a lucrative market for

in *The Politics of Conducting Research in Africa: Ethical and Emotional Challenges in the Field*. Palgrave Macmillan.

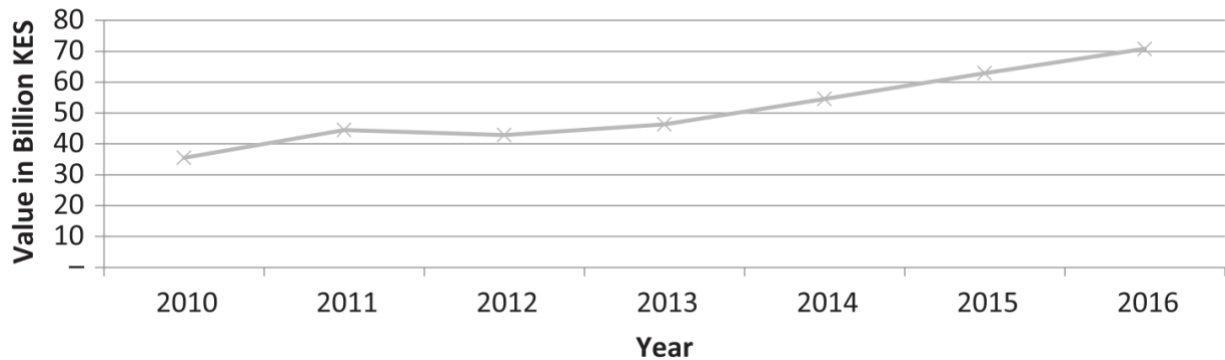
¹⁰ Daily Nation newspaper, June 4, 2018. Accessed at <https://www.nation.co.ke/business/Cut-flower-exports-defy-poll-jitters-to-hit-Sh82bn/996-4595916-392u86z/index.html>

¹¹ Voice of America, February 9, 2018. Accessed at <https://www.voanews.com/a/kenya-flower-producers-eye-us-market/4246221.html>

¹² International Trade Centre website, February 23, 2016. Accessed at <http://www.intracen.org/blog/USA-increases-direct-sourcing-of-flowers-from-Kenya/>

Kenyan producers willing and able to diversify from the auction. The development of direct flights to China also enhances these prospects for growth ([ITC, 2015](#))¹³.

Value of Kenyan cut flower exports, 2010-2016



*Exchange rate: Ksh 101 to 1 dollar

Figure 1.1

Source: Ifedapo & Esposito 2018 :335; Data obtained from the Kenya Flower Council (2017)

Volume of Kenyan cut flower exports (MT), 2010-2016

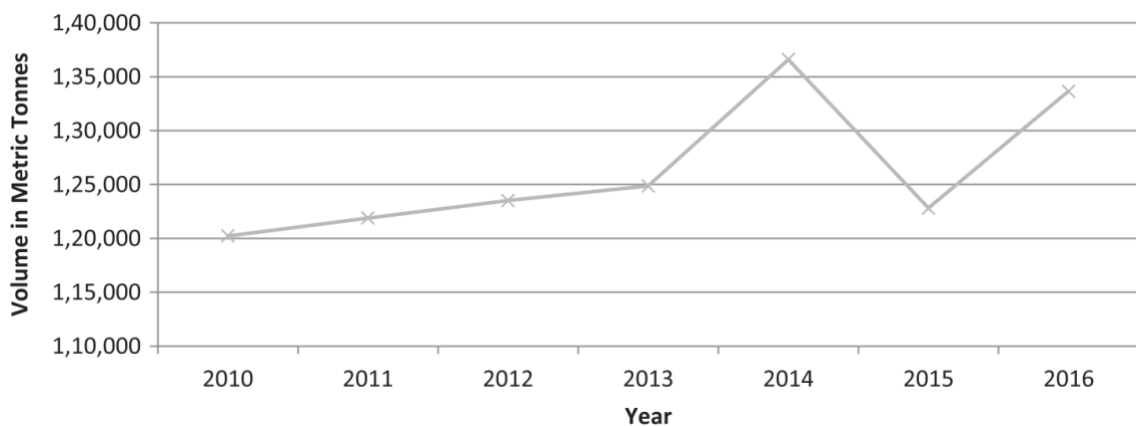


Figure 1.2.

Source: Ifedapo & Esposito (2018:335); Data obtained from the Kenya Flower Council (2017)

The mid and large scale farms employ approximately 100,000 people directly in farms, 500,000 indirectly and supports 2 million livelihoods in total ([KFC website](#))¹⁴. Kenya produces approximately 110 varieties of cut flowers (Ifedapo & Esposito, 2018:335) on over 2,600 hectares (Kirigia et. al, 2016: 34). As it was over a decade ago, export production remains concentrated in two dozen large scale farms accounting for 75%

¹³ International Trade Centre website, February 26, 2015. Accessed at <http://www.intracen.org/blog/China-is-an-attractive-market-for-Kenyan-flowers/>

¹⁴ Kenya Flower Council webpage on Floriculture in Kenya. Accessed at http://kenyaflowercouncil.org/?page_id=92

of the industry (English, Jaffee, & Okello, 2004:25; Hortiwise & FlowerWatch, 2012:21). 77% of the approximately 180 farms¹⁵ are owned by Kenyans of Indian or European descent and the remainder by the political elite¹⁶ (Mulangu, 2016). According to the Kenyan constitution promulgated in 2010, non- citizens (either individual or corporate) can only hold land under a leasehold tenure that does not exceed 99 years. Thus, land purchased by foreigners only confers to them 99-year leasehold interest (Kibugi & Makathimo 2012:26)

While the statistics are compelling, the qualitative narrative of the development impact of the industry muddies the waters. A number of high profile large scale farms have in the last decade come under fire by the Kenya Revenue Authority (KRA) for tax evasion and transfer pricing practices¹⁷. The government has been losing hundreds of millions of dollars of tax revenue through these practices ([Business Daily report, 2011](#))¹⁸. In terms of the labour impact, the literature points out the precarity of employment, poor working conditions, forced overtime, gender discrimination and oppressive and paternalistic types of supervision (Dolan & Sutherland, 2003; Dolan & Opondo, 2005; Hughes, 2000a; Opondo, 2006; Gibbon & Riisgaard, 2014). It also points out the limitations of certifications and codes of conduct especially on improving the lot for majority of the workers who are women. The elite ownership of the industry combined with its near total export orientation contributes to its distancing from the popular imagination as an industry that is really ‘for the people’.

Environmentally, the flower industry has been criticised for its high water footprint¹⁹, for polluting Lake Naivasha through run-offs into the lake²⁰, for carbon intensity of

¹⁵ This figure is an approximation based on data from Riisgaard and Gibbon (2014:104) that stated 177 commercial flower farms in Kenya in 2011.

¹⁶ Asian-Kenyan 52.2%; White Kenyan 24.6%; Black-Kenyan 23.2% (Mulangu 2016).

¹⁷ ITC Report, 2013. Sher Karuturi, then the world’s biggest commercial rose flower farm based in Kenya was found guilty of tax evasion in 2013. Karuturi used transfer pricing to avoid paying \$11 million in Corporate Tax to KRA. Accessed at: <http://www.intracen.org/itc/blog/market-insider/Tax-authorities-investigate-flower-farms-in-Kenya/>. Transfer pricing is discussed further in chapter 8.

¹⁸ Business Daily, April 6, 2011. Accessed at <https://www.businessdailyafrica.com/corporate/Kenya-loses-Sh42bn-annually-to-flower-sector-tax-evasion/539550-1139462-6b84x8z/index.html>

¹⁹ The water footprint of one Kenyan rose flower is estimated to be 7-13 litres and the total volume of water exported from Lake Naivasha per year is estimated to be 16 Mm³/year (Mekonnen, et.al, 2012).

²⁰ The continued use of Methyl Bromide, a powerful soil fumigant and an ozone depleting substance raised significant environmental concerns in the 2000s but alternatives have been developed and this has been checked through international regulation, and stringent implementation of environmental codes and checks.

production²¹, and for dispossessing indigenous pastoralist communities' from grazing land (Kirigia, Betsema et. al, 2016: 36). Further, Kenya's national food reserves have significantly declined since the 1990s and there is increasing competition for agricultural land which launches a challenge to leasing land for luxury, non-food export crops such as flowers (Kirigia, Betsema et. al, 2016:39; Government of Kenya, 2011). The sector therefore presents a checkered narrative of its development impact. With all this in mind, one aspect that has been overlooked is the impact of the industry on Kenya's knowledge economy, which will be addressed herein²².

1.4. The global cut flower sector – a landscape view

Cut flowers are part of the ornamental plant sector which also includes cut foliage, flower bulbs, potted flowers, and bedding plants. The global value of the cut flower production is currently estimated to be \$55 billion ([Rabobank, 2016](#))²³. The sector has grown robustly from 1985 when production was valued at \$11 billion, to \$31 billion in 1996 and \$44 billion in 2000 (Uffelen & de Groot, 2005). Worldwide, there are three main consumption centres – USA, Europe and Japan (Wijnands, 2005). Within Europe the major importers of cut flowers are the UK, Germany, Russia and the Netherlands ([Rabobank 2016](#)) where roses are the most highly sought after variety. The total value of demand for cut flowers in the EU is estimated to be 20 billion euros. ([CBI report](#))²⁴. 88 per cent of Kenya's flowers were sold to Europe in 2017 which has consistently been Kenya's main flower market (Ifedapo & Esposito, 2018:335).

The strong growth in global trade witnessed in the 1990s and 2000s has now plateaued (Mamias 2015). In the last eight years, global trade in cut flowers has been weakening, which can be attributed to the slow-down in the global economy due to the 2008 financial crisis. Unfortunately, only 2-4% growth is expected in the global flower markets in the medium to long term (Rikken, 2011:4) prompting Kenyan producers to

²¹ Williams (2007) did a comparative study of cut flowers produced for the British market and found that each rose grown in the Netherlands produces 2.91 kg of CO₂ to the atmosphere while a Kenyan rose produces only 0.5 kg of the same.

²² The knowledge economy in relation to the flower industry is explored in chapters three, six and seven in detail.

²³ Rabobank World Floriculture map, November 2016. Accessed at https://research.rabobank.com/far/en/sectors/regional-food-agri/world_floriculture_map_2016.html

²⁴ CBI Product Factsheet. Accessed at https://www.cbi.eu/sites/default/files/market_information/researches/product-factsheet-europe-fresh-cut-flowers-foilage-unspecialised-retail-market-2016.pdf

explore emerging, non-traditional markets such as Japan, Australia and the UAE. There are also ongoing concerns about the stability of financial markets in Europe which are linked to recent political developments.

In particular, Brexit has generated uncertainty, as has the possibility of other countries leaving the European Union, as well as the instability in Russia which is a particularly important market for Kenyan roses. Potential weakening of the pound under Brexit would make the imports of cut flowers more expensive and it would lower demand ([CBI report, 2017](#))²⁵. The effects of Brexit remain unclear while the UK is still working on defining its position in trade with the EU. Until 2016, Britain imported flowers and plants from the EU for an approximate value of €925 million per year ([Floriculture magazine, 2017](#))²⁶. 80% of cut flowers in the UK are still imported via the Netherlands²⁷. Despite initial nervousness when flower exports from the Netherlands to the UK went down by about 10% right after the referendum²⁸, the value of sales in 2017 equalised with the previous year because the purchasing behavior in the UK had not (yet) changed ([Floriculture magazine, 2017](#)). Due to the reliance on Dutch flower imports, British florists are especially concerned about the possible increase in customs duties and border delays ([BFA website, 2018](#))²⁹. In the meantime, the BFA launched a campaign for 'provenance labelling' of flowers to encourage British supply and purchase of British-grown flowers ([The Guardian, 21 May 2017](#))³⁰.

The Netherlands is the largest importer and exporter by value and is also a big grower and redistributor of flowers to the rest of the world (CBI 2016). However, in 2015 for

²⁵ CBI Report 2017. Accessed at <https://www.cbi.eu/market-information/cut-flowers-foilage/trends/>

²⁶ Floriculture magazine online. Accessed at <http://www.florinews.com/index.php/past-featured-articles/40-past-featured-articles/258-market-description-of-the-flower-markets>

²⁷ Britain imports about 80% of total cut flowers from the Netherlands. Floriculture magazine, 2017.

²⁸ Horticulture week magazine online. November 21, 2017. Accessed at <https://www.hortweek.com/plants-flowers-imports-fall-10-brexite/ornamentals/article/1416191>

²⁹ British Florists Association Post Brexit Position Paper, 2018. Accessed at <http://www.bfaflorist.org/Websites/212/Images/upload/file/British%20Florist%20Association%20Brexit%20statement%202018..pdf>.

While things are not looking rosy for florists, for British wholesalers, Brexit might work in their favour. Florists pay 6% VAT on Dutch flower imports and 20% VAT when they buy from British wholesalers. If VAT rates go up after Brexit, Dutch flowers will be less attractive as florists would be able to buy more and fresher flowers from British wholesalers. (ITC, 2016) Accessed at <http://www.intracen.org/blog/Brexit-to-impact-negatively-on-Kenyan-and-Dutch-exporters/>

³⁰ In 2017, the National Farmers' Union backed by growers and florists launched a campaign for "provenance labelling" to champion British flowers. The Guardian, 21 May, 2017. Accessed at <https://www.theguardian.com/lifeandstyle/2017/may/21/buy-british-blooms-florists-farmers-patriotic-shoppers>

the first time four developing countries - Kenya, Colombia, Ethiopia and Ecuador surpassed the Netherlands to account for 44% of global cut flower exports as shown in figure 1.3. below (Rabobank, 2016). The decline in Dutch production and export capabilities has been attributed to a decline in land under production. The four countries' flower export growth has been remarkable in the last ten years given that in 2005, their combined share was just 25%. As of 2015, Kenya has recorded a global market share of about 11% (figure 1.3.).

The world's largest cut flower export countries 2005-2015

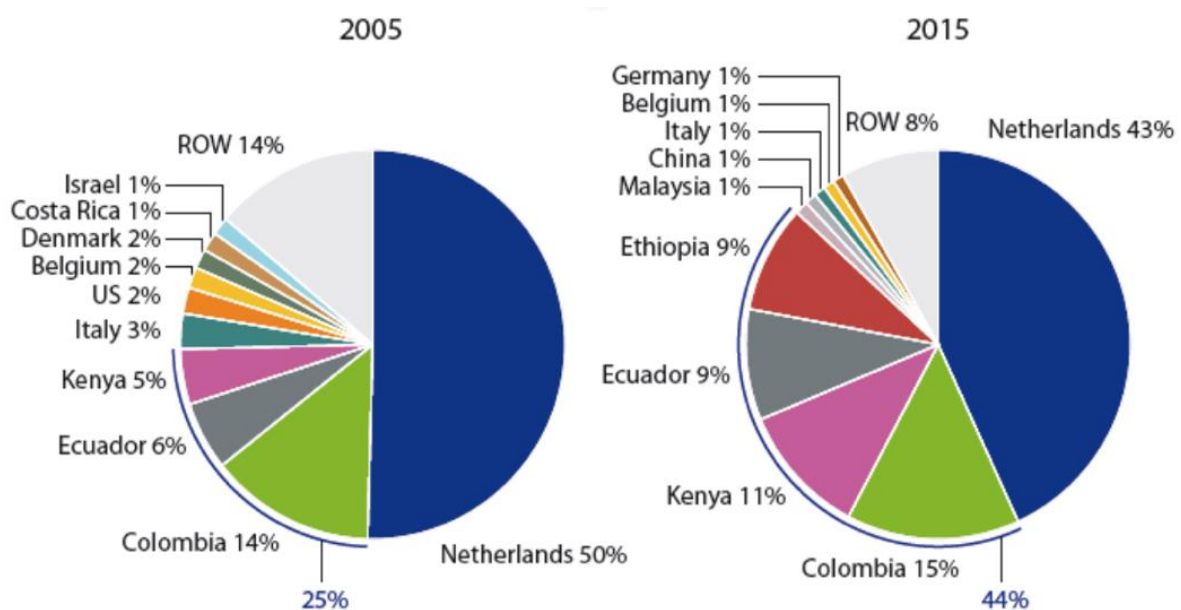


Figure 1.3. Source: Rabobank World Floriculture Map (2016)³¹

Latin America – Colombia and Ecuador

Colombia

The US is the world's leading importer of cut flowers ([Rabobank, 2016](#)). Colombia is the biggest supplier to the American market providing approximately 62% of cut flower imports (Pizano 2015). Colombia also commands about 15% of the world market share (figure 1.3), making it the world's second biggest exporter after the Netherlands. Contrary to flower production in the Netherlands which is dominated by smallholders, Colombia's flower industry is dominated by a handful of large grower/exporters and the landed elite (Patel-Campillo 2011:2524), which is similar to production in Kenya. Colombian flower growers are organized under the cut flowers exporters' association,

³¹ Accessed at https://research.rabobank.com/far/en/sectors/regional-food-agri/world_floriculture_map_2016.html

Asocolflores, known for its 'unrelenting national and international lobbying campaigns for preferential trade agreements³²' (Patel-Campillo 2010:283), which bears some similarities to the Kenya Flower Council's activities³³.

Ecuador

Ecuador comes third after Kenya in global flower production and exports about 9% of the world market share (see figure 1.3.). It supplies approximately 23% of total imports to the US (Pizano 2015). Ecuador competes primarily with Kenya where wage rates are lower, targeting the Russian market in particular to increase its global market share (Ifedapo & Esposito, 2018: 338).

The expansion of large scale flower farms in Ecuador has limited smallholder flower production. That was until 2015 when some 300 small (<2 ha) greenhouses were established by smallholders (Mena-Vásconez et al. 2016:231). The smallholders mimic the large scale capitalist farmers' modes of production in a desire to "become like them" by producing for export through high tech modernization despite capital and capability limitations (Mena-Vásconez et al. 2016: 229). Intensified water use for export crops in already water scarce regions generates inter-communal conflict, a situation similar to the contestation between large scale flower farms in Kenya and pastoralist communities access to pasture land and water.

Ethiopia

Ethiopia has similar production conditions to Kenya and two advantages in particular - higher altitude conditions which allow for production of bigger budded roses and comparatively lower labour³⁴ costs (Taylor 2011:86). Systematic government support came about in 2004³⁵ when an EU report on the potential of the sector was launched. Ethiopia now has 130 flower farms which occupy 1,426 hectares of land and export predominantly roses (about 80%). ([Embassy of Ethiopia, Belgium](#))³⁶. The country has

³² Despite strong opposition from US flower growers, the Colombian government backed by Asocolflores instituted export-promotion policies and tax exemptions for commercial flower exporters to ensure competitive market entry to the US. (Patel-Campillo, 2010b)

³³ The lobbying for preferential trade agreements carried out by KFC is explored in chapter eight

³⁴ The sector generated employment for over 100,000 people between 2010-15 ([ITC report, 2015](#)).

³⁵ In 2004, there were only six flower growers that regularly exported to the Dutch auctions and by 2005, the Ethiopian floriculture industry was the fastest growing in the world (Taylor, 2011:65).

³⁶ Embassy of Ethiopia in Belgium website, June 23, 2017. Accessed at <https://ethiopianembassy.be/en/2017/06/23/the-blooming-horticulture-industry-of-ethiopia/>

become the second largest exporter in Africa after Kenya, exporting \$225 million worth of cut flowers, which is 80% of the foreign exchange earnings from the horticulture sector ([Embassy of Ethiopia, Belgium](#)). The industry is also the fourth largest exporter of cut flowers in the world.

The institutional environment has also favoured the growth of the sector. In terms of finance, loans from the Development Bank of Ethiopia (DBE) fund a considerable portion of the investment by Ethiopian and foreign investors (Melese & Helmsing 2010:62). The Dutch who are leading foreign investors, can obtain grants from their government if they are in joint ventures with Ethiopian firms. Foreign Direct Investment (FDI) complements these sources of capital. To stimulate FDI, the government introduced a five-year tax holiday, custom duty exemptions, loss carry forward, remittance of funds, allowing full profit repatriation and making land near the airport available at low cost (Melese & Helmsing, 2010:46, 63). Ethiopians who venture into flower farming³⁷ tend to be seasoned and successful business people with expertise in other industries and who have been exposed to the sector in other ways. As of 2015, there were 61 foreign owned farms, nine joint venture firms with foreigners while domestic investors owned 46 firms (Admasu, 2015:6).

The development impact of the sector in Ethiopia is still unfolding. Evaluating the degree of endogenisation, which is the process of building local capabilities, and enclave formation³⁸, Melese & Helmsing (2010:63-64) find that endogenisation is occurring but to a limited extent. The main limitation to that process is the weak capabilities of Ethiopian entrepreneurship in the sector. They find that the big role of Dutch FDI in the sector does not cause the formation of enclaves, but rather a win-win situation for both countries' economies.

³⁷ Melese and Helmsing (2010:52) find that local commercial flower farmers are of three extractions – wealthy Ethiopian business with export experience in other or related industries, entrepreneurs from the Ethiopian diaspora who set up farms with the help of foreign consultants or Ethiopians who have been exposed to the industry in Kenya or India and return to set up their own.

³⁸ Enclave formation concerns an extractive process by external firms which have very low reinvestment rates; and benefits and development of the economy are usually exclusive to FDI, with little room for linkages and knowledge spill-over and learning by local firms (Helmsing 2005)

1.5. Review of historical underpinnings of the Kenyan cut flower sector

The roots of Kenyan flowers

The Kenyan commercial cut flower sector is about fifty years old, having developed in the immediate post-independence era under the auspices of enterprising European businessmen³⁹ (English et al. 2004:23). Perhaps the best known is Hans Zwager, the Dutch businessman who set up Oserian flower farm in Naivasha in 1969⁴⁰. The viability of profitable flower exports depended on being able to grow at scale so as to justify the cost of chartering flights to Europe (English et al. 2004). The seventies saw development of jumbo jets that brought tourists to Kenya and had spare cargo capacity on the flight back and were therefore able to offer relatively low freight rates for horticultural exports (Hortiwise & FlowerWatch 2012:17). By the eighties, Oserian had become a leading flower export farm to the Dutch auction ([Nairobi Business Monthly, 2017](#))⁴¹.

A second narrative details institutional origins of the sector. It also pegs the start of the industry in 1969, when Dansk Chrysanthemum and Kultur (DCK) a Danish chrysanthemum firm, invested in a 6,000-hectare farm⁴². Government support was key to this venture. DCK had the backing of the Danish government which put in the equivalent of a third of the investment costs, while the firm introduced advanced irrigation and post-harvest technologies. The company was also offered very attractive investment terms by the Government of Kenya which played an active role in the sector⁴³.

Though DCK did not thrive, DCK set up two other farms - one in Updown and the other in Naivasha, growing carnations. The Naivasha farm, renamed Sulmac after being

³⁹ For example, it is said to have begun with a former member of the British army who planted flowers on a small scale in a farm near Limuru (Dolan, Thoen et. al, 2000).

⁴⁰ Hans Zwager came to Kenya to manage ABN Amro Bank in the sixties, and then ventured into selling agro-chemicals. He first set up a vegetable farm for export and in seeking greater profitability, moved into flowers.

⁴¹ Nairobi Business Monthly, February 2, 2017. Accessed at <http://www.nairobibusinessmonthly.com/a-flower-business-success-after-loss-of-founder/>

⁴² This was in in Msongaleli in what was then Eastern Province to grow chrysanthemums and a filler known as *Asparagus plumosus* (Dolan, Thoen et.al 2000:7).

⁴³ This included a low-cost lease on the 6,000-hectare estate, a twenty-year *status quo passus* with regard to changes in the law about foreign direct investment, taxation and profit repatriation, and a *carte blanche* regarding work permits for expatriate managers and technical specialists." (Dolan, Thoen et. al, 2000:8).

purchased by Brooke Bond, evolved into one of the leading flower firms in the country. By 1979, it was exporting at least 90% of the 4000 tons of flowers exported from Kenya overall. FDI continued to play a major role in the flower sector's development in the 1980s, such as the investment by the Yoder Brothers (English et al., 2004:24). In the 1980's the government had control of air freight and forex rates, restricted repatriation of profits and was not yet party to international agreements on plant breeders' rights (UPOV), factors which have been argued to have limited the growth of the industry in that decade (English et al., 2004: 24).

The history of smallholders in the cut flower industry begins with a government outgrower scheme in the 1970s from the restructured Updown flower farm, which came under management by the government's Agricultural Development Corporation (ADC). The Horticultural Crops Development Authority then received funding from the FAO to train smallholder farmers as outgrowers through the ADC or small export companies (Dolan, Thoen et. al 2000). This scheme involved at least 200 farmers by the late 1970s, each growing tiny areas that were about 50 square meters of carnations and/or statice. After the scheme collapsed, 300 smallholders formed a now defunct flower trading cooperative (English et. al 2004:23).

In the 1990s, the Structural Adjustment Program reforms took shape in Agriculture, encouraging export diversification in response to pressure from declining revenues from principal export crops and crippling fiscal austerity measures Dolan (2005:418)⁴⁴. The non-traditional, high value flower industry became a darling of these neoliberal prescriptions because "in contrast to the traditional agricultural commodities, which signified 'the old statist policies of developmentalism, non-traditional exports were vaunted as progressive and entrepreneurial, replacing archaic parastatal-controlled agriculture with market-savvy actors" (Little and Dolan, 2000: 64). The Kenyan flower industry is particularly remarkable since as Riisgaard (2009:329) noted, "cut flower exports from Sub Saharan Africa led by Kenya grew from \$13 million in 1980 to almost \$300 million in 2007 representing one of Africa's most significant cases of non-traditional export development during the past two decades".

⁴⁴ On the link between balance of payments and the push towards high value export horticulture see for example, Maharaj and Dorren 1995: 45-46; Papademetriou and Dadlani 1998; Van Liemt 1999

The Kenyan government liberalised controls on foreign exchange, freight rates, and streamlined importation procedures which made it easier to import production inputs for the flower industry. Thereafter, the area under production doubled and Kenya increased threefold the value of its flower imports (English et al., 2004: 24). Kenyan producers capitalised on the growing demand for roses in Europe in the 1990s and the production area grew from only 27 hectares in 1990 to 550 hectares in 1997 Dolan, Thoen et. al (2000:11). Kenya’s flower industry had evolved to become a “testament to neoliberalism” (Dolan (2007:240). However, with the remarkable growth came a realisation of the immiserating effects of growth indubitably through exploitation of women’s labour in the industry⁴⁵. The graphic below provides a summary of the historical development of commercial flower farming in Kenya.

Timeline of major developments in the Kenyan cut flower industry

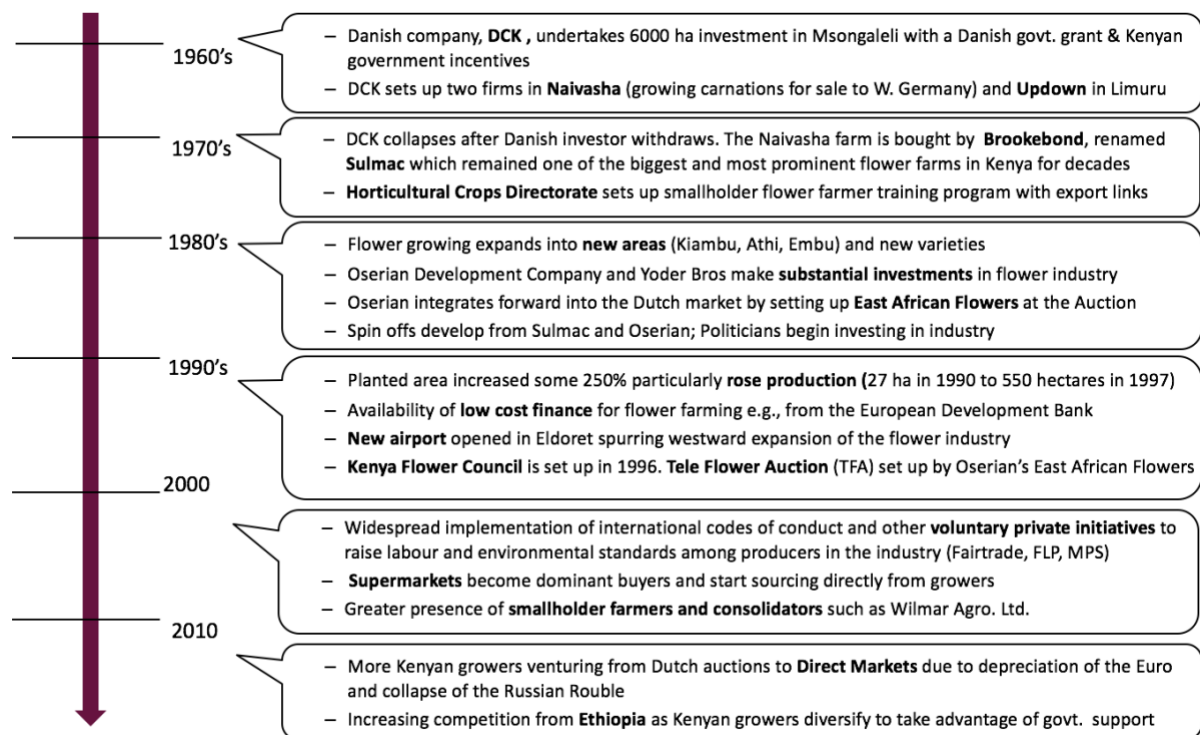


Figure: 1.4.

Sources: Compiled from Dolan, Thoen et. al (2000); Rikken, M. (2011); Hortiwise & Flowerwatch (2012); English et al. (2004); Kenya Flower Council and author’s own analysis

⁴⁵ The increasing precariousness and vulnerability of labour that is associated with new forms of integration into global production particularly in export horticulture globally have been observed and extensively analysed. See for example (Barrientos 2001; Kritzingner et al. 2004; Selwyn 2009).

Historicising shifts in export markets in the global cut flower industry

The Netherlands has historically been the nerve centre of the global flower trade (Stewart 2007)⁴⁶. 65% of all the flowers traded globally move through Schiphol airport and the Dutch flower auction system (Gebhardt, 2014). Cut flowers have historically been constructed as globalised commodities⁴⁷ whose value is hinged on the cultural trends and demands of buyers in foreign nations. The globalisation of the flower trade can be seen in the geographical shift of flower production from Europe to various centres in the Global South – notably Kenya, Ethiopia, Colombia, Ecuador and Israel among others. Meanwhile, the Netherlands through constant innovation around its flower auction system has remained the centre of trade. Patel-Campillo (2011:87) argues that the centrality of the Dutch auctions to the global flower trade was established through its historical trajectory, the regulatory context and the strategies of growers. The Dutch auction is the primary export market for Kenyan flower producers, and the consolidation of its power in global trade is explained in the section below.

Centralisation of buying power in the Dutch flower auction system

In 1912, flower growers in Aalsmeer set up the Centraal Aalsmeer Auction mart (CAV) which was the first modern cooperative for cut flowers, and which after a merger with another auction Bloemenlust, evolved into the first flower auction, Verenigde Bloemenveilingen Aalsmeer (VBA) (Gebhardt 2014). Today VBA is the umbrella organization for all the Dutch floricultural cooperatives. The second biggest auction was at Naaldwijk/Bleiswijk⁴⁸. Though there were other auctions in the Netherlands such as at Rijnsburg, the auction at Aalsmeer was dominant because it was the largest auction in the industry, had a wide variety of flower varieties and plants, and its location eased export to Belgium, Germany, Luxembourg, Britain, Scandinavia, and Switzerland (Gebhardt 2014: 102). The locations of the Dutch auctions in 2008 after

⁴⁶ The Netherlands made a name for itself in the global flower trade in the 17th century when ‘Tulip Mania’ gripped the Dutch republic and speculators traded tulip bulbs as [what we now call] ‘futures’ for exorbitant amounts of money, only for this bubble to burst shortly thereafter leading to the ruination of fortunes (Stewart, 2007)

⁴⁷ Tulips for example, which are now synonymous with Dutch floriculture originated in Central Asia and graced the gardens of opulent Ottoman rulers before being transported across trade routes to the gardens of wealthy Dutch connoisseurs. (Stewart, 2007)

⁴⁸ The auctions underwent reorganization in 2013/14. Bleiswijk auction was closed in 2014 and its operations moved to Naaldwijk. The facility is still maintained as a logistics center. Accessed at <http://www.flowerweb.com/en/article/169873/Massive-reorganization-at-FloraHolland-announced>

the two largest flower auctions merged⁴⁹ to form FloraHolland are shown in map 1.1. below.

Locations of the FloraHolland auctions, Netherlands (2008)



Map 1.1.
Source: Levelt (2010:153)

The auction was supplied by small-scale flower farmers who dominate cut flower production in the Netherlands and typically grow one variety of flowers on their land (Patel-Campillo 2011b), while bidding at the auction is carried out by wholesalers. Increasingly wholesalers are sourcing flowers directly from developing country producers (CBI report 2016:10). Cooperative structures⁵⁰ backed by government support have a long and rich history in the development of Agriculture in the Netherlands and the uniqueness of the Dutch flower auction is its roots in this system.

⁴⁹ The recent series of mergers is discussed in detail in the following section

⁵⁰ The cooperative strategy among small scale Dutch farmers enabled them to scale up their operations, consolidate volumes and diversify their supply. Patel-Campillo (2011:88) explains that rather than have individual growers deal with traders directly, sales were formalised through purchase agreements that ensured payment on the spot and so collective action protected growers from exploitative, opportunistic behaviour by traders. Cooperatives therefore strengthened the position of growers as a formalised network vis a vis that of traders. Further, Patel-Campillo (2011) elaborates that the auction system protected growers from the risks of trading in highly perishable commodities. The separation of production from sales gave farmers the freedom to focus on their core competencies of production without worrying about the transactional challenges of marketing their product (Gebhardt 2014: 114). Focussing on production also fosters cooperation among growers which enables them to share knowledge in associations, trade fairs and clubs.

The auction has persisted as a reference point in Dutch floriculture despite the unpredictability of prices at the auction and the slim margins. It offers transparency in pricing (Wijnands 2005) and because of its position within the value chain, that is its ability to differentiate the production function from sales, it reduces transaction costs (in particular the 'Coaseian' search and policing costs) between growers and buyers. The Dutch auctions give organised producers a platform to consolidate varieties, and buyers supply of a wide range of varieties. Further, the auction system also guarantees payment for every transaction that occurs in its system (CBI report, 2016). The flower auctions also persist because of the importance of availing a broad (variety choice) and deep (cut flower specifications) range of varieties⁵¹ and bouquet arrangements that meet the flower industry aesthetic (Wijnands 2005:33). Dutch floriculturalist Hans de Vries sums up the 'genius' of the Dutch auction system thus:

"You don't have to worry about sales, because the auction takes care of that. You don't know the clients, who's buying your product, so you don't view other growers as competitors. You're not fighting each other to win a contract with someone. This is the genius of the grower's auction system, or at least as the system works in combination with the cooperative, and other cultural, financial, historical, infrastructural and policy-related factors in the Netherlands." (Gebhardt, 2014: 114)

The centralisation of growers' power in the Dutch flower trade has important lessons through which to view flower production in Kenya. These include the importance of harnessing collective power among smallholders and the institutional power of government support in policy which enables a strong bargaining position in an otherwise buyer-driven industry.

Consolidating the power of the auction and the growers' interests

The membership of the CAV grew from 25 in 1912 to 1200 members in 1948. This strong growth was because of the emergent benefits of the collective action of producers under the auction. Patel-Campillo (2011:87) explains that the power of Dutch flower growers was further consolidated by the introduction of favourable regulation and the introduction of a clock based on declining price. In this way, buyer

⁵¹ It is interesting to note that the Dutch also had vegetable auctions but their demise was caused by higher volumes of vegetables in supermarkets and the consumer responsiveness to this. (Gebhardt 2014)

demand sets the price and so as the price drops, buyers who are really keen on purchasing the lot bid first and therefore pay the higher price. In this way, buyers are more likely to get a high price for their flowers. Government regulation in support of grower cooperatives came into effect as buyers tried to boycott these cooperatives to protest their diminishing power in setting prices with growers one-on-one. The government established the mandatory use of producer cooperatives as the sole suppliers of cut flowers thereby strengthening their position and ability to capture value. In effect, this move transferred the governance of the chain from the buyers to producers (Patel-Campillo, 2011:88). The first fifty years of the existence of the auction can therefore be seen as a period of consolidation of the power of the auction to protect the interests of Dutch flower growers.

For the better part of a century, Dutch flower producers sold their roses at the most competitive price because of their superior technology and production capabilities, cooperative networks and marketing systems. Cut flower production is however very energy intensive and these concerns rose to the fore with the energy crisis in the seventies⁵². It prompted a move away from production in Europe to alternative production sites in the Global South where agronomic conditions were naturally optimal and labour was relatively cheap. The need for a seasonal and flexible work force in the flower plantations was also central to this southward shift. Developing countries tend to have weaker labour comparatively lower wages and weaker labour regulations to protect workers from capitalist exploitation (Selwyn, 2009).

At the same time, the CAV voted to allow international imports of cut flowers at the auction, which represented the beginning of international competition at the auction. Dutch growers later began to import East African flowers⁵³ particularly Kenyan roses in the winter months to augment their own low production in winter. For a while, this provided consistency of supply and therefore stabilised prices at the auction. However, Kenyan growers began to import flowers to the auction year-round and because they could produce for much cheaper than Dutch farmers, their produce began

⁵² Despite the fact that a decade earlier, the Netherlands had discovered its gas reserves in the North Sea and that the flower trade was mostly regional (Germany and France) at that time, Dutch producers began to look for alternatives that would allow for more economical production (Gebhardt, 2014: 106).

⁵³ Initially, these imports mostly came from Israel and Spain and were only a small percentage of total sales (Gebhardt 2014: 106).

outcompeting Dutch roses. Even so foreign-grown export from the auctions remained below 30% of turnover and this was the case till the 2000s (Gebhardt 2014: 106). All in all, the 1970s and eighties were characterised by the development of Dutch flower exports and its dominance in the world flower market trade (Kouzmine 2000: 21; Riisgaard 2009: 328).

Flower market ‘shifts’ and Dutch Auction ‘turns’

In the mid-nineties there were discussions at the auction about the increasing foreign flower imports, decoupling price information mechanisms from logistics at the auction, and the use of IT in the auction system (van Heck & Ribbers 1997:29). Out of these concerns emerged the innovations and changes that took place as the auction modernized itself. I characterize these internal changes within the auction as “turns”, and the external changes of the wider global trade landscape in which the auction operates as “shifts”.

Shifts in the global flower trade landscape

The 1990s marked a monumental shift in the global flower trade first in terms of the geographies of production towards the Global South⁵⁴ as explained above and which informs the formation of bifurcated markets. Second, market development led to the expansion of direct markets and later a shift to non-traditional markets.

In regard to market development, in the late nineties and 2000s a market shift occurred that involved the expansion of direct markets (supermarkets, garden centres, florists and other retailers) in Europe in competition with the auction as buyers of first priority for cut flowers producers (Hughes 2000). While buying habits remain fairly conservative in most of Europe with most people buying from florists and garden centres, in the UK, majority of flowers are bought in supermarkets which brand their flowers or provide third party certification to ensure the quality and reliability of the production process. Retail concentration and the domination of governance in the flower industry by supermarkets through these private voluntary codes consolidated the buyer-driven nature of the value chain (Dolan 2005:422). Regional traditional

⁵⁴ As previously explained, production shifted to and was embraced by some countries along the equatorial belt in the Global South where environmental and agronomic conditions for flower production were optimal such Kenya, Zimbabwe, Colombia, Ecuador and Israel, while the hub of trade remained the Dutch flower auctions.

markets for Dutch-grown flowers such as Germany and France began to wane and non-traditional markets emerged such as Russia and Scandinavian countries, and in other world regions such as North America (Hanks 2015). These market developments involve the diversification of players in the global cut flower trade territorially and institutionally.

Auction turns

I identify three main internal changes within the Dutch auction which I characterise as 'turns'. These include (1) the contestation over the membership of international growers, (2) the introduction of electronic trading at the auction, and (3) a series of mergers and acquisitions. Agitations for change began as the auction became deeply institutionalised in the flower trade and bureaucratised, and Dutch growers perceived it as being more concerned with the protection of its interests as a firm⁵⁵ rather than the interests of its growers. The demands of the auction bureaucracy were often at odds with those of the constituent growers. For example, Cunden and van Heck (2005) explain that the Dutch flower growers who own the Dutch flower auctions, were hostile to the incorporation of foreign competing growers and the rising imports of competitive foreign flowers on sale at the auction. Meanwhile, the East African Flower (EAF) Company which was comprised of a range of flower growers from Kenya, Tanzania, Zambia and Zimbabwe had been successfully marketing their flowers at the Dutch auctions all through the 1980s and early 90's.

In relation to Kenyan production, the first notable turn was in 1994 when the Dutch flower growers decided to prohibit EAF from the auction in order to cut down competition. These import restrictions meant that EAF could not sell up to 30% of their cut flowers at the auction and in the summer, they could not sell at all (Van Heck & Ribbers, 1997). In response, Oserian's East African Flower Company set up the Tele Flower Auction (TFA) as a private company to cater to marketing their flowers and flowers from foreign growers (Cunden and van Heck, 2005: 579) in Amstelveen. TFA was set up as a fully electronic auction in contrast to the then FloraHolland and Aalsmeer auctions which were a combination of traditional and electronic. The restrictions existed till 2002 (Cunden and van Heck 2005). Prior to that, in order to

⁵⁵ Gebhardt (2014: 116) explains that the Dutch flower grower membership has little to do with the day to day running of the auction and is not active in setting the agenda for the future.

transact at TFA members had to be registered with the Dutch Chamber of Commerce which meant that many growers transacted via Dutch intermediaries. In 2006, full voting membership at the Dutch Auction was then extended to foreign international growers (Levelt 2010). Cooperative members were expected to sell 100% of their produce at the auction (Levelt 2010) but given recent developments with competition from direct markets and slow growth, this rule has been relaxed. This market diversification strategy by producers in developing countries contesting the dominance of the auction as an oligopoly remains essential to the shift in power relations between producers in the global South and markets in the North.

The second auction turn first marked by the TFA was the introduction of electronic sales in 1996 through the 'buying at a distance' or remote sales platform "Kopen Op Afstand"⁵⁶(Heezen & Baets 1996). The TFA (designed for international growers⁵⁷) had the effect of decoupling logistics from the price discovery mechanism⁵⁸ of the auction clock sales. For the system to work, there had to be trust in the quality⁵⁹ of the product because buyers who were further away from the warehouse at Amstelveen and could not physically inspect the quality. Today, the digitization of markets continues to be a key trend shaping flower export markets. Notably, 50% of wholesale trade in flowers now takes place through online shops (CBI 2017).

The third formative turn for the auction was the series of mergers that the Dutch auctions underwent since 1973 but formatively in the 2000s. Mergers and acquisitions have historically been the means by which Dutch auctions consolidate corporate and

⁵⁶ Under the TFA, buyers could bid on their personal computers and each PC was connected to a fully computerized auction clock. Flowers were no longer physically visible to buyers (as they were paraded in the auction for sale) and buyers no longer needed to be physically present in the auction room to make their bids, thereby decoupling the price mechanism from logistics (van Heck & Ribbers 1997); Cunden & van Heck 2004). The KOA system is discussed in detail in chapter five.

⁵⁷ Growers who participated at the TFA came from many developing countries, sent their flowers to the EAF warehouse at Amstelveen and once they had been purchased, the flowers would be distributed to the buyers' addresses, while transport costs were catered for by EAF

⁵⁸ Van Heck (1997) and Kambil & van Heck (1996) discuss the example of the Aalsmeer flower auction as a sample-based auction which decouples logistics from price discovery. In this concept growers sent a sample of their produce for sale to the auction and this represented the entire inventory. The system was discontinued in 1994 after it failed to deliver on storage efficiency or on increasing sales of potted plants.

⁵⁹ Van Heck (1997) notes that quality control was done at three stages: by TFA's quality inspectors at the grower's place, at the distribution point in Nairobi (Africa), and at TFA in Amstelveen.

institutional power⁶⁰. In the seventies, there were approximately 20 Dutch flower auctions and by 1996 there were six (Heezen & Baets, 1996). In 2008, the two largest auctions FloraHolland⁶¹ and *Verenigde Bloemenveiling Aalsmeer* (VBA) underwent a merger forming a new, more powerful integrated entity known simply as *FloraHolland* which became the biggest flower market in the world. [The Economist](#)⁶² reported that the merged entity FloraHolland controlled 98% of the Netherlands' flower business and nearly a seventh of the global trade⁶³. One effect of the merger was the growth of direct sales between retailers and growers through the auction's 'direct sales' office (Levelt 2010: 167). Direct sales in this context refer to sales that go through the auction system in terms of linking buyer and grower, but bypass the auction clocks. Also in 2008, the only independent auction *Veiling Oost Nederland* voted for a merger with *Veiling Vleuten* and became what is now known as *Plantion* (Hughes 2000; Gebhardt 2014)

These three 'turns' which have transformed the form and function of Dutch flower auction showcase collective power as wielded by Dutch growers to dominate the competitive landscape by excluding international growers. The auction turns also show the importance of accessing market knowledge through information technology, which was harnessed for example through the Tele Flower Auction to empower previously excluded growers from developing countries and enable their participation in global trade. The auction mergers exemplify corporate and institutional power which the auction system wields to maintain its position as the hub of global trade. These three concepts are emergent themes in the narrative of how mid and small scale producers navigate access to export markets.

⁶⁰ For example, CAV and Bloemenlust merged to form the powerful VBA as previously discussed. The monopoly control of the FloraHolland merger in 2008 was challenged in court as violating anti-monopoly laws but eventually it went through (Gebhardt 2014: 101).

⁶¹ The name *Flora Holland* came with the last merger in 2002. (Ingenbleek et al 2007:9)

⁶² The Economist, May 10 2007. Accessed at <https://www.economist.com/business/2007/05/10/petal-power>

⁶³ The monopoly control of the FloraHolland merger in 2008 was challenged in court as violating anti-monopoly laws but eventually it went through (Gebhardt 2014:101).

1.6. Bypassing the auction clock

The previous section has outlined the ways in which the Dutch auction maintained its dominance in the global flower trade. Even so, the market landscape is bifurcated between the auction and direct markets, and there is great heterogeneity therein as this section will explain. More and more growers are bypassing the auction clock and selling to direct markets (CBI report 2016). As of 2007, nearly half of Kenyan flower production was sold outside of the Dutch auctions (Levelt 2010: 158). [Reuters \(2016\)](#)⁶⁴ highlighted that direct sales from members of the cooperative bypassing the auction rose by 3.8 percent to 2.3 billion Euros in 2015. Further, in 2016, the CEO of FloraHolland, Lucas Vos was quoted as saying that sales of flowers by growers directly to buyers have indeed overtaken sales 'on the clock' [Reuters \(2016\)](#).

Producers are bypassing the auction because of the high costs of transacting⁶⁵, the decreasing profit margins and price fluctuations, all of which challenge the survival particularly of mid and small-scale growers. The quote below crystallises the adverse competitive terrain at the auction for producers from developing countries:

“Marketing costs of the auction range from 10-12 % of the auction selling price for large volumes or high-value products, and up to 20 % for small volumes or low-value crops. These costs include commission, promotion levies, bucket rent and handling fees. The marketing costs and the airfreight costs inhibit marketing of small volumes or low-value flowers from foreign growers.”
(Wijnands 2005:39)⁶⁶

In addition, as part of a cost cutting initiative the auction did away with the quality assurance service of flowers that it provided to buyers and to producers who trusted and relied on it as a guarantee they could get nowhere else.

Noting the increasing shift by producers to direct markets, the auction developed an innovation that would enable it to still capture value and maintain its financial dominance by managing transactions, as a financial intermediary⁶⁷. Sales handled as such are not registered as auction sales because they do not happen 'on the clock',

⁶⁴ Reuters, June 16, 2016. Accessed at <https://www.reuters.com/article/us-netherlands-flowers/african-growers-threaten-dutch-flower-power-idUSKCN0Z21RW>

⁶⁵ The experiences of Kenyan producers with cost at the auctions are elaborated on in chapter seven.

⁶⁶ Cross referencing research done by Thoen et al (2000:34)

⁶⁷ The functioning of the auction as a financial intermediary is discussed in detail in chapter three

rather they are recorded as 'direct sales'. The producer and buyer may then separately work out the logistics of delivering the bought flowers. This financial transaction system capitalised on use of electronic markets which enabled the decoupling of logistics from the price mechanism as previously described. Transacting parties value this innovation because as financial intermediary the auction is responsible for guaranteeing the integrity of the sale. This is a high priority since lack of security and timely payment⁶⁸ is one of the main risks of shifting to direct markets (CBI 2016). Another innovation aimed at increasing the number of transactions passing through the auction and therefore protect the auction's financial dominance is a new 24 hour online dealing platform ([Reuters, 2016](#))⁶⁹. For these and other reasons previously discussed, capable producers continue to transact at the auction, while also exploring opportunities in direct markets, detailed below.

Trends and key features of direct markets

Retail flower markets in Europe can be categorised into two – specialised and unspecialised channels which together constitute what is commonly referred to as 'direct markets'. Specialised retailed channels include florists, garden centres, market and street stalls where flowers are the only product (CBI report, 2016). These retail options are displayed in figure 1.5. below. Specialised channels offer a wide range of flowers and custom-make bouquets for their customers. Wholesalers, referred to as consolidator-exporters ⁷⁰ in this thesis to clarify their double roles, who supply these outlets buy their flowers from the auction and this is the traditional sales route. "Florists and street vendors either buy flowers directly at the auction, or are supplied through cash-and-carry outlets, by "Flying Dutchmen" or specialised exporters." In the Netherlands, Italy, Spain, France as well as Eastern Europe, 60-85% of flowers are sold through florists (CBI report 2016:2-3). Notably, in specialised channels

⁶⁸ "Supplying via the Dutch flower auction means payment security. Payments are wired to your account soon after the auction. If you supply directly, you must wait longer (between 30 and 60 days)". Accessed at: https://www.cbi.eu/sites/default/files/market_information/researches/product-factsheet-europe-fresh-cut-flowers-foilage-retail-market-2016.pdf

⁶⁹ Accessed at <http://www.businessinsider.com/r-african-growers-threaten-dutch-flower-power-2016-6?IR=T>

⁷⁰ This thesis refers to wholesalers as *consolidator-exporters* for clarity in the double role they play as intermediaries in the flower trade. They are responsible for amalgamating flowers for economies of scale (consolidating) and handling the specifics of export from producers typically in developing countries to Europe. The term wholesalers though commonly used obfuscates the second critical role of export. The role of consolidator-exporters is elaborated on in chapter five.

environmental and social standards⁷¹ do not play a dominant role. Rather than focus on how the flowers are produced, these retailers are more concerned with quality, variety, price and arrangement.

Unspecialised channels include supermarkets and petrol stations (CBI report, 2016). They offer flowers as a secondary commodity and offer a more limited range of flowers and pre-made bouquets. This sector is highly concentrated and has a few very large, dominant players such as Tesco (UK), Sainsbury's (UK), Aldi (Germany), Lidl (Germany), Carrefour (France) and Royal Ahold (Netherlands) (CBI 2016:3). The CBI report explains that most consolidator-exporters will supply either specialised channels or supermarkets exclusively, except very large consolidator-exporters who can afford to have specialised portfolios catering to each. The UK in contradistinction with other countries in the EU, has the largest proportion of supermarket sales for cut flowers at 56% and the smallest for florists at 14% (Hanks 2015:4). As seen in figure 1.5. below, the Netherlands, Scandinavia and Germany are increasingly buying from supermarkets even though specialised channels remain dominant, while Russia and Spain have the smallest supermarket segments.

⁷¹ However, in Sweden for example where the share of specialised florists is decreasing (Riisgaard & Hammer 2011), markets are becoming more specific and require labelling such as Fair Trade or FFP.

Cut flower sales showing specialised and unspecialised channels in Europe

(2013)

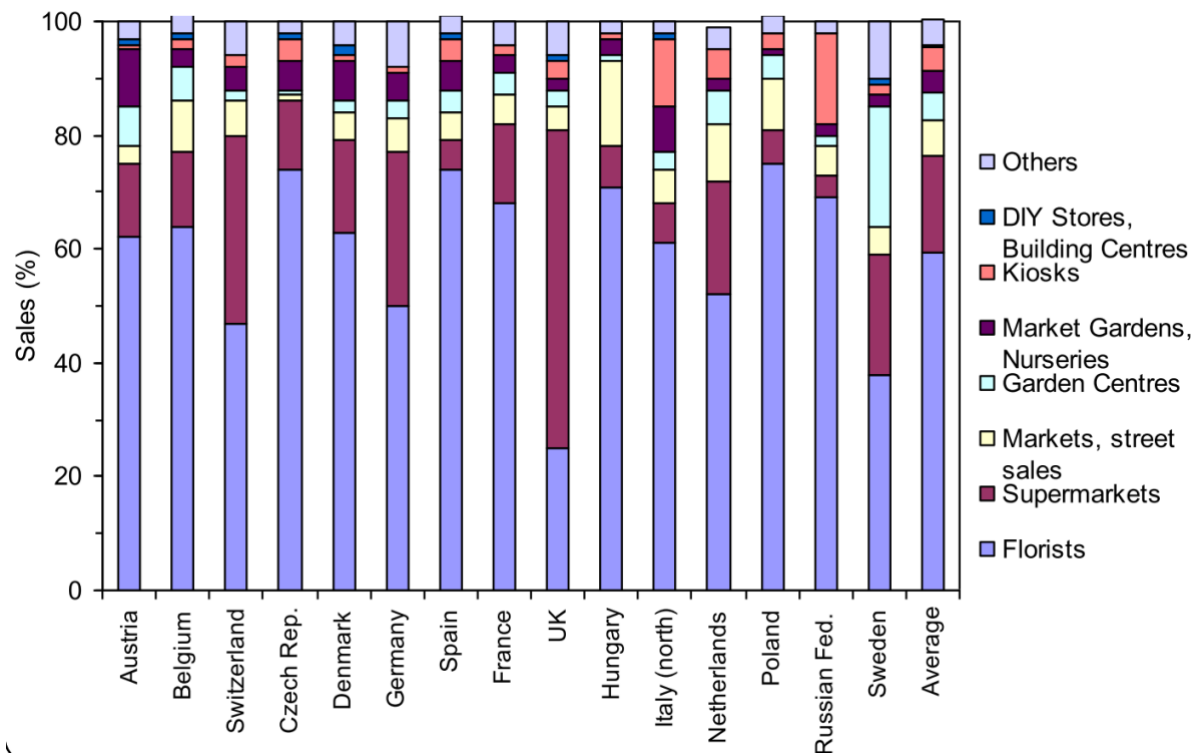


Figure 1.5.

Source: Hanks (2015:6)

The consolidation and expansion of supermarkets globally termed 'the supermarket revolution' (Reardon & Gulati 2008) led to the expansion of direct markets in the flower industry. Figure 1.6. below (Hortiwis & FlowerWatch 2012:27) summarises the bifurcation of the European flower export markets and from left to right shows how the market has been shifting. Supply chains 1, 2 and 3 centre the Dutch auction where florists are the main retail buyers, while 4 and 5 portray the shift to direct markets and supermarkets dominate this segment as buyers. Wholesalers dominate the auction, where they are known as 'big buyers' (see supply chains 1 and 2 below). The adoption of direct sourcing approaches by supermarkets for cut flowers from producers in developing countries undercuts the role of consolidator-exporters and the auction (CBI 2007; Thoen et al. 2000, Riisgaard 2009: 180). This is shown below as supply chain 5.

Cut flower supply chains from Kenyan producers to European consumers

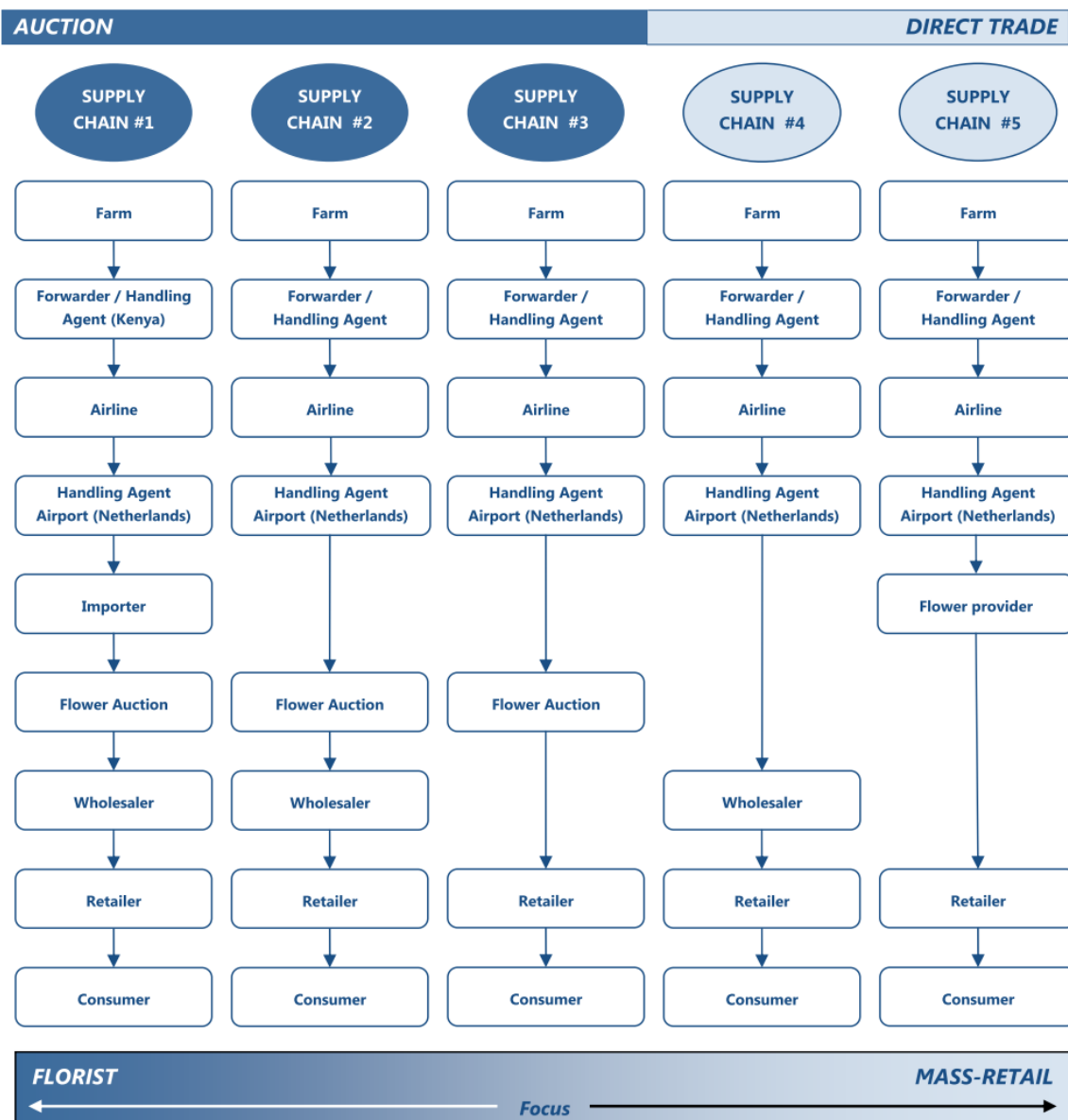


Figure 1.6.

Source: Hortiwise & Flowerwatch (2012:27)

Wholesalers are referred to as consolidator-exporters in this thesis

Direct sourcing by supermarkets is carried out in three main ways, which showcase efforts at vertical integration of the role of the consolidator-exporter. The first is via an importing company created as subsidiary of the supermarket⁷². Secondly, as part of a process of vertical integration, very large flower farms may enter into partnerships or joint ventures with importers in European markets to develop more established

⁷² Such as International Procurement and Logistics (IPL) is for ASDA, Walmart's UK subsidiary.

relationships with supermarkets⁷³. Third, rather than opt for to internalise the role of the consolidator-exporter, supermarkets may outsource for the services of a global consolidator-exporter⁷⁴. By the late nineties, cut flower producers and exporters saw sourcing agreements with UK supermarkets as “being the way forward, preferring to bypass the Dutch flower auctions⁷⁵ where most flowers for EU countries are sent, and thus maximize efficiency and profit” (Barrett et. al 1999:167).

Two significant effects of producers’ shift towards direct markets are a proliferation of private voluntary codes including supermarket certifications⁷⁶ and greater consolidation among consolidator-exporters as described above. This is as a result of the ‘cascade effect’ (Nolan et al. 2008) where supermarkets prefer to work with larger more capable suppliers to minimise coordination costs (Reardon et al. 2012:176). To this effect, in the past decade the number of consolidator-exporters in Europe has been declining (CBI report 2016:4). The few major independent players left are giants of industry such as the Dutch Flower Group which are very large and diversified entities with secured markets.

1.7. Conclusion

This introductory chapter has undertaken the task of outlining the shifting bifurcated landscape akin to shifting sands, in which Kenyan cut flowers are traded. It has also provided a rich historically grounded account of the shifts in European cut flower export markets, explaining the dominance of the Dutch auctions and the emergent power and appeal of direct markets.

My overall research question is: “What strategies do Kenyan cut flower producer networks use in seeking greater bargaining power amidst shifts in end markets?” It is concerned with the experiences, relationships and contestations of mid and small scale flower producers seeking access in European markets split between the auction and supermarkets. Three thesis sub-questions guide the thrust of this thesis. The first

⁷³ For example, MM flowers, a wholesaler of flowers and plants, is one third owned by one of the largest Kenyan flower farms, Veg Pro. Marks & Spencer supermarket is now moving towards having only one strategic partner, MM, to specially supply its cut flower demand.

⁷⁴ Such as the Dutch Flower Group, a global family company with 30 individual companies that specialises in international trade of cut flowers. This case study is analysed in chapter six.

⁷⁵ Hughes (2000:182) noted that by the late nineties the influence of the auctions was waning slightly as retailers sought to source directly from producers.

⁷⁶ Discussed in detail in chapter eight.

addresses the theoretical engagement of this thesis using the Global Production Networks lens, the second delves into the experiences, networks and strategies of mid and small-scale cut flower farms. The third sub-question is premised on the knowledge-intensive nature of the flower industry, an important but often overlooked aspect of the sector. It zeroes in on the development impact of Kenyan flowers industry by evaluating the nature of its interaction with Kenya's knowledge economy.

The remainder of the chapter lays out the setting of the argument by explaining the bifurcated nature of European flower export markets that are the north-star of Kenya's flower producers. After describing the narratives of origin and the strong performance of the Kenyan flower industry led by large scale producers amidst global competitors such as Colombia, Ecuador and Ethiopia, the chapter goes on to discuss the auction as the first path in the bifurcated structure of the flower market. It provides a historical explanation of the dominance of the auction emphasising the collective power of Dutch small producers and regulatory support from the state which lead to the consolidation of producers' interests therein. Contestation of the power of the auction is narrated in terms of 'shifts' within the global flower landscape and auction 'turns' which are changes in the workings and organisation of the auction. Shifts involved geographic reorientation of production towards the global south, and the development of direct markets (mostly supermarkets) and later a shift to non-traditional markets such as the UAE and Japan. The three auction turns entail negotiations in the auction over the membership of international growers, the introduction of electronic trading at the auction, and a series of mergers and acquisitions. These dynamics point to the evolution of the collective, corporate and institutional power of the auction, which are locations of power later outlined in the GPN framework.

Direct markets are the second path in the flower market landscape, which include retail channels such as supermarkets and florists. The expense of doing business at the auction, the fluctuation in prices and the stripping away of quality assurance mechanisms, as well as stagnation in growth in traditional European markets pushed developing country producers to seek out direct markets. Two outstanding features of this development are the evolution of the role of the wholesaler intermediary firm, referred to in this thesis as the consolidator-exporter as summarised in figure 1.6. Secondly, the proliferation of private voluntary codes of conduct as supermarkets

establish 'preferred suppliers'. Consolidator-exporters play a key role in the auction trading system supplying mostly florists and other specialised channels. However, in the move to direct markets the consolidator-exporter is increasingly consolidated or vertically integrated into the supermarket's direct sourcing arrangement. This scenario is testament to what Nolan et al. (2008) describe as 'the cascade effect'.

These dynamics in the flower trading landscape are a heavily contested, competitive space. The chapter shows the great heterogeneity (for example in figure 1.6.) of actors, the complexity of their roles and geo-politics within flower export markets that necessitates a diversity of strategies from producers in developing countries. Building on this rich landscape, the chapter that follows will provide a literature review analysing the competing narratives framing the flower industry.

2. Cut flowers in prose: a literature review

2.1. Introduction

Ensnared between the romantic materialities of providing an everyday, perishable, luxury commodity for the global North, and being a lifeline for millions of families in Kenya, the flower industry has been rich fodder for empirical literature. Despite the celebration of colour and variety that the industry boasts, it postures as a wallflower situated between paradoxes and silences of elite ownership, impoverished wage labour, environmental degradation, invisible smallholder farmers, informal business networks and global power struggles in trade policy.

The literature on the sub-sector is dominated by authors from the global north, particularly the Dutch who have historically been the centre of knowledge production on cut flowers. The Kenyan face of scholarship on the flower industry remains scanty with the leading scholars being Professor Margaret Opondo who has written extensively⁷⁷ on gender and governance in the industry, Dr. Maurice Bolo⁷⁸ who conducted extensive research on the participation of smallholders in the cut flower industry and the late Professor Mary Omosa on the social impact of codes in the industry (Omosa & Njiru 2006). There is a second group of Kenyan researchers based at agricultural research institutes with donor funding who have published on plant science and agricultural economics of various flower varieties (Muriithi 2011; Muthoka & Muriithi 2008; Muthoka 2008). Outside of this, Kenyan scholarship on the flower sector is skewed towards MBA theses on themes such as competitiveness, environmental challenges and the politics of certification on flower farms (see Awuor 2013; Moriasi et al. 2014; Kabiru et al. 2017).

2.2. Categories of empirical literature on the Kenyan cut flower industry

I have identified five main strands of empirical literature on the Kenyan flower sector. These include four strands in development policy literature and one strand in the critical Political Economy literature mostly done by economic geographers and sociologists summarised in table 2.1.1. below. In addition, there is *agronomic literature*

⁷⁷ See for example publications such as Dolan & Opondo 2002; Dolan & Opondo 2005; Hale & Opondo 2005; Opondo 2006; Tallontire, Opondo, et.al 2011

⁷⁸ See for example publications such as Bolo et al. (2006); Bolo (2010); Bolo et al. (2012) on smallholder flower farmers in Kenya

done by Kenyan scientists, *technical papers* such as baseline studies of smallholder flower farmers carried out by consulting firms and research groups typically funded by donor agencies (Fintrac 2010; Wilshaw 2013; Buxton & Vorley 2012; Buxton 2012), and *business and supply chain studies* coming out of various MBA programs. Another category are *journalistic articles* published as interest pieces around peak seasons such as Valentines’ day and which cover issues of interest to ethical consumers such as labour rights on flower farms, environmental impacts of the industry and the politics of certification.

This overview of empirical literature will focus on the first two categories – development policy literature and political economy literature - which intersect on the question on governance through private voluntary initiatives. These two categories of literature have been instructive on the strategies that mid and small-scale Kenyan cut flower producers employ to navigate shifts in global export markets.

Summary of two categories of empirical literature

Development policy literature strands	Sample of literature from prominent scholars in the field
1. Evolution of export horticulture	Jaffee 1992; Thoen et. al, 1999; Jaffee 2001; Hughes 2000
2. Rights-based approach	Hughes, 2000; Barrientos, 2001; Dolan et. al, 2002; Barrientos et. al, 2003; Dolan & Opondo, 2005; Tallontire et. al, 2005; Gibbon & Riisgaard 2014; Barrientos et. al, 2015; Tallontire et. al, 2012; KHRC 2012
3. Environmental impact (Water-Energy-Land nexus)	Mekonnen et. al, 2012; Mavuti & Harper 2005; Kitaka et al., 2002; Gitachi, 2005; Fayos 2002; Nyangena & Willem te Velde 2012 ; Williams 2007; Holt & Watson 2008; Kirigia, Betsema, et al 2016
4. Smallholder participation in the Kenyan flower industry	Bolo et al. 2006; Bolo 2010; Fintrac 2010; Buxton 2012; Buxton & Vorley 2012; Zylberberg 2013
Critical political economy literature strand	Sample of literature from prominent scholars in the field
1. Governance of the cut flower industry	Thoen et. al, 1999; Blowfield 1999; Hughes 2001; Barrientos 2000; Dolan 2005, 2007; Bair 2005; Bolo, 2010; Patel-Campillo 2011a, 2011b; Ksoll, Macchiavello et. al, 2013; Hughes et al, 2015; Macchiavello & Morjaria 2015; Kuiper & Gemählich 2017
2. Ethical and culturally grounded analyses	Blowfield 1999; Hughes 2001; Opondo 2006; Dolan 2007; Kuiper & Gemählich 2017; Blowfield & Dolan 2008; Hughes, McEwan & Bek 2015

Table 2.1.
Source: Author’s analysis

Review of development policy literature pertaining to the Kenyan flower industry

Development policy literature on the Kenyan cut flower industry has four strands, the first of which analyses the origins, dynamics, evolution and performance of Kenya's flower sector under shifting global trade policy paradigms (Jaffee 1992; Jaffee 2001; Hughes 2000a; Dolan 2005; Laibuni et al. 2012). The most prominent author thereof, a World Bank agricultural economist Jaffee (1992), highlighted the foreign ownership characteristics of firms in Kenyan horticulture, particularly in cut flowers and early on raised interesting and important questions about who is benefiting from the lucrative sector. The ownership of flower farms in determining producer strategies is an important emergent theme, and also finds resonance in the GPN theory 2.0. as influencing value capture.

The second strand which emerged from the late nineties takes on a *rights-based approach*⁷⁹ and addresses challenges from the perspective of labour and gender, and later on environmental issues. The literature concerning the gendered nature of the flower value chain has been especially prolific. It has been researched from the perspective of the gendered division of labour in the flower value chain (Barrientos 2000, 2001; Dolan et al. 2002; Dolan & Sutherland 2002; KHRC 2012), the link between adoption of codes of conduct and gender dynamics in flower farms (Barrientos et al. 2003; Tallontire et al. 2005; Omosa & Njiru 2006; Opondo 2006; Barrientos & Smith 2007; Riisgaard & Hammer 2011;) and "social upgrading" which is discussed further below (see Bernhardt & Milberg 2011; Evers & Amoding 2014; Barrientos et al. 2015; Barrientos et al. 2016).

In the 2000s literature on the rights based approach focussed on the extent to which certifications have limited the negative impacts of the market model of employment on flower farms. In the mid-nineties, many leading flower farms had subscribed to various codes of conduct and certifications in order to guarantee market access and build confidence in their production processes. The emergence of the rights- based

⁷⁹ In this body of literature on the rights-based analysis of value chains, leading scholars such as Barrientos and Smith (2007) make the distinction between *process rights* such as principles of freedom of association and no discrimination, that are based on intrinsic principles of social justice based on ILO conventions, and *outcome standards* which are entitlements to a certain standard of work for example a health and safety policy, a living wage or working hours.

literature was reactive in the sense that it evolved in conversation with concerns by European consumers and civil rights groups locally and in particular in the UK about workers' rights. Opondo (2006:5) details that the poor condition of workers was highlighted in a spate of what can be thought of as 'blood and roses' early media reports that uncovered the exploitative underbelly of the industry (Bolger, 1997; Wolf, 1996). By 2002, Christian Aid and Oxfam had launched investigations and consumer oriented campaigns against sourcing arrangements by UK supermarkets that worked with exploitative farms. The main labour rights issues raised over time have been poor wages, sexual harassment, dangerous working conditions, forced overtime, casualization of employment and paternalistic managerial styles (KHRC 2012). This mushrooming literature contributed to the pressure to implement industry reforms and by highlighting progress particularly around Valentines' day each year, developed greater transparency between consumers, supermarkets and producers. It now has new form under the banner of "social upgrading"⁸⁰ (Barrientos, et. al, 2010; Bernhardt & Milberg, 2011; Evers & Amoding 2014; Barrientos et. al, 2015) which involves better work, standards and rights for workers and smallholders and evolving forms of labour management on farms (Gibbon & Riisgaard 2014).

A third strand under the development policy literature is focussed on the industry's interaction with the environment, in particular the water-energy-land nexus. It highlights contestations around the use of Lake Naivasha, the potential of renewable energy, concerns over the carbon footprint– termed the "flower miles" debate (Holt & Watson 2008:324), land user rights contestations and the "flowers for food debate" (Kirigia et al. 2016) which is the perceived competition for limited arable land between food and flower production. In terms of water intensity, the cut flower industry is a very thirsty sector indeed. Mekonnen et. al (2012) worked out that the water footprint of one rose flower is estimated to be 7-13 litres per year⁸¹. Further, the quality and quantity of water in the lake has deteriorated significantly over time (Kitaka et al., 2002; Mavuti & Harper 2005; Gitachi, 2005; Nyangena & Willem te Velde 2012). This has led to the

⁸⁰ Barrientos, Gereffi and Rossi, (2010) explain that *social upgrading* integrates the early GVC depiction of workers as labour - a factor of production and a 'rights focus' that examines conditions and entitlements of workers. Social upgrading is therefore "the process of improvement in the rights and entitlements of workers as social actors, and enhances the quality of their employment (Sen 1999; 2000). This includes access to better work, which might result from economic upgrading" (pp.7)

⁸¹ Mekonnen et. al (2012) Between 1995-2006 a total of 16 mega cubic metres per year (Mm³/yr) was virtually exported via cut flower exports from the Lake Naivasha basin.

displacement notably of Maasai pastoralists from the surrounding pasturelands and the aggravation of conflict between them and the flower industry management (Fayos 2002). The carbon footprint⁸² of cut flowers as they are transported from farm to market or “flower miles” is another major theme in the environmental literature on the flower industry (Williams 2007 ; Holt & Watson 2008).

The competition for the use of arable land between the flower industry and local agricultural and pastoralist land user rights is particularly acute in Kenya, a food-poor country. Given the political complexities associated with land ownership and use in Kenya, there has been very little academic literature on this (see Kirigia, Betsema et al (2016)⁸³ and the topic receives coverage only sporadically in journalistic articles (see for example, [Financial Times, Feb 27 2015](#)⁸⁴; [Reuters, Jun 30 2016](#))⁸⁵.

The fourth strand of development policy empirical literature discusses the participation of smallholders in the flower industry. Since smallholders operate on the margins of global production, there is little scholarship on their experiences and contributions. Two robust empirical studies of Kenyan smallholder flower production in Kenya informed my own research on smallholders in the sector – Bolo (2012) on farmer-exporter partnerships and a baseline study conducted by Fintrac (2010). A third study by Zylberberg (2013) discusses Wilmar Agro Ltd.⁸⁶ as a case study to analyse sustainable means of incorporating smallholders into the formal economy. Bolo (2012) employed the Global Value Chain (GVC) analysis and innovation systems theory as the two main theoretical frameworks for his analysis of contractual outgrower groups and non-contractual spot market arrangements in relation to ‘farmer – exporter’ partnerships (2010:94). The effect of farmer-exporter partnerships on farmers’ capabilities was that exporters safeguard their power in the value chain through

⁸² Williams (2007) did a comparative study of cut flowers produced for the British market and found that each rose grown in the Netherlands produces 2.91 kg of CO₂ while a Kenyan rose produces only 0.5 kg of the same.

⁸³ The report (2016:6) concludes that, “it is difficult to assess the impact of Dutch agribusiness on food security and no direct linkages exist between FDI and food security”.

⁸⁴ Financial Times, 27 February 2015. Accessed at <https://www.ft.com/content/4839da78-b8fa-11e4-a8d0-00144feab7de>

⁸⁵ Reuters, June 30, 2016. Accessed at <https://www.reuters.com/article/us-kenya-landrights/kenyas-flourishing-flower-sector-is-not-all-roses-for-maasai-herdsmen-idUSKCN0ZG0Z0>

⁸⁶ Wilmar Agro Ltd. was one of my case studies of organised smallholder flower farmers in Kenya and is discussed in detail in chapter eight.

detailed, restrictive contracts that keep smallholders mostly “locked in” (2010:94) to production functions which prevents them from undermining the exporters’ functions in the market. He concludes with policy recommendations⁸⁷ that in order to enhance the sustainability of smallholders, initiatives should build farmers’ capacities to innovate and adapt to constant changes in their environment.

In sum, the empirical literature outlined above is concerned with explaining the historical evolution of the cut flower industry in Kenya. It is also concerned with the physical and social materialities within which the industry is embedded, and the partnerships and contestations between diverse stakeholders over resources. These themes foreground debates on sustainability and governance which are discussed in section that follows on the critical political economy literature.

Review of the critical political economy literature pertaining to the Kenyan flower industry

This section outlines two main angles of the critical political economy literature - studies pertaining to governance of the flower industry through private voluntary initiatives, and secondly, culturally grounded critiques of the flower industry. The first sub-section of critical political economy literature pertains to the governance of the cut flower industry through certifications, private voluntary initiatives and codes of conduct. These formal institutions of governance emerge from European markets, multi-stakeholder initiatives, independent third parties, international organisations and national industry bodies. Since the mid-nineties, the Kenyan flower industry has emerged as one of the most codified industries in the world (Jaffee, 2005; Opondo 2006; Humphrey, 2008; Nelson & Tallontire 2011).

The rise of private voluntary initiatives in the flower industry is located in the processes of globalisation, neoliberalism and deregulation of global trade which has placed governance beyond the reach of any one country (Hughes 2001; Blowfield 1999). In Kenya, the proliferation of codes must be understood in the context of state deregulation under the Structural Adjustment Programs which was at its apogee in the

⁸⁷ Bolo’s (2012:177-180) policy recommendations revolve around articulating smallholder farmers’ research and training needs, reforms and inclusiveness in research institutions working with smallholders, and strengthening smallholders’ market intelligence gathering.

early 1990s, and the subsequent abdication of this governance gap to the private sector. Doing so also minimised the risk of doing business for multi-national companies operating in countries with weak regulation. In the same moment, the UK government passed its Food Safety Act which required traceability in horticulture chains including in sourcing flowers. This made large supermarket chains such as Tesco seek more transparent relationships with their horticultural suppliers and build supply chains with only a few large, sophisticated Kenyan suppliers whose production quality conditions they could verify (Barrett et. al 1997, 1999; Hughes, 2000:12).

The proliferation of codes also emerges from exposés on the exploitation of labour under expansion of the global trade in cut flowers. The strategic shift of production to the global south was driven by the existence of “cheap labour” which existed as a result of weak labour regulation and enforcement. The industry remains characterised by feminised⁸⁸ and flexible labour (Tallontire et al. 2005; Opondo 2006; Coles & Mitchell 2010). Another major force behind the temporary employment of seasonal labourers in flower farms is the seasonality of the flower trade driven by peak seasons such as Valentine’s Day and Mother’s day (Riisgaard, 2011:436). Further, the perishability of the flowers means that workers have to work long hours in harvesting and spraying and are subsequently exposed to harsh chemicals in greenhouses over long periods of time, which is the main health hazard in flower farms. Though the time sensitivity, aesthetic and high-end nature of the flower industry set it apart, the labour issues⁸⁹ (Dolan et. al, 2002) which private codes of conduct arose to check are common in other labour intensive global supply chains.

Certification schemes in the flower industry also gained prominence alongside debates on sustainability and transparency. They first codify consumers’ demands to producers for ethical, transparent sourcing and sustainable production practices that protect workers and the environment (Dolan, 2007). Certifications then transmit

⁸⁸ Opondo (2006:2) explained that the ostensible feminine traits of dexterity, attention to detail and reliability aligned with industry demands of quality, consistency, speed and meticulousness in handling a luxury, highly perishable aesthetic commodity.

⁸⁹ These include employment insecurity, overtime work, sexual harassment, Low wages, lack of access to maternity leave, minimal union membership among the workers, poor communication between workers, supervisors and management, poor transport facilities, frequent exposure to chemicals, lack of opportunities for promotions, lack of a proper complaints procedure; and lack of awareness of codes among the workers (Dolan et. al, 2002)

information to customers and end-users about a product's technical specifications, its compliance with health and safety criteria or the processes by which it has been produced and sourced" (Nadvi, 2008:325). As Kuiper & Gemählich (2017:38) explain, the two main features of certification schemes is the assertion that they are creating a sustainable business, and the visible logo that transmits this information and confidence to consumers. However, as Timms' (2017) shows, the persistent invisibility of certification particularly to consumers and florists is puzzling given the fact that they are meant to signal sustainability of production practices. She suggests that this invisibility could be due to the assembled nature of the final product into bouquets with flowers of mixed origin, lack of consumer interest or awareness, doubts as to whether a certified flower is necessarily an ethical flower and perhaps even perceived reputational risk from explicit promotion. The high information costs of this process underscore the knowledge-intensive nature of the flower industry.

Rising concerns with sustainability have led to literature that analyses the link between subscription to certifications and effects on labour rights protections. The general conclusion is that though labour rights have improved over time in part due to the schemes, subscription to certifications does not challenge underlying power relations since the schemes remain 'the masters' tools' and therefore instruments of control. (Barrientos & Smith, 2007; Kuiper & Gemählich, 2017; Nelson, Martin, & Ewert, 2007; Opondo, 2006; Riisgaard, 2009; Riisgaard & Gibbon, 2014). The effect of certifications has also been discussed in reports commissioned by NGOs such as Fairtrade (Wilshaw (ed.) et al, 2013; Klier, 2012; Leipold & Morgante, 2013).

Ethical and culturally grounded analyses in critical Political Economy literature

The second theme in the theoretical literature provides an ethical and culturally-specific analysis of the global cut flower trade. This body of work covers themes such as governmentality⁹⁰ (Hughes 2001; Dolan 2007; Kuiper & Gemählich 2017), the underpinnings of ethical trade and corporate social responsibility (Hale & Opondo 2005; Blowfield 1999; Blowfield & Dolan 2008; Opondo 2006; Omosa & Njiru 2006;

⁹⁰ Dolan (2007) discussed the notion of governmentality in the context of Fairtrade arguing that it translates consumers' humanism into *technologies* (standards, audits and certification) of *regulation and surveillance*, which shape the African subject as less than full partners in the intended partnership.

Neilson & Pritchard 2009) and cultural sensitivities⁹¹ of the relations of production in the flower value chain (Hughes 2000; Dolan 2007; Hughes, McEwan & Bek. 2015) and in north-south horticultural trade generally (Freidberg 2003). Cultural narratives of production help consumers forge the feeling of being in relationship with the producers, who in the throes of globalisation are so far yet by global logistical technologies rendered so near (Hughes, McEwan and Bek, 2015). Further, applying a postcolonial critique of institutional hybridity⁹² to GPN theory (Hughes, McEwan and Bek, 2015:254) allows for a critique of knowledge flows⁹³ in the production network by foregrounding understandings of the economy from the Global South.

This review of critical political economy literature has outlined themes in research pertaining to the governance of the cut flower industry through private voluntary initiatives, as well as providing culturally-specific analyses. These analyses engage substantively the Global Value Chain theory on issues of governance and power dynamics between industry actors. The review further notes that the body of work on the political economy flower industry using the Global Production Networks lens is still growing, and this thesis is part of that development.

2.3. Strands of theoretical literature

Overview of Global Commodity and Global Value chain approaches

The Global Production Networks framework which is the main theoretical framework herein, has its roots in Global Value Chains (GVC) and Global Commodity Chain (GCC) theories. These are anchored primarily in Economic Geography and Sociological analyses. Hopkins & Wallerstein (1977) developed the “commodity chain” approach as part of World Systems Theory (WST) as a way of understanding the global, historicised and uneven dimensions of capitalist production processes. Their framework was set at the national level and categorised the world economic system

⁹¹ The call to a deeper consideration of the cultural influences such as norms, routines and value systems shaping global value chains, network dynamics and development outcomes has been articulated by several scholars including Bair (2005:168), Hess and Yeung (2006:1198); and Neilson and Pritchard (2009: 9)

⁹² Hughes, McEwan and Bek (2015) use the postcolonial notion of *economic hybridity* from the work of Eiman Zein-Elabdin (2009; 2011) which argues for a more culturally sensitive understanding of the institutional contexts shaping global production networks.

⁹³ An example is the consideration of who defines and sets the standards for ethical trade. Friedberg (2003) explains how ethical interventions coming from the Global North construct agency within the global North as ethical, while production in the Global South is constructed as inherently unethical and in need of regulation.

into core, periphery and semi-periphery. Michael Porter (1985,1990) later popularised the use of the chain metaphor by using it to explain how firms manage their relationships with other firms in competition for cost differentiation.

The Global Commodity Chain (GCC) was conceptualised by Gereffi and Korzeniewicz (1994). This perspective provided a meso-level analysis which was focussed on inter-firm relations from production to market, and policy recommendations for upgrading geared towards producers in developing countries. In it, Gereffi introduced the concepts of 'lead firms' which have influence over other actors and explained how connecting to them can influence the ability of firms in developing countries to upgrade. Subsequently GCCs evolved into Global Value Chains (GVCs)⁹⁴, a switch which is generally credited to researchers at the Institute of Development Studies at Sussex (Neilson & Pritchard 2009: 38).

The main analytical categories of the Global Commodity Chain approach as developed by Gereffi (1994:96-7) were: (1) an input-output structure (ii) territoriality (iii) governance and (iv) an institutional structure. The analysis of governance has since dominated the GVC research agenda, as was evidenced in the review in the previous section on GVC analysis in the flower industry. Gereffi developed two ideal-types of governance - *buyer-driven and producer-driven commodity chains*. In buyer-driven chains such as the cut flower industry (Hughes 2000), lead firms capture value and knowledge through branding and design, rather than technology (Gereffi 1999; Gereffi & Memedovic 2003). The two ideal types of governance have since been critiqued for being too crude (Fold, 2002:230) and rigid (Raikes et al. 2000:21). The dichotomy has also been critiqued for being too narrow and abstract (Clancy 1998; Gellert 2003; Henderson et al. 2002). Gibbon et al. (2008:321) also criticised the distinction, since rather than being comprised of a single homogenous entity, a single GVC is actually made up of several 'strands' as differentiated by variety of product type, institutional configuration or end market⁹⁵. Finally, it was recognised that actors

⁹⁴ Bair (2005: 162) explains that at a meeting at Bellagio in 2000, researchers favoured value chain terminology over commodity chain for its inclusiveness, and adopted it in order to develop a shared language for those researching global industries.

⁹⁵ For example, the flower industry has thousands of flower varieties, an institutional configuration comprising a range of private voluntary initiatives governing market access, and bifurcated markets split between the Dutch auction and Direct Markets.

other than buyers or producers (such as NGOs or certification bodies) could have a very important stake in chain governance (Ponte 2007).

GVC analysis posits that static idea that the power and role of the lead firm is taken as given. It overlooks for example, that within the flower industry there are contestations among the characteristic lead firms (the Dutch auctions and supermarkets) that are in dialectical relationship with the strategies of producers in the global south who are fighting for their survival. The relevant and useful concept emerging from the GCC buyer driven/producer driven analysis is the conceptualisation of “big buyers”. This is the locus of commercial capital (Bair 2005) which was identified by Dolan & Humphrey (2000) as giant retail outlets or supermarkets. At the Dutch flower auction, the term ‘big buyers’ specifically refers to wholesale buyers (Maharaj & Dorren 1995; Hughes 2000) placing bids and who then supply florists, retailers and supermarket chains with specific orders.

Complementing the notion of the “big buyer” is the concept of the “focal firm”⁹⁶ (OECD 2008; Dembinski 2009). These are firms that “consistently operate value adding processes on both sides of the focal point, i.e. both in production and in marketing/distribution”(OECD 2008: 47-48). The focal point in Global Value Chains is described as the point at which the focus moves from production to the market. In the cut flower industry, consolidator-exporters are the focal firms intermediating between the flower producers and the big buyers at the Dutch auction and/or supermarkets, that oversee the conversion of the harvested cut flower into an export-ready commodity. They add value by consolidating various varieties of cut flowers to reach economies of scale, to match the seasonality of demand in export markets and to maintain consistency of supply. *Consolidator-exporters* are therefore really the ‘make-it-or-break-it’ link to a diversity of markets for small and mid-scale Kenyan and indeed all producers in the global South (Cunden & Van Heck 2004; J. Wijnands 2005).

⁹⁶ Dembinski (2009:121) explains that this concept is operational in the context of global value chains which can be divided into two segments: “a segment in which all value added activities are centred on the production of the good or service, and a segment in which value adding is made of efforts to reach the final customer or user” This structure is evident in the cut flower industry between production on the farm and the point of harvest when cold chain management, consolidation and sometimes bouquet making is carried out by exporting firms.

Drawing in the developmental angle of value chain relationships between buyers and producers, Gereffi later (1999) linked the notion of value chain governance to questions of uneven development in a globalised world economy, through the concept of “upgrading”. Upgrading refers to how producers’ positions within chains either enhance or restrict their ability to improve their livelihoods (Neilson and Pritchard 2009: 39). The term was previously restricted to mean only industrial upgrading, which is how firms can improve their competitiveness within the chain. Later the concept of economic upgrading was introduced in regard to moving into higher value added activities and more lucrative markets. In the cut flower industry, this concept of upgrading (discussed further in chapter three), has been expanded by Barrientos et al. (2011) and Bernhardt & Milberg (2011) to include the social dimension referred to as “social upgrading” .

While Gereffi’s (1994) GCC formulation summarised governance as ‘driven’ emphasising the role played by chain drivers, Gereffi, Humphrey and Sturgeon (2005) further developed the concept of governance as ‘coordination’ between value chain activities⁹⁷. This conceptualisation led to the formulation of five forms of governance Gereffi, Humphrey and Sturgeon (2005:83-84) derived from transaction costs economics, production networks and firm level learning literature. These include *market, modular, relational, captive and hierarchical governance*, which define linkages between value chain activities. This typology is based on three key variables: the complexity of transactions, the codifiability of information and the capabilities of suppliers. The spectrum from market to hierarchical type of governance highlights the degree of firm control (Delgado and Cruz, 2013). As value chains move from market to hierarchy, the level of explicit coordination increases and, with it, power asymmetry between actors (Gibbon et al. 2008:323). The five types of governance are captured in table 2.2 below. The modes of governance are derived from Gereffi et al. (2005: 84-86) are manifested at various scales within the Kenyan cut flower industry.

⁹⁷ There is a third formulation of governance in value chains as ‘normalisation’ which uses convention theory to situate and analyse the dynamics of buyer-seller relations in their immediate normative environment. This is beyond the scope of this thesis. For examples of how the concept has been operationalised in analysing horticultural trade, see Ouma (2010) and Riisgard & Gibbon (2014).

Key determinants of value chain governance

Governance type	Complexity of transactions	Ability to codify transactions	Capabilities in the supply base	Degree of explicit coordination and power asymmetry	Generalised example from flower industry	Key aspects of the mode of governance described	
Market	Low	High	High	Low	Independent brokers purchasing flowers at farm-gate	<ul style="list-style-type: none"> - Buyers respond to specifications and prices set by sellers - Costs of switching to new partners are low for both - Transactions require little coordination 	
Modular	High	High	High	↓	European supermarkets sourcing for Kenyan cut flowers from capable farms	<ul style="list-style-type: none"> - Mostly facilitated by industry codes and standards - Codification creates routines to reduce uncertainties - Complex information exchanged with little coordination - Cost of switching to new partners relatively low 	
Relational	High	Low	High		Trading between sister companies in a family firm	<ul style="list-style-type: none"> - Requires frequent face-to-face contact and relationships are built over time - Cost of switching to new partners is very high 	
Captive	High	High	Low		Outgrower firms sourcing produce from smallholders with limited capabilities	<ul style="list-style-type: none"> - Intense supervision to meet buyers' requirements - Lead firms tend to 'lock-in' suppliers - Suppliers limited to specific tasks and face significant costs of switching 	
Hierarchical	High	Low	Low		High	Vertically integrated firms that control the entire supply chain	<ul style="list-style-type: none"> - Lead firms here cannot rely on supply base and build capabilities in-house - Occurs when firms need to wield control of intellectual property

Table 2.2.

Source: Gereffi et. al (2005: 86-87)

*Generalised example is author's analysis

Given this outlining discussion based on contributions from the Global Value Chain framework, the forms of governance reflected most clearly are the *modular* in regards to the mid-scale farms and *captive* in regards to the small-scale farms. This GVC typology of governance has however been critiqued for underplaying the extent to which governance is shaped by factors external to the firm, including the institutional landscape (Patel-Campillo 2011:84). It overlooks spatial and social dynamics of value chains and focusses primarily on technicalities of governance, which is very similar to the New Institutional Economics approach (Khan, 1995; Gibbon et al, 2008; Neilson & Pritchard, 2009; Coe & Yeung, 2015). Lastly, it is important to note that multiple forms of governance can coexist within GVCs (Gibbon & Ponte 2005).

GVC analysis is useful for explaining how specific steps within the chain are coordinated, but ill-suited to explaining overall governance. Additionally, as noted by Krauss (2015), this typology of firm-centric governance renders too strong a focus on the private sector. This top-down analysis also obscures the role of critical intermediary firms (such as consolidator-exporters) between producer and buyer and thereby lacks the granularity required to shed light on the diversity of market practices by the range of actors in a production network. Further, the chain structure of governance in the GVC framework limits the complexity of relations involved in globalised trade. Lastly, as Gibbon et. al (2008) point out, the GVC analysis takes as given the power of lead firms rather than explaining how it is that this control comes about.

The flower industry in GVC literature

Gaining ground in development policy in the 2000s, the Global Value Chain (GVC) theory provided an excellent framework for the *analysis of governance* as seen in the proliferation of certifications in the flower industry. In particular, it provided a useful lens to analyse power dynamics in the buyer-driven value chain, contestations between labour and capital, gendered labour relations therein, possibilities for upgrading and the consolidating effects large retailers or “big buyers” have on other actors upstream in the value chain (See Hughes 2000; Hughes 2001; Dolan & Humphrey 2000; Dolan & Opondo 2002; Oxfam 2004; Tallontire et al. 2005; Riisgaard 2009).

Governance in GVC literature is defined as “non-market coordination of economic activity” (Gereffi et.al, 2001:4) and incorporates formal and informal rules, norms and networks. From the GVC perspective, certifications transmit information on the nature of products and processes of production, reduce complexity and facilitate coordination across the value chain (Humphrey & Schmitz 2001; Henson & Humphrey 2008). In addition to the reduction of transactions costs, standards exist to codify information for two main purposes in global value chains– *risk management and product differentiation* (Gibbon & Ponte 2005; Nadvi 2008; Henson & Humphrey 2010). These two aspects of certification are particularly relevant to the governance of the flower industry which operates virtually contract-free (Macchiavello & Morjaria 2015).

Risk management standards generally refer to standards that provide assurance that producers have complied with certain defined requirements (such as the Dutch MPS standard) while product differentiation standards distinguish the product in terms of the quality of its production process from others typically by a visible consumer label (such as Fairtrade). It is also possible though rare for a standard to possess both attributes. Further this is not a rigid dichotomy, but also includes the possibility that as regulations are enhanced over time, risk management standards will evolve to take the place occupied by product differentiation standards while product differentiation standards adapt to more nuanced and newer attributes (Henson & Humphrey 2008; Riisgaard 2011).

The variety of origins of certification, codes of conduct and the pre-dominance of some over others is telling of the contestation of power in the flower value chain. Blowfield & Dolan (2008:15) note that there is a “political economy of knowledge production” with respect to standards especially looking at their origins, the stakeholders involved or excluded, how they are legitimated and implemented. Standards have great ideational power in contestations over knowledge production, the construction and distribution of value, quality, consumer ethics and who gets legitimating power in a globalised economy (Dolan 2007; Ouma 2010; Moberg & Lyon 2010; Nelson & Tallontire 2014). The originator of a particular code of conduct boasts knowledge over the construction and protection of consumer value and interests in that society and by association acts as a gatekeeper to prosperity (or not) of the producer seeking access.

Naturally, the originator's interests become embedded in the information that is transmitted via compliance to the code. For example, the first standards in the industry were developed by corporate buyers and so were technically oriented and weak on social issues (Riisgaard 2011:440). Northern originators' ability to keep raising the standards and minimum requirements⁹⁸ for certification represents shifting goal posts, such that only the most capable, nimble and sophisticated suppliers can gain entry, while the rest are locked out.

Certifications also provide insights into the dynamics of extra-firm bargaining since they often do not originate from the market itself (Gereffi et al., 2001:4), but are nevertheless implemented through market mechanisms such as price-setting (Kuiper & Gemählich, 2017). They do however refer to or converge around international 'best practice' models of governance under the auspices of multi-stakeholder initiatives (MSIs)⁹⁹. These standards are not neutral mechanisms but institutional mechanisms¹⁰⁰ with different forms of implementation arriving at different results on the ground (Riisgaard 2011:436).

The flower industry in GPN literature

Though hugely influential, the GVC framework is limited in terms of its consideration of the variety of players and the diversity of their strategies, the realities of multi-scalar governance and power dynamics in the global economy. The Global Production Network (GPN), as the analytical lens, provides the tools to engage the micro and relational experiences of actors in the cut flower chain. This literature review yielded only a few examples of studies of the flower industry as analysed using the GPN lens.

⁹⁸ A good example was the change made to Maximum Residue Levels (MRLs) by the EU for flowers and other horticultural producer imported to the European Union in 2013 which saw a large proportion of Kenyan produce intercepted. Flower companies which violated the MRLs were banned from exporting until corrective actions were instituted. Accessed at: <http://www.kenyaflowercouncil.org/blog/?p=5623>

⁹⁹ For example, in the 1990s codes began to converge around the International Labour Organisation (ILO) core labour rights and adopted other 'good governance' principles such as independence through third party auditing and inclusivity through MSIs

¹⁰⁰ The way these codes of conduct play out within the context of the Kenyan flower industry is discussed in depth in chapter eight.

Hughes (2000) first and perhaps most influentially advanced the suitability of the network metaphor¹⁰¹ to an analysis of the cut flower commodity trade. Networks portray webs of interdependence rather than fixed, uni-directional relationships, and also bind together multi-directional flows of information. Hughes (2000:213) explained that “Applying the metaphor of the network, at least at its most general level, to the cut flower trade offers a productive analytical framework within which both to adapt Gereffi’s (1994a, 1994b) notion of buyer-driven commodity circulation and to identify the forces driving competitive pressures in the sphere of production.” Hughes’ (2000) perspectives are instructive for highlighting the complex dependencies among various actors, the power of retailers and how they capitalise on their knowledge to construct and deconstruct the idea of value in the cut flower production network.

More recent work such as Patel-Campillo (2011) applies GPN theory to the Dutch flower industry to illustrate how producers’ strategies, regulation and historical trajectories influence and transform chain governance over time¹⁰². Taylor’s (2011) PhD thesis used GPN theory to examine the early stages of Ethiopia’s flower industry and the relationships between its actors. He concludes optimistically about the potential for value capture locally and argues for the importance of territorial embeddedness of actors (Taylor 2011:160) so as to endogenise developmental gains in Ethiopia. From this evaluation of GPN literature in the cut flower industry, it is possible to surmise that a gap exists in the applicability of the GPN framework to the Kenyan flower industry.

Discussion of key concepts emerging from GPN 2.0 theory

The following part of this theoretical literature review section is divided into three parts, each one elaborating on key concepts in the GPN analytical framework (Coe & Yeung, 2015) developed in chapter 4. These key concepts include *networks*, *strategies and the idea of bargaining power* which resonate with my empirical findings. The first section outlines *Actor-Network Theory* that animates the GPN conceptualisation of networks and its heterogeneity and *structuration theory* which is mentioned in GPN

¹⁰¹ Hughes (2000) paper predates the comprehensive development of the Global Production Network approach as a general theory by such as Henderson et. al (2000) and later Coe & Yeung (2015)

¹⁰² Patel-Campillo (2011:81) explained how in the development of the Dutch cut flower agro-industry, a combination of actors’ strategies and state regulation can effectively reverse power relations from buyers (buyer-driven chain) to producers (producer-driven chain).

theory as a means of resolving the tension between structure and agency in production networks. The second section engages institutional theory to provide a relational view of the firm and develop associated ideas of the reduction of transactions costs and governance of global production networks. The third section points to key ideas arising from endogenous growth theory that enable a critical analysis of the cut flower industry as a 'knowledge intensive' industry (Hughes 2000). It allows us to investigate unacknowledged flows of knowledge, how knowledge is institutionalised and its role in the development of the industry.

Conceptualizing networks in relation to the flower industry

Actor-Network Theory

GPNs theory uses networks as an organizing principle for global economic relationships. By encompassing all relevant sets of actors and relationships, it goes beyond the GVC approach of focussing on inter-firm transactions (Coe et al. 2008:272). To develop the idea of networks, GPN theorists borrowed from *Actor-Network Theory (ANT)*¹⁰³ developed by Bruno Latour and Michael Callon and John Law to emphasise the relationality of objects and agency in heterogenous networks¹⁰⁴. Associations are of primary importance and power is located in the strength of those associations (Cressman 2009).

As employed within the GPN framework, Actor-Network theory is useful¹⁰⁵ for analysing the cut flower industry as a heterogeneous network in which the variety of institutional actors, the production and logistical technologies, and techniques interact to make and remake relations in the network (Hughes 2000). ANT's dynamism¹⁰⁶

¹⁰³ ANT is a relational and network-focussed theory that was developed to understand processes of technological innovation and the scientific development of knowledge.

¹⁰⁴ ANT treats human and non-human actors as equal agents, in what is known as *the principle of generalised symmetry* (Callon 1986a). In doing so, ANT breaks down dichotomies such as human and non-human, knowledge and power, structure and agency. "Reducible neither to an actor alone nor to a network...An actor-network is simultaneously an actor whose activity is networking heterogeneous elements and a network that is able to redefine and transform what it is made of" (Callon 1987:93).

¹⁰⁵ However, ANT does not focus on *why networks work* per se, but rather on the infrastructure of actor-networks. It accords equality to all the actors and so is unable to explain the asymmetry of power. Henderson et al., (2002) therefore find ANT alone unable to explain the processes of economic development because it fails to explain the underlying structures that influence power relations.

¹⁰⁶ Henderson et. al (2002:442) explain that ANT is useful for GPN theory because it helps in defining space and distance as "relational scopes of influence" and therefore redefining what we mean by 'global' and 'globalisation'. We cease thinking of them simply as geographic bounds and see them as

helps to show how the connections between entities are formed. It is also useful as a lens into the formation, breakdown and reformation of heterogeneous producer networks as they negotiate entry into export markets. Lastly, ANT's focus on agents and on processes shaping human interaction complements institutional theory (discussed below), which focusses on streamlining tensions between structure and agency in networks.

Converging institutional theories and GPN 2.0.

Structuration theory and GPN

In GPN theory, Yeung (2014:44) makes use of '*structuration*' (Giddens 1984) to provide a relational understanding of how firms operate within the rules, regulations, policies, and norms that constitute their production networks. Structuration resolves the tension between structure and agency with the view that actors' values and actions are embedded, enlivened and constrained within the structures they are located in, and in turn inform and shape those same structures. The institutions configure actors and include among others shared beliefs, norms of doing business, institutional arrangements, policies, regulations and contracts. GPN uses this notion to explain that firms exercise agency through the creation of *institutional routines* and through *firm strategies*¹⁰⁷ (Fuller & Phelps 2018). This agency is in turn shaped by a firm's *dynamic capabilities* (Coe & Yeung 2015) which are a reflection of its ability to learn, experiment, absorb R&D and codify information.

New Institutional Economics and transaction costs

North (1992:74) introduced the notion of institutions as "the rules of the game of a society or more formally the humanly devised constraints that structure human interaction." Of particular interest under the New Institutional Economics (NIE) framework was the institutional environment or the '*rules of the game*' which can be formal or informal such as judiciary, property rights and contracts, and what Williamson (1998:75) referred to as the institutions of governance or the '*play of the game*' which include markets, firms and hybrids such as environmental cooperatives. The rules of the game become institutionalised when power relations are repeated

dynamic phenomena that change over time. Secondly, ANT rejects simple dichotomies such as the 'global-local' nexus and 'structure-agency'. (Henderson et al. 2002:459).

¹⁰⁷ Chapters six, seven and eight characterise the institutional routines and firm strategies of Kenyan cut flower producer networks.

over time and form a pattern. These institutional arrangements are the mechanisms that coordinate economic activity thereby reducing uncertainty in exchange.

Markets operate under incomplete information and limited mental capacity to process that information¹⁰⁸ which determines the cost of transacting. That is not to argue that the price mechanism does not work, but that it is costly and uncertain in doing so. (Amsden, 1989; Toye, 1995). Coase (1937, 1960) famously elaborated that transactions costs arise because information is costly and is held asymmetrically by different transacting parties. Coase (1937) earlier conceptualised firms and markets as alternative governance structures because they accomplish for transactions what technology is meant to. These transactions costs include search and information costs, bargaining and decision costs, policing and enforcement costs. Institutions therefore matter because they minimise these information asymmetries, reduce costs and facilitate the enforcement of contracts by constraining market participants' behaviour and choice (North 1992; Bates 1995; Chang 2014). In the absence of formal contracts as is the case in the flower industry (Macchiavello & Morjaria 2015), informal institutions¹⁰⁹ such as trust within gentlemen's networks, familial ties and reputation built on consistency of quality become the rules of the game, and are the foundation of relational modes of governance in value chains.

NIE exhibits a few limitations in institutional analysis. It holds to a neo-classical framework in which institutions emerge spontaneously, and therefore fails to explain how institutional change comes about (Knight, 1992). It is also limited in its view that market institutions exist primarily to facilitate exchange. Institutions inhabit and carry out a wide range of socio-political purposes beyond facilitating economic efficiency (Knight, 1992; Bates, 1995; Polanyi, 2001). An acknowledgement of the embeddedness of markets in institutional arrangements as first articulated by Polanyi (1944) led to a shift in development policy from "getting the prices right" to "getting the institutions right" (Scoones et al. 2005).

¹⁰⁸ Instrumental rationality holds that ideas and ideologies do not matter, and that efficient markets characterise economies. North (1992:73) argued that the limitations of neoclassical economics are rooted in instrumental rationality, which makes it an institutions-free theory. NIE expands neoclassical economics by abandoning instrumental rationality and centering the fact that we have incomplete information and limited mental capacity with which to process information.

¹⁰⁹ The use of informal mechanisms to guarantee contractual performance has been widely explored in economic literature for example, Johnson, McMillan, and Woodruff 2002; Greif 2005; Fafchamps 2010.

Building further on the notion of the embeddedness of markets, Chang & Evans (2005:2) critique NIE's singular focus on institutions as constraints, because it obscures the constitutive role of institutions in incorporating ideas and culture and shaping how groups and individuals shape their preferences. Chang & Evans (2005) put forward a more comprehensive framing for institutions as, "devices which enable the achievement of goals requiring supra-individual coordination and, even more important, which are constitutive of the interests and worldviews of economic actors." Institutions are therefore constraining, enabling and constitutive mechanisms, which should be seen as socially constructed in response to changes in world view and also constitutive of interests and ideology (Chang & Evans 2005:28). Speaking about the development of export agricultural markets in particular, Ouma et al. (2013:228) explain that the making of markets is a joint venture. "Markets are not seen just to be "there" and "do" things as soon as all obstacles have been removed, they have actively to be created and shaped by – among others – the work of development organizations¹¹⁰."

A relational view of the firm in GPN

This understanding of the firm and the market as governance structures enables us to think of the relational qualities of the firm in global production networks. The firm forms the starting point for the analysis of economic activity and can be anything from a small family business to a multi-national corporation. The term 'relational' is used in the literature on global value chains to discuss various dynamics of interaction between chain or network actors. It has been used to define *relational governance*, one of five earlier discussed forms of governance in a value chain (Gereffi et al. 2005a). The term *relational* has also been used in GPN literature in the context of '*relational rents*'¹¹¹ which is one of the forms of value generated by a firm's asymmetric access to various inter-firm relationships.

¹¹⁰ The heterogeneity of 'makers of the flower market' includes the role of development organisations which provide philanthropic capital such as the Bill and Melinda Gates Foundation, USAID, Fintrac, and the International Institute for Environment and Development (IIED)

¹¹¹ Relational rents as previously discussed could involve, "The management of production linkages with other firms, the development of strategic alliances, or the management of relations with clusters of small and medium sized enterprises" (Henderson et al. 2002:449).

Within the framing of GPNs, a relational perspective of the firm involves understanding its relationship to the territory in which it is embedded and operates. To expound on the relational view of the firm within a territory, *the firm-territory relationship*, Dicken & Malmberg (2001:346) explain that we need to reconceptualise the firm as not only legally bound entities or owners of proprietary assets but as, “institutions with permeable and highly blurred boundaries—in other words, conceptualizing them as “networks within networks” or “systems within systems.” Firms interact with territories and industrial (or agricultural) systems under a governance system that sets the rules, institutions and regulations for the interaction as shown in the image below.

The firm-territory nexus

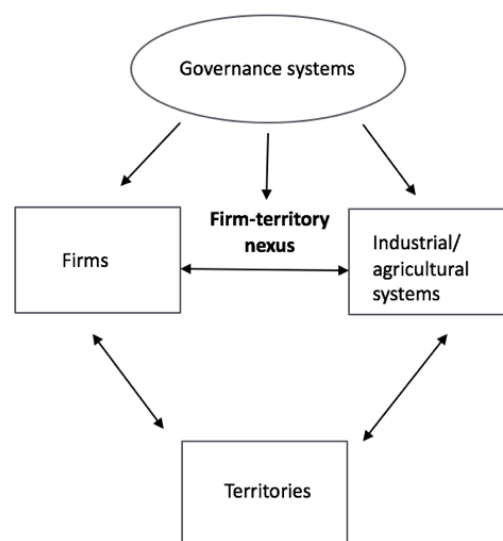


Figure 2.1
Source: Dicken and Malmberg (2001:347)

Firm-territory relationships finds resonance in the idea of “nested institutions” as elaborated by Aggarwal (2005) which explains how broader regimes influence the design of new institutions that are narrower in scope. Nested institutions can emerge either around an issue area or regionally¹¹². Aggarwal (2005) also discusses the creation of parallel institutions¹¹³, which is when institutions deal with separate but

¹¹² For an example of nesting of regional institutions, Aggarwal (2005:4) gives the example of the development of the Asia-Pacific Economic Cooperation grouping (APEC) in 1989 and its relationship to the predecessor of the WTO, the Global Agreement on Tariffs and Trade (GATT). To reconcile tension between GATT and Asia Pacific regional interests, APEC was seen as “a better alternative to using GATT, which permits the formation of free trade areas and customs unions”(Aggarwal 2005)

¹¹³ The proliferation of codes of conduct has led to the emergence of what Riisgaard, (2011:437) refers to as ‘parallelism’, which is where standard schemes operate in parallel in the same issue area. A means of reconciling this institutional conflict is the recent emergence of ‘baskets of standards’ that seek to benchmark parallel codes in an issue area to one highly esteemed code, in a bid to avoid audit

related issues, as another way of reconciling institutional conflicts. The relational concepts of the 'Firm-territory nexus' and 'nested institutions' find resonance for example in the development of the Kenya Flower Council's certification which is benchmarked to the Global G.A.P. standard while adapting to local realities of production¹¹⁴.

2.4. The concept of bargaining power

Bargaining power¹¹⁵ is linked to the agency of producers using a range of strategies to survive and thrive in a global production network, and is defined as the ability to negotiate with influence to bring about desired change (Ladd, 1964:157).

GPN theory discusses power under three main categories - *institutional, corporate and collective power* (Coe &Yeung 2015). While illuminating the locations of power in a GPN, the theory does little to elaborate on the actual process of contestation and bargaining that occurs given the asymmetry of power between actors. To incorporate the idea of bargaining power into the GPN approach, it is necessary to first acknowledge that geography and location of the actors determine the scope of influence of each actor (Arias 2016; Allen 2003). Secondly, Allen (2003) who helped shape the idea of power in GPN theory, elaborated that power is distinctly relational rather than contained in access to limited resources:

“Power as an outcome cannot and should not be ‘read off’ from a resource base, regardless of its size or scope. Power in this sense is no more to be found ‘in’ the wood of musical instruments. It is, as suggested, **a relational effect** [italics mine], not a property of someone or some ‘thing’.” Allen (2003:5)

With this in mind, there are two aspects of bargaining power highlighted by Arias (2016:266) – *episodic bargaining power* and *non-decisional bargaining power*. The third, *ideological bargaining power* is briefly mentioned to frame the possible long term

fatigue and mainstream the sustainability requirements. These are discussed in chapter eight under extra-firm relationships.

¹¹⁴ Elaborated further in chapter eight.

¹¹⁵ The literature on bargaining in value chains typically discusses bargaining power in terms of supplier and buyer bargaining power. An analysis of supplier power would highlight the level of differentiation in inputs and services, possibilities for forward integration and supplier concentration. Buyer bargaining power includes a consideration of for example the concentration of buyer power, access to information, switching opportunities and costs (Joosten, 2007:3).

effects of exercising the first two, but further discussion is beyond the scope of this thesis.

*Episodic bargaining power*¹¹⁶ (Dahl 1961; Clegg 2002) refers to how one actor by using its strategic resources succeeds in making the other actor do something they would not otherwise do. It is “about decision making *situations* and cannot simply be equated to the strategic resources or reputation held by the agents, since such resources [may or may not] be mobilized during the bargain” (Arias 2016:82). The event is shaped by rules, relations and resources which are in turn shaped by more fundamental systemic forces (Alsop 2004:23). In the flower industry, an example of episodic bargaining power is in the scenario where market intermediaries (known as ‘ethical agents’) with the backing of philanthropic capital¹¹⁷ negotiated for amendments to the requirements of the Rainforest Alliance certification, thereby enabling smallholders to supply summer flowers to ASDA and Sam’s Club (Buxton & Vorley 2012). While the certification constitutes the rules, the episodic bargaining process here points to the systemic power of integration into informal networks in the flower industry.

Non-decisional power is derived from Bachrach & Baratz (1963) that attempted to go beyond Dahl’s (1961) view of decision making power which assumed that all matters of concern were surfaced and pursued in decision making spaces. The concept of Non-decisional power was built on *two faces of power* (Bachrach & Baratz 1962) which acknowledges *agency* in decision making and *structure* which accounts for institutional bias. Non-decisional power can be seen where one actor limits the scope of the political process available to the other actor, when issues are deliberately left out of the agenda by one of the actors. Bachrach and Baratz (1962) found that some issues were never voiced or pursued in recognized political arenas or with appropriate decision makers and concluded that power also exists covertly¹¹⁸, that is, outside

¹¹⁶ This is the first of “three circuits of power” articulated by Clegg (1989) as the most visible and easily accessible circuit. The other two are *dispositional power* which concerns social integration, according to the rules of the game and *facilitative power*, which provides the context for the other two and is the basis of system integration (Haugaard and Ryan 2012:47).

¹¹⁷ The Bill and Melinda Gates Foundation, the IIED, The Sustainable Food Lab and commercial experts developed this flower smallholder market access program known as the New Business Models for Sustainable Trading Relationships (NBMSTR).

¹¹⁸ Arias (2016:266) gives an example of *non-decisional power* in how mining multi-nationals in Chile have created the belief that if the state intervenes in any way, the MNE will leave the country.

political arenas, and argued that non-decision making power was ‘the less apparent but nonetheless extremely important face of power’ (Bachrach 1970: 9).

The third relevant aspect of bargaining power is Lukes’ (2005) notion of *ideological bargaining power*¹¹⁹ which refers to when actor A exerts influence over actor B so as to make them completely change their perspective and defend the interests of actor A as if they were Actor B’s own interests. It refers to “how continually strong bargaining positions in terms of episodic and non-decisional bargaining power can shape the perceptions of the less powerful actors in the long term, to ensure the acceptance of their role in the existing order”(Arias 2016:82). These conceptualisations of bargaining power are grounded in the understanding that power is not something that can be materially possessed¹²⁰ (Arias, 2016:266) but rather it is circumscribed by a sphere of activity and by the bounds of relationships.

In the following section, we explore the concept of a knowledge economy in the literature, through the lens of the flower industry.

2.5. The knowledge economy and intellectual property rights in the flower industry

The ‘knowledge economy’¹²¹ has been defined as, “production and services based on *knowledge-intensive activities* that contribute to an accelerated pace of technological and scientific advancement as well as equally rapid obsolescence” (Powell & Snellman 2004:201). It has also been defined as an economy in which knowledge is the key input for production in contradistinction from an agricultural economy in which land is the main resource or an industrial economy in which labour and or coal for example are the main resources (Houghton & Sheehan 2000). In the economy, these advancements can be measured through the increasing relative share of the gross domestic product that is attributable to “intangible” capital (Powell & Snellman

¹¹⁹ It is based on Lukes’ conception of the three dimensions of power, where the third dimension of power is defined as “the power to prevent the formation of grievances by shaping perceptions, cognitions, and preferences in such a way as to ensure the acceptance of a certain role in the existing order (Lorenzini, 2006:92)”.

¹²⁰ For example, bargaining power among producers in the flower industry is not primarily derived from possession of specific physical assets or technologies. Rather, it is linked more to producers’ strategic integration into export *networks* through various forms of collective action and ownership and utilisation of *knowledge*.

¹²¹ The idea of the knowledge economy was popularised by management theorist Peter Drucker (1959) when he described the rise of the *knowledge worker as one* who whose main asset is her knowledge.

2004:201). Global firms that¹²² are knowledge leaders in their fields typically exhibit enormous outlays of R&D spending (Nolan et al. 2008:36-37).

The flower industry was first analysed as “knowledge-intensive” by (Hughes 2000b) and later by Bolo & Adeya (2006). Building on Appadurai’s (1986) formulation of technical, social and aesthetic knowledges, Hughes (2000:218) explained that:

“Other critical knowledges shaping the flower industry include an understanding of cold-chain management in international logistics, seasonal dynamics of markets in relation to flower varieties, the codes of conduct that govern competitive participation and access to markets, and the increasing digitalisation of flower markets globally.”

It is important to analyse the disjunctures between the cut flower industry and the local economy so as to contribute to this important but under-explored aspect of the flower industry.

The role of knowledge in the economy

Knowledge is key to the long-run growth of an economy (Romer 1986)¹²³, as seen through investments in *R&D* and in advancing *human capital* (Becker et al. 1990) to spur innovation. Developing policies that drive efficiencies or cut costs of doing R&D with respect to intellectual property, trade, competition, education and taxes can influence the rate of innovation and drive economic growth (Howitt 2008).

Intellectual Property Rights (IPRs) protections are necessary institutions because knowledge is considered an impure public good given that it is non-rivalrous but is to some extent excludable. With no charge, there would be no incentive to produce knowledge and therefore for knowledge to be privately provided, certain protections

¹²² Nolan et al. (2008:37) “Each of the main automobile assemblers spends between US\$2–8 billion annually on R&D” (DTI, 2005)

¹²³ Romer’s (1986) *theory of endogenous growth* explained that the rate of endogenous growth is determined by forces that are internal to the economic system especially forces which govern opportunities and incentives for technological knowledge. The rate of technological progress is driven by ideas and innovations such as new products and processes. While investments in physical capital are subject to diminishing returns, knowledge as input in production has increasing marginal productivity. Many innovations therefore emerge from investments in R&D and in what Becker et al. (1990:13) termed as Human Capital. “Since human capital is embodied knowledge and skills, and economic development depends on advances in technological and scientific knowledge, development presumably depends on the accumulation of human capital.”

or property rights must be availed (Stiglitz 1999). However, excessively strong property rights regimes can also hinder innovation. Since there are extensive externalities associated with innovation meaning that the originators might fail to get their dues, the issuance of patents as protections has been used to curtail competition and in some cases create monopolies (Stiglitz 1999:11).

IPRs have been a controversial issue in developing country contexts particularly in the wake of the Trade Related Intellectual Property Rights (TRIPS) agreements under the WTO (Chang 2001; Maskus 2001). Much of the theoretical literature weighs the costs and benefits¹²⁴ of introducing IPR protections in developing countries particularly in the context of global trade between “northern innovators” and “southern imitators” and the tendencies of IPR to favour producers over consumers (Chin & Grossman 1990; Diwan & Rodrik 1989; Helpman 1992; Markusen 1998). However, Chang (2003) showed from a historical perspective that there is no sound theoretical or empirical evidence supporting the argument that strong IP laws are necessary for the economic growth of developing countries. In flower breeding, the main IPRs are plant breeders’ rights¹²⁵.

2.6. Conclusion

This literature review has provided an overview of the empirical and theoretical literature framing the interactions of the Kenyan flower industry with the global economy. The empirical literature outlined two streams – development policy literature focussed on materialist concerns over resources and actors and contestations therein, and critical political economy literature which is focussed on debates around sustainability and governance within the industry. The theoretical literature review traces major themes emerging from Global Value Chain (GVC) literature leading up to the suitability of the GPN theory as the analytical framework. In regards to the flower industry, GVC theory (particularly notions of the buyer-driven chain and the five modes of governance) is engaged mainly to provide an analysis of governance given the proliferation of private voluntary initiatives in the sector. Furthermore, the chapter introduces Dembinski’s (2009) notion of ‘the focal firm’ to highlight the centrality of the

¹²⁴ The costs include a reduction in revenues of industries which imitate the products from developed countries, and increases in the prices of protected products. The benefits of introducing IPR might include increases in local innovation, in FDI, R&D and technology transfer.

¹²⁵ Plant Breeders’ Rights are discussed in detail in chapter five.

consolidator-exporter as the key intermediary in the cut flower trade. Only a few studies use the GPN framework to analyse the flower industry, and these engage the GPN network metaphor as well as the conceptualisation of actors' strategies and value capture to discuss the sector's dynamics in Ethiopia and Latin America. Having surmised that no GPN analysis of the Kenyan flower industry has been undertaken, I operationalise the GPN framework to offer a micro and relational perspective on the strategies of Kenyan mid and small scale flower producers' navigating shifting export markets.

The chapter then isolates and discusses in sequence four key concepts in conversation with the GPN framework. These concepts include networks, institutional theories, the notion of bargaining power and the knowledge-intensive nature of the flower industry. Respectively, these concepts outline the heterogeneity of actors and the relational view of the firm that recognises agency embedded within particular 'rules of the game'. The idea of bargaining power among producers is portrayed as a contested practice emerging either in episodic or non-decisional forms, and which plays out through their networks and their utilisation of knowledge. With these key ideas from the literature, the next chapter develops the analytical framework.

3. Conceptualising Kenyan cut flower producer networks, strategies and knowledge implications

3.1. Introduction

This chapter develops the analytical framework building on the overview of the bifurcated structure of production and flower export markets provided in chapter one, and the analysis of empirical and theoretical literature in chapter two. This third chapter will engage the Global Production Networks (GPN) framework to conceptualise the networks, strategies and knowledge implications emerging from the sample of mid and small-scale Kenyan cut flower producer networks as they adapt to the demands of shifting export markets.

This research employs the network rather than the chain metaphor¹²⁶ because that more accurately portrays the heterogeneous, differentiated and nested nature of relations of production and marketing locally (horizontal dimension) as well as trade globally (vertically). Although the GPN framework is more suitable for understanding the overall form and functioning of the Kenyan flower industry, elements of the GVC analysis such as the five modes of governance (Gereffi et al. 2005b) and the concept of 'big buyers' (Dolan & Humphrey 2000) are retained. It also contests with the limitations of other key GVC notions such as 'upgrading' in favour of the more relational idea of 'strategic coupling' articulated in GPN.

The thesis question which asks, "**What strategies do Kenyan cut flower producer networks employ to seek greater bargaining power in response to shifts in export markets?**" seeks to shed light on the practices, relationships and contestations that make up small and mid-scale producer strategies navigating changes in export markets in Europe and beyond. This section theorizes these producer practices and relationships by exploring the merits and limitations of the Global Production Network 2.0 theory, which provides a lens through which we can better understand the complexity of actors in relation to each other as they work to

¹²⁶ As discussed in the theoretical literature review, chain and network frameworks remain the major ways of analysing complex production, value addition and market participation processes in global industries.

create, enhance and capture value, their strategies, and their developmental impacts. In this regard, the chapter is guided by the sub-question below (1 of 3):

Thesis sub-question 1: To what extent does the Global Production Networks framework explain how cut flower producers adapt to shifts in export markets?

- a) To what extent does GPN theory explain the **interests and position of the variety of actors** in the Kenyan cut flower production network in line with the shifts in export markets?
- b) To what extent does GPN theory help us to understand the **strategies of actors** as they adapt to shifts in export markets?
- c) What are the strengths and limitations of GPN theory in explaining the **development implications** for the localities where the Kenyan cut flower network is embedded?

To answer this question, this chapter will discuss the application and limitations of GPN, evaluate its suitability to the cut flower industry and then operationalise an attuned version of the framework to the empirical findings on the strategies and relationships of cut flower producers from my research¹²⁷. The chapter then develops the conceptualisation of bargaining power from producers' perspectives and then moves on to the developmental implications of the industry by engaging GPN's concept of strategic coupling in reference to the cut flower knowledge economy.

3.2. Global Production Networks 1.0 application and limitations Analysis of the three main categories of analysis – Value, Power and Embeddedness

The Global Production Networks (GPN) framework was developed to provide a more rigorous and dynamic approach¹²⁸ to globalised economic relations. Henderson et. al (2002: 448) developed the initial GPN framework (henceforth referred to as GPN 1.0) along three categories (summarised in figure 3.1).

¹²⁷ The adapted version is summarised in appendix A and cut flower farmers' strategies in the schematic 3.1.

¹²⁸ The GPN framework also developed in response to a call to the 'relational turn' in Economic geography (Massey et al 1999), which emphasised "actors and structures that effect dynamic changes in the spatial organization of economic activities" (Yeung 2005:1).

- *Value* in both the Marxian sense of surplus value and also in terms of economic rents¹²⁹. Value is conceptualised in terms of how it is created, enhanced and captured
- *Power* which is categorised into three forms: corporate power, collective and institutional power
- *Embeddedness* which means the connection between agents and with the environment or context within which they operate. This is discussed along three fronts: territorial, network and societal embeddedness.

This formulation of GPN represented a move away from the commodity focus used in Global Commodity Chain and Global Value Chain frameworks, and towards a discourse of production. It enabled a refocussing on the “social processes and circumstances underlying the production of goods and services and reproducing knowledge, labour and capital” (Henderson et al. 2002:444). Production according to GPN theory is defined as the “collective participation in value adding activity by a variety of actors in different sectors, industries and locations to create finished goods or services” (Coe & Yeung, 2015:34). This is a useful analytic point for my research which is centred on cut flower production, a process which entails breeding and propagation of plant material, growing, consolidating, transporting and packaging the flowers for sale. These processes of production are very knowledge intensive (Hughes 2000a) and it is therefore key to outline these previously under-researched dynamics surrounding the (re)production and management of knowledge in the cut flower industry.

Approximately 15 years into the development of GPN theory, Coe & Yeung (2015:3) describe a Global Production Network as “an organizational arrangement, comprising interconnected economic and non-economic actors, coordinated by a global lead firm, and producing goods or services across multiple geographic locations for worldwide markets”. This description emphasises three key elements of GPNs – a diversity of actors, strategies and multi-scalarity or a recognition of multiple locations as the sites of global economic production with a particular focus on the sub-national dimension since that is where development actually takes place. It gives equal importance to sub-

¹²⁹ Coe & Yeung (2015: 16) “Rent is created in a situation where a firm has access to scarce resources that can insulate it from competition by creating barriers to entry for competing firms.”

national and regional dynamics, rather than foregrounding national level interactions as the GCC/GVC approach does (Coe et. al 2002). This unique multi-scalar approach of the GPN is particularly relevant to my work on both mid and small scale flower producers whose strategies are grounded in a range of agro-ecologies, while at the global level it allows for the expression of shifts in export markets.

GPN 1.0. A framework for analysis

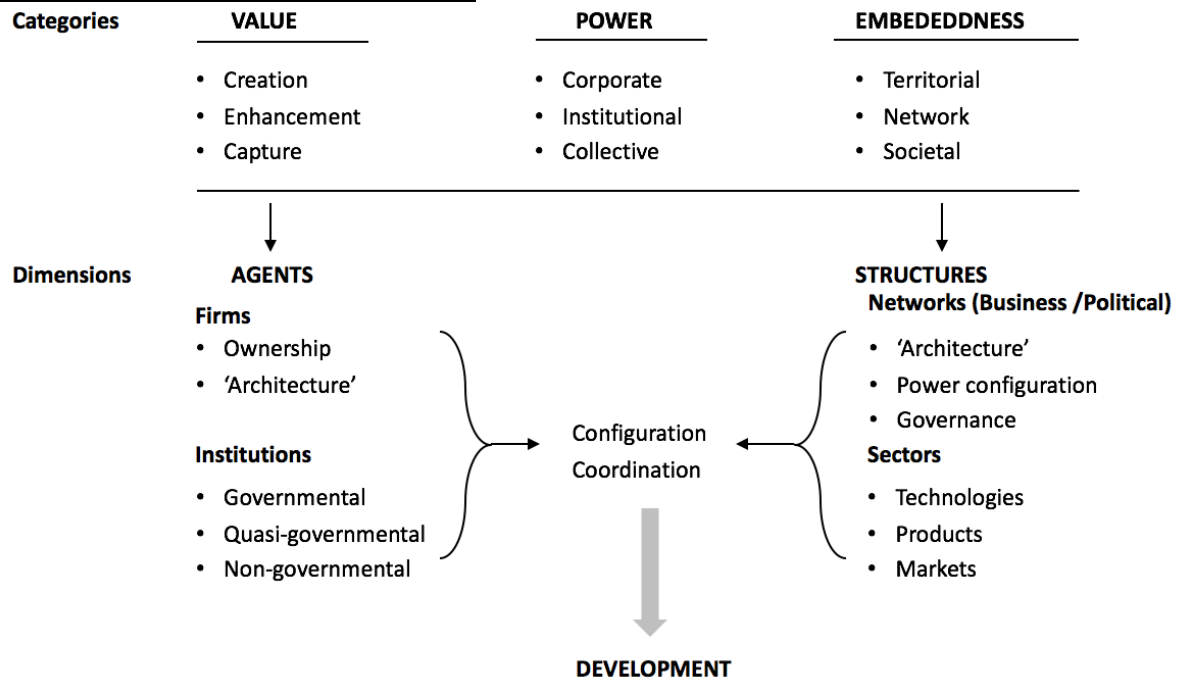


Figure 3.1. Source: Henderson et al. (2002:448) and Coe & Yeung (2015: 18) GPN 1.0: A schematic representation

The overall appeal of the GPN theory for my research rests on two of its key tenets – the analytical categories of value, power and embeddedness, and the utility of the network metaphor, both of which are further developed in the revised version of the theory, GPN 2.0. The argument will employ the first two categories of value and power for an analysis of producer strategies while the third category, embeddedness, will emerge strongly in the narrative on the regulatory landscape in which producers generate, enhance and capture value and exercise power¹³⁰.

¹³⁰ See chapter eight for an in-depth discussion on the regulatory landscape of the Kenyan flower industry.

Value

The first category discusses *value creation, enhancement and capture* which encompasses the strategies observed among mid-scale cut flower farmers as they try to better position themselves as preferred suppliers within shifting export markets. Value creation is concerned with the use of technology to generate value, the various ways of converting labour power into labour, and the possibilities thereof of capturing various forms of rent. Value enhancement entails the process of technology transfer, improvement and whether local firms can begin to generate organisational, relational and brand rents on their own (Henderson et al. 2002:449). Value capture is dependent on government policy¹³¹ and corporate governance which facilitate the repatriation of profits or more indigenous ownership¹³².

Power

The second analytical category on *power* is relational, and by use of the network metaphor eschews a zero-sum conception of power as derived only from lead firms. GPN 1.0's conception of power therefore allows us to highlight the agency and autonomy of small and intermediary firms which use a range of strategies to survive and thrive in globalised trade (Henderson et al. 2002:450).

Corporate power refers to the lead firm's capacity to influence decisions and resource allocations, decisively and consistently in its own interests, through the control over key resources, like information, knowledge, skills and brands within a GPN (MacKinnon 2012). Global lead firms often exercise power through the asymmetric control of information. Lead firms such as supermarkets or the 'big buyers' at the Dutch auctions have corporate power to influence producer strategies. Secondly, 'focal firms' identified as consolidator-exporters exercise corporate power in their ability to link

¹³¹ Chapter nine outlines contestations between the flower industry and the state on value capture issues including taxation.

¹³² Linked to the category of value as described above, in chapters seven and eight I discuss two strategies producers employ as they manoeuvre through the demands of export markets. The first are *intra-firm strategies* which pertain to the management of flower varieties for supply to export markets, as well as the management of labour in mid-scale farms. The second are inter-firm strategies that correspond to the diversity of relationships between flower farms and focal firms which are consolidator-exporters. These two strategies map on to GPN forms of value creation through generation of various kinds of rents (Kaplinsky 1998, 2005) such as organisational rents, technological rents, relational rents and brand rents (Henderson et al, 2001:449) as elaborated in table 4.1.

producers to buyers and add value to the cut flower commodity by managing economies of scale, diversity of varieties in accordance with demand and maintaining the aesthetic value of the flowers by managing the integrity of the cold chain. In the midst of this, smaller firms can and do find ways to navigate, manoeuvre and negotiate the exercise of power by lead firms but their capabilities are limited by various shortcomings of technical capability, high information costs and weaknesses in collective action.

Institutional power is defined as power exercised by local and national institutions, international institutions, the Bretton woods institutions, UN agencies and various financial institutions. It comes into play in considering the dominance of private voluntary initiatives which govern market access in the flower industry, as well as the public regulatory structures such as taxation, traceability and trade policy instruments which span local, national and regional borders.¹³³

Third, *collective power* refers to the actions of collective agents who influence the workings of the sector. These include firms (trade and labour unions, employers' associations), consumers and civil society organizations (NGOs involved with human and environmental issues, neighbour councils, consumer associations and political parties) and academia (Henderson et al., 2002). The notion of *collective power* leaves room for the producers' autonomous, creative and collective forms of engagement with the market¹³⁴

¹³³ A popular narrative for the development of the Kenyan flower industry is that it has flourished because the government 'stayed out' and let the private sector manage the sector with relative independence. However, an historical analysis of the origins of the sector show very active government support¹³³ of private sector efforts elaborated in chapter one. The nested nature of institutional power (Aggarwal 2005) in the flower industry emerges through the interplay of the public and private forms of governance

¹³⁴ Among mid-scale farmers their collective power is seen in the mutual creation of an export marketing firm between four farms, as well as under the umbrella of the Kenya Flower Council which lobbies for the corporate interests of its producer members. The main limitations on smallholders' collective power are high information costs, weak group governance and weak integration into global trade networks.

Embeddedness

Territorial embeddedness as developed in GPN 2.0 refers to how firms are anchored¹³⁵ in different places from the local to the global (Henderson et al, 2002: 452) and how they operate within territorial influences based on local policy, infrastructure, regulatory arrangements and incentive structures (Coe & Yeung, 2015: 177).

Network embeddedness refers to the structure and stability of actors' relationships, both formal and informal regardless of their country of origin or local anchoring. Hess (2004: 174) explains that the literature on embeddedness stresses the central role of concrete personal relations and networks of relations to generate trust. Network embeddedness seems to be a necessary condition to facilitate Gereffi et. al's (2005) relational mode of governance which relies on trust and familial connections for market coordination¹³⁶.

Societal embeddedness was added later to GPN 1.0 theory (Hess, 2004: 176) refers to the 'genetic code of firms' which account for their cultural, institutional and historical origins. The concept steps away from an over-spatialized perspective, and roots itself in the Polanyian view which accounts for the discursive relationship between the firm and the institutions it interacts with¹³⁷.

The table in appendix A summarises an effort to map the GPN 1.0 categories of value, power and embeddedness to the Kenyan flower sector. The first two categories of value and power are much more detailed than the section on embeddedness which further underscores the rationale for focussing the analysis of my field work on the first

¹³⁵ The establishment of the flower industry in the lake Naivasha region as well as in the Central highlands shows territorial embeddedness between the industry and the local agro-ecology and critically with the availability therein of relatively cheap, migrant labour. Secondly, territorial embeddedness is seen in the interaction of Kenyan flower producers with the meshwork of private and public forms of governance expounded on in chapter 8 of this thesis.

¹³⁶ For the Kenyan cut flower industry, network embeddedness consists of the nurturing of trust between firms in a contract-free environment (Macchiavello & Morjaria 2015) via gentlemen's agreements, as well as the existence of a myriad of codes which transmit information and police access and reputation in the industry, and therefore coordinate market relationships.

¹³⁷ I refer to societal embeddedness in chapters one and seven in highlighting the elite origins and ownership of the commercial cut flower sector seen in investment from foreign (European) and Kenyan political circles, European engagement in production and the exploitative use of migrant and mostly female labour on plantations.

two categories¹³⁸. The third category on embeddedness is considered cross-cutting and emerges in the discussion on extra-firm bargaining which will be elaborated in chapter eight of this thesis. Since my argument is concerned with the strategies, relationships and contestations of mid and small scale cut flower production networks which call for a more micro and relational perspective, we now consider the suitability of the revised version of the GPN theory known as GPN 2.0 discussed below.

3.3. Evaluating the suitability of Global Production Networks 2.0 to empirical findings

Having discussed the basic framework for GPN theory and its relevance to my empirical findings along the analytical categories of value, power and embeddedness from GPN 1.0, this section transitions to explaining why the revised version of GPN theory – known as GPN 2.0 – is particularly suited to understanding the Kenyan cut flower production network. GPN theory in its original formulation was criticised for a failure to specify the causal mechanisms linking the key analytical categories of value, embeddedness and power to *how* the global economic system actually works. In response to this challenge, Coe & Yeung (2015) developed a more advanced theoretical framework for the Global Production Networks labelling it *GPN 2.0*. This sought to elucidate *how* global production networks work. In doing so, GPN 2.0 provides compelling conceptualisations of three central aspects of my research – actors, strategies and networks.

Conceptualisation of actors in GPN 2.0

GPN 2.0 places economic actors into three categories – firms, extra-firm actors and intermediaries, which renders itself well to a robust analysis of the array of actors from my field work ranging from breeder farms, flower farms, consolidator-exporters, freighters, export handlers and the Dutch auction and European retail giants which are the *lead firms* or more accurately, *the big buyers* (Dolan & Humphrey 2000). The view of the firm employed under GPN 2.0 is useful because it is relational in nature, that is: “firms are collective social actors rather than production functions or cost minimisation

¹³⁸ While the categories of value, power and embeddedness provide a useful macro-framing for analysing the functioning of actors in the cut flower production network, this framework is but the first step to a thorough consideration of the empirical findings. My argument is concerned with the strategies, relationships and contestations of mid and small scale cut flower production networks. This more detailed micro and relational perspective is provided in the revised version of the GPN theory known as GPN 2.0, the suitability of which is discussed at length in section 3.3

devices (Coe & Yeung, 2015: 127). Thinking of firms as collective social actors or as “societally embedded”(Hess 2004) actors also allows us to develop a richer, more complex image of cut flower industry actors considering for example, their corporate cultures, norms, ownership modes and technological capabilities.

While accounting for historical contingency and structural dynamics, GPN 2.0 theory places actor agency and intentionality at the centre of understanding how global production networks actually work. GPN 2.0 also outlines the importance of identifying a lead firm, which in the cut flower production network is changing from the Dutch auction to supermarkets. Identifying the evolution of the lead firms in the flower value chain enables a clearer understanding of the mechanics of coordination and control in the production network. Medium and small scale cut flower farms, hitherto underexplored producers in the sector, are the primary suppliers whose strategies of value generation, enhancement and capture are under study in light of the shift in export markets. The role of extra-firm actors in particular the state comes into play in the contestations over the tax regime regarding duplication of taxes and trade policy negotiations at the regional and global levels, as well as voluntary private certification bodies that are increasingly shaping the access to markets and governance within the industry. GPN 2.0’s unique proposition is in highlighting the role of *intermediaries*¹³⁹ categorised as financial, logistical and in standard-setting. It acknowledges that intermediaries have often been the ‘missing links’ in GPN discussions.

Analysis of the network metaphor in GPN theory

The ‘network’ metaphor in GPN theory portrays “production systems ... as networked and recursive meshes of intersecting vertical and horizontal connections in order to avoid deterministic linear interpretations of how production systems operate and how value is generated and distributed” (Coe & Yeung, 2015:18). The network concept therefore breaks from the rigid understanding of intra-firm hierarchical control (as in Fordism) to an acknowledgment of inter-firm and extra-firm networks (Coe & Yeung, 2015:34). In its initial formulation, GPN went beyond the GVC approach of focussing

¹³⁹ The role of the intermediary in the cut flower industry is emphasised by employing Dembinski’s (2009) concept of the *focal firm* to describe consolidator-exporters which link producers to direct markets and coordinate just-in-time delivery as well as enhance the value of the cut flowers through various forms of volume consolidation into bouquets, packaging and marketing.

on inter-firm transactions to encompassing all relevant sets of actors and relationships¹⁴⁰ (Coe et al 2008:272).

The network metaphor also allows for the articulation of autonomous action of domestic firms within globalised systems of production (Henderson et al. 2002:445). It enables a fuller conceptualisation of the varieties of ways in which power is exercised for example, in the rejection of zero-sum power of lead firms and acknowledgment of the power of local firms to exercise their own strategies (Henderson et al 2002: 450). The notion of autonomous action is useful for understanding the variety of contested relationships that small and mid-scale producers engage in to obtain greater bargaining power. It also remains cognizant of the wider structural limitations upon those actions and the dialectical relationship between the actor and those constraints (Coe & Yeung, 2015: 18). In doing so, the framework situates itself at the intersection of structure and agency, a position coined as 'structuration' by the sociologist Anthony Giddens (1979,1984). This perspective eschews the determinism implicit in value chain literature and allows for a richer, grounded explanation for the variety of strategies that Kenyan cut flower producers employ in a bid to secure lucrative export markets. Having outlined the depiction of actors, networks and strategies as the relevant aspect of GPN 2.0 theory to my research, the section that follows operationalises the framework to my findings.

Conceptualisation of strategies in GPN 2.0

GPN 2.0 addresses the shortcomings of the initial formulation of GPN theory by explaining causality in GPNs, that is, *why* global production networks emerge and how they evolve¹⁴¹. In addition to conceptualising actors as inherently relational, the theory seeks to explain causality by identifying three *dynamic drivers of value activity* which include cost-capability ratios, sustaining market development and exerting financial discipline (Coe & Yeung, 2015: 81) and they are depicted in figure 3.2. below.

¹⁴⁰ This view was developed from selectively incorporating ideas from Actor-Network Theory (ANT) developed by Bruno Latour, Michel Callon, and John Law and is elaborated on in the literature review. Dicken et al. (2001) used the network metaphor in the GPN framework to provide a relational view of the firm not as individual agent but as constitutive of the wider network through which power and development effects intersect. This network formulation is relevant for analysing the strategies of actors which are collectively responsible for 'making the market' (Ouma, 2010) in diverse and intersecting ways.

¹⁴¹ The reasons why the Kenyan cut flower production network evolved are however beyond the scope of this thesis and so these drivers will not be evaluated further.

The causal mechanisms of Global Production Networks

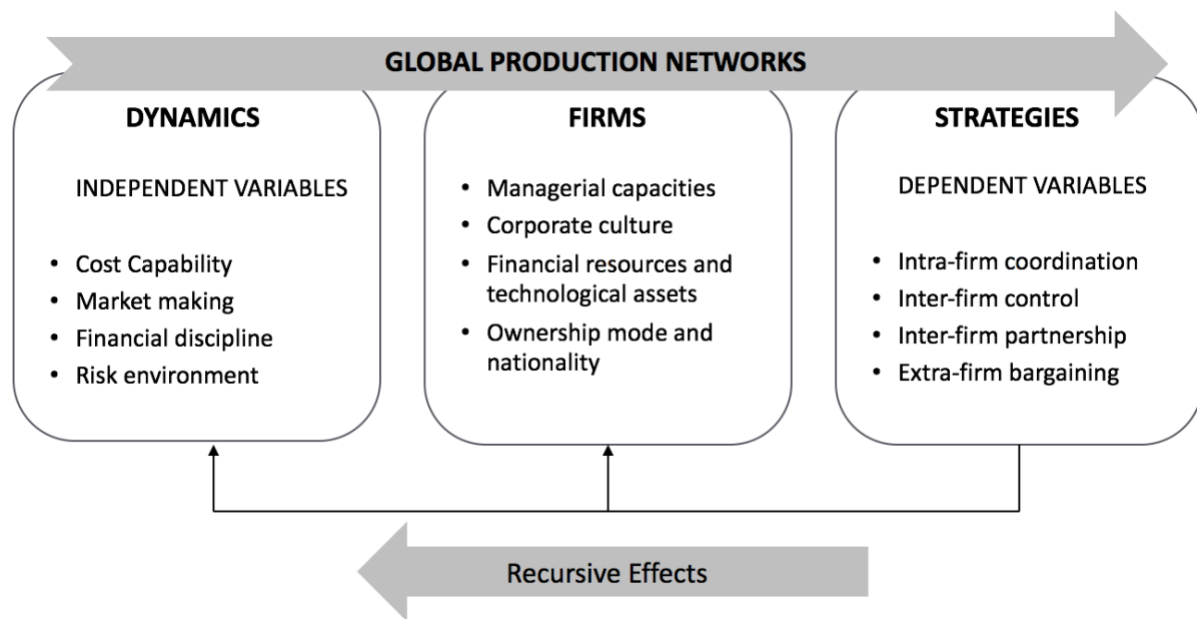


Figure 3.2.

Source: Coe & Yeung (2015: 124)

In addition to explaining *why* global production networks emerge along the three dimensions mentioned above, GPN 2.0 shows its strength in explaining *how* a range of economic actors organize and govern their value-added activities by laying out the *strategies of corporate actors* within global production networks. We can think of the causal dynamics depicted in the figure 3.2. above as independent variables and the strategies of actors as the dependent variables which interact to influence development outcomes. Strategy is worthy of consideration because it “represents the purposeful response of actors to the challenges of competitive dynamics in the face of real world uncertainty” Coe & Yeung (2015: 125).

Cut flower farmers’ strategies – a schema

Acknowledging that there is little research on how firms reorganise their value activities within in order to meet emerging market challenges, GPN 2.0 outlines three strategies employed by firms often in intersecting ways: (i) *Intra-firm strategies* of coordination (ii) *Inter-firm strategies of control and partnership* and (iii) *Extra-firm* interactions which are forms of bargaining.

- (i) *Intra-firm strategies* of coordination entail processes of internalization and consolidation. *Internalization* refers to when a firm engages in horizontal

specialisation - “a strategy of expanding into adjacent markets and or products/ services by fully exploiting firm specific proprietary assets” (Coe & Yeung 2015:129). It allows the firm to act in greater economies of scope.

Consolidation requires the firm to integrate its resources and capabilities.

This strategy manifests differently for lead firms (The Dutch Auction and supermarkets), focal firms (consolidator-exporters) and producers (cut flower farms)¹⁴².

(ii) *Inter-firm strategies of control and partnership.*

Inter-firm control is described as “a highly-managed externalization strategy through which a lead firm outsources a very significant part of its value activity to independent suppliers and contractors and exercises strong control over their production processes and product quality (Coe & Yeung, 2015: 135)” Hierarchical or captive forms of governance (Gereffi, Humphrey, & Sturgeon, 2005) are common where the power dynamic is asymmetrical in favour of the lead firm. Suppliers tend to be ‘locked in’ to their production functions with little capacity to move into higher value added functions (Bolo, 2010). Modular relationships are seen more often between capable mid-scale producers and consolidator-exporters.

Inter-firm partnership is defined as the collaboration, co-evolution and joint development of a lead firm and its strategic partner or key suppliers in the same global production network (Coe & Yeung 2015: 142). Lead firms and their strategic partners must complement each other in terms of resources and capabilities, and secondly standards and codification schemes must exist in order to establish trust and confidence between partnering firms. Firms enter into cooperative relationships where the risk environment is high e.g., operating in volatile markets, or susceptibility to supply chain disruptions. In the flower industry, inter-firm coordination can be seen whereby a supermarket as lead firm partners with a brand-name global consolidator-exporter firm to ensure a consistent, high volume supply of quality, certified flowers. This partnership reduces the transaction and coordination costs and minimises risks in supply disruption for supermarkets seeking a large, diverse and specified volume of high quality flower varieties. It enables consolidator-exporters to capitalise on their

¹⁴² The variety of firm strategies are discussed in chapter seven.

vast local supply networks to ensure consistency and just-in-time supply to their customers. Over time, this form of coordination further leads to a “cascade effect” (Nolan, Zhang, & Liu, 2008) where supermarkets tend to opt for a fewer, larger strategic partners e.g., signing only with one large consolidator-exporter and this preference cascades to working with select large scale flower farms rather than a variety of smaller ones. This reduces the transaction costs of coordinating supply across multiple consolidators, and also minimises the effort of maintaining multiple relationships given that the industry is virtually contract-free (Macchiavello & Morjaria 2015).

(iii) *Extra-firm* interactions are predominantly *bargaining strategies* (Coe & Yeung, 2015: 129).

Extra-firm bargaining entails a two-way process of negotiation and accommodation between firms and extra-firm actors in order to reach a mutually satisfactory outcome as far as the creation, enhancement and capture of value is concerned (Coe & Yeung, 2015:151). GPN 2.0 theory outlines three objectives for actors engaged in bargaining strategies – *market power, proprietary rights and social and political legitimacy*. The role of state actors is key in regulating specific sectors, negotiating trade agreements at a regional or international level, assuring institutional support for protection of R&D investments among others. The proliferation of certification mechanisms to regulate behaviour of firms within the flower industry checks market access by policing the quality of production processes. The form of extra-firm bargaining employed shows the variability of actors’ strategies depending on which territories they are embedded in, that is their national identities, competing local and international interests and changing positions in the global economy.

These three strategies are summarised in table 3.1. below. They provide perspectives which show how despite the arguments made in GVC literature about the leviathan-like power of lead firms and the limitations of producers’ power in buyer-driven value chains, Kenyan cut flower producers at the mid and small scale show use a diversity of strategies to navigate their way and adapt to the demands of shifting to more lucrative export markets. Recognising the variability and intentionality of actors’ strategies in this process of seeking out new markets contributes to our understanding

of the practices of how cut flower firms create, enhance and capture value and exercise their bargaining power in the process.

Schematic of intra-firm, inter-firm and extra-firm strategies employed by mid-scale cut flower producers

Intra-firm strategies		Inter-firm strategies		Extra-firm strategies	
Market	Strategy	Dynamic	Strategy	Institution	Strategy
Dutch Flower Auction	<i>Diversification of varieties</i>	Control	Hierarchical governance between supermarkets and less capable suppliers OR in direct sourcing arrangements	Voluntary private codes and International regulations e.g., UPOV	<i>Compliance</i> by capable producers
Supermarket	<i>Specialize Standardize Scale varieties ("Triple S")</i>		Captive governance between outgrower firms and smallholder farmers in "contractual collectives"	National regulation e.g., tax, trade policy	<i>Contestation</i> by organised and powerful producers
"Differentiated" direct markets such as florists or non-traditional markets	<i>"Going niche" with varieties</i>	Partnership	Modular governance between supermarkets and capable mid-scale producers	"Differentiated" direct markets	<i>Circumvention</i> by less capable producers
Direct markets	Coordination of labour focussing on year-round production, increasing productivity and worker retention		Smallholder farmers' "collectives of convenience" exporting to the auction		

Table 3.1.
Source: Author's analysis

Mapping GPN 2.0 network configurations to Kenyan cut flower producer networks

GPN 2.0 theory provides a richer, fuller explanation of the various network configurations employed by cut flower producers in an effort to manage shifts in export markets. Global Production Networks typically have a distinctive lead firm and then interact with a constellation of firm and extra firm actors described as ‘strategic partners’ and ‘specialised suppliers’, and the customer to show the dynamics of networks within and between industries. The two main organizational configurations according to the theory are a Strategic Partnership Model and a Lead Firm-centric model, discussed below in relation to the Kenyan cut flower industry.

In a *Strategic Partnership model*, “a global lead firm engages another firm as a strategic partner to provide partial or complete solutions for its product to key customers” (Coe & Yeung, 2015: 59). GPN 2.0 draws on examples of ‘specialised suppliers’ and ‘strategic partners’ from the manufacturing and service industries to develop this network configuration. However, in the cut flower industry, what GPN 2.0 refers to as the strategic partner translates into the consolidator-exporter, that links the “big buyer” (supermarket) in direct markets to the grower for the supply of cut flowers. Although the Dutch auction is designed for wholesale of cut flowers, it does not stipulate viable scale to producers, which allows smallholders with limited volumes to participate. The consolidator-exporter firm adds value to production by sharing export market information about trends in demand, manages the cold-chain and maintains the integrity of the aesthetic value of the flower commodity, contributes to export-readiness by packaging the cut flowers into bouquets, maintains the consistency of demand and supply, and ensures just-in time delivery to direct markets. Given the complexity of roles that the consolidator-exporter plays, it does not fall neatly into the binary characterisations of a ‘specialised supplier’ or ‘strategic partner’¹⁴³ as laid out in GPN 2.0, but rather renders itself more to the notion of “focal firm” (Dembinski, 2009:120) within the production network. Dembinski (2009) studied the

¹⁴³ The flower industry does not map neatly onto either one of these two typologies because of the importance of seasonality and variety in the industry. Consolidator-exporters are *both* specialised suppliers and strategic partners because they deal in supplying specialised/specific varieties based on orders that are specific based to the market. Depending on the scale of producer that they source flowers from and the market, they can also be a strategic partner. For example, the supermarket Marks and Spencer is moving towards having only one strategic partner, MM, to specially supply its cut flower demand, and MM’s flower portfolio is one third owned by a large-scale Kenyan farm, Veg Pro.

interactions between very large enterprises and SMEs and explained that a firm plays a focal role when it operates value adding processes on both sides of the focal point¹⁴⁴ within a global value chain – that is in production and in marketing. He further explains that in the automotive, cinema and software industries he had researched, focal firms tended to be large global firms listed on stock markets. The Dutch Flower Group¹⁴⁵ is a family of 25 businesses engaged in the cut flower trade and the largest trader in the industry. It is a good example of a focal firm in the cut flower industry, that is engaged in consolidation and export. In order to cut down on costs and minimise risks, supermarkets can choose to engage in direct sourcing and internalise the focal role of the consolidator-exporter as explained in the model below.

In a *Lead Firm Centric model*, there is no strategic partner but rather the lead firm dominates the entire network. In the Kenyan cut flower industry for my sample of mid and small scale flower producers, the lead firm is the supermarket. The supermarket may choose to internalise the functions of the consolidator-exporter so as to cut down on the costs of contracting an external firm. The lead-firm centric model is seen in *direct sourcing arrangements* where the supermarket has a subsidiary¹⁴⁶ that sources directly from growers, thereby internalising the critical functions of cut flower consolidation and export. Increasingly, direct sourcing is seen as a way to enhance the image of sustainable sourcing and transparency to the consumer. Another form of the lead-firm centric model can be seen in the case of *vertically integrated large scale flower farms* which enter into joint ventures with large focal firms located in export markets and that strategically supply large supermarkets¹⁴⁷.

¹⁴⁴ Dembinski (2009:121) explains the focal point of a global value chain to be the point where “the focus of attention moves from production to the market”.

¹⁴⁵ The Dutch Flower Group is discussed in detail in chapter seven as part of a network configuration for mid-scale cut flower farmers.

¹⁴⁶ A good example of this is International Procurement Limited which is ASDA’s sourcing firm that purchases cut flowers or packed-at-source bouquets directly from Harvest flower farm in Kenya.

¹⁴⁷ A good example of this is the partnership between MM Group, a leading supplier of fresh produce to Marks & Spencer supermarket in the UK and Veg Pro flower farm in Kenya. MM’s flower portfolio is jointly owned by three leading large scale flower farms in Kenya, Colombia and South Africa. MM’s sourcing strategy is to become more important to fewer growers. That way, they can have deeper relationships with the growers and have greater influence over their production strategies.

Through analysing these networks¹⁴⁸, the focal role of consolidator-exporters is posited as a hybrid between an intermediary and a new locus of power given the shifts in export markets. The dynamics between consolidator-exporters and producers are discussed in detail in the empirical chapters on mid-scale and small scale producers.

3.4. The formulation of power in GPN 2.0 and its limitations

The nature of power

The idea of power, its agents, where it is located and how it is exercised has been much theorised in the social sciences (see for example Clegg, 2002; Lukes, 2005; Hearn, 2012). Producers' strategies exercised in a buyer-driven network entail greater bargaining power therein. While GVC theory that claims that power is exerted primarily by the lead firms and other actors merely respond to this impetus, GPN goes beyond this uni-directional understanding. Coe & Yeung (2015: 66) define power as, "the capacity of an actor to exercise and achieve control over a particular strategic outcome in its own interests that can be realised only through the process of exercising."

Power is both *structural* in the sense of emerging from a firm's position or strength of association in network¹⁴⁹, and *relational* in that the exercise of power is witnessed in an evolving set of social relations (Coe & Yeung 2015:66). This GPN 2.0 portrayal of power as both relational and structural is relevant, because it allows us to engage the complexity of actors' roles, asymmetry of power and change over time. The power of lead firms to shape global production networks comes from their "asymmetric control and internalization of key resources (physical, political, economic, social and technological) (Coe & Yeung 2015: 65). If asymmetries of power between producers and lead firms characterise relations within the production network (described by Gereffi et al. (2005b) as captive or hierarchical governance in a value chain), then local producers will not be able to capture much of the value created and this has negative developmental implications (Amin and Thrift, 1994; Coe et. al, 2004). In this regard, the GPN formulation of power finds resonance with the conception of power

¹⁴⁸ Though originally, these network configurations were developed with manufacturing industries in mind, they are nevertheless useful as a heuristic device for analysing the flower industry, by highlighting the often overlooked but critical position of consolidator-exporter firms as focal firms.

¹⁴⁹ Coe & Yeung (2015) explain that this structural view of power comes from economic sociology. They critique it for failing to explain the dynamic and qualitative nature of the exercise of power which includes the degree of mutual trust, commitment and reciprocity in partnership, durability and endurance. These finer qualities emerge in my empirical observations of cut flower farmers' relations in their production network.

put forward by Allen (2003). He clarifies the location of power as being in relationships rather than resources:

“Power as an outcome cannot and should not be ‘read off’ from a resource base, regardless of its size or scope... It is, as suggested, a relational effect, not a property of someone or some ‘thing’. Power... is often disguised as resources and in that sense we need to disentangle the two; we need to distinguish clearly between the exercise of power and the resource capabilities mobilized to sustain that exercise” (2003, p. 5).

This relevance of this quote can be seen at the inter-firm level in the rise of consolidator-exporters as a new focal point of power within the cut flower production network. While they have immense resources most of which are knowledge-based such as cutting edge cold-chain technology, and international logistical expertise, it is their ability to identify reliable, high quality flower producers, consolidate their produce and connect them to various buyers in direct export markets that has seen them emerge as indispensable. In effect, the locus of the power of consolidator-exporters lies in their relational capabilities which enable them to intermediate between the globalised production and marketing ends of the cut flower production network.

At the extra-firm level, GPN 2.0 depicts the exercise of power again as both structural and relational. Coe & Yeung (2015: 63) explain that power is exercised only in relation to other firms in the network or its *network embeddedness*, that is its position, status and relationship to other firms, extra-firm and intermediary actors¹⁵⁰.

¹⁵⁰ For example, the dynamics of producers’ collectives within production networks can enhance or diminish producer power. Empirical findings show the power of the mid and large commercial flower farmers organised under the Kenya Flower Council in lobbying for the signing of the Economic Partnership Agreement for duty free access to European markets. On the other hand, “Size does not always matter” (Coe et.al, 2008: 276) and contrary to conventional wisdom, though large players may dominate, smaller players exercise their relative autonomy by organising in various forms of collectives (discussed in detail in chapter seven).

Bargaining power - Building on GPN 2.0's notion of power

Bargaining power at the intersection of corporate, institutional and collective power

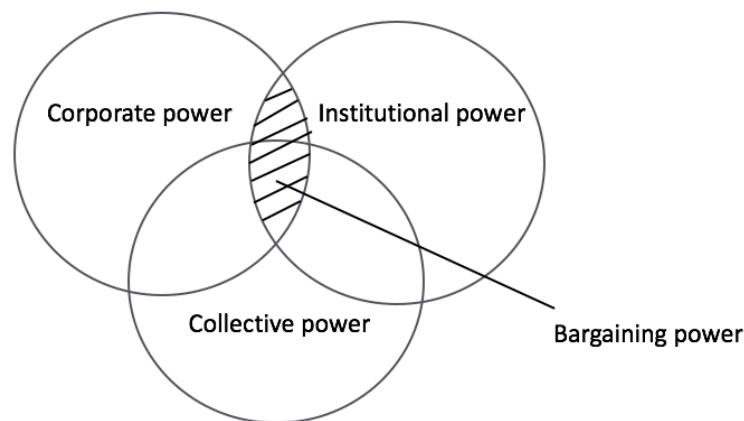


Figure 3.3.
Source: Author's analysis

GPN theory made advances over the GVC notion of power as capacity of action over others, and articulated it as a relational concept of collective endeavours developed from network relationships (Hess 2008). GPN 1.0 then put forward the three locations of power – *corporate, institutional and collective power*¹⁵¹, and these categories are retained in GPN 2.0.

Beyond identifying the locations of power, the GPN 1.0 theory does little to elaborate on the actual process of contestation and bargaining that occurs given the asymmetry of power between actors. For this reason, GPN theory has been criticised for lack of depth¹⁵² in the study of power (Arias 2016) and similarly, the concept of bargaining power in GPN 2.0 has also been underplayed. The range of contestations between producers and other firms in the flower production network account for bargaining power. Bargaining power is not so much a location as it is *a practice intersecting corporate, institutional and collective power* as shown in figure 3.3 above.

¹⁵¹ As discussed previously (and summarised in appendix A)

¹⁵² This is a break from other literature in political economy that is explicitly concerned with for example investigating the power of multi-national companies in developing countries, and the challenges these relationships can cause in terms of dependency on capital, technology and knowledge (See for example Harvey, 1982; Massey, 1984; Cardoso & Faletto, 1979).

As a relational concept within the flower industry, bargaining power plays out in *extra-firm strategies* as flower producers navigate the complex regulatory system. Three producer bargaining strategies are identified: *compliance* by the capable to the range of private voluntary codes, *contestation* by powerful, organised producers in regards to locally enforced regulation, and *circumvention* by less capable producers seeking paths of least resistance to export markets. Producers at the mid and small scale use their corporate power to manage and allocate existing resources and market information and comply to certifications where possible. Furthermore, they tap into their collective power through various collectives and export configurations in relation to consolidator-exporters to capitalise on economies of scale so that their flowers can be viable in export markets. Once organised, producers can use their institutional power to lobby for more favourable market access regulations. The section that follows evaluates GPN 2.0's conceptualisation of development and its suitability for Kenya's cut flower industry.

3.5. The conceptualisation of Development in GPN 2.0

The conceptualisation of development in GPN 2.0 has a threefold focus on *value capture trajectories*, the *sub-national scale*, and *strategic coupling*. GPN 2.0 provides a powerful and relevant analytical lens through which to study the local developmental impact of Kenyan cut flower production networks.

According to GPN theory, the notion of *value capture* refers to “the ability of firms to retain the surplus within their organizational boundaries in the context of wider power dynamics within a global production network” (Coe & Yeung, 2015: 171). It is a much more well-rounded concept than ‘*upgrading*’¹⁵³ which refers to the range of strategies that firms may pursue in order to enhance their functional position within a value chain. Upgrading has been criticised for being too static, linear, deterministic, overly focussed on supplier firms and conflating the means (strategies) with the ends (greater value capture) (Coe & Yeung, 2015: 172-3). Drawing from examples in South Africa's wine industry, (Ponte & Ewert 2009) broaden out the boundaries of upgrading arguing that

¹⁵³ There are three essential forms of economic upgrading (Gereffi 1999) (1) upgrading of a product so as to improve its quality or design; (2) upgrading of a process in scale and speed and in efficiency and productivity; (3) and functional upgrading which is acquisition of new functions to increase the added value of activities in the chain. Upgrading has been expanded to include ‘social upgrading’ which is about better work, standards and rights for workers and smallholders.

the process should be about ‘securing a better deal’ for smaller players, which sometimes coexists with downgrading¹⁵⁴. Ultimately, going up the value-added ladder¹⁵⁵ is only one way among many of securing that better deal and sometimes deepening and building capabilities and networks at the same stage of the value chain can be transformative. Fernández (2015:214) further explains that the concept of upgrading left us with an “imprecise concept of power” which network approaches have since sought to clarify.

Going beyond the constraints of upgrading, GPN 2.0 asserts that *value capture* from coupling with global production network actors is a necessary condition for regional economic development (Coe & Yeung, 2015: 170). The ability of a firm to capture greater value depends on the capabilities of the firm, influences at the level of the GPN which might include asymmetry of power between actors and how easily a firm can be replaced, specificities within the industry such as slow demand growth and local conditions in the territory where the firm is anchored (Coe & Yeung, 2015: 177). The notion of value capture ties back to how Kenyan cut flower producers use diverse strategies at the intra, inter and extra-firm levels to navigate access to export markets.

Expounding on development at the *sub-national scale* enables GPN 2.0 to move beyond the confines of national-level analysis espoused by the GCC/GVC frameworks and embrace the multi-scalar realities of GPNs. Mapping this sub-national focus to the Kenyan flower industry, the sector is established mainly in Naivasha in the Rift Valley, and in the Central Highlands which offer ideal type year-round climate, agro-ecologies and access to rural and migrant labour. In addition, at the sub-national level, there are increased contestations between the flower industry and the county governments¹⁵⁶.

¹⁵⁴ Downgrading may make sense where lower value products sold in larger amounts may be the most profitable strategy for some firms, at least in the short term (Gibbon & Ponte, 2005).

¹⁵⁵ Tokatli (2013:1000) explains that “simply entering into higher value added activity does not guarantee the capture of additional value, as this often happens due to a shift in responsibility for this activity from the buyers to the suppliers.”

¹⁵⁶ For example, the Kenya Flower Council is engaged in lobbying for streamlining of the proliferation of taxes which have been instituted under the new county-level administrative set up. Beyond the sub-national scale, however, Kenyan producers do not have similar power to lobby international codes of conduct governing the industry, and must comply or exit the market.

The insertion of firms into global production networks is the key mechanism driving economic development. GPN 2.0 conceptualises the developmental interaction linking the advantages of regions to the needs of global production networks through reasonably stable transactions as “*strategic coupling*”. Regional assets can therefore only be employed for development when they meet the strategic needs of GPNs. This process implies intentionality and strategy and is an outcome of a dynamic bargaining process¹⁵⁷ between the agents in a production network based on how they employ the strategic resources they hold (Arias, 2016: 34). The articulation of a region into a global production network also requires supportive regional institutional infrastructure such as investment incentives and policies that aid trade (Coe, Hess, Yeung, Disken, et al. 2004). Regional institutions can also help to balance out power asymmetries by anchoring global capital and unleashing regional potential. Coe & Yeung (2015: 174) further explain that the process of strategic coupling is dynamic, it is also not automatic or always successful. Over time a firm can capture less value and may decouple from a global production network until it is able to improve, and may then recouple with the same or another GPN. While the aggregate effect of coupling between Kenyan flower farms and the global flower trade has been analysed in terms of contribution to foreign exchange, creation of jobs and its impact on the environment, little has been said about the knowledge impact of this interaction, which we turn to next.

GPN 2.0 acknowledges the *knowledge transfer implications of enrolment into GPNs* (Coe & Yeung, 2015:183). It helps to explain how access to and over-reliance on new technologies accompanied by the leaching out of indigenous knowledge places limitations on the extent of value capture. The knowledge economy surrounding the Kenyan flower manifests in three ways: *relationships*, *systems of knowledge management* such under intellectual property rights regimes, and various *infrastructures of production* introduced via the flower industry¹⁵⁸. These are summarised in figure 3.4. below.

¹⁵⁷Regional institutions can also help to balance out power asymmetries by anchoring global capital and unleashing regional potential. Coe & Yeung (2015: 174) further explain that the process of strategic coupling is dynamic, it is also not automatic or always successful. Over time a firm can capture less value and may decouple from a global production network until it is able to improve, and may then recouple with the same or another GPN.

¹⁵⁸ The empirical findings around the cut flower knowledge economy are discussed in detail in chapters six and eight

Three key aspects of the cut flower knowledge economy

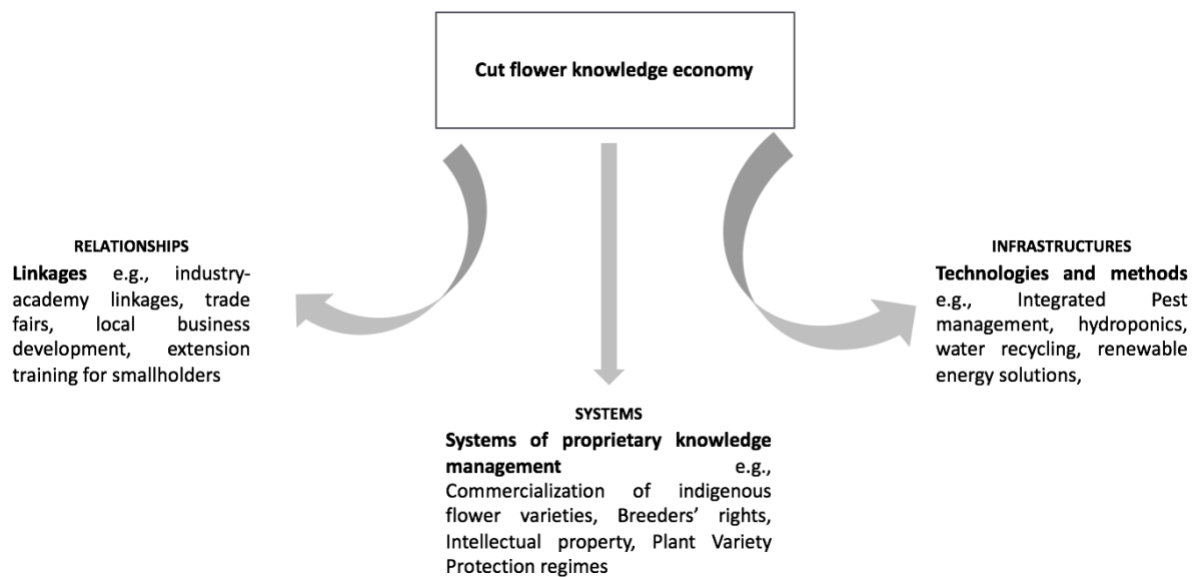


Figure 3.4.
Source: Author's own

The flower industry is positioned as a centre of knowledge production in terms of variety development and innovative use of production technologies is concerned, and identifies *disjunctures in the relationships* between the fast-paced industry and national agricultural research centres in the country. The disjunctures are traced back to clashing interests and work cultures between the private and public research bodies in the industry. The flower industry has been instrumental in the development of *systems of proprietary knowledge management* such as Plant Breeders' Rights Protections under the 1991 UPOV convention which spurred investment from large multi-nationals in the sector. On *infrastructures*, the flower industry has pioneered and set the bar on advanced production technologies¹⁵⁹.

Value capture from the cut flower knowledge economy is dependent on whether it is 'endogenised' in terms of building local capabilities or 'enclaved' (Melese & Helmsing 2010). Capital flows, the embeddedness of the actors involved and state support play a big role in determining this dynamic. Discussing the flower industry in Ethiopia¹⁶⁰, Melese & Helmsing (2010:36) explain that, "*endogenisation* is a two-way process. It

¹⁵⁹ This includes cold-chain technologies in horticulture, the use of Integrated Pest Management to diminish the use of chemical pesticides, innovation in water recycling systems to reduce water intensity of production among others.

¹⁶⁰ Melese and Helmsing (2010) found that endogenisation was taking place at an incipient stage in Ethiopia but that Dutch FDI had little direct interest to share technologies

depends both on the degree to which FDI has an interest to draw on domestic firms, enter into relationships and share technologies; and on the interest and ability of domestic firms to take up such opportunities, and on the creation of supporting institutions and infrastructures to make this take-up possible... which rests largely with government.”

Based on the ownership structure breakdown¹⁶¹ the Kenyan flower industry has however evolved more towards local industrial and political capital. Innovation from the industry’s knowledge economy is enclaved within the interests of these capital flows, rather than linking more widely into other sectors, which is further complicated by the asset specificity of production in the cut flower industry. However, while the *mechanics* of production knowledge such as in propagation, have been localised over the years through training, *the science and innovation* of, in particular breeding, remains the proprietary knowledge of European flower breeding firms.¹⁶² Due to weak integration into the research system and high information costs, smallholders’ innovations at the farm-level are neither legally protected under IP law¹⁶³, nor institutionalised in such a way as to enable them to capture value from it.

3.6. Concluding thoughts

This chapter has evaluated the suitability of the GPN lens for analysing the Kenyan cut flower sector in line with the research question, “*To what extent does the Global Production Networks framework explain how cut flower producers adapt to shifts in export markets?*” It found the first two of three analytical categories of value and power in GPN theory particularly useful for understanding the strategies of producers. The third category of embeddedness is used cross-sectionally to discuss governance and network relationships. The revised version of GPN (GPN 2.0) as articulated by Coe & Yeung (2015) is found most useful for analysing the sector on three fronts. It provides a micro and relational lens through which to study *strategies, networks and development* among mid and small-scale cut flower farms in Kenya and their varied

¹⁶¹ See chapter one for the breakdown of corporate ownership of the flower industry.

¹⁶² That said, it is also important to underscore that knowledge flows do not only occur from the outside-in, but can also be seen locally in the development of new varieties by Kenyan smallholder farmers growing summer flowers.

¹⁶³ Chapter seven outlines a few isolated cases of smallholder farmers who developed new commercially viable varieties of summer flowers and managed to go through the process of obtaining plant variety protection under the Plant Breeders’ Rights statutes.

networks. Furthermore, GPN 2.0 puts forward a relational view of power, and identifies corporate, institutional and collective power as three main locations of power within production networks. My analysis goes a step forward to discuss bargaining power as the practice of contestation that intersects those three locations in the cut flower industry. The chapter then operationalises GPN 2.0 using empirical findings mid and small scale cut flower producers, which is summarised in table 3.1. on inter-firm, intra-firm and extra-firm strategies.

This chapter applies the two network configurations in GPN 2.0 - the lead-firm and the strategic partnership models - to the Kenyan flower industry. Its main contribution here is to eschew the binary function of strategic partner/ specialised supplier which is drawn from manufacturing and service industries, and to introduce Dembinski's (2009) notion of the 'focal firm' in relation to the critical role of the consolidator-exporter which links producers to big buyers. The chapter argues that building relationships with these focal firms is absolutely essential for producers seeking more lucrative export markets. The power of the focal firms in turn rests not so much in their physical resources but in their relational capital and ability to link the downstream and upstream segments and manage information between the two.

The chapter then discusses the limitations of GVC's conceptualisation of upgrading in favour of GPN 2.0's notion of development as value capture. The chapter highlights an overlooked aspect of strategic coupling, which is the interaction between the needs of the GPN and the resources of the local industry from a knowledge-sharing perspective. Acknowledging the knowledge intensive nature of the cut flower industry, the chapter depicts the industry as a centre of knowledge production. The chapter highlights the disjunctures in how the industry couples with global trade and the local economy in terms of relationships, systems of knowledge management and technological infrastructures. It argues that endogenisation of the knowledge from the cut flower industry 'follows the money' and is enclaved within the bounds of local industrial and political capital.

Chapter four that follows leads into the methodology of conducting research among the range of actors in the Kenyan cut flower production network.

4. Unfurling the flower industry: Methodological considerations

4.1. Introduction

This chapter is concerned with outlining the research design and five qualitative research methods used to answer the central research question:

“What strategies do Kenyan cut flower producer networks use in seeking greater bargaining power amidst shifts in export markets?”

Foregrounding the bifurcation of export markets in the cut flower trade, the research question probes the mid and small scale producers' practices, relationships and contestations which together make up their strategies for market access. This necessitates an in-depth understanding of the actors in the production network as they relate to each other. While the GPN framework operationalised in chapter three enables us to analyse this complex, layered network and how producers have survived and adapted to changing export market landscape, chapter five that follows unpacks the heterogeneity, capabilities and embeddedness of the various actors engaged in production and marketing.

This research employed five main research methods which include *semi-structured interviews, site visits, documentary analysis, trade shows and fairs, and workshops* to capture a sample of perspectives and practices of the key actors shaping the Kenyan flower sector. The table below summarises the methodology in order of reliance, used to answer each of the three thesis sub-questions elaborated in chapter 1.

Variety of research methods used to answer thesis sub-questions

Thesis sub-question	Research methods employed
<i>To what extent does the Global Production Networks framework explain how cut flower producers adapt to shifts in end markets?</i>	<ul style="list-style-type: none"> • Semi-structured interviews • Documentary analysis • Site visits • Trade shows and trade fairs • Workshops
<i>What are the experiences of Kenyan cut flower producer networks in seeking greater bargaining power in European export markets?</i>	<ul style="list-style-type: none"> • Semi-structured interviews • Site visits • Trade shows and trade fairs • Workshops • Documentary analysis
<i>What is the nature of the interaction between cut flower producers' activities and Kenya's knowledge economy?</i>	<ul style="list-style-type: none"> • Semi-structured interviews • Site visits • Trade shows and trade fairs • Documentary analysis • Workshops

Table 4.1.
Source: Author's analysis

This chapter shows how my research generated knowledge through diverse and intersecting qualitative techniques to develop a rich hitherto untold narrative of the realities of cut flower farmers' experiences navigating the bifurcated European export markets. Fieldwork did not engage in a comparative study of mid and small scale flower producers but rather shows them as existing in parallel, with synergies emerging only when driven by local or European export markets.

4.2. Rationale for the selected field work methods

The plurality of methods for my research presents a collage typical of the multi-disciplinary nature of Development Studies. Semi-structured interviews, site visits, documentary analysis, trade shows and fairs, and workshops correspond to inductive and grounded methodologies found broadly within the social sciences, and more specifically within ethnographically oriented research. As Glaser (1978) elaborated, grounded theory methodology is a series of inductive processes that produce theory that is embedded in the research context, rather than forcing the data to a predetermined speculative theory. Employing Grounded Theory (Glaser & Strauss, 1967) requires the stating of theoretical assumptions up front and then discursively testing and engaging it with observed relationships emerging inductively from the data.

In this research, chapters two and three outline the shortcomings of GVC theory¹⁶⁴ and make the case for the use of GPN framework as a lens for the Kenyan flower industry which employs the network formulation, and analytical concepts of strategies, power, value capture and strategic coupling. Gaps in the literature can also inform assumptions taken into the field. For example, the GPN framework has not been deployed to capture the heterogeneity of the Kenyan flower sector nor its interaction with the knowledge economy, and there is very little empirically grounded literature on smallholders in the Kenyan flower industry, which construes the assumption of invisibility or marginality and weak participation.

Research is organised for the purpose of uncovering relationships between actors in order to account, inform and refine theoretical conceptions of how the world works (Cloke et al. 2004). In this regard and in light of testing the theory against data, my field work challenged in particular the enfeebled perception and silences surrounding the position, creativity and capabilities of smallholders by highlighting the agency and bargaining power of mid and small scale producers. It pushed back on the uni-directional understanding of governance by showcasing heterogeneity, complexity and contestation of producers' relationships, and the relational nature of their strategies for market access. Uniquely, it spotlights the critical but often overlooked role of consolidator-exporters as focal firms in the GPN, and the knowledge-intensive nature of the industry as a focal point of development interactions discussed as "strategic coupling" in GPN 2.0 theory.

The rationale behind the use of the five different qualitative methods was to gain insights into the formal and informal functioning of cut flower producer networks, and to triangulate the information availed. As an industry where aesthetics and appearances are most highly valued, flower industry officials go to great lengths to protect the image of the industry from any potential negative press. Triangulation of information in this context is therefore important to check for narrative inconsistencies, as well as draw out common threads of narratives espoused by those interviewed. Similar to Neilson and Pritchard (2009:62), my research established that triangulation

¹⁶⁴ Outlined in the literature review chapter (See Hughes 2000; Hughes 2001; Dolan & Humphrey 2000; Dolan & Opondo 2002; Oxfam 2004; Tallontire et al. 2005; Riisgaard 2009)

across various sources, “brought into focus the differences in interpretation among industry participants, emphasising the complex nature of processes under investigation.”

Quietly Blooming – considering reticence in the research approach

An overarching consideration that informed a varied approach to field work was a prior understanding of the reticence of the cut flower industry, particularly towards academic researchers and journalists. From my literature review, particularly work done by Opondo (2006), it became clear that the Kenyan flower industry became averse to researchers in the 2000s when scathing exposés¹⁶⁵ were published of the industry’s labour and environmental rights violations. As the industry embraced reform thereafter, it also carefully curated its public image, and with that research access (Mwangi, 2018 [forthcoming]) that might shed light on other issues in the industry was policed. Experientially, I was aware of the aloof image of the industry in the Kenyan popular imagination, conjured by the elite ownership circles of Europeans, the Kenyan political class and Indian industrialists. Visually, the industry is also physically sealed off from everyday interaction as portrayed by images of sealed greenhouses stretching into the horizon, tightly guarded gates and high electric fences. Even at the local point of sale at the Nairobi Flower Market, the flower trade occurs under shadow in the wee hours of the morning between four and seven o’clock in the morning. This foreknowledge and being an industry outsider made it all the more necessary to build trust through gatekeepers, snowball interviews through references once in the field, and to triangulate the information obtained thereof. The next section will elaborate on the process and structure of each field work method employed.

4.3. Overview of field work structure and sites

As the PhD field work plan in figure 4.1 below illustrates, my field work in Kenya was prefaced by literature reviews on the Kenyan and global flower industry and by preparing interview guides. Secondly, it shows that my field work in Kenya and the Netherlands was organised into three phases all of which took place in 2016.

¹⁶⁵ Outlined in the literature review in chapter two. Leading international NGOs such as Oxfam (2004) and Christian Aid (2008) in the UK, and more recently the Kenya Human Rights Commission (2012) also wrote reports highlighting exploitative and unethical business practices of Kenyan large scale producers.

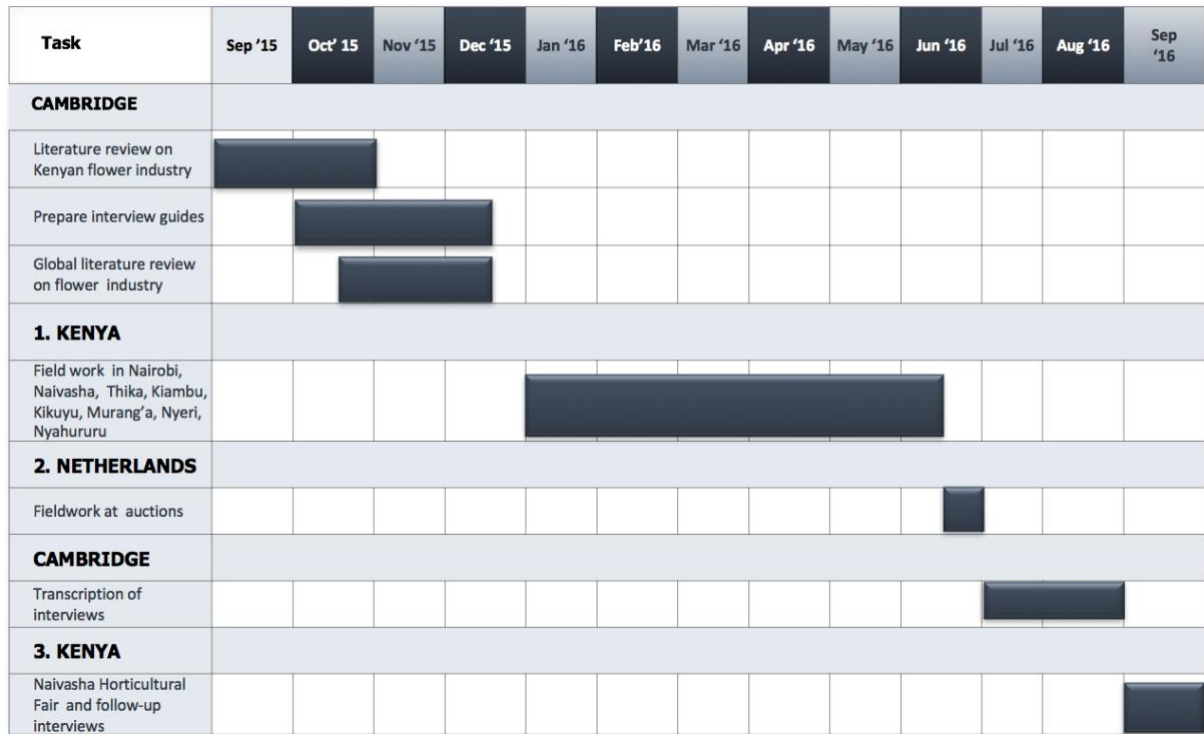
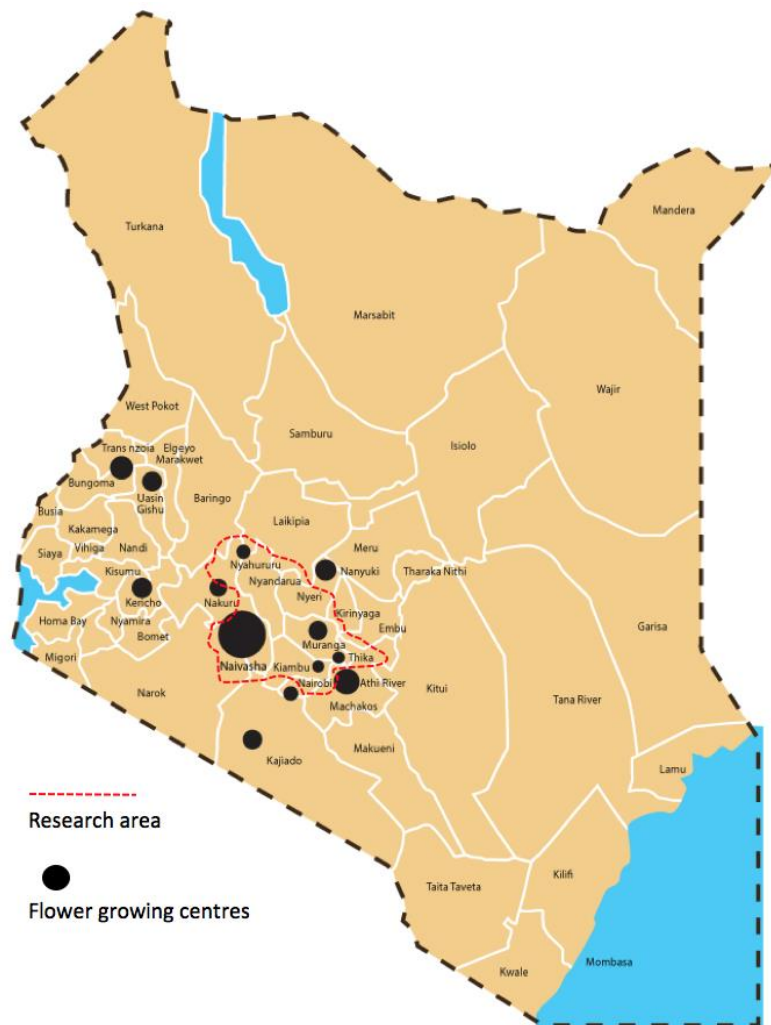


Figure 4.1.
Source: Author’s analysis

The first phase involved field work in Kenya conducting semi-structured interviews, and farm sites with industry officials based in Nairobi and with the production network of mid-scale farms in Naivasha, Nyahururu, Kiambu and Kikuyu. I conducted interviews with smallholder flower farmers in Thika, Murang’a, Nyeri and Njabini which are all located in the Central Highlands and Rift Valley regions. These locations and the overall area under study is outlined in red in map 4.1. below. I also attended the fifth edition of the International Flower Trade Expo (IFTEX) in Nairobi in June. The research in Kenya lasted from January to June 2016.

Field work research sites in central Kenya and the Rift Valley



Map 4.1.

Source: Kenya Flower Council website; author's analysis

The second phase involved field work in the Netherlands at two sites highlighted in red in map 4.2. - the Royal FloraHolland auctions at Aalsmeer and Naaldwijk. There, I interviewed a range of import handlers, buyers and auctioneers. This interview phase took ten days in June 2016. In July and August 2016, I began transcribing the interviews and analysing collected data. The third phase of field work was carried out in September 2016 for one month, in which I attended the Naivasha Horticultural Fair, Africa's biggest horticultural fair, which brings together a range of industry actors including flower producers, input and service providers, regulators, freighters, marketing agents and government regulators. I also took the opportunity to conduct more interviews with consolidators, sourcing managers, and smallholder farmers.

Research sites at two Dutch flower auctions, Netherlands



Map 4.2.

Source: van Heck & Ribbers (1997); Levelt (2010:153); author's analysis (in red)

4.4. Research methods

1. Interviews

Prior to going to the field, I developed an outline of the key institutional actors in the Kenya flower industry, which was useful for developing a shortlist of prospective interviewees. Having had no prior contact with the industry beforehand meant I had to establish contacts once I was physically in Kenya. With a letter of introduction from the University of Cambridge, a research affiliate position at the University of Nairobi, Institute for Development Studies as well as a research permit from the National Council for Science, Technology and Innovation (NACOSTI), I approached the Kenya Flower Council (KFC) for support in identifying a sample of flower farm managers and smallholder groups for interviews. Given the insularity of the industry, “snowballing” or chain referral sampling (Biernacki & Waldorf 1981) through references from the initial set of introductory interviews proved essential for mapping a network of industry actors. The techniques’ embeddedness in social networks suited the study of production networks which is at the heart of this research. Snowball sampling is particularly useful when researching sensitive issues or dealing with hard-to-reach people, because it relies on insider information to gain access (Biernacki & Waldorf 1981).

Beyond the institutional introductions from the KFC, personal contacts played a big role in securing interviews in an overwhelmingly male- dominated, fast paced and insular industry. The difficulty in securing interviews was aggravated by the timing. My field work began in January 2016 and the first two months of the year are the busiest as the flower industry ramps up production to meet demand for roses at Valentine’s Day in mid-February. Seeking interviews then was a time-consuming and subjective process that offered little or no guarantee of the participants’ willingness to share information.

Research participants

Proportional representation of fieldwork research participants

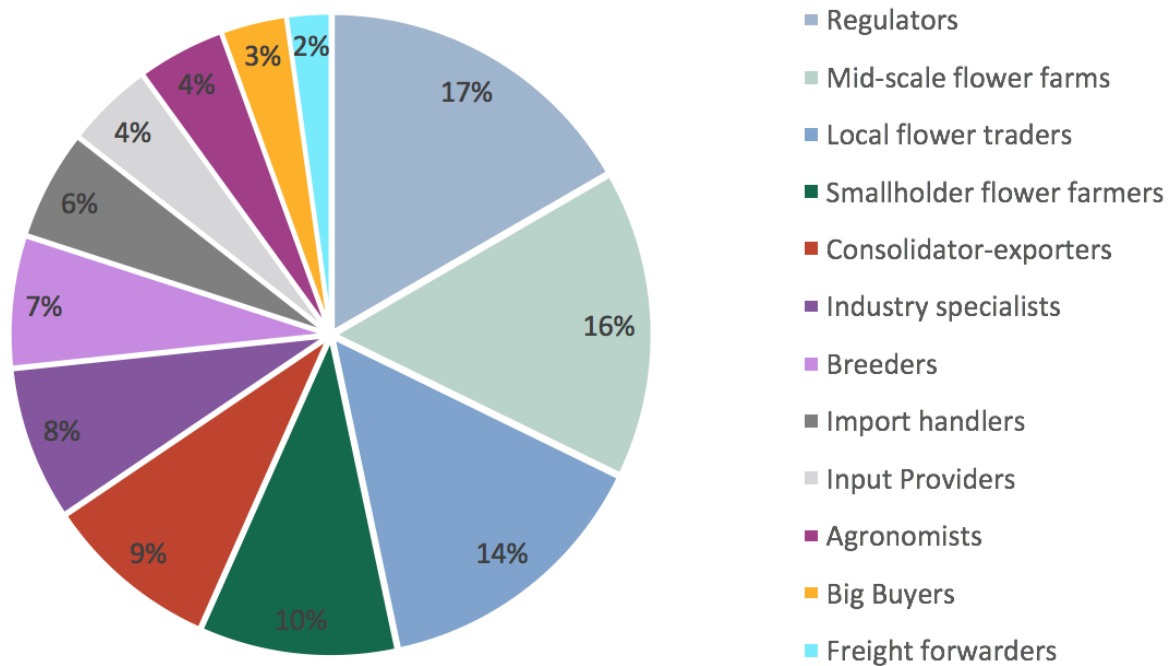


Figure 4.2.
Source: Author’s analysis

The proportional categorisation of people interviewed is displayed in image 4.2. above. The twelve categories of actors represented in the proportional representation of interviewees feed into the visualisation of the flower industry as a production network, as portrayed in image 5.1 in the next chapter. Of the ninety interviews conducted, eighty-three of the interviews were carried out in Kenya while seven were conducted at Aalsmeer and Naaldwijk, Netherlands. Given the focus on production networks of

mid and small-scale farms, thirty-three percent¹⁶⁶ of those interviewed were downstream actors and in direct contact with the flower farmers. Mid and small scale farms combined (26%), industry regulators (14%), local traders (14%) and consolidator-exporters (9%) account for the largest segments of interviews. Though the proportion of local flower traders is significant, these were mostly brief though illuminating interactions that provided a holistic view of the diversity of smallholders' participation as they engage in the local Nairobi Flower Market and in export markets, which is the focus of the research. The remainder of the interviews were upstream and pivot around the consolidator-exporter as focal firm linking the flower farm outwards to export markets. The research does not cover interviews with direct market actors such as super markets or florists. These sites were studied through everyday observation and already existing information in secondary sources.

My research sample profiles seven mid-scale farms and seven small-scale farms. To put this in perspective, there are over 180¹⁶⁷ mid and large scale commercial flower farms, and the last available baseline studies estimated 5-10,000 smallholder farmers (Bolo 2010; Fintrac 2010). The [Kenya Flower Council](#)¹⁶⁸ estimates over 300 active exporters of cut flowers from Kenya to the EU. This thesis therefore makes no claim that the producers interviewed are representative of the sector, but rather that my research sample provides unique insights on their networks, strategies and bargaining power in shifting export markets as differentiated by scale. That said, the concentration of the mid-scale farms in my sample in Naivasha area, where 60% of all flower farms are located (Riisgaard & Gibbon 2014:103), gives on average a fair glimpse into their production and marketing practices¹⁶⁹. This is further compounded by the fact that the farms were identified by the KFC for being on average strong performers and good representatives of the industry. Further, smallholder farmers engaged in horticulture are also generally concentrated in the highlands and cooler parts of the Rift Valley, where the smallholders in my sample were located, thereby providing a realistic snapshot of the overall picture.

¹⁶⁶ As shown in the pie chart figure 4.2: Input providers (4%), consolidator-exporters (9%), agronomists (4%), freighters (2%) and local flower traders (14%).

¹⁶⁷ This figure is an approximation based on data from Riisgaard and Gibbon (2014:104) that stated 177 commercial flower farms in Kenya in 2011.

¹⁶⁸ Kenya Flower Council website accessed at http://kenyaflowercouncil.org/?page_id=158

¹⁶⁹ See chapter six on mid-scale farms for a proportional breakdown of the representation of farms in my research sample.

Detailed breakdown of 90 interviewees in Kenya and the Netherlands

Interviewee category	Number of people interviewed	Breakdown of interviewees' institutional affiliations
Regulators	15	12 Government officials from KEPHIS, KALRO, EPC, HCD 1 County government official 2 Industry representatives from KFC
Mid-scale flower farms	14	Seven mid-scale flower farms
Local flower traders	13	7 from Nairobi Flower Market 5 local florists/ flower handlers 1 preserved flowers and foliage expert
Smallholder flower farmers	9	4 farmers affiliated with Wilmar Agro Ltd (outgrower) 4 farmers affiliated with various collectives of convenience 1 farmer entrepreneur
Consolidator-exporters	8	4 from multi-national firms 2 from a small local enterprises 1 from a local joint venture 1 outgrower
Industry specialists	7	2 university/ think tank based academic researchers 3 consultants 1 journalist 1 technical management expert
Breeders	7	3 managers from two leading Dutch breeders 1 representative from a French breeder 1 British breeder 1 Dutch-Kenyan propagator
Import handlers	5	Managers from Marginpar BV, IQ flowers, Vrolijk Bloemen, and Flora Holland Services
Input providers	4	2 Agrochemical suppliers 1 packaging firm 1 firm dealing in Integrated Pest Management services
Agronomists	4	3 Wilmar Agro Ltd. agronomists 1 affiliated with KALRO, Embu
Big Buyers	3	2 Auction buyers 1 sourcing manager, ASDA
Freight forwarders	2	Kuehne+ Nagel Panalpina Airflo
Total number of interviewees	90	

Table 4.2.
Source: Author's analysis

The interviews conducted spanned the breadth of the production network as shown in table 4.2 above and included: flower farm managers and production specialists, input suppliers, flower breeding firms, smallholder farmers, consolidator-exporters, freighters and logistics experts, industry consultants, government and private sector regulators and certification agents, government research institutes, policy makers,

packaging and value addition specialists, agricultural officers, flower handling import agents at the Dutch auction, local flower traders and government agencies in charge of agriculture, horticulture, exports and trade policy. Providing a gendered view of the research participants, twenty five percent of the people interviewed were women, three of whom included flower farm directors and a HR manager while another was the general manager of a smallholder outgrower group. In the category of local flower traders, fifty percent were women. Also notable were two women at the helm of industry, that is, the CEO of the Kenya Flower Council as well as the Managing Director of the Kenya Plant Health Inspectorate Services (KEPHIS). These observations are significant because while overall the management of the industry traced from the farm to the auction is overwhelmingly male, women are dominant as plantation workers, florists and other workers engaged in the final-point of contact with the flowers before presentation.

The interview format

The interview format was semi-structured which is a process that involves use of interviewing “with an interview protocol that is somewhat set, but that also relies on open-ended questions to allow for spontaneity by the participant”(Savin-Baden & Howell Major 2011:177). To set the parameters of discussion, I prepared a set of interview guides prior to the meeting based on the position of the interviewee in the production network (Berg 2007). The questions centred around the interviewee’s profile, views of their role and everyday activities, the nature of their relationship with other actors, the identity, and perception of the flower industry, engagement in knowledge production and sharing and R&D, interaction with export markets and the local impact of their activities.

All the interviews were conducted one-to-one rather than with focus groups and lasted on average two to three hours which provided rich detail that is a key strength of the data. All but one of the interviews were recorded¹⁷⁰. The majority of the interviews with industry officials were held in English but when interacting with local traders and smallholder farmers I would switch to Kiswahili and Kikuyu. This is because Kiswahili is the national language and traverses barriers of class, urbanisation and formal

¹⁷⁰ Confidentiality issues are addressed at the end of the chapter

education, while Kikuyu as my mother tongue enabled a familial connection that helped to dispel suspicion and enabled the conversation to flow.

The open-endedness of the semi-structured format was useful because it 'broke the ice' especially with reticent farm managers who were suspicious of researchers' intentions and enabled me to sense the tone of the research participant. I learned that with farm managers the best way of 'breaking the ice' was to engage them on the technicalities of production such as varieties and cost breakdown which provided me with a rich body of data that I had not anticipated¹⁷¹. The open-endedness of the questions also allowed the interviewee to steer the conversation to the issues they found pressing at the time such as double taxation, currency crunches and audit fatigue. At the same time, silences around certain issues such as ownership questions, workers' welfare and representation and relationship with the government also provided insight into what are considered the more sensitive 'black box' dynamics of the sector. The image of the flower industry therefore emerged as curated both through what was said and what was silenced.

The two techniques of accessing and conducting interviews - snowballing and the use of semi-structured interview guides - also present limitations that shape the narrative of this thesis. Though often considered a spontaneous process, snowballing is challenging because the researcher has to first find participants and initiate the referral chain, verify the eligibility of potential respondents, monitor the referral chain and data quality (Biernacki & Waldorf 1981:144; Patton 1990). The method provides access to self-referential social networks that are bound by specific power relations, which are in turn made visible when the reference or access is provided (Noy 2008). This is particularly the case in this elite industry since often elitist groups enforce their power by monitoring and controlling accessibility (Moyser & Wagstaffe, 1987; Odendhal & Shaw, 2001). For example, the Kenya Flower Council in its capacity as industry lobby, representative and certification agent provided references of the farms it believed were 'best practice' farms or those that were known to be amenable to researchers. Farm managers obliged in part to maintain a good relationship with the lobby body. This means that the farms that do not necessarily 'tow the line' according to the KFC were

¹⁷¹ This data from mid-scale farm managers is expounded on in chapter six.

placed out of my purview. This creates a sample bias which might obscure the overall reality as far as farm practices are concerned. The use of semi-structured interview guides though allowing for flexibility and the ability to further probe the interviewee, sometimes may lead to rather limited conversations with the more reserved interviewees.

2. Site visits

The research took place over two sites – production sites which were the mid and small scale farms in Kenya, and wholesale markets at local and international levels which include the Nairobi Flower Market and the Dutch Flower Auctions. Site visits put forward a micro-perspective since in production the study was located at the firm level, at the same time providing insight into the globalised nature of firm relations. I carried out semi-ethnographic¹⁷² observations during site visits to the Nairobi Flower Market as well as the Royal FloraHolland Dutch flower auctions at Aalsmeer and Naaldwijk.

Access to all the mid-scale farms was mediated through the Kenya Flower Council and confirmed via a series of email and telephone exchanges. Farm managers had to organise security passes for me which were issued at the gate, typically tightly secured, where I showed or left my ID card. The interviews with farm managers were held in their offices and I was only allowed supervised visits to the greenhouses and packhouses thereafter which lasted about an hour or less. I had some basic interaction with the production and irrigation managers who showed me the farms and no direct contact with labourers other than to ask for permission to take a photograph. The reservations in interaction confirmed previous reports about the reticence of flower industry officials to outsiders.

Following up on references first provided by the KFC, I visited smallholders' farms in the Central highlands and Rift Valley. Visits to Wilmar's smallholders' farms were accompanied and facilitated by Wilmar's agronomists, who tended to fill in on the technical or financial questions. There was a sense of deference to the company's position among some, while some other farmers challenged the agronomists' positions

¹⁷² The observations made were only partially ethnographic due to the short amount of time I had to observe the activities, typically a few hours in which I took notes, pictures where allowed and where I conversed with some of the people I observed.

particularly on how the company splits profits with farmers. This dynamic was useful methodologically because it illuminated the contested nature of the relationship between farmer and outgrower, and helped to triangulate the information.

The semi-ethnographic study of the Nairobi Flower Market was mediated through a gate-keeper from the Kenya Agricultural and Livestock Research Organisation (KALRO). The visit, which took place at the crack of dawn involved brief conversations with seven local flower traders as they went about their business, I made detailed observations¹⁷³ market demographics, interactions and varieties.

Site visits to the Dutch auctions involved guided tours of the auction rooms, vase-life inspection halls, cold storage facilities and the auction highways by flower importers, and other auction agents such as the big buyers. I was connected to them via references from Kenyan research participants which highlights another way in which snowballing was effective. These visits provided insights into auction “software” that cannot otherwise be deduced such as the intensely masculine nature of the auction, the attention to detail, familial and straightforward nature of business norms, the sophistication and speed of the logistical organisation, the relationship of the wholesale buyers to the flower-as-commodity. I also noted the ‘stickiness of tradition’ in agents’ scepticism about operational changes such as digitalisation of sales and nostalgia for the more tactile live-bidding process. Visiting both local and export markets highlighted connections between the two spaces since the Nairobi Flower Market (NFM) trades in the ‘rejects’, or rose stems that did not make the quality standards for export access.

Site visits illuminated the territorial and cultural embeddedness of firms engaged in production and marketing. It also brought to life the discursive nature of the firm-territory relationship, and the multi-scalar nature of intra-firm relations as embedded in the sub-national, the local and the global as put forward in GPN analysis.

¹⁷³ The dynamics of the Nairobi Flower market are highlighted in chapters 1 and 7

3. Documentary analysis

To gain a thorough understanding of the different lenses through which the flower industry has been empirically studied, I analysed a wide range of literature which I organised into five overall categories shown below in table 4.3. below¹⁷⁴.

Table showing documents analysed and emergent themes

Document category	Sample of Emergent themes
'Developmentalist' or development policy literature	<ul style="list-style-type: none"> • Origins and dynamics of high value horticulture markets • Rights-based studies • Environmental impact • Governance of the flower industry
Critical political economy	<ul style="list-style-type: none"> • Ethical trade considerations • Governmentality • Cultural sensitivities of relations of production • Political economy of knowledge production • The nature of governance systems in the flower industry
Agronomic literature (conducted by agricultural scientists)	<ul style="list-style-type: none"> • Varietal characteristics of cut flowers • Factors affecting variety productivity • Smallholder production in different sites
Technical papers (commissioned by government, NGOs)	<ul style="list-style-type: none"> • Baseline studies of smallholder cut flower production • Comparative analyses of sector competitiveness • Production statistics • Living wage analyses
Business and supply chain studies	<ul style="list-style-type: none"> • Supply chain and profitability analyses e.g., sea freight • Export market intelligence • Corporate social responsibility
Journalistic articles	<ul style="list-style-type: none"> • Labour rights infringements • Environmental issues in production and trade • Sustainability certifications • Livelihoods impacts on producers • Direct sourcing and increasing globalization of flower markets

Table 4.3.
Source: author's own

In line with grounded theory methodology (Charmaz 2006:6), I familiarised myself with the literature before commencing my field work to ensure that I was conversant with prevailing issues in the industry, and then after field work conducted the critical review of literature, placing it in conversation with the data collected. As table 4.3. shows, the documentary analysis was intersectional in approach and multi-disciplinary in nature¹⁷⁵. Savin-Baden & Howell Major (2011:127) explain that bringing together such a wide range of documents from different disciplines for analysis is a form of bricolage,

¹⁷⁴ These were discussed in detail in the literature review chapter. The development policy literature and Critical Political Economy literature were particularly instructive in shaping the analytical thrust of this thesis.

¹⁷⁵ The documentary analysis engaged literature from political economy, economic and human geography, sociology, critical agrarian studies, gender studies, public policy, agricultural economics, environmental science, business and management studies.

where the literature is fitted to the data and this enables the researcher to “transcend disciplinary boundaries in a search to explain ‘what is going on with this data?’ ” This means of reviewing literature is also true to the inter-disciplinary nature of Development Studies and shows the interconnectedness, and contested nature of the development processes and phenomena we study in the field as seen through various lenses.

4. Trade Shows and Fairs

The 5th annual International Flower Trade Expo (IFTEX) held in Nairobi in June 2016 as well as the 14th annual Naivasha Horticultural Fair (NHF) in September 2016 were important industry events that I attended in the course of my field work. IFTEX is the main industry networking event that brings together hundreds of regional and international sector players. These included among others breeders, propagators, flower growers, cargo and trade suppliers. The aim of the expo is to connect international buyers from a range of markets to opportunities to purchase Kenyan cut flowers. The exposure generated for Kenyan growers at this forum is critical in developing relationships in supplying direct markets. For international buyers, the focus is on ascertaining the range of varieties, quality and capabilities of growers to supply consistently and at scale.

The Naivasha Horticultural Fair is the biggest forum for horticulture players in Africa, so it was important as a means of showing the interconnectedness of floriculture to the horticultural sector overall. There were nearly 200 exhibitors ranging from breeders, input suppliers, freighters, certification agents, government regulators, growers and export agents. The trade shows showcase the societal embeddedness of the industry, and the importance of in-person interaction among potential business partners in the flower industry for the formation and growth of cut flower production networks.

5. Workshops

I attended the Flower Sector Sustainability Workshop at Coventry University, UK hosted by the Centre for Business in Society in July, 2017¹⁷⁶. The aim was to build a

¹⁷⁶ The workshop was hosted by Dr. Jill Timms and Dr. David Bek, who are co-heading the research project “Promoting Ethical Flowers for Improved Working Conditions in Supply Chains: The Disconnect Between Increased Certification and Poor Purchaser Knowledge” funded by the British

stakeholder network that brings together academics studying the flower industry, certification agents such as Fairtrade and MPS, exporters such as MM Flowers¹⁷⁷ and supermarkets such as the Co-op. The main lessons emerging from the workshop included interesting discussions on the ‘puzzle of invisibility of certifications’ to consumers, the relative lack of interest in certifications by florists and the challenges this poses for sustainability initiatives. The workshop also highlighted the responsibilities of ensuring ethical supply between producers, retailers and certification agents. Exposure to the sourcing work of MM Flowers gave me a glimpse into the vertical integration and consolidation of Kenya large scale flower farms into foreign markets through wholesalers, which I had not previously had while in Kenya. This exposure affirmed the foundational categorisation I had made of the Kenyan production network as bifurcated between small and mid-scale farms, and large scale vertically integrated farms.

4.5. Research analysis

Field work has a life of its own and researchers must be flexible enough to let their analyses be led by the data to sometimes uncharted horizons. Charmaz (2006:2) explains that data forms the foundation for Grounded Theory and our analysis of this data generates the concepts we construct. After seven months of field work, my research analyses took place in two phases – the first was to accurately transcribe the interviews which were recorded in three languages (English, Kiswahili and Kikuyu). The challenge of translation of concepts from Kiswahili and Kikuyu to English helped me to focus on the meaning and context of the interview and to bring out the cultural embeddedness of the data. The second phase entailed line-by-line coding of the interview transcripts (Charmaz 2006:11) using Atlas ti software. Once the emergent concepts had crystallised from this process, I then wrote memos based on the key conceptual findings emerging from each interview which helped me to piece together the key argument and the thesis’ narrative.

Academy/Leverhulme Trust. Accessed at <https://www.coventry.ac.uk/research/research-directories/current-projects/2017/promoting-ethical-flowers-for-improved-working-conditions-in-supply-chains-the-disconnect-between-increased-certification-and-poor-purchaser-knowledge/>

¹⁷⁷ MM Flowers is the UK’s leading, vertically integrated cut flowers specialist, supplying major UK and European retailers. It is an integrated flower company owned by the largest rose producers in the world in partnership with Munoz group. In Kenya, MM sources roses directly from Veg Pro, (VP group). In Colombia, it sources roses, chrysanthemums, alstroemeria and hydrangea from Elite Flowers.

Emergent theoretical categories which formed the pillars of my analytical framework include the notion of strategies, the heterogeneity and dynamism of networks among producers, as well as the contested nature of relationships producers and institutional actors in a show of agency and bargaining power¹⁷⁸. The initial process of coding enabled me to see gaps in the 'big picture' I was building and thereby prompted my second trip to Kenya, where I collected additional data on smallholder networks and their varied relationships with consolidator- exporters.

Coding is a subjective process that impinges the researcher's framing on the data because the naming of concepts comes from one's own understanding. It therefore impinges a socially constructed understanding of the phenomena. That said, coding is an iterative and creative process that enabled me to extract meaning and develop an internally coherent narrative of the forces at play in shaping the Kenyan cut flower production networks.

4.6. Issues arising from conducting field work in the Kenyan flower industry

Having foregrounded this methodology chapter by explaining the overall reticence of the cut flower industry to outsiders, this section outlays the various challenges of access experienced in the course of conducting field work primarily in Kenya. It does so by discussing the positionality of the researcher, managing reciprocity in field work settings, and ethical considerations. It also discusses the performativity of the researcher in terms of managing the challenges that arise from one's positionality, as well as the importance of reciprocity in institutionalising knowledge obtained from field work.

I was considered an industry outsider because I had no prior direct contact with the flower industry, even though I previously worked in Agriculture more broadly writ as a development consultant at Dalberg Global Development Advisors. My work entailed providing advisory services for the public sector with various ministries of Agriculture in Eastern Africa. Kenyan flower industry circles are small and insular and people build

¹⁷⁸ The concept of bargaining power is explained in the literature review and exemplified in the three empirical chapters, in particular chapter eight. For example, the flower industry lobbying the state on streamlining of the tax regime.

trust and credibility through informal gentlemen's networks and personal references. The challenges of access were experienced not only at the point of introduction but also contextually within the interview setting when participants were hesitant to share information.

Access challenges

The origins of the difficulties I experienced with access were twofold – first, those arising from the social dynamics of the flower industry particularly the previously described aversion to researchers, the gendered dynamics of interaction in a largely male-dominated industry, and the near-impermeability of the informal networks that set the boundary lines between insiders and outsiders. The second source of access challenges was navigating my own positionality, as a Kenyan, female, foreign-educated researcher who was returning home to conduct field work. Positionality can be understood as a coming to terms with the intersecting, changing aspects of our identities or the plurality of selves that we bear as researchers who are 'othered' in various ways in fieldwork sites (Mollinga, 2008).

The protection of industry image is of paramount importance as it mirrors the aesthetic nature of the commodity it produces where value (vase-life) is indeed in the eye of the beholder. The image of the sector has also been impacted by local and international human rights activists and consumers in Western markets acting to secure ethics in processes of production. It came as no surprise then, when I realised that to secure interviews as an industry outsider with mid-scale commercial flower farm management, I would need a reference and introduction from a reputable gatekeeper.

The Kenya Flower Council, as the industry representative was critical in identifying a sample of 'researcher friendly' mid-scale farm managers, and smallholder farmers for me to interview. Even with such an introduction, I experienced some hesitation in the interview setting. For example, one manager of a prominent farm in Naivasha initially refused to speak with me, and to be recorded, and proceeded to simply fill out the interview guide I had brought with me. He later relaxed his guard as I explained that the information was for academic purposes only, and that I had no business interests nor was I 'working for someone' in the industry.

Navigating my positionality involved a performative balancing of various parts of my identity including gender, class and age depending on the research setting. The majority of the interviews I conducted in Kenya and in the Netherlands, were with middle-aged men who had been working in the flower industry for decades. Further, while a fair amount of the authoritative research and scholarship in this industry has been carried out by women, all except three¹⁷⁹ are white and based in universities in the Global North. The positionality I bore by virtue of being young, female and Kenyan in that setting had the effect of not being taken seriously by the male interviewers at first glance. However, the effect changed from dismissive to either keen or defensive when the interviewee learnt of my affiliation to the University of Cambridge. The class privilege and academic authority that came with the institutional affiliation sharpened their attention, while also eliciting a sense of cautionary distance because ‘whatever I write would be taken very seriously thereafter’. Managing the gender dynamic within that interview setting curated a functional performativity¹⁸⁰. For example, in order not to antagonise the farm manager (and therefore jeopardise the interview) as he explained what was effectively a sexist hiring policy¹⁸¹, I had to ‘play along’ in agreement with what he proposed as culturally accepted truths about women’s docility, domestic subservience and long-suffering.

Positionality, Performativity and Reciprocity in fieldwork

The nature and importance of reciprocity in conducting field work emerged from dealing with the slow, bureaucratic procedures of obtaining a local field work permit. The government of Kenya requires academic researchers conducting fieldwork locally to apply for permits from NACOSTI. I had difficulties submitting my application online months prior to commencing my field work. However, once in Nairobi I visited the

¹⁷⁹ Notably, Professor Maggie Opondo and the late Professor Mary Omosa whose work is on governance and the gendered nature of the cut flower industry. Alice Nakhumicha Muriithi is a plant physiologist who worked at KARI and has systematically published particularly on smallholder engagement in floriculture in Kenya. There are other women who have conducted research on the sector and published most commonly MBA theses. However, this point refers to those who have *systematically* conducted high impact research on the political economy of the flower sector.

¹⁸⁰ I explore the idea of performativity in the field work setting in a forthcoming chapter, Mwangi, N. (2018) in Johnstone, L. (ed.). ‘“Good that you are one of us”’: Positionality and Reciprocity in conducting field work in Kenya’s flower industry’ in *The Politics of Conducting Research in Africa: Ethical and Emotional Challenges in the Field*. Palgrave Macmillan. In it, I characterise the shifts between positionalities in three ways: ‘slipping between’, emphasising or downplaying some positionalities and ‘playing along’ or acquiescence. These shifts are part of the process of seeking access and building rapport and collaboration with participants.

¹⁸¹ This issue is explored in chapter six under labour management dynamics.

administrator severally in-person and in a few weeks my proposal was finally processed. This process speaks to the importance of building rapport through face-to-face, inter-personal relationships with institutional gatekeepers, especially when considered an outsider.

One of the conditions of obtaining the NACOSTI research permit is that the researcher is locally affiliated with an institution in Kenya and commits to sharing their work with NACOSTI. This requirement is an attempt to build up and locally house the body of knowledge produced within Kenya with Kenyan research bodies. To meet this stipulation, I decided to apply for a research associate position at the University of Nairobi, Institute of Development Studies (IDS), which was a less-than-straightforward process. The brochure with information on the application was out of date and the application was churned through four months of bureaucratic delays. It was also relatively expensive, costing approximately 70 pounds. These challenges abounded even after receiving some inside support from a family friend who is a member of faculty at the University. The IDS finally granted me the research associate position on the condition that I would share with them the knowledge gained in the process. I intend to share a copy of this thesis with them for their reference.

An element of performativity can be seen in how in the process of my interaction with IDS, I downplayed my foreign higher education so as not come off as entitled or bullish. There have been reports of foreign-educated students struggling to gain acceptance¹⁸² within local institutions partly because they are perceived as competitors, and because their foreign education may be resentfully perceived as a rejection of the local system of higher education. Nevertheless, the fact that I could 'slip between' and accentuate or downplay various positionalities (that is being Kenyan and an insider while being foreign as a Cambridge student) in order to build rapport as required, manifests the privileges of class access at play within the Kenyan academy that still reflect the esteemed position rendered to knowledge production and producers based in the Global North.

¹⁸² See for example the case with the University of Nairobi school of law and graduates from foreign law school programs. University World News. Africa Edition, 17 November 2017. [Court scraps pre-law bar exam for law school entry.](#)

One of my goals was to better understand the relationship and knowledge flows between the Kenyan academy and the flower industry. My research associate position at IDS unfortunately did not yield an in-person discussion with any of the faculty despite multiple efforts to do so. A series of strikes¹⁸³ in the public university system also ensued a month into my field work thereby creating a further impediment to interaction within the academy. It meant that I was only able to establish the situation with knowledge flows from the flower industry perspective.

Seeking out local institutional backing is also a way for the researcher to respect the role of the research bureaucracy in localising and making public knowledge produced through the field work encounter. The process creates a shared sense of public responsibility in the researcher as co-creator of knowledge with and through the society from which it finds its meaning. While none of the institutions in which I conducted interviews asked to see the NACOSTI research permit except one (the Export Promotion Council), I made it a point at the beginning of each interview to explain the permits and references I had obtained. This was particularly important for building credibility and trust in the rigour of my research, while conducting interviews in government institutions. Private sector actors cared more about the KFC reference.

4.7. Analytical and ethical considerations

The general criteria used to evaluate the rigour and quality of research in the social sciences are reliability, replicability, generalisability and internal validity (Boaz & Ashby 2003:7) though these are largely derived from quantitative traditions (Bryman 2001). While I believe that my field work is largely replicable (Sumner and Tribe, 2012), it is also highly contingent on my positionality. For example, in addition to the issues on gender, class affiliation previously discussed, I also believe that being ethnicity influenced my field work access. Being a member of the Gikuyu community, speaking Kikuyu and understanding the norms of social engagement therein allowed for some measure of ethnic familiarity, which gave me unique access to smallholder farmers in rural Kenya. In regards to generalisability, my research presents more of a snap shot than a proportional representation of cut flower production in Kenya. It offers micro

¹⁸³ See for example, The Star News, 9 March 2016. [Varsity academic staff strike threat](#); Capital News 5 April 2016. [University of Nairobi campuses shut after violent protests](#) and Daily Nation Newspaper, 13 April 2016. [University of Nairobi suspends 139 more students over strike](#).

and relational insights into the market strategies, networks and bargaining practices of two previously understudied scales of production – the mid and small scale. The internal validity of research pertains to the approximate truth about inferences regarding cause-effect or causal relationships ([Web Centre for Social Research Methods](#))¹⁸⁴. Rather than inferring a causal relationship, the thrust of this thesis is concerned with analysing the dynamics of existing producer practices, relationships and relative power in relation to the markets in which they operate.

Throughout my research, I ensured that I complied with University ethical requirements. That involved checking for informed consent for every person I interviewed, and also asking for their permission prior to recording the interview. Though I did not have the chance to record every interview based on the research setting, there was only one commercial farm manager who declined being recorded for fear that the information might be leaked to competitors or the media. He however had no qualms with me taking detailed notes of the conversation. Beyond this, I also ensured that I obtained permission to make use of the information shared in interviews. As a matter of integrity, I agreed to share my thesis with the Institute of Development Studies (IDS), the Kenya Flower Council and NACOSTI.

One of the ethical difficulties I encountered in interviewing marketing agents in particular, was to manage their expectations for business enhancement. Upon realizing that I was based in the UK at an elite university, some of them assumed that I could open up business opportunities to supply British florists. Conversely, one import handler at the Dutch auctions thought that, because I had been referred to her by one of her top Kenyan smallholder flower growers, I was somehow assessing the quality of her work and would report back to the supplier in Kenya. I took pains to explain that my involvement in the flower industry was purely academic and I could offer no such guarantee of reaping business rewards, or of relaying business performance assessments from one partner to another.

¹⁸⁴ The Web Centre for Social Science Research Methods. Accessed at <https://socialresearchmethods.net/kb/intval.php>

4.8. Conclusion

This chapter has argued that the five research methods which include semi-structured interviews, site visits, documentary analysis, trade shows and fairs, and workshops were useful for answering my overall and underlying research questions. It has also highlighted the peculiar challenges of gaining access to conduct research in the flower industry – an elite, reticent, gendered and relatively obscure industry amongst Kenyans. The research experience raised serious considerations regarding awareness of the researcher’s positionality, the performativity experienced in seeking flexibility in various research settings, and the importance of reciprocity in the field work encounter so as to develop genuine knowledge exchange. Ethical considerations raised revolve around maintaining transparency and managing the expectations of the research participants in line with my academic mandate. Finally, the chapter clarified the scope of the research methodology employed by stating that it makes no claim that the research sample presented is representative of the industry as a whole, but rather that its goal is to provide an incisive view into an understudied yet important scale of production in the cut flower industry. Building on the categorisation of actors summarised in figure 4.2. and foregrounding the empirical chapters, chapter five will now discuss how the network of actors in the flower industry is involved in growing and selling a Kenyan flower.

5. How to grow and sell a Kenyan flower

5.1. Introduction

It often comes as a surprise to consumers of cut flowers in Europe, that the flowers so readily available from supermarkets and florists, are more often than not imported from developing countries, particularly Kenya. Consumers want flowers to be natural, unique, fragile symbols of humanity, warmth and affection. And these romantic narratives of their production have been engendered by marketing campaigns. Cut flowers are commodities designed for cultural trends¹⁸⁵. They are artificially bred to resist fragility and so fulfil the retailers' quality guarantee of 7-10 days' vase-life¹⁸⁶ and that they 'travel well' from the highlands of Kenya to retail points globally. Two main aspects of the nature of the 'rose-as-commodity' influences the character of the production network – extreme perishability, and aesthetic value.

Building on the literature review in chapter two which explored the narratives around the interaction and impact of the Kenyan flower industry in globalised markets, this chapter addresses the technical aspects of the production and marketing process. It details the complex set of interactions among the wide variety of actors in the cut flower production network summarised in figure 5.1. below. These include breeders, growers, consolidator-exporters, freighters, import handlers and auction agents who are involved in getting the flowers from production in Kenya to first point of sale in European markets. This chapter will discuss the auction as the final point of sale since direct markets are far too diverse to be characterised here in technical terms. The heterogeneity of actors and their recursive interactions lends itself to the network formulation articulated in GPN 2.0 theory (Coe & Yeung, 2015:18) outlined in chapter three. Since there is too much disparity on the production undertaken by smallholders, this chapter will discuss only rose production and export, which is the main export from mid-scale farms. The information herein is derived from documentary sources and general observations of the internal interactions of the industry actors. The next section discusses the archetypal process for every rose – breeding.

¹⁸⁵ For example, red for Valentine's Day, white and yellow for Easter, pink for Mothers' Day

¹⁸⁶ Vase life refers to the period during which a cut flower or cut foliage retains its appearance in a vase. For consumer, the longer the vase life, the more desirable the flower. Vase life is terminated when the average consumer discards the stem based on petal wilt, necrosis, discoloration, or abscission; bent neck; leaf and stem discoloration; drying; or general stem decline (Dole et. al 2013)

Visualisation of the Kenyan mid-scale cut flower production network

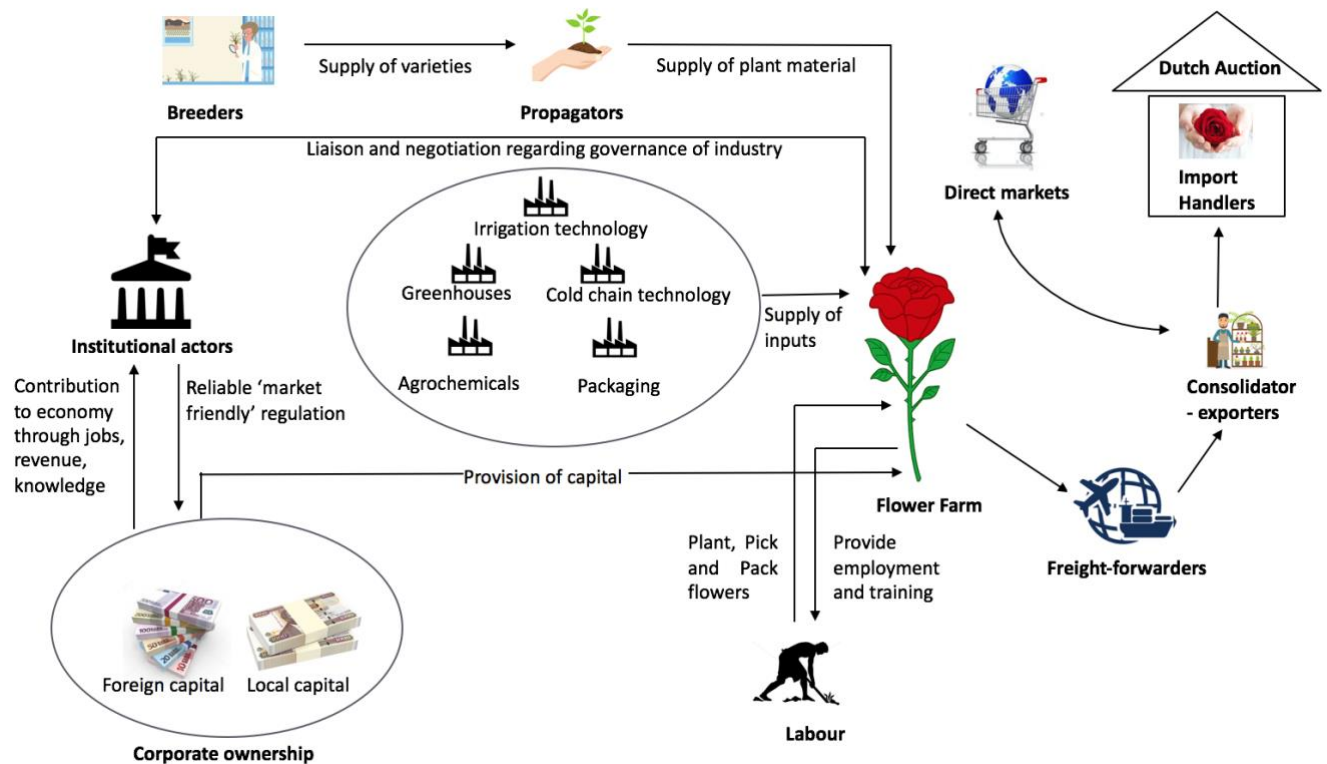


Figure 5.1. Production actors involved in Kenyan floriculture

Source: Adapted from Taylor (2011: 81); author's analysis

5.2. Breeders and Propagators - Accessing plant material

Rose bushes are planted for 5-7 years after which they begin to lose their vigour¹⁸⁷ and must be replanted. This quality means they are a long-term investment and varieties must be carefully selected. Typically, a commercial flower farm will obtain its plant material from a flower breeding company (henceforth 'the breeder') and then propagate the material so that it can be planted at scale. Breeding entails cross-pollinating flower varieties with desirable characteristics to develop a variety that will be high quality¹⁸⁸ and that will grow well and commercially viable. The industry is dominated by very large, highly competitive, family-owned, international breeding

¹⁸⁷ Roses are grown from cuttings which are propagated plant material. The portion of the stalk used to propagate the cutting is known as a *budwood* and this is obtained from a hardy *root stock* e.g., the Natal Briar.

¹⁸⁸ For commercial rose varieties, this often means a prolonged vase life (< 10 days), between 30-80 petals that open in good time, production of usually six stems (though can be many more) per metre square, tall stem length (60-80 centimetres), shades of colour. Scent which normally comes with soft, fragile light coloured roses are difficult to transport.

firms based in Europe¹⁸⁹. There are no Kenyan-origin flower breeding firms¹⁹⁰. New varieties later undergo local trials and selection to determine their viability for production under local conditions. New varieties later undergo local trials and selection to determine their viability for production under local conditions. This is a slow and arduous process which can take up to eleven years (Stewart 2007:131). Rose breeding is defined by the very high costs of developing new varieties relative to the costs of imitation, and only a small number (e.g., 1 in 1000 seedlings) of new products become commercially successful, making it especially necessary to have plant variety protections (Moser & Rhode 2011:423). Breeders are the vital link in research and design (R&D) in the flower production network.

Intellectual Property Rights (IPRs) in plant breeding were introduced and anchored in developing countries through the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization. Plant Breeder's Rights (PBRs)¹⁹¹ gave breeders temporary exclusivity on the commercialisation of the variety (Louwaars et al. 2006):1. Breeders can then collect royalties¹⁹² for plant material sold to commercial flower farms via the end-point collection system, which is where royalties are determined and collected at the point of sale¹⁹³, usually the Dutch flower auction (De Jonge & Munyi (2016:42). This system means that instead of having the royalty included in the price of the seed that is sown, the royalty is calculated based on the produce sold arising from the seed. De Jonge & Munyi (2016:42) explain that this system works well in highly organised value chains and enables a differentiation between subsistence and cash crops. For Kenyan smallholder flower farmers, who have limited access to flower varieties obtained from breeders and who cannot afford

¹⁸⁹ Examples of international flower breeding firms with operations in Kenya include Kordes (German), De Ruiter (Dutch), Interplant (Dutch) Olij Rozen which was recently purchased by Dümme Orange (Dutch) and Meilland (French). In the UK, the best-known rose breeder is David Austin, who has bred over 900 varieties of English rose

¹⁹⁰ European cut flower breeding firms have moved their activities to Kenya, setting up trial stations, purchasing cut flower farms and dislocating their complete breeding programs (Sander 2011:11). Preesman (Dutch breeding firm) was purchased in 2011 by Zena Roses, a Kenyan flower firm owned by one of Kenya's former ministers of Agriculture under the Moi regime, Dr. Sally Kosgei, and renamed United Selections. Accessed at [Floriculture magazine October 28, 2011](#).

¹⁹¹ Plant Breeders' Rights (PBRs) are sometimes also referred to as Plant Variety Protections (PVPs)

¹⁹² On average royalties are charged per plant and cost about 0.8 euro cents per plant while the cost of propagation is approximately 0.3 euro cents per plant.

¹⁹³ This is in contrast to many parts of the world where breeders typically charge royalties based on crop production information. (De Jonge & Munyi 2016:42)

the royalties in any case, the effect is that they are locked out of exporting their flowers to the auction.

IPRs are based on national laws and countries enable them by setting up Plant Variety Protection (PVP) systems. These institutions are meant to facilitate and incentivise innovation and technology transfer (UPOV 2012). In Kenya, the system of IPR management was consolidated all through the nineties as neoliberal tenets of privatization were being anchored into Kenyan agriculture. IPRs were first institutionalised¹⁹⁴ under the Industrial Property Act, Cap 509 of 1990 which set up the Kenya Industrial Property Office (KIPO). Today, IPRs are protected by the Kenya Industrial Property Institute (KIPI, formerly KIPO) which was established in 2002, after the enactment of the Industrial Property Act (2001) ([Ministry of Industry Trade and Cooperatives website](#))¹⁹⁵. The Seeds and Plant Varieties Act (Cap 326) of 1991¹⁹⁶ provides for plant breeders rights (PBRs) to be conferred upon breeders for a period not exceeding 25 years. In 1997, the Plant Variety Protection (PVP) office was set up to handle PBR applications and operates under the Kenya Plant Health Inspectorate Services (KEPHIS).

To enable better access to competitive, new protected varieties which are bred internationally, Kenya became the first African country to become a member of UPOV (International Union for the Protection of Varieties of Plants) in 1999¹⁹⁷ (KEPHIS presentation, March 2016). In May 2016, the 1991 UPOV convention came into effect in Kenya. Without careful regulation, this might lead to the strengthening of breeders' rights (typically owned by foreign multinationals firms) over local farmers' rights¹⁹⁸. The cut flower sector has benefited greatly from these value-capture institutions. De Jonge & Munyi (2016: 31) explain that ornamental crops lead in terms of the total number of

¹⁹⁴ Plant Breeders' Rights were also emphasised in sessional paper no.1 of 1994 (Bolo 2012: 137)

¹⁹⁵ MITI website accessed at <http://industrialization.go.ke/index.php/state-corporations/86-kenya-industrial-property-institute-kiapi>

¹⁹⁶ The revised edition was published in 2012. Accessed at: <http://extwprlegs1.fao.org/docs/pdf/ken37547.pdf>

¹⁹⁷ This act domesticated the 1961 Act of the UPOV Convention in Kenya's Kenya Seed and Plant Varieties Act (Cap 326).

¹⁹⁸ Compared with UPOV 1961, the 1991 revision of the convention is characterised by a widening of the scope of rights granted to breeders, a narrowing of the breeders' exemption which allows anyone to use the protected varieties for further breeding, and a lengthening of the duration of plant variety protection (from 15 to 20 years). Accessed at: <https://ipkenya.wordpress.com/2016/05/16/upov-1991-enters-into-force-in-kenya-farmers-vs-plant-breeders-rights/>

PVP applications made in Kenya, with 692 out of a total of 1156 applications. All the owners of these PVPs are of foreign origin¹⁹⁹, typically due to the complexity and expense of the process.

While Kenyan plant scientists and technicians are trained, and involved in the mechanics of conducting variety trials locally as well as propagation, the science and technology of breeding and selecting roses remains enclaved in Europe. Given the knowledge-intensive nature of the flower industry, the Eurocentric geopolitics of flower breeding undermines possible value enhancement that could improve the global positioning of flower industries in the global south.

5.3. Flower Producers

This section highlights the embeddedness of the flower farm as a site of production in a capital-knowledge-technology and labour intensive set of interactions as shown in image 5.1. above. Overall, the profile of producers in the Kenyan flower sector is elite²⁰⁰ and deeply gendered. The day-to-day management and supervision of production is handled by Kenyan-African men. The profile of production in the flower industry is highly gendered. Women comprise 75 percent²⁰¹ (Opondo 2006:1; Barrientos 2014:10) of the approximately 100,000 workers in the sector particularly in packhouses, where they are often paid more than lower level field and greenhouse workers, but also work longer hours (Barrientos 2014:10). By 1995-99, virtually all farms had appointed Kenyan men with experience in the larger, older farms to professional management roles. Further, professional growers rotated farm visits, particularly in the Naivasha cluster and informally benchmarked production practices and systems (Riisgaard & Gibbon 2014:12) which helped to improve and standardise the general quality of Kenyan roses.

¹⁹⁹ 73% of the 1457 applications for PVPs in horticulture overall between 1997 and March 2016 were for roses. Of those, 62.5% are foreign applicants predominantly (Netherlands, Germany, USA, France and Israel) while 37.5% are local Kenyan (De Jonge & Munyi 2016: 31).

²⁰⁰ Chapter one detailed the concentration of corporate ownership the flower industry as dominated by industrial capital (Asian-Kenyan 52.2%); Foreign capital (White Kenyan 24.6%) and Political capital (Black-Kenyan 23.2%) Figures from (Mulangu 2016); (categories are author's own).

²⁰¹ Opondo (2006) estimated between 65-75 percent of the then 40-50,000 flower plantation workers are women. Barrientos (2014) found that women comprise 75 percent of the 70-90,000 Kenyan flower workers.

The informal and intricate nature of knowledge-exchange occurring in these gentlemen's networks is testament to the importance of being societally embedded therein in order to thrive in this knowledge-intensive sector. From the nineties, a number of foreign consultants²⁰² have been consistently hired by flower farms to advise and train on various technical aspects (J. H. M. Wijnands 2005; Hortiwise & FlowerWatch 2012). This is further testament to the north-south flow of knowledge in the sector, and the slow and limited endogenisation occurring at the upper levels of knowledge management.

Kenya has naturally optimal conditions²⁰³ for commercial production of roses²⁰⁴ which came to dominate flower production in Kenya from 1998 (Gibbon & Riisgaard 2014:12). There are thousands of commercial rose varieties which denotes their technical qualities. Based on the flower diameter, commercial rose types can be categorised into four basic types²⁰⁵, (the length from the base of the bud) – tea hybrids, spray roses (*floribunda*), sweethearts (*polyantha*) and intermediate roses (*grandiflora*). In general, the bigger the bud the higher the price it fetches at the auction, although the highest prices depend on novelty and specific rare varieties.

The commercial production of roses is done in greenhouses²⁰⁶ and is a knowledge and technology-intensive process. Rose plantations are made up of multiple greenhouses each one two hectares in size. Production therein is carried out in soil beds, or in soil-less media with computer-controlled fertigation otherwise known as hydroponics. A few experienced commercial farms are opting to move from cultivation

²⁰² Ethiopian entrepreneurs setting up flower farms often hire foreign consultants and production managers, many of whom are Kenyan. (Melese & Helmsing, 2010: 51-52)

²⁰³ The Lake Naivasha cut flower cluster has thrived because of the abundant supplies of fresh water from Lake Naivasha, ideal temperature ranging from 22- 30 degrees Celsius during the day and 6-12 degrees at night, equal lengths of day and night due to location by the Equator (Bolo & Adeya, 2006: 3) and suitable humidity of above 70-80% (Joop de Hoog 2001).

²⁰⁴ The modern rose and most types of the genus rose used in greenhouse cultivation form the sub genus *Eurosa* and are part of the family *Rosaceae* (Joop de Hoog 2001).

²⁰⁵ Tea hybrids which are the largest have a bud diameter that spans 9 centimetres or more, while sweethearts are those less than nine centimetres (Joop de Hoog, 2001:11). Spray roses are easily distinguishable because they consist of at least three rose buds to one stem. While there is no consensus on intermediates, these are generally rose buds which measure approximately 3.5 centimetres.

²⁰⁶ Between 2000 and 2005, 'Israeli' steel-poly greenhouse structures replaced existing 'Spanish' wood-poly ones which allowed for greater economies of scale in deployment of labourers. (Riisgaard & Gibbon 2014:11). This also shows the reliance on foreign expertise for the supply of technical infrastructure.

in soil to hydroponic production, in order to recycle water (Chandra 2006:354), have greater control over inputs and to avoid soil-borne diseases and pests that can wipe out flowers. Overall, the use of hydroponics is low perhaps due to lack of knowledge on its performance under Kenyan conditions (Ketter et al. 2015:112). The greenhouses are also equipped with other modern floriculture technologies such as computerised heating, misting and lighting systems, all of which require huge capital outlays. Notably, Amiran Kenya, considered to be the “gateway to Israeli agriculture in Kenya” ([Embassy of Israel in Kenya](#))²⁰⁷ has provided much of the technology transfer²⁰⁸ and greenhouse technology set-up using credit schemes.

Roses take approximately 7-8 weeks to grow till maturity though this depends on the rose variety²⁰⁹ and the altitude. In a year, a typical rose farm will therefore have six or seven ‘flushes’, which is the point in the flowering cycle when all the flowers are in bloom. Roses growing in higher altitudes develop bigger buds and longer stems, and take a little longer to mature. Productivity²¹⁰ is measured in terms of number of stems produced per square metre, which is dependent on the variety. On average for intermediate varieties which are popular for supermarket sales, a farm should be able to produce 200-250 stems per square metre.

Cut flower production is also very labour intensive and detail-oriented. Roses need to be sprayed with pesticides twice a day and the flower beds manually weeded and pruned daily. Greenhouse workers must also manually ‘bend’²¹¹ rose stems to enhance productivity. Roses are harvested by hand twice or thrice a day by checking the ‘cut-stage’ which is the degree to which the rose bud has opened, and snipping the stem at 50-60 centimetres. The cut flowers are then transported to the pack houses

²⁰⁷ Embassy of Israel in Kenya, June 8, 2012. Accessed at <http://embassies.gov.il/nairobi/NewsAndEvents/Pages/Amiran-Kenya-Transforming-Farming-In-East-Africa.aspx>

²⁰⁸ In the late 1980’s Amiran brought consultants from Israel to advise the future flower growers of Kenya on the adoption of large scale greenhouses and has also set up 90 percent of the 3000 ha of greenhouses in the flower industry in Kenya. Amiran is now a subsidiary of the British multinational Balton CP. Accessed at <http://www.flowerweb.com/en/article/192572/The-Story-of-Amiran-Kenya>

²⁰⁹ For example, spray roses may take up to nine weeks to harvest.

²¹⁰ To enhance productivity in time for peak seasons, some rose flower farms will undertake a process known as ‘flushing’. This means manipulating the production cycle so that the rose bushes all flower just in time for the peak season harvest which maximises volumes and profits. Flushing also increases pressure on farm labour and some farms have to hire temporary workers or pay their workers overtime.

²¹¹ ‘Bending’ encourages higher shoot quality because the bent shoots act as a source of carbohydrates since they capture ample light and photosynthesize better thereafter (Kim & Lieth 2004).

where pack house workers cut them to required stem length, check for any damages, pack the flowers in bunches and place them in plastic sleeves. The flowers are then left to cool in the cold store at a temperature of 2 degrees for up to 8 hours in order to slow down their metabolism and boosts the vase life²¹². Thereafter the flowers are packed in branded cardboard boxes and transported in refrigerated trucks to the airport. All this detailed manual labour means that rose cultivation is incredibly labour intensive, requiring on average 18-20 workers per hectare²¹³.

Farms producing roses primarily for auction sale may hire workers more seasonally in time with peak seasons such as Valentines' day and Mothers' day, while those exporting to supermarkets must produce consistently year-round in line with sourcing agreements. This requires higher worker retention and a stable or permanent labour force, that is however required to work more intensively and precisely in packhouses in a form of *relative surplus value extraction* (Selwyn 2016:9). On the contrary, exporting roses to the auction provides "a degree of protection against the unpredictable delivery conditions, predatory pricing and supplier service-provision" coming from supermarket demands (Riisgaard & Gibbon 2014:16).

Locally anchored yet deeply embedded in international knowledge networks, the flower farm as the nexus of production holds in tension the financial, knowledge and labour inputs and therefore shapes much of the industry's corporate image. In this buyer-driven industry, it is also the singular point of reference for the sector's complex mechanisms of governance²¹⁴ and reform which makes it the site of intense political and institutional contestation that informs the political economy of the sector.

5.4. Consolidator-exporters as focal intermediary firms

One of the peculiarities of the cut flower industry is that while production is thought of in terms of number individual stems, the aesthetic value of the commodity lies in variegated, consolidated volumes – a bunch in hand or a bouquet in a vase. Highly

²¹² The vase life is the duration of time that flowers last in the consumers' vase, is between 10-14 days

²¹³ This figure is derived from interviews with flower farm managers in Kenya. According to Thoen et al. (1999:14), at the end of the 1990s there was a Kenyan 'industry standard' for deployment of workers in rose production, of 12 production workers per hectare, which however did not include sprayers, irrigation/fertigation workers or transporters

²¹⁴ Discussed in chapter eight

specialised firms known as consolidator-exporters or wholesalers have evolved to fulfil roles straddled between production and marketing in the flower industry. 500 tons of cut flowers worth approximately \$1.7 million are packaged and consolidated for export per day in Kenya ([Flowerweb 2015](#))²¹⁵.

Consolidator-exporters²¹⁶ are the crucial intermediaries linking mid and small scale farms to the bifurcated European markets. In relation to producers, they carry out two main functions – aggregating harvested cut flowers into exportable volumes so that they meet economies of scale, and secondly for those growers diversifying to direct markets, they help to identify buyers in export markets and facilitate supply. For buyers in direct markets, consolidator-exporters are critical in minimising coordination costs. They ensure consistency, quality and alignment of seasonality with supply of the required quantities and varieties of cut flower supply. Furthermore, consolidator-exporters can provide flowers at a stable price-range. For buyers, working with consolidator-exporters who source widely minimises the risk of supply failure perhaps due to sudden onset pest or disease attacks on farms. To further reduce uncertainty, buyers in direct markets generally have contracts working with independent consolidator-exporter firms²¹⁷. The capabilities of consolidator-exporters lay in balancing a knowledge and technology function²¹⁸, deep societal and network embeddedness and logistical acumen²¹⁹.

The relational role of consolidator-exporters in supply depends on whether the firm is active in supplying the auction or in direct markets, as was summarised in figure 1.6. in the introductory chapter. Accordingly, consolidator-exporters may be categorised

²¹⁵ Flower web magazine. Accessed at <http://www.flowerweb.com/en/article/169517/Kenya%E2%80%99s-flower-standards-to-be-in-place-by-end-of-2015>

²¹⁶ In some of the literature, they are also referred to as wholesalers. However, as explained in chapter 1, to offer precision and clarity on the complexity of their roles, this thesis refers to them as consolidator-exporters.

²¹⁷ However, consolidator-exporters only have informal supply agreements with flower farms and therefore bear the risk and possible penalties in the case of supply shocks. In view of these intermediary roles that consolidator-exporters play, and as outlined in chapters 1 and 2, they can be categorised as 'focal firms' (OECD 2008; Dembinski 2009) in that they consistently operate value-adding processes on both sides of the focal point, that is both in production and in marketing.

²¹⁸ Cold-chain technology is discussed in greater detail in the section that follows on freighters.

²¹⁹ Logistical acumen comes from partnerships with globally reputable logistical firms discussed in section 5.4 on freight-forwarders.

into two types – traditional, and specialised consolidator-exporters also known as ‘flower providers’ (Hortiwise & FlowerWatch 2012:50).

Traditional consolidator-exporters

At the auction, the role of traditional Dutch consolidator-exporters or ‘big buyers’ is deeply institutionalised. These are typically mid-sized family firms²²⁰ that purchase their flowers at the auctions or from import agents²²¹. Some may handle the importation themselves. They are one of the key determinants of European buyer power since they are the main customers at the Dutch auctions. They tend to buy daily from all the auctions in order to get the best price (Hortiwise & FlowerWatch 2012) and so provide their clients with less expensive flowers and a wide range of limited volumes of varieties they need for their daily assortments. Their domestic clients are in specialised retail channels and are predominantly florists, while abroad they may re-export to other wholesalers and retailers.

Traditional consolidator-exporters at the auction only make a profit margin of less than 2% and therefore their competitiveness depends on offering a lower price than other firms (Wijnands 2005:72). For many Kenyan producers, the advantages of marketing by Dutch wholesalers at the auction outweighs those of direct marketing due to the coordination costs (Wijnands 2005:49). Producers may however switch between wholesalers, although transaction costs may increase unless they use the auction as facilitator (Wijnands 2005:72).

‘Flower providers’

Figure 1.6. showed 2 types of supply chains (4 and 5) in direct markets where the role of consolidator-exporters is articulated differently in relation to supplying unspecialised channels, in particular supermarkets. This is where the ‘flower providers’ are located. These are typically large or very large scale multi-national consolidator-exporters with their own bouquet making facilities (Hortiwise 2012:50).

Flower providers’ main clients are supermarkets, which generally require fixed quantities of specific varieties at fixed prices over time. Price fluctuations at the auction

²²⁰ Some of these traditional Dutch firms have developed into large multi-national companies.

²²¹ The role of import agents is discussed in section 5.6 of this chapter.

make it a risky source for these flower providers who as a result tend to import directly and manage their own supply. Supermarkets' sourcing strategies also require close strategic partnerships with consolidator-exporters. They must also trust that the partner is capable of ensuring full transparency and compliance to the various codes of conduct under sustainable sourcing plans. This leads to "a whole series of joint ventures and vertical and horizontal strategic alliances²²²"(Hortiwise 2012:28). Supermarkets either establish their own subsidiary firms to handle the sourcing, or outsource the task to a large reputable multi-national firm²²³. Beyond these overarching categories, there is diversity of form among locally articulated types of consolidator-exporters.

The evolution of the 'flower providers' in particular is testament to the bifurcated and knowledge-intensive nature of global flower markets. Overall, consolidator-exporters exhibit remarkable embeddedness which heightens costs of switching between them, and wield immense corporate and institutional power through their tendency to consolidation, their enforcement of industry codes of conduct, and their accumulation of tacit knowledge gained from these interactions over time.

5.5. Freight-forwarders

Freight-forwarders (henceforth referred to as 'freighters²²⁴') partner very closely with consolidator-exporter firms to transport cut flowers in a time and temperature-sensitive²²⁵ system to export markets, and may be considered the industry's pipeline. Overall, the time taken from harvest at the flower farm in Kenya to arrival at the European retailers' ranges from 48 hours to 5 days, depending on the length of the supply chain. At the auction, a shipment of flowers may be spread out over a few auction days but is generally sold within 24-36 hours of arrival. Direct sales which cut

²²² Leading large scale Kenyan farms such as Veg Pro and Homegrown integrate forward and form joint ventures with consolidator-exporters. Consolidator-exporters in general do not integrate backwards (Wijnands 2005: 72).

²²³ These network configurations are outlined in chapter three. Chapters 7 and 8 provide three case studies highlighting the diversity of relationships consolidator-exporters have with mid and small scale Kenyan farms.

²²⁴ Technically, *freighters* are vessels such as cargo ships or vehicles or people that transports cargo, supplies, or goods. *Freight-forwarders* are typically the companies that organize shipments and oversee the logistical and administrative operations for export/import. This thesis' focus is on the firm definition, using the term freighter for short.

²²⁵ Most farms purchase a fleet (usually 2-5 depending on volumes exported daily) of refrigerated trucks which make two trips daily to the airport on average.

out the time spent 'on the clock' drastically reduce the farm-to-vase time (Hortiwise & FlowerWatch 2012:48). Cut flowers must then provide a vase-life of a minimum of seven days to the consumer. Table 5.1 below summarises the various steps and time involved in transporting cut flowers from the farm to the retailers.

Farm-to-vase: Duration of time taken transporting flowers

PROCESS	DURATION OF TIME TAKEN ON AVERAGE
Post-harvest on farm	4-8 hours
Cold-storage in farm pack-house	12-72 hours
Transportation in cold-truck to Jomo Kenyatta International Airport (JKIA)	1-2 hours*
Transport to the freight forwarder's facility	1-10 hours
Palletising done by freight forwarder	4-6 hours*
Customs clearance	30 minutes
Loading on to aircraft	1-2 hours
Flight from Nairobi to Amsterdam	8-9 hours*
Customs clearance at Schiphol airport	4-12 hours
Removing flowers from pallets (done by importing agent)	2-4 hours
Storage at the handling agent's cold store in Schiphol airport	4-72 hours
Transport to European retailer	2 hours to 5 days

Table 5.1

Source: Flowerwatch in (Hortiwise & FlowerWatch 2012:28)

* marks times amended by author to accommodate research observations

Two freighters to rule them all

The two main international freight companies dealing with cut flowers in Kenya are Kuehne + Nagel, which has the largest market share followed by Panalpina Airflo²²⁶. Panalpina Airflo, which is part of the Dutch Flower Group, has carved out a niche as a perishables-only freight company, and in cut flowers specialises in working with producers operating in direct markets. These producers sell their flowers on an FOB

²²⁶ Panalpina Airflo was formed in 2015 when Panalpina, an international freight forwarding company, bought a majority share in Airflo, a Kenyan based freight forwarding company specialising in perishables. Airflo was originally owned by the Oserian Mavuno Group as a clearing agent for the chemicals they imported to grow flowers from 1988. Oserian then turned it into an export facility for their flowers. However, in 2011 the Mavuno group wished to return to their specialisation in cut flower production. The company was then sold to the Dutch Flower Group (DFG). Panalpina came on board to purchase Airflo, as DFG sought to refocus on its specialisation which is cut flower trading.

Accessed at

http://www.panalpina.com/www/global/en/home/news_media/news_archive_folder/news_2015/15_11_05.html

(Free On Board) basis which means that they are only legally liable for the flowers till they are loaded on the flight, after which the liability is the buyer's. In effect, the cut flower producer pays for the cost of transporting the flowers from the farm to the airport including the loading costs, while the buyer pays for the cost of air freight to the point of sale in export markets. Kuehne + Nagel works with producers who sell flowers mainly to the Dutch flower auction. Overall, cut flowers comprise of over 60% of the total air freight exports ([Panalpina website](#))²²⁷. Both freight companies provide two main services – air transportation for cut flowers and Cold Chain Management (CCM)²²⁸. Precision is important in this role because transportation damages attract quality remarks presented to bidders at the Dutch auction. These can lead to a decrease in price of 5 -20% (Hulst 2004).

The cost of freight²²⁹, proximity of export markets and the availability of direct flights determines which global markets are accessible to cut flower producers. For mid-scale producers selling their cut flowers at the auction, freight costs are the highest of all direct costs ranging between 40 and 60% of total costs²³⁰. Under further pressure by the recent devaluation of the Euro which is the trading currency, freight charges present a serious challenge to market access. For many smallholders, this cost is prohibitive and non-negotiable, and is aggravated because they also ship much smaller quantities than mid and large scale farms. Freight companies generally have *no contracts with the flower farms*. To manage the risk, the freight company cultivates long term relationships with flower farms and makes use of the farms' historical

²²⁷ Panalpina website accessed at http://www.panalpina.com/www/global/en/home/news_media/news_archive_folder/news_2015/15_11_05.html

²²⁸ CCM includes temperature-sensitive management of flower logistics. For example, these firms offer vacuum cooling facilities which is the best available technology for cooling perishables. An increase in temperature beyond 4 degrees at any point in the cold chain compromises the quality of the cut flowers because it invigorates the rate of metabolism, affects water loss, tissue deterioration and growth of *Botrytis cinerea*.

²²⁹ The freight rates for the two freight companies to the Netherlands are dollar-denominated and range between \$1.80 - \$1.90 per kilogram in 2016. Freight rates are pegged to the costs incurred by freighters, which are driven primarily by the cost of the round trip. Prior to signing the block space agreement, the carrier typically conducts a feasibility study as to what they might import back from Europe. Kenya typically imports via sea freight through Mombasa. The commercial case for the return cargo flight transporting Kenya's cut flowers North wards is then made by flying in imports from Europe to West and South Africa on the return leg. From there back to Nairobi, the cargo flight normally flies empty. These round trips via the various African coasts are known as '*shore hops*' and are a distinctive characteristic of the dynamics of north-south flower trade.

²³⁰ From field work conversations among flower farmers detailed in chapters six and seven

production data and seasonal trend information. For mid and small scale producers without a range of reliable, technically proficient commercial options in this space, cultivating strong, consistent relationships with freighters is critical to their continued ability to access export markets.

5.6. Import handlers

To maintain the value of imported cut flowers and prepare them for bidding at the Dutch auction, cut flowers must be 'handled' by specialised importing firms²³¹ which are located within the auction²³², as the last point of contact for flowers before sale. Import handling includes unpacking them, checking for and reporting damages or wilting after transport, rehydrating, cooling, sleeving and organising them in order of varieties in buckets and lots²³³ in preparation for bidding. One category of importers at the auction receives and resells flower boxes to customers as they are, while a second category unpacks the incoming boxes and rehydrates them while awaiting sale (Hortiwise & FlowerWatch 2012:48). Their role is critical to how successfully the flowers sell at the point of auction.

Handling of cut flowers at the auction is a significant cost for producers (up to 15% of costs of production) and therefore the choice²³⁴ of import handler is a key consideration (Wijnands 2005:). Import handlers sometimes emerge out of the collective action of flower growers, who having pooled their flowers for export felt the need to also consolidate gains through forming their own handling and marketing company at the auction²³⁵.

²³¹ A good example includes FHS (FloraHolland Handling Services).

²³² See image 51.1 depicting the position of the import handlers in the cut flower production network

²³³ Imported roses are typically displayed in 'Dutch auction buckets'. A certain number of buckets typically of one variety are then organised and bid for as 'lots'.

²³⁴ The timeline summarised in image 1.5. described how Oserian flowers integrated forward by setting up East African Flowers to handle its flowers at the auction. A family company, these connections between Kenya and the Netherlands were fostered by familial ties, and an understanding of the Dutch way of doing business. Historically, for the pioneers of commercial flower farming in Kenya, the connection to import handlers at the auction was a key factor for success because having 'their man' at the centre of the trade in Europe meant that their business interests were well represented and cared for.

²³⁵ Marginpar BV is an example of this kind of import handler at the auction that specialises in African summer flowers.

One critical role of import handlers is in developing a feedback loop with producers on the condition of their cut flowers upon import²³⁶, which helps to reduce information costs. Relationship management between import handlers and the producers which is anchored in a deep societal and network embeddedness, is an important aspect of sustaining quality and a strong reputation at the auction. Import handlers are often smallholders' only connection to seasonal and marketing trends at the auction. Those who work with smallholders²³⁷ produce tend to know the local consolidator-exporters on a personal basis and have long-term, capacity-building relationships with them.

5.7. The Dutch Flower Auctions

This section builds on from the discussion in chapter one which laid out the bifurcation of flower export markets. The auction remains the main point of trade for Kenyan cut flowers and so its operations are analyzed in detail below.

Players at the Dutch flower auctions

As the world's biggest flower market place, the auction is itself a network of actors within the flower production network. Section 5.4 outlined the consolidator-exporters or 'big buyers' and flower providers, who are the main customers. Producer members are also a key part of the auction, which was founded on a Dutch growers' cooperative, *Verenigde Bloemenveilingen Aalsmeer* (VBA), described in the introduction.

The Dutch auctions are both a membership organization and a service agency. They handle over 60% of the world's trade in cut flowers (Phillips 2016). A member of the auction is an agent that sells 100% of his produce at the auction, and in turn the auctions are obliged to sell all the members' flowers (Wijnands 2005:37). As discussed in the introductory chapter, membership has been historically contested, and was only extended to international growers in mid-nineties. Now, FloraHolland consists of approximately 5000 members, and more than 7000 flower producers who supply the auction with flowers daily (FloraHolland, 2014). Those members who sell part of their

²³⁶ This quality function has gained in importance since the auction did away with its quality assurance service (mentioned in chapter one under reasons why producers are shifting to direct markets). Importers now use Whatsapp to send pictures and immediately communicate the condition of flower shipments on arrival.

²³⁷ There are a few enterprising smallholders who export directly to the auction, but they cannot afford to travel to the auction and therefore operate on the basis of trust with their handlers.

produce to the auction and part to direct markets, have to declare to the auction how much they have sold directly and the auction charges them a commission²³⁸ on the value of that sale.

As a service agency, the Dutch auctions provide world class transaction and logistical services. The auction has a dizzying array of specialists including import handlers, cold chain and logistics specialists, relationship managers, value addition specialists, plant scientists and quality experts. A critical service offered by the auction is the provision of a sophisticated, timely, logistical supply chain²³⁹. The section that follows discusses the auctions' transaction services.

How the auction works: the clock system

As of 2008, FloraHolland had three export auctions located at Aalsmeer, Naaldwijk and Rijnsburg and three regional auctions at Venlo, Bleiswijk and Eelde shown in map 1.1. in chapter one. Kenyan producers are most active at the FloraHolland auction at Aalsmeer, where they comprise about 50% of producers bringing in flowers daily ([FloraHolland, 2014](#))²⁴⁰. In total, there are 38 auction clocks in Holland. In Aalsmeer alone, there are on average 45,000 transactions carried out on 14 auction clocks per day ([FloraHolland, 2014](#)). In 2016, the auction traded 4.6 Billion Euros worth of cut flowers ([Royal FloraHolland website](#))²⁴¹.

The Dutch flower auction matches demand and supply to ascertain the price over early morning bids “on the clock” and has been described as the most efficient price-setting mechanism for flowers (Kambil 1995). Figure 5.2 shows a picture of the auction screen as explained by the auction. Three kinds of basic information displayed – information on the next lot to be auctioned, the current lot and the digital auction clock. The digital auction clock (right) provides two kinds of information – the minimum price typically

²³⁸ Wijnands (2005: 39) noted that, “Members pay a contribution fee of between EUR 450 and EUR 1350 as well as a 3.9 % provision, whereas non-members pay a 5.9 % provision.

²³⁹ There are internal highways that ferry flowers bought at the auction from the cold stores to cold trucks for distribution to various retail outlets and this helps to maintain the quality and precision of delivery times. The Dutch auctions also use a network of local short haul European flights and ‘flying Dutch men’ who transport the flowers in refrigerated trucks to various retail clients in Europe.

²⁴⁰ Royal FloraHolland facts and figures 2014. Accessed at <https://www.royalfloraholland.com/media/3949227/Kengetallen-2014-Engels.pdf>

²⁴¹ Royal FloraHolland website. Accessed at <https://www.royalfloraholland.com/en/about-floraholland/who-we-are-what-we-do/facts-and-figures>

marked in blue which is set along the perimeter of the clock's circumference, and a moving red ball which traces how the going price, set by the auctioneer drops when the bid begins. Finally, there is also a quality index²⁴².

The auction screen at the Dutch flower auctions

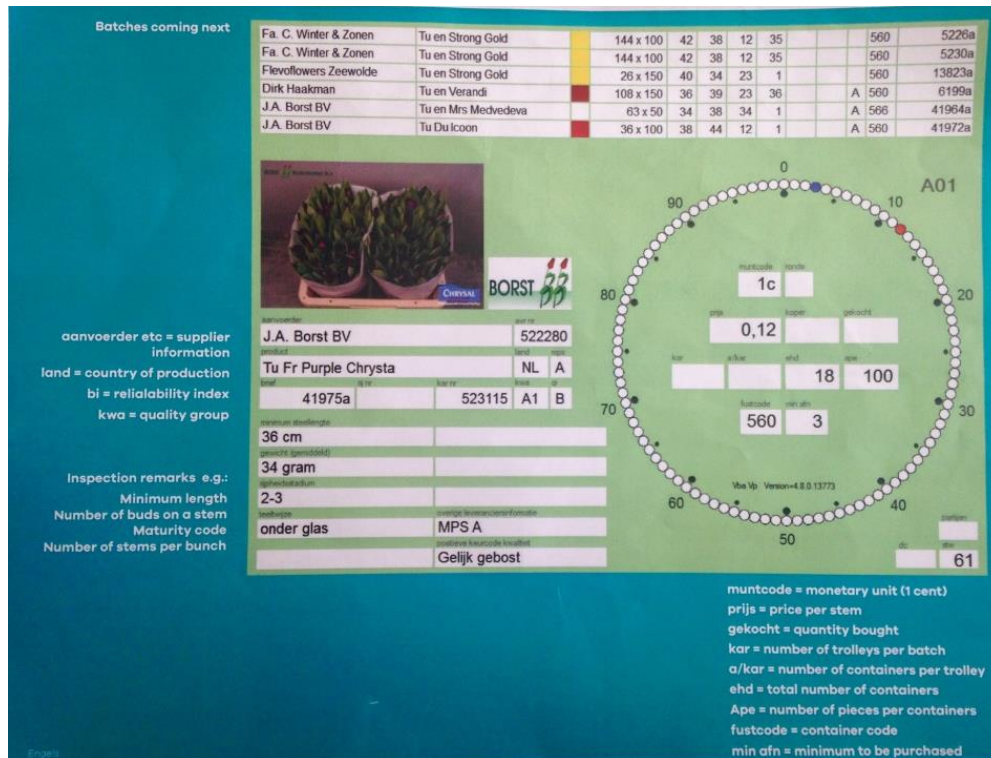


Figure 5.2.

Source: Author's own image taken at Royal FloraHolland auction, Aalsmeer

There is typically an auctioneer who controls the bidding process and he provides information on each variety as it appears on the clock. Typical of the Dutch auction system, bids on the clock start at the highest price and quickly decline. Big buyers, who are predominantly male²⁴³ company representatives place bids by pressing an electronic button at their desks. Placing bids for cut flowers is an immensely high-pressure and time-bound task since buyers have to make decisions worth thousands of Euros in two or three seconds. For this reason, buyers cannot rely solely on the quality data provided, but rather they rely on reputation of producers, whom they purchase from consistently and often know personally. This is why maintaining a consistent presence at the auction, cultivating informal relationships and being part of

²⁴² A1 (highest quality), A2, B1, B2 (lowest quality) that signifies the reliability of the supplier, minimum stem length, number of stems in a bunch, maturity stage, and the way in which a product has been cultivated for example, in greenhouses or under artificial lighting.

²⁴³ The author only saw one woman buyer bidding in the auction rooms in a room of about 300 men. This profoundly masculine environment is typical of the auction bidding environment.

the gentlemen's trading networks is key for producers to establish stable export relationships with buyers. Ketter et. al (2010:9) explains that, "most buyers purchase from a group of known sellers and continue to do so until the quality of the flowers falls short of the anticipated quality. When this happens, buyers will reconsider from which seller they will buy." Two innovations have facilitated this the digitalization²⁴⁴ of trade at the auction – the remote buying system (KOA) and the development of the auction's financial intermediary services²⁴⁵.

Remote Buying (Kopen op Afstand, KOA)

KOA enables remote buying and requires a subscription²⁴⁶ to the auction. Buyers can then review, filter and mark in advance the auction's entire supply of flowers by viewing multiple auction clocks all on one screen ([Royal FloraHolland website](#)). Capitalizing on the decoupling of logistics from the price discovery mechanism (van Heck 1997; Kambil & van Heck 1996) presented by the digitalisation of auction services, buyers do not have to be physically present to bid at the auction, but can purchase lots of flowers through all the auction clocks from their private computers (Cunden & van Heck 2004). The KOA service has gained momentum in the last few years and currently accounts for 60% of the auction's turnover (Rikken, 2010). The image below shows the wealth of information presented to the buyer in this platform. The various auction clocks he is interested in are shown to the left and the one he is currently bidding at is in the centre of the screen. Similar to bidding in person, and in light of the erasure of the auction's quality assurance system (discussed in chapter one), the successful use of KOA also requires buyers to be very well acquainted with the producers he is buying from to minimize the risk of purchasing questionable quality.

²⁴⁴ The digitalization of the auction which is described in chapter one as the second of the "internal shifts" that have changed the way flower trading takes place at the auction, is a central part of auction operations. Indeed, half of wholesale trade now takes place through online shops ([CBI, 2016](#))²⁴⁴. The other two internal turns at the auction were the contestation over the membership of international growers, and the series of mergers and acquisitions.

²⁴⁵ Introduced in chapter one.

²⁴⁶ A subscription that costs €62.50 per month is required to access this service ([FloraHolland website](#))

Image showing what the buyers see on the KOA remote buying screen

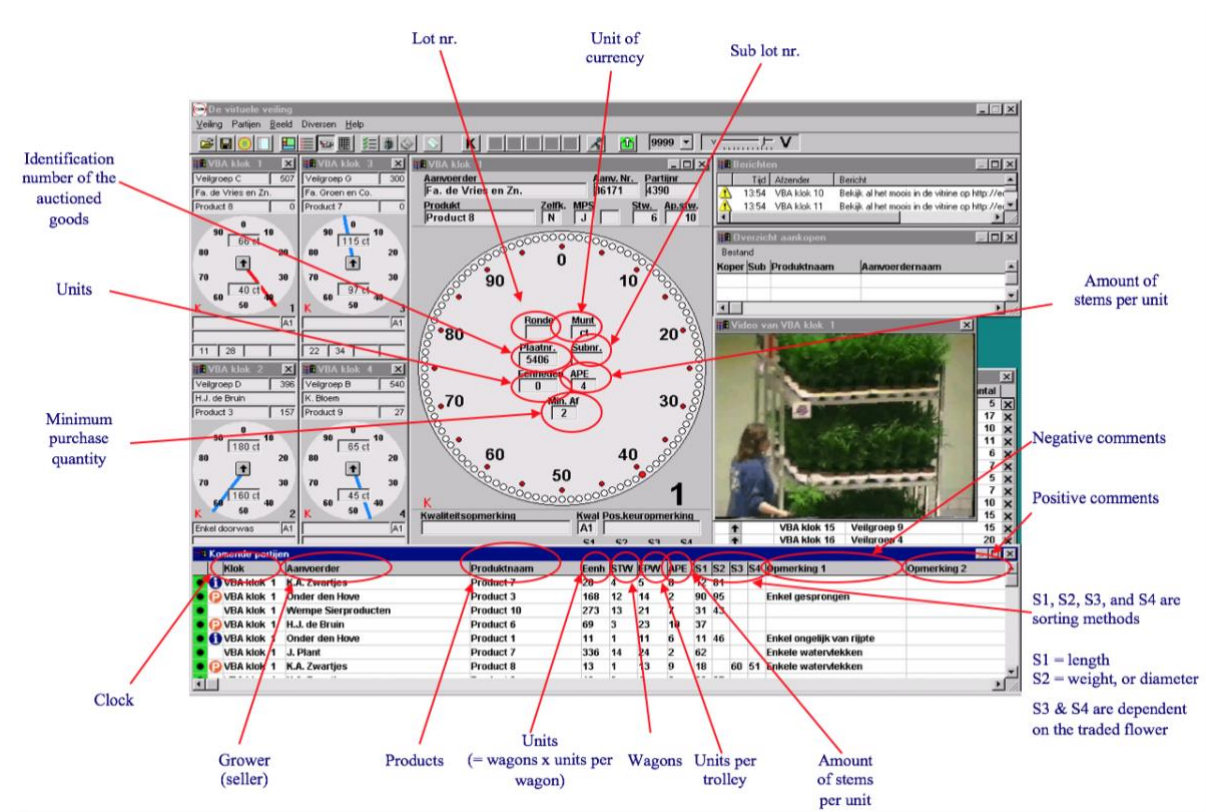


Figure 5.3.
Source: Ketter et al. (2010:11)²⁴⁷

The Dutch flower auction as financial intermediary

Witnessing producers increasingly bypassing the auction²⁴⁸ and shifting towards direct markets, the auction sought to maintain its financial dominance in the market by offering its services to manage transactions between producers and direct markets. It is cheaper²⁴⁹ to make use of this service rather than the full auction bidding process 'on the clock' at the auction. Growers who use this financial intermediary service lower their information and enforcement costs²⁵⁰ because the auction always pays its debts. This guarantee is especially important given that the industry is virtually contract-free.

Doing business at the auction favours large scale growers whose ability to produce at scale enables them to balance out the high cost of doing business at the auction,

²⁴⁷ Power point presentation by Ketter et al (2010: 11) derived from *ibid* paper.

²⁴⁸ See chapter 1 section 1.6 on bypassing the auction clock.

²⁴⁹ Members who choose to interact with the auction this way pay 1.5% as commission, rather than the 2.5% charged to full members. Information obtained from auction import handlers – June 2016

²⁵⁰ Wijnands (2005:75) explained that, "The transparency of the prices at the auction and the guarantee that your entire product, if it meets the minimum quality standards, will be sold, means less time for information seeking. This does not mean that marketing by auction is also most profitable."

which amounts to between 10—15% of the total cost of production. For smaller volumes, marketing costs at the auction can go up to 20% (Wijnands, 2005:39). Auction charges add up because they are disaggregated over the various logistical, membership and transaction services provided by the auction²⁵¹. For a big company dealing with huge flower volumes this is ideal, but for a small company these costs could push them out. This scenario is not new. Thoen et. al (1999) explained that the marketing costs and the airfreight costs inhibit marketing of small volumes or low-value flowers from foreign growers. The information costs required to keep track of all these disaggregated costs, not to mention the overall high value of all these fees means that it is very difficult for a small player who cannot supply large volumes to participate and grow. Consolidation of volumes is the key to tackling these costs most effectively.

The power of the auction persists as it is the main price setting mechanism in the industry and so retains referential power even as growers move to direct markets. The provision of unparalleled transaction and logistical services, and its ability to innovatively adapt to changes in the global trading landscape entrench its dominance. Viewed from a transaction costs economics lens, transacting at the auction minimizes search and information costs, due to bringing transacting parties together and ensuring transparency of pricing at the auction. It also reduces negotiation costs through the bidding process, and monitoring or enforcement costs because it acts as a financial guarantor of payment for members.

Considerations of Kenyan producers' future engagement with the Dutch auction system

The auction has undergone many changes over the century of its existence, and in spite of the shift by growers towards direct markets, it remains the heart of the global flower trade. Arguably the auction is here to stay though perhaps not necessarily in its current form. The popularity of remote sales in recent times might foreshadow a deeper engagement with the technology frontier on virtualization of trade, twenty-four

²⁵¹ In terms of service fees, producers selling at the auction must pay a bucket fee, trolley fee and a lot fee. In terms of membership costs, there is the membership fee which is a commission of 2.5%. Then there is a yearly contribution of 600 euros including 0.5% of the member's first few hundred-thousand-euro turnover. A few years ago, the auction added a very small yearly contribution, but set a high percentage of commission. Currently, the commission is very low, but augmented with a high yearly contribution. There is also a capital contribution of 1% on which the auction earns interest for nine years and eventually pays the contributor back with interest. In this way, the auction acts as a bank by accruing interest. From author's conversations with auction officials, FloraHolland Aalsmeer and Naaldwijk - June 2016.

hour online decentralized trading platforms, or perhaps a strategic use of cloud systems to further ease information costs. There is already significant innovation in the retail end using online technologies²⁵².

In Kenya, what might be seen as a local form of resistance to the power of the auction as a monopsony emerged in the draft Horticulture policy of Kenya drafted by the Government in 2012. The document put forward that the Government will set up a flower auction in Kenya to give Kenyan flower growers greater bargaining power in international markets.

“Despite the high volume of flowers marketed in these auctions, Kenya as a country does not adequately benefit from her flowers due to various middlemen who could be avoided if there was a local flower auction. **Therefore, the country will establish a regional flower auction in Nairobi** [emphasis mine] to tap the economic rent of exporting flowers directly from Nairobi flower auction.” – Draft National Horticulture Policy of Kenya, 2012: p. 37²⁵³

This proposition though politically and conceptually attractive, is encumbered with a set of practical challenges. Financially, it would be an enormous cost to set up from scratch the bureaucratic, administrative and logistical technologies and networks required to operationalize an auction in Kenya that can rival the century-old Dutch auction. Secondly, producers value selling their flowers in the Euro-zone and further afield so as to capitalize on earnings in hard currencies. The development of a strong local and regional market might nevertheless boost the prospects of success for a local auction²⁵⁴.

²⁵² A few start-ups such as Bloom & Wild, Stems and Daisies and Stems by Tineke in the UK, enable customers to customise bouquets online from the supplier which are then packaged for letter-box delivery, thereby cutting out the middle-man. Accessed at: Guardian Newspaper 26 Oct, 2017. [Flat packed bouquets – The startups transforming the flower trade](#).

²⁵³ <http://extwprlegs1.fao.org/docs/pdf/ken147935.pdf>

²⁵⁴ *MultiFlora* auction in Johannesburg handles about 300 million stems per year for sale to *local and regional* wholesalers and retailers. *How we made it in Africa* blog. April 15, 2011. Accessed at <https://www.howwemadeitinafrica.com/africas-largest-flower-auction-sourcing-from-across-the-continent/9226>

5.8. Conclusion

Honing in on the first path of the bifurcated market which leads to the auction, this chapter has traced the experiences of Kenyan mid-scale farms engaged in rose production. It has discussed the roles, capabilities and relationships of the key actors who make up the Kenyan cut flower production network including breeders, producers, consolidator-exporters, freighters, import handlers and the Dutch auctions. The dynamics of the journey from farm-to-vase revolves around maintaining the aesthetic value of the flower-as-commodity, and critically its vase-life. This economic lifeline demands meticulous management of the time and temperature sensitive dynamics of exchange in the supply chain.

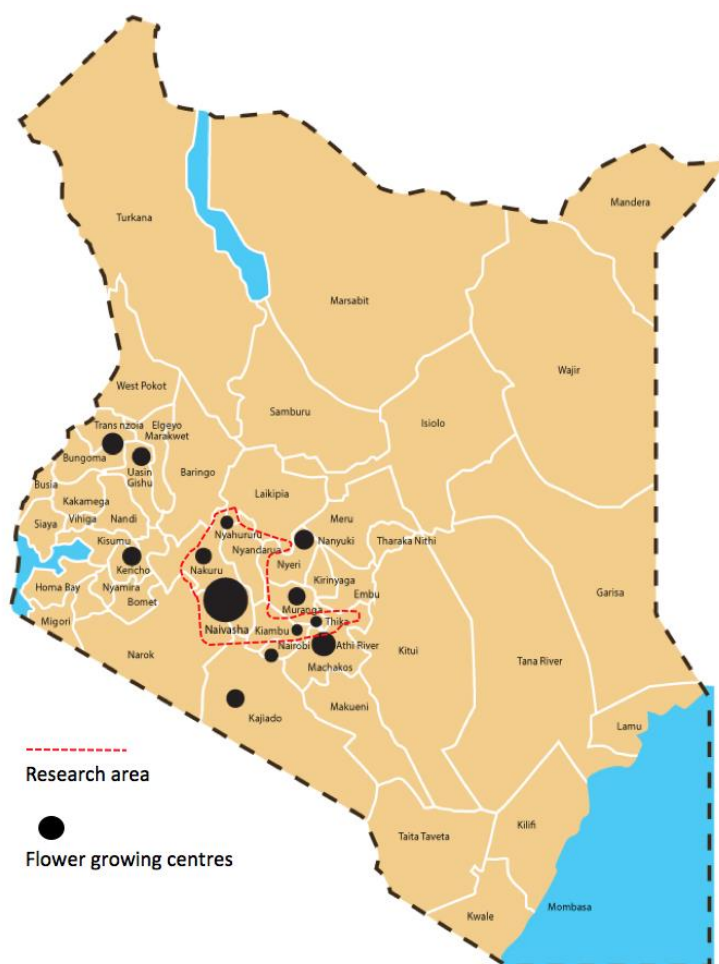
The technical detail involved in actors' roles is emphasized first to showcase the knowledge-intensive nature of the flower trade. The industry still relies heavily on foreign expertise to handle the science and technology frontier. Thus, the geopolitics of the industry's knowledge economy remains oriented towards Europe. Secondly, the relational nature of the firms, as well as the exchange of various forms of knowledge in informal networks, through kinship ties and gentlemen's networks is a testament to the deep social and network embeddedness that is characteristic of the cut flower production network. Moreover, the heterogeneity of actors showcased here makes a strong case for the use of the network metaphor employed in the Global Production Networks lens that was discussed in chapter three. We now turn to a discussion of the empirical findings from field work among a sample of mid-scale cut flower farms in Kenya.

6. Building a bouquet? Variety selection, labour management, networks and knowledge in mid-scale flower farms

6.1. Contextualising the mid-scale flower farm sample in the landscape of Kenyan commercial flower producers

The flower industry covers over 2600 hectares of land predominantly around Lake Naivasha area, which accounts for seventy percent of Kenya's total floriculture production (Kirigia et. al, 2016: 34). This is situated in the higher altitude areas of the Central Highlands, and South east of Nairobi as shown in map 6.1. below.

Location of field work sample of mid-scale farms in Central and Rift Valley, Kenya



Map 6.1.
Source: Kenya Flower Council website; author's analysis

The total area of the flower farms in my research sample amounts to 248 hectares which is approximately 10 percent of the total area under commercial flower production in Kenya. The area of the farm sample ranged from 18 to 60 hectares and averaged 35.4 hectares with the median farm being 38 hectares in area. To accurately situate them within the wider landscape of Kenyan flower producers, I classify them as mid-scale commercial flower farms²⁵⁵. They are distinct from large scale farms which are typically vertically integrated and grow 3-400 million flower stems annually²⁵⁶. The total annual production from the sample of seven amounts to approximately 366.2 million stems per year which is about seven percent of the total national production recorded by the Kenya Flower Council in 2016²⁵⁷. The table 6.1 below summarises the profiles of the farm sample²⁵⁸ and is discussed in the next section.

²⁵⁵ See table 1.1 for the basic structure and characteristics of the industry according to scale in chapter one

²⁵⁶ For example, Oserian farm, which is one of the best-known Kenyan large scale flower farms, cultivates on over 200 hectares of land around Lake Naivasha, produces 400 million cut flower stems per annum and employs over 4000 workers (2016)

²⁵⁷ This calculation is based on a crude average of 40 stems per kilogram, used as a rule of thumb (Gibbon & Riisgaard, 2014). In 2016, the Kenya Flower Council recorded 133,658 metric tons of cut flower exports from Kenya to the EU.

²⁵⁸ Data from the farm interviews was analysed according to their characteristics such as area, age, farm ownership, location, type and number of flower varieties grown, whether the farm is specialised or diversified in its production strategy, number of farm workers, certifications, choice of end-market (auction and direct markets), and use of technology in particular hydroponics for efficient management and recycling of water resources.

Summary of profiles of the field work sample of seven mid-scale cut flower farms in Kenya

Farm	Size (Ha)	Size	Ownership	Location	Year set up	Varieties grown	No. of varieties	No. of stems sold p.a.	Specialised Diversified or Niche varieties	No. of workers	CBA member	Certifications	Auction	Direct	Hydroponics use?
M	18	Small	Kenyan politician	Kikuyu	1994	Roses - tea hybrids, intermediates and sprays	39	19 million	Specialised	330	YES	KFC Silver; Max Havelaar; Fairtrade	Yes (also sell at Planteon)	Yes	Yes
S	38	Mid	Kenyan politician	Nyahururu	1996	Roses - tea hybrids, intermediates	30	30 million	Specialised	850	NO	KFC Silver; SMETA	Yes (60%)	Yes (40%)	No
W	42	Mid	Austrian aristocrat	Naivasha	1999	Roses - intermediates, sprays and 'premiums'; hypericum; ranuncula	17	40 million	Diversified	500	YES	Fairtrade; MPS; KFC Silver, ETI, SEDEX	Yes Hypericum	Yes (all their roses)	Mix
P	60	Mid	Greek-Kenyan Business lady	Thika	2004	Roses - intermediates ; Chrysanthemums, Gypsophila, Solidago	Not disclosed	120 million	Diversified	700	YES	MPS; Fairtrade; ETI; BOPP	No (left auction for 100% direct market sales)	Yes, exclusively	Yes
R	28	Mid	French agricultural scientist	Ruiru	1996	Roses - tea hybrids and sprays	110	50 million	Specialised	Approx. 600	YES	Fairtrade (in process of withdrawing); KFC Silver; MPS; FFP	No (opposed to split market sales)	Yes exclusively	Yes, (pioneered the technology use)
G	18	Small	British Kenyan	Naivasha	2004	Roses - intermediates and sprays; bouvardia, delphinium	Not disclosed	7.2 million	Niche	125	NO	KFC Silver	Yes Delphinium	Yes (florists, wholesaler)	No
N	44	Mid	British family	Naivasha	1997	Roses - intermediates	Not disclosed	100 million	Specialised	540	YES	KFC Silver; Fairtrade; MPS; ETI	Yes (but pulling out completely)	Supermarkets (80% exclusively)	Yes

Table 6.1.

Source: Author's analysis²⁵⁹

²⁵⁹ The farms have been anonymized due to the sensitivity of the data. The complete list of people interviewed in the mid-scale segment is in appendix B.

6.2. Intra-firm dynamics from sample of mid-scale flower farms in Kenya

This section presents intra-firm dynamics emerging from an analysis of field work conducted in a sample of *seven flower farms*. It first provides a prismatic glimpse on the profile of the farms, followed by a discussion on the inner life of mid-scale flower farms by looking at the two main focal points in flower farms – flowers and people.

Only three of the farms in the sample were based in Lake Naivasha area²⁶⁰ which is the hub of floriculture primarily due to the abundant availability of fresh water. The other four farms were in the central Highlands²⁶¹, specifically Thika, Kiambu, Kikuyu and Nyahururu. Flower farming has been expanding to these higher altitude areas allow for the development of bigger budded, longer stemmed roses (tea hybrids) which fetch higher prices, as well as for the abundance of land required for commercial production at scale. Overall the seven farms in the sample have been in existence for an average of 17.4 years. Five of the farms interviewed were set up in the mid 1990s²⁶² while two were set up in early 2000s.

In terms of farm ownership, five of the seven farms, which are also the biggest in the sample (42, 44 and 60 hectares) are owned by European directors²⁶³ some of whom have become naturalised Kenyan citizens, while the other two farms are owned by Kenya's political elite. Though illustrative, this profile is typical of the structure of ownership²⁶⁴ in the Kenyan flower industry.

²⁶⁰ The number of farms in Naivasha could be between 90 and 108 flower farms depending on whether one uses the more conservative estimate of 150 flower farms (IDS, Nairobi) or approximately 180 flower farms which includes farms that are part of larger conglomerate farms (Gibbon & Riisgaard 2014: 104)

²⁶¹ Two significant flower production areas not represented in the sample are Athi River (south east of Nairobi) and the Kericho-Eldoret-Kitale zone in the Rift Valley.

²⁶² The mid-1990s was perceived as the golden age of Kenyan flower farming when there was minimal regulation in terms of codes of conduct and certifications, the global market prices for roses were diversifying from chrysanthemums to roses. This was also prior to the establishment of transfer pricing legislation in 2006 (see chapter eight). Kenyan producers who grow predominantly roses were able to capitalise on this 'sweet spot' in the nineties to establish their enterprises and reap huge profits.

²⁶³ This includes Greek, French, British and Austrian heritage (including an Austrian count).

²⁶⁴ Mulangu (2016) showed that **77% of flower farms are Kenyan owned and within that, Asian Kenyans own just about half (52.2%), White Kenyan 24.6% and Black Kenyan, 23.2%**. An important category of ownership that is not profiled in the sample is Kenyan-Indians who participated in the industry historically as input suppliers, owing to their foothold in Kenyan industry, and have also invested in flower farms. The Kenyan-Indian community is also well established in the banking sector. More research is required to further understand the Indian community's participation in the flower industry. For example, on the unusual diversification or shift from upstream activities in finance and industry, downstream to production.

In order to break even, one has to invest at least \$2 million to set up on the minimum required area (20 hectares) to guarantee returns on investment, the returns to which will only begin to be recovered after 3-5 years when the rose crop has begun to mature. European owners often have access to long term loans from European development banks, patient capital from private equity firms²⁶⁵ or access to family wealth often from involvement in industry, to finance the venture.

Patterns of variety selection on mid-scale flower farms²⁶⁶



Figure 6.1. Spray roses

Roses constitute about 70% of the total volume of cut flowers exported from Naivasha ([KFC website](#))²⁶⁷. There are however, hundreds of varieties grown locally the most popular being chrysanthemums, carnations, hypericum, statice, gypsophila and calla lilies. Because roses are perennial crops, the decision of which variety to grow is crucial for the success of a rose

farm²⁶⁸. Therefore, one of the major aspects of a farm's success in export markets is its choice of flower varieties, which is dependent on the altitude and agro-ecology, technical production knowledge and demand specificities in target markets.

²⁶⁵ Prime examples of this include New York based private equity firm KKR & Co. which invested \$200M in 2014 in, Dutch-owned Afriflora farm, the world's biggest rose farm to support its expansion plans. In 2017, Sun European Partners bought Afriflora. Accessed at: <https://www.wsj.com/articles/kkr-co-investing-about-200-million-for-stake-in-afriflora-1401908629>

Sun European Partners also purchased Finlays Horticulture in 2015 enabling Finlays to refocus and consolidate its forte in the beverages industry. The Swire Group bought the Lamorna farm (British owned) in Naivasha. Accessed at: <https://www.hortweek.com/sun-european-partners-buys-finlays-horticulture/ornamentals/article/1368925>

In April 2018, EXEO Capital and Norfund invested US\$17 million in Dutch-owned Marginpar Flower Group Holdings enabling it to purchase Kenyan flower farm, Carzan, Marginpar Ethiopia and Marginpar BV in the Netherlands. Accessed at: <https://www.liquidafrica.com/agri-vie-and-norfund-in-flower-co-investment-deal/>

²⁶⁶ *All images of cut flowers shown are author's own taken in various farms during field work

²⁶⁷ The KFC estimates about 840 hectares of roses are grown in Naivasha of the total 1200 hectares nationally. Accessed at http://kenyaflowercouncil.org/?page_id=158

²⁶⁸ Whitaker and Kollavali (2006:356) noted that, "A poor decision is costly, as the cost of re-planting roses can range from \$120,000 to \$160,000 per hectare."



Figure 6.2. Intermediate rose

As shown in table 6.1, the sample of farms had as many as 100 varieties and as few as 30 under greenhouse production. Spray roses and intermediate roses were the most popular sub-variant²⁶⁹, followed by tea hybrid roses. Roses are popular because they are highly productive²⁷⁰ and once a rose stem is planted it will be ready for harvest in 8 weeks meaning that in a year, a farm can get 6-7 ‘flushes’ (big harvests).

Based on their variety selection, I categorise four of the seven farms as ‘*specialized*’, two as *diversified* and one as ‘*niche*’. Being ‘specialized’ refers to farms’ primary focus on roses. The larger farms (40+ hectares) which are transitioning to sales in direct markets opted to specialize in roses only, most commonly, intermediates and spray roses which are popular supermarket varieties. Growers supplying the boutique UK florists and the Russian market also intensively grow premium tea hybrids which grow best and most efficiently in higher altitude locations such as the Mount Kenya region. Typically, in a large farm’s earlier years, it is considered prudent to build a strong reputation by first selling at the auction before launching into direct markets.

Specialization makes it easier to produce consistently at large scale and also to standardize the conditions of production in greenhouses, as the quote shows.

“The reason we grow only roses is because this strategy allows for stability of production year-round. This is because we can project, because we have year-round contracts with the supermarkets. We don’t have other varieties because we are specialized. On 23 hectares, we grow 50 million intermediate roses for supermarkets like Waitrose and Tesco in the UK.” - Farm Manager, Farm-N.

²⁶⁹ These descriptions pertain to the *size of the bud* and are outlined in chapter five. *Sweetheart roses* are the smallest roses in the market and have buds that are approximately 2.5 cm and shorter stems that are 30-40 cm tall. *Super sweethearts*’ buds are in the range of 3-4 cm. While there is no consensus on *Intermediates*, these are generally rose buds which measure approximately 3.5 centimetres (Joop de Hoog, 2001:11). *Tea hybrids* which are the largest have a bud diameter that spans 9 centimetres or more. *Spray roses* are easily distinguishable because they consist of at least three rose buds to one stem.

²⁷⁰ For example, intermediate roses can produce 200-250 stems per m² per year.



Figure 6.3. Hypericum

The two farms categorized as “diversified” also tend to be the larger at 60 and 42 hectares respectively. Diversification refers to those farms which grow roses as one of a range of varieties including summer flowers or fillers such as Eryngium and Hypericum which are in high demand. Trials, and the technical ability to manage a range of varieties are an important part of a diversification strategy.

Diversification complicates production practices in the green houses because different varieties place varying demands on labour intensity. Diversifying to spray roses demands more labour than single stem roses, but spray roses are also more profitable. The diversity of varieties on a farm depended on the demand and the range of target markets, as well as the farm’s capabilities to meet the demand at scale. Diversification is an ongoing iterative process with farms constantly evaluating the income per square metre of various varieties in order to gauge which varieties to scale up and which to possibly uproot.

The two smaller farms (18 ha) opted to “go niche” (Farm-G) and produce unusual varieties such as bouvardia and delphinium which are occasion flowers, as well as high value spray roses for specialized direct markets while Farm M which is older, less technologically savvy and sells predominantly to the auction opted to produce a diversity of varieties in order to minimize risk of price fluctuation and/ or suppressed prices for standard roses at the auction. Smaller farms are at a competitive disadvantage when they produce standard roses because they simply cannot supply the large volumes required to make profit when auction margins are so small – often 0.05 to 0.08 euro cents per stem. For this reason, it makes sense to operate as niche producers. Reinforcing this perspective, a receiver-manager of one of the largest flower farms in the country explained that,

“If you are growing something that is really unusual, you will survive. But if you are trying to compete in roses, anything that is standard, your days are over.”

The longer harvest cycle of some of these niche varieties also means that it is better to sell the flowers to the higher end direct markets (such as florists or non-traditional markets such as the UAE) and to the auction in the off-season. Variety choice is critical in determining a producers' costs of production, viability in export markets and is formative of the grower's reputation, which is currency in the flower industry.

Operationalising the Global Production Network 2.0 framework to empirical findings

The field work findings of variety selection inform the identification of three *intra-firm* strategies linking to GPN 2.0 framework. These strategies shown in table 6.2. below are directly correlated with the farm's target market. Farms that target the Dutch auctions have a 'diversification' strategy that allows them to manage the risks of auction price fluctuations, capitalize on seasonal booms by supplying a range of varieties accordingly. Diversification also minimizes the risk of widespread losses from relying on one variety, which is susceptible to being wiped out by pests and diseases. The auction has the capacity to absorb a wide range and large volume of undifferentiated varieties of flowers to meet all buyers' demands. Larger, older farms also are more likely to have built up production capabilities across a range of varieties and so more able to grow them with a measure of success.

Intra-firm supply strategy: Linking field work findings on variety selection to GPN 2.0 theory

Supply strategy	Varieties	Target market	Relative size of mid-scale farm
Diversification	Roses and summer flowers	Dutch Auctions	Upper range (42; 60 ha)
Specialisation Standardization Scaling <i>"Triple S" strategy</i>	High value rose varieties - Intermediates, Spray roses, Tea hybrids	Direct markets in particular supermarkets	Mid-scale
<i>"Going niche"</i>	Occasion varieties such as bouvardia, delphinium in addition to spray roses	'Specialised' direct markets such as boutique florists or occasion orders; off-season auction market	Mid-scale (<i>smaller than 20 ha</i>)

Table 6.2.
Source: Author's analysis

In navigating the shift to direct markets, commercial flower farms have to adapt in both *what* they grow and *how* they grow. In terms of what they grow, farms that shift to supermarkets employ what I characterize as a “Triple S” strategy which is to *specialize, standardize and scale*. The choice is determined in large part by the agro-ecology and altitude of the farm. ‘Specialisation’ of varieties to for example the higher value spray roses and intermediates, typically done by relatively large, experienced



Figure 6.4. Bouvardia

farms allows them to meet the specified needs of the supermarket clients. ‘Standardization’ means being able to uniformly supply bouquets or bunches of flowers as demanded by retailers, while ‘Scaling’ elaborated below, means expanding production so that the farm is able to meet the large quantities that supermarkets consistently demand and to manage peak seasons. The third supply strategy, ‘going niche’ is for the relatively smaller farms which cannot compete for supermarket supply, or produce at large

scale. So, they opt to secure markets with niche demands which includes the supply of the aforementioned ‘occasion’ varieties such as delphinium and bouvardia which are demanded in limited quantities for special occasions. Smaller farms are also better able to provide the required attention to detail necessary to grow unusual varieties. Larger farms are not able to compete in this segment as efficiently because of the sheer size of their operations which demands that they standardize the production of one variety at scale.

Beyond knowing what to grow, the question of *how to grow* means addressing challenges of *scale and expansion* in terms of land in order to meet the high volume, regularised demand from large retailers. An experienced receiver-manager highlights the importance of scaling and specialization for the intensification of production and is worth quoting at length:

“[Anonymized farm] was one big farm of 220 hectares. And [the Dutch farm owner] changed the rules on growing roses. In a standard arch within a greenhouse you will normally get 6-7 rows of product. He squeezed in 8 or 9. He stopped doing double drip lines and put in single drip lines. It’s cheaper. The whole thing was just to get more efficient production and to put out more

volume. Volume, volume, volume. Because he realised the supermarkets, the changing tastes in Europe, people are not buying from florists. Supermarkets are going to rule this market... He also concentrated on one sector of the rose market - super sweethearts... I think that the problem is that too many people are growing intermediates and we have flooded the market, prices are falling. But, as growing techniques got better, the super sweetheart market has expanded. Because you can get more per square metre. [The owner] is now operating a 400-hectare farm in Ethiopia and is adding 1 hectare a week of new production. He's pumping roses intensively..." – Receiver manager of a large-scale farm in Naivasha.

In summary, this section has identified diversification, the 'Triple S' strategy (specialization, standardization and scaling) and 'going niche' as production strategies for the selection of flower varieties from the field work data. It has provided insights into the relationship between variety selection and a farm's capabilities to meet the stringent demands in shifting to direct markets from the auction. The management of labour as part and parcel of a farm's intra-firm strategies is discussed in the following section.

Emergent dynamics of labour management on mid-scale flower farms

The data in this section²⁷¹ comes from interviews with farm managers and production managers. Unfortunately, I was not granted access to speak directly with the general farm workers²⁷². Due to reports of frequently strained farm labour relations²⁷³, labour issues are highly sensitive and politicized.

²⁷¹ *All images taken of workers on flower farms and displayed here were obtained with permissions for use and are all author's own.

²⁷² The literature on labour issues in flower farms is prolific and is highlighted in the literature review

²⁷³ Recent examples include Business Daily, April 26 2018. Finlays to close Kericho flower farms, blames workers' strikes. Accessed at <https://www.businessdailyafrica.com/corporate/companies/Finlays-close-Kericho-flower-farms--blames-workers-strikes/4003102-4531770-12hi1yl/index.html>. Flowerweb online 2018. Kenya's Union Boss Warns of Nationwide Strike by Flower Farm Workers. Accessed at <http://www.flowerweb.com/en/article/197741/Kenya%C2%B4s-Union-Boss-Warns-of-Nationwide-Strike-by-Flower-Farm-Workers>The Star Newspaper, November 29, 2016. Flower exports hit by Naivasha workers' strike. Accessed at https://www.the-star.co.ke/news/2016/11/29/flower-exports-hit-by-naivasha-workers-strike_c1463768.

The mid-scale flower farms in my sample hired an average of 520 general workers, a median of 540, with the biggest number of workers being 850 (on the 38-hectare farm) while the smallest (18 hectares) had 125 workers. These workers labour in production activities in the greenhouses and in pack-houses in post-harvest tasks. The vast majority of workers were women, who were also departmental heads in pack houses. Men are typically hired to set up farm infrastructure such as greenhouses and flower beds and to manage irrigation systems as technical managers.



Figure 6.5. (left): Male worker in overalls preparing a flower bed in greenhouse

Figure 6.6. (right): Women workers in protective clothing in a flower farm packhouse

A key observation was that labour intensity is determined in large part by variety choice as well as the choice of end markets as was outlined above in table 6.2.5. The shift towards supermarket varieties and the resultant increase in attention to detail for bouquet making and packaging means a ballooning wage bill as explained in the quote below.

“It’s different in terms of labour intensity. Some varieties are intensive. For ... spray roses you need to build the heads. To build single headed roses you need 10 people per ha, but for sprays you’ll need 15. In terms of prices, sprays fetch better prices so you need to focus more on sprays than on single roses.”

– Farm Manager, Farm-S.

Many farms that supply supermarkets produce consistently throughout the year rather than ‘flushing²⁷⁴’ which is done so as to obtain a bumper harvest at peak seasons. Flushing often requires additional labour to harvest the bumper supply. Due to the stability and predictability of demand in direct markets year-round, farms can avoid

²⁷⁴ See chapter five.

flushing and maintain steady employment on a permanent basis. Increasingly, to save on costs supermarkets require farms to provide bouquets as finished products that are 'pack at source' which means farms often have to hire more workers to deal with packing according to customer specifications rather than exporting the flowers as plain bunches as farms do when exporting to the auction. The effect of this is a higher wage bill as the following quote shows.

"[This farm] used to sell through the auction, but three years ago we moved entirely to direct markets. Direct marketing means that we sell a finished product which is packed according to customer specifications at the farm. This means you have to hire more workers which makes your wage bill higher." - Farm Manager, Farm-P.

The interviews conducted with farm managers on the seven farms revealed that the wage bill was approximately 30-35% of total production costs. The wage bill is compounded with welfare costs which include health insurance, leave days, sick days and maternity costs and is second only to freight costs which are on average 40% of the cost of production. Workers in the sample farms were paid on average between KSH 6-7000 (\$60-70) per month not including housing allowances for farms that offer them (usually about KSH 2000 or \$20) and bonuses for overtime. On average, the flower farms hire 18-20 workers per hectare. Though this figure was expected to decrease over time as workers became better trained and more efficient, all farm managers interviewed complained that worker productivity has not increased over time. Managers further explained that despite this, the farms were expected to comply with the 10% annual increment on salaries stipulated by accession to the Collective Bargaining Agreement (CBA), which is discussed further below.

Variation of the wage bill *between* farms depends on CBA membership, certification, and geography, while *within* farms depends on the workers' years of employment and role in the farm. For example, pack house workers earn considerably more than greenhouse workers due to bonuses, which are calculated on a piece rate over the daily target. The privileging of workers upstream mirrors the disproportionate distribution of profits in the global flower value chain where retailers retain majority

profits while the production end downstream is squeezed. The high wage bill is also influenced by competition between farms in various geographies. Farms have to pay salaries attractive enough to draw people from working on their personal farms (for those in rural Central Kenya), and competitive enough to draw them to their farm rather than other comparable farms in the same area. Location affects the living wage²⁷⁵ especially because workers tend to be migrant labour coming from as far as rural Western and Northern Kenya who send money back home. These considerations are important because the real wages for newly hired flower farm workers have fallen by an average of 40% between 2004 and 2014 despite CBA negotiations (Anker & Anker 2017:7)²⁷⁶.

As elaborated in table 6.1. five of the seven farms are signatory to the CBA. Of the two farms that are not signatory, one is in Naivasha, while the other is in Central Kenya. The Naivasha farm is relatively small at 18 hectares with the fewest workers (125) in the sample, while the farm in Central Kenya had the biggest number of workers in the sample (850) working on the median 38 hectares. The wage level is governed by two main mechanisms - Kenya's labour legislation on which CBA negotiations are based, and industry certification requirements. In 2015²⁷⁷, the government set the minimum wage per month at KSH 5,436.90 (approximately \$55) for unskilled agricultural workers (RoK, 2015).

The CBA specifies a basic minimum wage which is higher than the statutory minimum. It also specifies cash allowances and in kind benefits (Anker & Anker 2014). It is a binding agreement negotiated every two years between the Flower Growers Group of the Agricultural Employers Association (AEA), which consists of 68 commercial flower farms representing about 60,000 workers, and the Kenya Plantation and Agricultural Workers Union (KPAWU) which is part of the Central Organization of Trade Unions

²⁷⁵ The formal definition agreed upon by the ILO and seven standard setting organisations for a “*living wage*” is “Remuneration received for a standard workweek by a worker in a particular [time and] place sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, water, housing, education, healthcare, transport, clothing and other essential needs including provision for unexpected events.”

²⁷⁶ As Anker & Anker (2017) show, living costs are higher in Naivasha where workers live in urban townships, than in Central Kenya where workers live in rural areas. Due to these geographical influences, they calculate that the net living wage in Naivasha should be KSh19,305 (\$191) as of October 2016, while for Mount Kenya area it should be KSh12,852 (\$128) per month.

²⁷⁷ This is relevant for the field work which was conducted in 2016.

(COTU). The CBA helps to facilitate farms' desire for long term, permanent and stable work forces to handle the seasonality, scale and quality of supply. Wage increases are pegged on the salary band and the years of experience which means that the CBA terms favour longer term workers than new hires (Anker & Anker 2014). Farms prefer to provide housing allowances²⁷⁸ rather than set up workers' camps which are often an enormous financial burden though necessary given that farm workers tend to be migrants. CBA negotiations often fail to reconcile in the set time and farms have to pay arrears of 6-8 months²⁷⁹. Recently, there emerged dissension in the ranks within KPAWU leading to the formation of a rival trade union²⁸⁰.

Farm managers sometimes view the CBA as a parallel or duplicate system of accountability to the many audit requirements of industry certifications which they already comply to. Further, managers view KPAWU as pressuring workers into membership simply to increase their numbers, rather than to fix existing labour issues on farms. Two farms (Farm-G and Farm-S) that were not signatory to the CBA illuminate these views with the quotes below:

“Because we are audited we have to stick to [labour] standards. And a lot of that overlaps with the CBA anyway or is to a higher standard than the CBA, so what benefit have my guys got being in the union? I don't see how it's going to help them other than cost them money. The problem is the Union here do pressurise - they want as many members as possible. But I feel that unless I am doing something very wrong our workers shouldn't need to be in the Union.”
Farm manager, Farm-G.

²⁷⁸ According to the 2015-2017 CBA, the housing allowance is pegged at KSh 2000 (\$20) for urban areas and KSh 1500 (\$15) for municipalities.

²⁷⁹ CBA negotiations completed in July 2017 mean that the starting basic salary will be at least between KSh 8,750 (\$88) and Sh12,500 (\$125) which is a 25% salary increase, and this will be back dated two years to July 2015. Accessed at: <http://www.flowerweb.com/en/article/194626/Pay-increase-for-Workers-in-Kenyan-Flower-Farms>

²⁸⁰ Disagreements over efficient representation of issues specific to flower farm workers under KPAWU led to the formation and recent registration of a new union – The Kenya Export Floriculture, Horticulture and Allied Workers Union (KEFHAU). KEFHAU has since blamed the loss of workers' jobs in the flower sector to double taxation of flower farms at county and national government levels. In particular, the Union lamented the loss of 3000 jobs with the closure of Karuturi flower farm, which was placed under receivership in 2016 for failure to pay a bank debt. Accessed at: <https://www.standardmedia.co.ke/business/article/2001247211/concern-over-lay-offs-in-naivasha-flower-farms>

“For us, it [the CBA] is not a big issue because we [pay] even above the CBA. If you are above the CBA, why should your guys go to the Union? They are happy with the terms. But you know those people who go to the Unions, go because they feel pressed. Our people are fine. They have never even thought of going.” – Farm Manager, Farm-S.

An analysis of the profiles of these two farms (Farm-S and Farm-G) above shows an interesting correlation between dissociation from the CBA and the type of certifications they subscribe to. Unlike the other five farms which had an array of international certifications such as MPS, Fairtrade, FLP etc. which require that farms subscribe to or are affiliated with the CBA as a means of safeguarding against labour rights violations²⁸¹, these two farms displayed mainly KFC Silver certification. This is the Kenyan industry certification which accommodates both farms which are signatory to or affiliated with the CBA, and those that are not in the CBA at all²⁸². The two farms therefore have weak institutional checks and balances on their workers’ rights protections. From this, one may surmise that the greatest loss is to the enhancement of workers’ power that comes with representation through collective action.

Flower farm hiring strategies were influenced by a gender bias in favour of women and a bias towards workers with lower levels of education. These strategies were concerned with achieving two main outputs - increased labour productivity and retention of farm labour with the outcome being higher overall farm productivity. Farm managers linked the two complaining that the retention of workers for many years has seen worker productivity decline or plateau. This relationship is visualised in figure 6.7. below and the tensions embodied in these strategies are later discussed.

²⁸¹ For the most recent examples where flower farm workers in Naivasha go on strike to protest poor pay and working conditions see: https://www.the-star.co.ke/news/2016/11/29/flower-exports-hit-by-naivasha-workers-strike_c1463768 and, <https://www.standardmedia.co.ke/business/article/2001247211/concern-over-lay-offs-in-naivasha-flower-farms>

²⁸² Referring to the Kenya Flower Council Ornamentals Sustainability Standard on unionisation (2015:29) “With regard to minimum industry standards; the producer has adopted the CBA which the farm is affiliated and/or signatory to, and where the farm has no CBA in place, then the current prevailing sector and or industry Collective Bargaining Agreement (CBA) wages and benefits shall prevail”

Overall, productivity in flower farms growing roses is measured on the basis of number of stems produced per metre square, which translates into revenue per metre square. For those in packhouses, it is expressed as the number of bunches or stems handled per unit of time, depending on the management system in operation, and is highly variable per farm. Farms that produce for supermarkets tend to have more exacting targets for packhouse workers to meet due to demands for consistency, uniformity and scale. Farm managers outlined training, issuing financial incentives and cultivating passion for work as means of enhancing worker productivity. Though promotions either within departments or vertically towards management were discussed as being merit-based through accumulation of tacit knowledge, underlying gender dynamics emerged which are discussed later in this chapter.

Linking farm hiring strategies to two desired outputs – worker productivity and retention and associated considerations

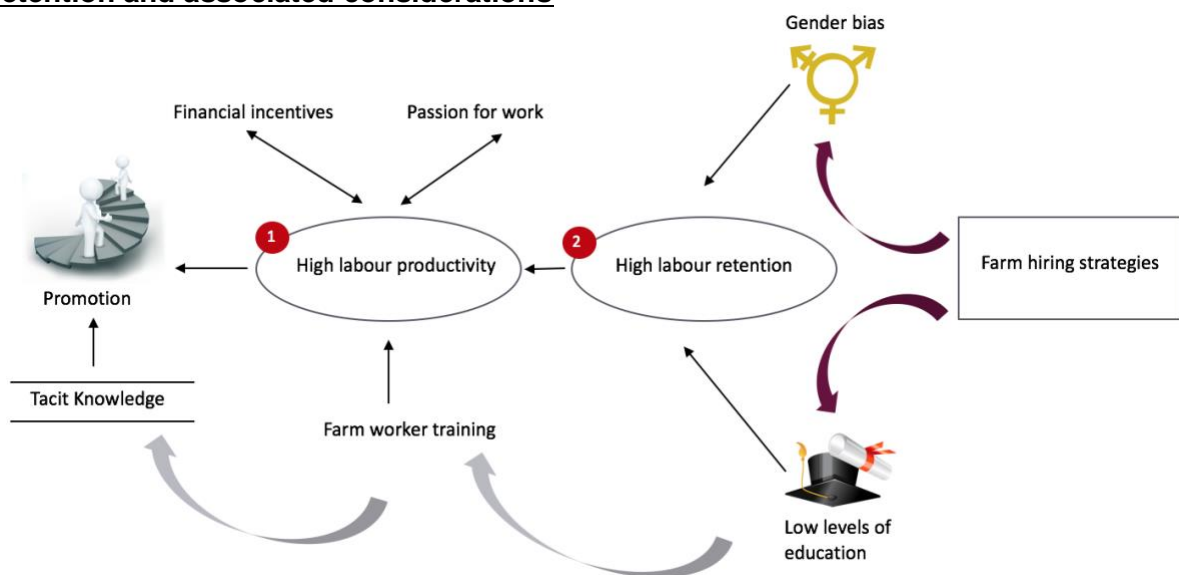


Figure 6.7.
Source: Author's analysis

One farm owner in Central Kenya explained that productivity gains were experienced in Kenya in the 1990s, when flower farms progressed from 30 workers per hectare to the current level of *18-20 workers per hectare*²⁸³, primarily as a result of systematic worker training. Paying her workers above the minimum wage helped retain them for

²⁸³ Thoen et al. (1999:14) posit that at the end of the 1990s the Kenyan 'industry standard' for deployment of workers in rose production was *12 production workers per hectare*, which however did not include sprayers, irrigation/fertigation workers or transporters. This figure would corroborate the farm managers' complaint of decreasing worker productivity over time.

over 18 years although their productivity is also now either declining or has plateaued. She explained that in the next decade or so, “the machines are coming”. Conversely, another farm manager explained that challenges with increasing labour productivity were linked to the worker turn-over, even though he elaborated that this is not more than ten workers per year. Farm managers interviewed linked the declining or plateauing of labour productivity to the constant retraining of new workers with no guarantee of their performance. While it is a commonly held belief that flower farms constantly generate employment, jobs are generated at the creation of a farm. Due to the high levels of retention on average, not many new jobs are necessarily created thereafter. Future job creation is linked to farm expansion, which is only possible for those farms that are outcompeting others.

Hiring strategies and retention of labour emerged as gendered phenomena on flower farms. Part of the rationale of hiring more women as general workers on the farm is linked to women’s perceived loyalty or more precisely, their risk aversion. They stay longer, because they have ‘more to lose’ as mothers and breadwinners, whereas men can entertain risk and readily move to more lucrative jobs. This mentality is captured in the quote below by a farm manager who ran the biggest farm in the sample with 850 workers.

“If I calculate what [female workers] are doing for me vis-a-vis maternity leave, sick leave and what have you, I would still want to stay with them. Because [look at] the precision of the cut-point they do for me, the loyalty.... The long-term benefits for the company are more. A man is flexible, you know he leaves work here and goes to work in another place. But a woman, because she has children here, you wouldn't hear that she has left and gone to Naivasha to look for work. You get?” Farm Manager, Farm-S.

Patriarchal stereotypes were firmly held by some male farm managers and this influenced their hiring decisions. Gendered stereotypes around women’s meticulousness, docility, nimble fingers, responsibility and obedience which influence women’s roles on flower farms have been previously widely explored in the

literature²⁸⁴. An excerpt of an interview of the same farm manager above is particularly telling of this perspective.

“Ninety percent of [my workers] are women. Womens [sp] are tender. They nurture. When [women] are harvesting flowers vis a vis men, men are...what can I say...rough. But women are more tender, they don't damage. The second thing. I don't know what happens with ladies and bending to work, they don't get tired like men. Naturally, I don't know. A man needs hard work even if it's three or four hours, let him do it quickly and leave. But this other easy kind of work where you have to be bent over doing the same thing over and over. Men don't like that naturally...for women they get used, it's not a problem.... Mostly, these womens [sp], you find they have more responsibility than men. Womens [sp] don't lose hope. They just keep pushing. They just say, oh tomorrow God will come. You'll hear this lady has a child waiting for her at home, she has a child she is educating. So, to tell her to go on strike, she will think twice. But a man! They don't care... a woman before she takes action, she will have calculated all the repercussions of her actions. Most of the time, strikes are done by men, not women. Women have too much to lose. So, she cannot take risks.” – Flower Farm Manager, Farm-S.

While the stereotypes described above privilege men by placing women in more menial roles, gendered hiring strategies have also been used to privilege hiring more men in other farms, as well as to inform promotion trajectories. One farm manager explained that he hired more men than women because men took fewer days off work whereas women asked for more days off in the year for sick leave and for care roles. It also emerged that there were informal, exclusive circles of mentorship between male managers and promising young male farm workers. The managers groomed the young male workers, lobbied for promotions and training opportunities, which enabled men to advance up the proverbial career ladder while their female counterparts spend decades working as pack house workers. Women who are promoted seem to hit a glass ceiling typically as managers of pack houses. The overwhelming lack of female

²⁸⁴ This is covered in the literature review chapter. See for example, (Barrientos 2001; Dolan & Opondo 2002; Barrientos et al. 2003; Opondo 2006).

farm managers seems to be not a question of lack of skill but rather the effect of being locked out of an intensely gendered skills development and promotional structure.

Another emergent correlation on farm hiring preferences is between low levels of education and labour retention. A Human Resources manager in Naivasha explained that he preferred to hire workers with low levels of education because they were more likely to be retained than high school graduates who soon started seeking out more favourable employment elsewhere as elaborated in the quote by Farm-N below. Further, the bar for basic education as a farm worker appeared to be very low indeed as indicated by the second quote.

“The minimum [requirement] is form four but we are not so strict on this because those who come in with form four qualifications cannot be retained for long. Within 5 months/ the first contract, most of them want to leave and go back to school. However, those with for example primary class 2 do not have any other future and so long as they are getting their salaries, they will work for over 20 years. 34% of their workforce has been with them for over 10 years. 25% have been at the farm for over 5 years.” - HR Manager, Farm-N.

“I had a certain lady who could not count when she first came in. She is very, very good. Now she can count to 10. She understands the plants. And that's all what's needed.” - Farm Manager, Farm-G.

These findings from two of seven farms on their preference for hiring lesser educated workers do not appear to be representative of the industry overall. Ksoll et. al (2011) established from figures by Kenyan flower farm managers in 2008, that an average of 45.9 per cent of Kenyan cut flower workers across 74 farms had some level of secondary school as their last stage of education. Gibbon & Riisgaard (2014:121) also establish that educational qualifications are increasingly a requirement by human resources departments in flower farms though, “a large minority of the workforce has been recruited through relations with the existing workforce, and there is *no evidence* [italics mine] that educational qualifications have greater salience than cost in hiring decisions.” They suggest that this could mean that there is a greater abundance of educated, cheap labour that is altering the labour landscape, an issue worthy of more research.

A consideration of these practices elucidates two internal contradictions or tensions in farm hiring strategies which are linked to the two desired outputs – higher worker productivity and higher worker retention. The level of education is central to informing these two outputs, as is depicted in the diagram below (figure 6.8.)

- (i) The first tension links the level of education with labour retention (depicted on the right). It shows the contradiction in what farm managers *say they* require when hiring - which is secondary school educated workers - versus *what they want* - which is to hire the less educated because they are more easily retained in the long term. Farm managers have observed that workers hired with relatively high (secondary school certificate) education have low retention as flower farm workers. This relation linking hiring of workers with low levels of education to high worker retention is shown in a **solid** red line in the diagram because the farm expectations of high retention of less educated workers matches the observed reality.

- (ii) The second tension links the level of education with worker productivity (depicted on the left). It shows the contradiction in *what the farms do* - that is actively hiring workers with lower education *versus what they want*, which is to observe high productivity in the long term. Farm managers complain that workers hired with high (secondary) school education still exhibit low productivity in the long term, which is the challenge that farm managers are trying to grapple with. This relation linking low level of education and high labour productivity is shown in a dotted red line in the diagram below because farm expectations of workers with low levels of education showing increased productivity in the long term do not match the observed reality.

The farm preference of hiring the less educated in order to retain them for longer, overlooks the notion that educated workers are more likely to train better, add greater value, and make more informed decisions at work. More research is required to understand the long-term effects of level of education on worker productivity in flower farms.

Tensions emerging between farm strategies pertaining to increasing labour productivity and retention

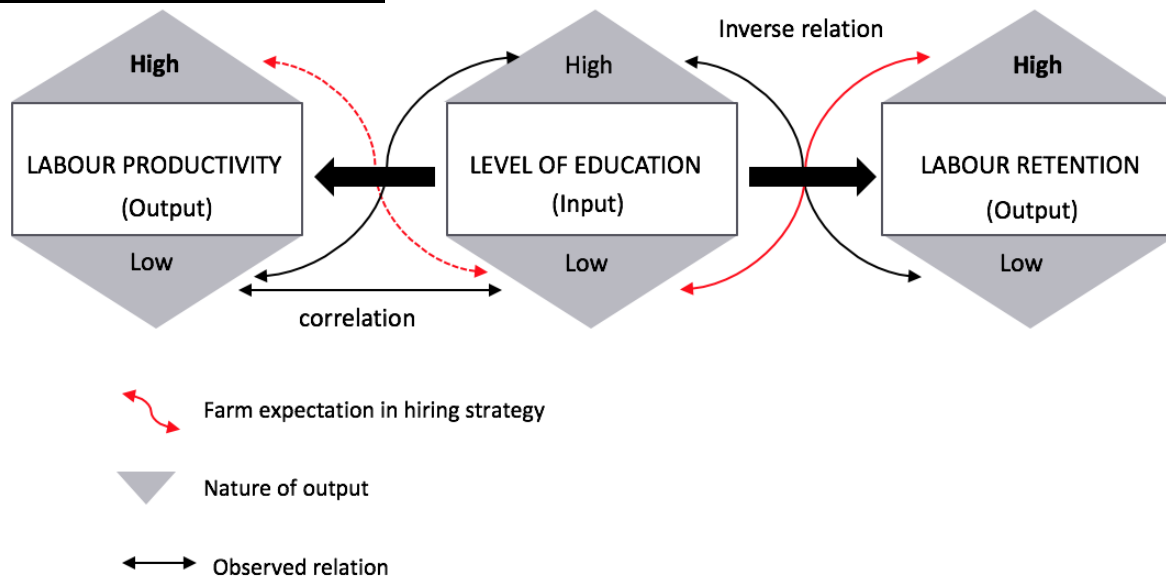


Figure 6.8.

Source: Author's analysis

These two tensions reveal pressures that flower farms are under to become more competitive while maintaining a socially acceptable corporate image. They also reveal tensions in the transitory moment of production, as farms shift to supplying supermarkets and therefore growing varieties that require greater attention to detail year-round, as well as rigorous quality standards in order to meet certification requirements. Flower farms have to be managed as a long-term project that is increasingly requiring stable, long term workforces as opposed to seasonal, casualised labour. This situation presents new challenges in terms of motivating and retaining workers. Though over a decade of reforms, there has been a shift towards hiring labourers on permanent rather than seasonal contracts (Gibbon & Riisgaard 2014). This has been driven by lobbying by KPAWU, labour rights advocates, compliance to stringent certification and codes of conduct and direct market pressures for consistency of production.

Rather than rely on workers' education, farm managers believed in the efficacy of their on-farm training to boost productivity and to address the shortage of supervisors and middle managers critical for the survival of the flower industry. Interviews revealed a range from three months of training for those working in greenhouses, to six to eight months of training for those in packhouses, to continuous on-the-job training to

facilitate promotion from greenhouse work to higher paid or incentivized pack-house work.

Kenyan flower farms have historically privileged tacit knowledge gained from on-farm training than academic qualifications. This emerged from interviews with African flower farm managers who were often recruited through familial connections or informal references for entry level and managerial positions in flower farms in the 1990's²⁸⁵. The practice then was to hide their academic qualifications such as university degrees in horticulture, for fear of being perceived as a threat. As expected, the more educated hires learnt quickly and proved proficient at technical tasks²⁸⁶. Tacit skill acquired through training rather than academic knowledge enabled steady though not quick progression into management. While acknowledging the importance of training, Rikken (2011) explains that training unskilled labour puts a major cost onto any flower farm. This observation points to another tension pitting the need and expense to train workers especially those with low education levels, against the need to keep costs low and to recoup the investment involved in their training.

Beyond training, financial incentives are particularly common in the pack houses to stimulate worker productivity. Supermarkets have stringent demands stipulating exact volumes, varieties, stem lengths etc. which makes the packing process more intense. Packing targets ranged from 120 stems per hour for the auction, to 450 stems per hour per day for those exported to supermarkets abroad, meaning that workers can pack up to 3,500 stems a day. This is a form of worker exploitation by *relative surplus value extraction*²⁸⁷. Each stem packed over this attracts a 'bonus' of Ksh 2.49.

²⁸⁵ Riisgaard & Gibbon (2014:12) explain that "virtually all farms, even the small ones, appointed professional growers to production management functions by 1995–9 – usually Kenyans with experience from the largest farms."

²⁸⁶ Mose's (2017) study found that the worker training accounted for 14.7% of flower farm worker productivity, second to labour union participation (35.4%) and use of information and communication technology (19%).

²⁸⁷ Selwyn (2016:9) speaks to this by elaborating on how within the capitalist structure, firms are able to extract surplus profit from workers by increasing *relative surplus value extraction* by managing the labour process so as to increase productivity within working hours, for example, through packhouse bonuses.



Figure 6.9. Women workers sorting roses according to stem length in a packhouse



Figure 6.10. Motivational acknowledgement of target-achieving packhouse worker

Thinking beyond the impact of level of education, training and financial incentives on boosting workers' productivity, a British-Kenyan farm manager on a relatively small farm in Naivasha argued that perhaps lower labour productivity in Kenya was a result of 'lack of passion'. He however acknowledged that it is difficult to motivate workers engaged in fairly menial and repetitive tasks. Furthermore, beyond the technical understanding, workers have little cultural appreciation of the value and meaning of the flower commodity they process every day.

This section has discussed the findings on labour in the sample of seven mid-scale flower farms which revolve around two main issues – the productivity and retention of labour. It discusses farm hiring strategies as influenced by gender and level of education of workers, as well as training and the use of financial incentives to motivate higher productivity in the labour force. Indeed, all farms raised the challenge of declining or plateauing worker productivity over time. The chapter identifies two tensions in the farm hiring strategies. First, there is a tension in that while farms say they prefer to hire educated workers, in practice the preference is for workers with low levels of education who are also retained for longer. The second tension is the farm expectation of increased labour productivity over time, while hiring workers with low levels of education. Another finding in terms of labour management was that farms privilege tacit knowledge acquired through on-farm training over educational qualifications for career progression among farm workers. Intra-firm promotions

emerge as gendered practices that evolve out of informal male networks of mentorship and sponsorship. These findings show that there is a history of employment in this sector that is influenced by hiring strategies that default to pre-capitalist forms of contracting which privilege familial referencing, tacit knowledge and gendered norms.

Having outlined intra-firm strategies on variety selection and labour management, the section that follows discusses the critical inter-firm relationships between flower farms and consolidator-exporters.

6.3 Inter-firm dynamics of mid-scale flower farm networks showcasing relationships between flower farms and consolidator-exporters

This section hones in on the relationships between flower farms and the crucial ‘focal firms’²⁸⁸ which perform the twin roles of consolidation and export, thereby facilitating access to new and lucrative direct markets. Consolidation in the cut flower industry is a service offered by specialized firms and it provides an interface of export preparedness by converting cut flower produce harvested by farms into commodities ready for international export markets. Different markets have different requirements²⁸⁹ of consolidators. Consolidator-exporters form strategic relationships with buyers in export markets, consistently supplying them with specialized varieties depending on demand and seasonality with the goal of becoming preferred suppliers in the long term. The power of consolidator exporters therefore comes from their market and technical knowledge, and network embeddedness which enables them to connect a variety of producers to big buyers in direct markets. Their command of economies of scale enables them to smooth out supply and demand in global flower markets.

²⁸⁸ In chapters two and three, this thesis discusses the employment of Dembinski's (2009 :121) concept of ‘focal firms’. “A firm plays a focal role (and can be labeled a “focal firm”) when it consistently operates value adding processes on both sides of the focal point within a chain, i.e. both in production and in marketing/distribution.” He further explains that the power of these focal firms may come from their command of economies of scale (as in automakers) or in standard setting (software).

²⁸⁹ For example, those selling at the Dutch auction normally export bunches of single varieties in boxes packed with anything from 150 to 500 stems. Those selling to direct markets engage consolidators or preparing bouquets that match specific, standardized orders when selling to direct markets.

I interviewed representatives from three different kinds of consolidator-exporters who source from mid-scale flower farms during my field work in Kenya as summarized in table 6.3.

Profiles of three consolidator- exporters in field work sample

Profile of firm	Source of flowers	Export market	Sample of services offered
<i>Dutch Flower Group</i> Giant, multi-national, family firm conglomerate	Large and mid-scale flower farms in 30 countries	Dutch auctions and direct markets in 60 countries	Quality control, cold chain logistics management, bouquet making, managing global wholesale, retail and online supply and distribution
<i>The Flower Hub</i> Local joint venture consolidator	Member producer farms (mid-scale)	Direct markets (Japan, USA, Northern Europe, Southern Europe, Scandinavia and Australia)	Production and quality control, cold chain management, delivery and distribution management, wholesale and retail supply
Independent consolidation enterprise	Certified commercial flower farms	Direct markets in Japan, Australia, Europe and West Africa	Quality control, cold chain management, bouquet making, value addition, retail supply

Table 6.3.
Source: Author’s analysis

Dutch Flower Group

The information on this case study is derived from an interview with a member of staff at the Dutch Flower Group (DFG) based in Nairobi²⁹⁰, as well as secondary sources. The DFG is a giant multi-national, family-owned firm with global networks, sourcing from over 30 countries, and supplies flowers to 60 countries the world over. It is a conglomerate comprised of thirty companies and is the world’s largest specialised flower trading firm²⁹¹, and the biggest supplier to retailers in Europe. It is also the biggest trader at Aalsmeer Dutch flower auction. Its portfolio of buyers includes large scale, retail, importing wholesalers, wholesale businesses, retail chains and online businesses.

²⁹⁰ DFG has had offices in Nairobi since 2003

²⁹¹ DFG supplies 60 million stems of cut flowers, 5 million bouquets and 5 million plants a week and had an annual turnover of € 1.5 billion in 2017. Accessed at <https://www.dutchnews.nl/news/2018/04/dutch-flower-group-posts-record-e1-5bn-in-sales-despite-brexite/>

DFG provides customized orders of cut flowers and bouquets to clients and also coordinates logistics, information and R&D to introduce new flower varieties matched with consumers' changing demands, as well as to innovate in cold chain management. It provides quality control by transmitting information on specificities required by the retailer to the growers. DFG ensures there is transparency and compliance to certifications among producers to facilitate retailers' sustainable sourcing requirements. It also facilitates cold chain management to maintain the integrity of the cut flowers as it links grower to retailer. Panalpina Airflo²⁹², the specialist air freight company is one of its portfolio companies which coordinates the time-sensitive cold chain logistics from Nairobi to various global export markets. DFG has also been responsible for successfully piloting sea freight of carnations from Kenya to the Dutch auction.

Only farms with the required certifications in target markets can supply the firm. It has sourcing agreements (not formal contracts) with multiple large and mid-scale farms which allows it to be flexible but also consistent in its sourcing. By having a vast network of growers, the firm is able to maintain consistency of supply even when there are disruptions to supply due to natural causes, changes in seasonality or production challenges. It also ensures a steady market for producers thereby alleviating the stress of seeking market access.

DFG also displays deep societal embeddedness (Hess 2004)²⁹³ within the Kenyan market in the close, capacity building relations it develops over time with producers. It also plays a critical role of transmitting information coded in sourcing agreements from buyers abroad to producers in Kenya as the quote below shows.

“We shape the presentation of a bouquet and how quickly can it be delivered. What is the temperature of this bouquet? Is the presentation based on the customer specification? ... for the ones going to the supermarket, we have to go to the farm and make sure that they follow the specifications. If there is a new customer that we have and they want this size of bouquet and not that

²⁹² Airflo is part of the consolidator firm's portfolio of companies. A majority share of Airflo was purchased by Panalpina World Transport Holding in 2015.

²⁹³ Embeddedness is an analytical category from GPN 1.0 explaining the ways in which firms are anchored and is discussed in chapters 2 and 3 as territorial, network and societal embeddedness. See appendix A for the summary table operationalising the concept within the flower industry

size, we explain that to the farms. Some farms might not otherwise understand what the customer wants. But because we are experts in that field we will go to the farm and explain to them exactly what the customer wants. We will then send a sample box which will be sent to the market and then the market will say, we like this, or not.” - Quality Manager, DFG.

These are all very knowledge-intensive capabilities that demand both technological proficiency and strong network embeddedness. The firm places great emphasis on its family-ownership²⁹⁴ and societal embeddedness in a long Dutch tradition of flower trading. It is interesting to note that the diversity of its portfolios and large number of companies mirrors the great diversity of varieties in the flower industry. The conglomerate also exhibits remarkable network embeddedness as a result of its enormous market share and influence over the trading landscape.

The Flower Hub

The second case study emerging from field work is more locally grounded. This section is informed by an interview with a manager at Flower Hub and secondary sources online. The Flower Hub (FH) was set up as a marketing hub through the collective action of four mid-scale flower farms, three of which were in my field work sample. The three farms have European directors, which has ramifications for embeddedness to European flower trading networks, access to capital and management style. FH was set up to strengthen the member farm's sales in direct markets. However, flowers such as hypericum and eryngium are still sold through the auction because they are in low supply on the market and still fetch good prices.

The Flower Hub set out by marketing hypericum, a filler, in Japan and then in Europe. In addition, the consolidator sources smaller quantities of summer flowers such as gypsophila from about ten smallholder outgrowers (on 2.5 hectares of land). FH farms cover 150 hectares collectively and supply 2.5 million stems per week to direct markets. They supply a wide range varieties including roses, hypericum, eryngium,

²⁹⁴ DFG was formed as a merger between the family Van Duijn (Van Duijn Group) from the Westlands area and family Van Zijverden (OZ Group) from Aalsmeer in The Netherlands. Van Duijn Group was founded in 1969, OZ Group started in 1959. Accessed from: http://www.florinews.com/index.php?option=com_content&view=article&id=72

molucella, solidago, alstroemeria, lilies, carnations and many others. As its networks and reputation grew, the consolidator began supplying roses to Europe, Ireland, France and the US. They also diversified from supplying wholesalers to the retail market, which is indicative of the flower industry marketing trend overall. The firm has a sales team and a marketing team in Nairobi as well as a logistics team, quality and technical teams which are based at the airport. Flower Hub partners with Kuehne + Nagel, the international logistics firm to manage the logistical coordination between grower and buyer.

The firm capitalizes on four main capabilities - its powers of consolidation (internally and through select outgrowers) of a wide range and volumes of flower varieties, value-addition in terms of bouquet creation²⁹⁵, an in-depth knowledge of *niche markets* and strong local and global inter-personal networks which attest to its *societal embeddedness*. For example, the firm has come to understand the peculiarities of Japanese consumer tastes²⁹⁶ such as longer stems, bi-colour flowers and slower changing tastes. The Flower Hub grew based on the relationships its directors had in Japan and through organized farm visits, attending flower expos globally, and visits to new markets such as in the US. On the producer end, the Flower Hub's successes are testament to the power of informal personal networks in securing sourcing arrangements in the flower industry as the quote below illustrates.

"We do not use contracts to secure sourcing deals. These are based purely on relationships. We have a team of people who travel the country to build strong relationships with flower farmers. I have not heard of people who break or renege on their agreements because they have found a better deal. People in the industry have that mutual understanding and respect for each other." - Flower Hub manager.

The Flower Hub has an informal agreement with the four member farms, to source a specified number and variety of stems per week. The informality of the agreement allows for the flexibility to source from external farms in case of a supply shock.

²⁹⁵ The firm's specialized bouquet-making adds up to 20% on export value of its cut flowers

²⁹⁶ The Flower Hub is now entering into the US market and they are finding that Americans are very interested in short stems (50 centimetres) and finished bouquets. Europe still prefers 50- 60 cm stems while in Japan, they like 60-70 cm stems

The Flower Hub's strengths are to be found in "complete control of the supply chain – from the planting and harvesting to the packaging, delivery and distribution" (Flower Hub website). This is characteristic of the dynamic of consolidation and depicts a hierarchical mode of governance, for more efficient coordination of trade in the flower industry. The case study epitomizes collective power among mid-scale farms, which is harnessed to develop the Flower Hub as a 'focal firm', that creates that vital link between production and marketing.

Independent local consolidation enterprise

Operating at a smaller, more local scale is the third case study of an independent local consolidator. This section details findings from an interview with the director of the firm, whose name has been anonymized due to the sensitivity of the information shared. The firm is a private enterprise set up by a former flower farm management official with two decades of experience in the sector. She sources a variety of flowers including roses and spray roses which account for about 80% of her portfolio, lilies, carnations, gypsophila and hypericum from about thirty-two mid-scale and eight large-scale commercial farms in Kenya. She does not source flowers from smallholders because of challenges with consistency of volumes and quality and lack of the required certifications. She does not have formal sourcing agreements as such but sources about 1 million stems per month from certified farms. All the flowers sourced are sold to direct markets in Japan, Australia, Europe and West Africa. None are sold to the auction. The consolidator also engages in value addition in the form of dyed flowers and preparation of premium bouquets which fetch higher prices in target export markets.

The main focus of the interview with this local consolidator was on the challenge of VAT²⁹⁷. Kenya's Value Added Tax Act of 2013 (VAT) took effect and meant that cut flowers bought locally accrued a 16% VAT charge over their sales price. This bill has increased the price of flowers and effectively priced them out of international markets. The consolidator complained of losing her Australian customers to Colombian and Ecuadorian firms which have no such VAT costs attached to their flowers. Since local

²⁹⁷ Discussed in detail in chapter eight. According to the Kenya Flower Council, the Kenya Revenue Authorities owe Kenyan flower farmers KSh 2 billion (approximately \$20 million) in VAT refunds which are years overdue. The consolidator has been lobbying the government for two years to repeal or revise the VAT law to encourage local consolidators who provide market access for flower growers.

sales of flowers are minimal, the government does not make much money from collecting the VAT. Flower farms which charge the consolidators the VAT also do not gain much because they put in VAT refund claims from the government.

In order to deal with this challenge, the local consolidator has devised a way to circumvent paying the VAT with the possible collusion of foreign importers. Flowers for export are zero-rated and are exempted from VAT. The consolidator set up a parallel export firm which submits form C17²⁹⁸ to the government, which records for example that fifteen tons of cut flowers were exported to a customer in the UK. This transaction does not accrue VAT charge because the flowers are registered as export commodities. The importing company in the UK and the local consolidator who prepared the consignment then set up a separate line of communication that details 100 boxes (each box weighing 10 kg) of flowers collected from 15 farms amounting to 15 tons of flowers and the consolidator will get paid for the service rendered. This situation can be generalized to other local flower consolidators in Kenya who operate in a similar system and also devise means of evading VAT payment. This scenario is symptomatic of the invisibility of local flower consolidators in the eyes of regulators, and also shows that the industry bureaucracies filter out smaller players leaving larger, higher capitalized players who can absorb the costs of compliance without going under. This regulatory power is inadvertently pushing industry actors towards consolidation.

This case study shows that in the consolidation business, size and collective power matters. Although smaller players can be nimble actors in direct markets by capitalizing on the strength of their inter-personal networks and professional reputations, they must deal with crippling hurdles in the regulatory context such as the VAT tax that limits their competitiveness and ability to capture value. Furthermore, as a smaller exporter, it is unlikely that the firm has the status of 'focal firm' to any one flower farm or retailer. Rather, the firm may be part of a diversification strategy of export by mid-scale farms, and a supplier of limited volumes of niche flowers to a variety of retailers abroad. Similar to the other two case studies, this one also highlights the importance of societal embeddedness to a consolidator. Being the

²⁹⁸ C17 is the form submitted to customs authorities declaring goods for export in order to obtain export clearance

Kenyan owned firm in the sample of three, it matters that the director had over twenty years of experience in the sector, which provided her with the knowledge and critically the networks required for the coordinating role.

6.4 Conclusion on inter-firm dynamics

The three case studies of Kenyan consolidator-exporters in the cut flower production network shed light on the role of consolidator-exporters as “focal firms” (Dembinski 2009) of the flower trade linking producers in the global south to buyers located in the lucrative direct markets the global north. As focal firms, they help producers navigate the shift from the auction to direct markets by managing the consistency of flower volumes and quality, cold chain logistics and the coordination costs of seeking market access. For buyers, they are responsible for smoothing out any inconsistencies in supply and reducing the coordination costs of seeking out reliable, high quality producers. Though operating at vastly different scales in terms of volume, geography and reach, and with varying capabilities, the three consolidator-exporters display *deep societal embeddedness* among growers, solid network embeddedness within export markets, and *thorough knowledge* of market specificities and the dynamics of production, logistics and trade in the flower industry.

A key generalizable observation from these networks is the “cascade effect” (Nolan et al. 2008:43) which simulates a wave of consolidation in the industry. For the consolidator as the main point of contact for the lead firm therefore, size matters. Very large consolidators such as the Dutch Flower Group profiled have deeply integrated and vast networks of growers to source from, innovative technical and logistical capabilities that enable them to meet demands consistently and on time. Smaller consolidator firms appear better suited to non-traditional markets which demand smaller quantities of niche varieties, and which can also provide the personable relationships desired by smaller producers and buyers. As a path of least resistance, they might also do well supplying specialized wholesalers such as florists or garden centres who are not as demanding of certifications. Without government support or incentives, it is likely that local consolidators under the burden of high VAT, are likely to continue employing strategies of circumvention regulation in order to stay in business, or be relegated to marginal markets.

6.5 Emergent knowledge disjunctures in the cut flower production network sample

This section discusses the cut flower production network as a knowledge intensive industry. It highlights existing and missing innovation and knowledge relationships between industry actors and various local centres of knowledge production such as universities and research centres. The perspectives illuminated are from interviews with farm managers and other industry ‘knowledge agents’ such as agronomists and researchers. One outstanding area of research is perspectives from within the Kenyan academy itself on its relationship to the flower sector, which I was unable to obtain due to challenges accessing local academics as explained in the methodology chapter. The academy position was alternatively deduced from documentary analysis²⁹⁹. Subsequent research done by Bolo et al. (2006) on research priorities for Kenya’s cut flower industry makes the case for farmer demand-led research in Kenyan floriculture. They however acknowledge challenges such as conflicting mandates between the private and public sectors. Private companies have an incentive to protect their trade secrets so as to enhance their competitiveness, while the public-sector shares knowledge for the public good, and was also found to be too slow, bureaucratic and poorly funded to respond to the urgent needs of the sector.

The main way in which flower farms interact with Kenyan agricultural universities is through hosting interns who are studying for various B.A programs in horticulture³⁰⁰. The internships are not systematically designed and in some years, there are no interns put forward. One of the farms interviewed was in the process of setting up a management trainee program to better structure the interaction with universities. Farm managers critiqued the University horticulture curriculum for being ‘too theoretical’, ‘not innovative enough’, ‘too general’ and for being ‘outdated’ and ‘irrelevant’ for industry needs. University students spent too little time working hands-on in the farms and were therefore not necessarily lucrative hires for the farms, with the only advantage being that they learned quickly. The common proposals in this regard were two-fold: university staff should spend time on flower farms developing the curriculum

²⁹⁹ The literature overall establishes, “weak linkages in interactions between Kenyan flower farmers and the local research system, causing the floriculture industry to rely on external knowledge to solve the industry’s problems” (ATPS & CTA 2004) The African Technology Policy Studies Network (ATPS) and the Technical Centre for Agricultural and Rural Cooperation (CTA) (2004)

³⁰⁰ These include the Jomo Kenyatta University of Agriculture and Technology (JKUAT), University of Nairobi College of Agricultural and Veterinary services (CAVS), Moi University and Egerton University

in line with the realities in the industry, and students should spend as much time learning theory as gaining practical knowledge in the flower farms. Flower farms also interact with Kenyan universities through targeted research initiatives³⁰¹ typically structured abroad for the purposes of identifying production efficiencies on commercial farms.

In terms of research collaboration, the main relationship for flower farms is with breeding³⁰² and propagation companies for the development of new, more robust and longer lasting varieties. Public research bodies work on slower research pertaining to pests and diseases, or domestication and commercialisation of local varieties for smallholder farmers, rather than commercial farms that can afford to work with private labs for their commercial interests. For example, the Kenya Plant Health Inspectorate Services (KEPHIS) works closely with the flower industry mainly on researching pests and diseases. The Kenya Agriculture and Livestock Research Organisation (KALRO) had a donor-funded floriculture research program in the late 2000s to strengthen the participation of Kenyan smallholders in the production and marketing of summer flowers. This research program has no perceived linkages with the mid-scale cut flower sector.

Two notable attempts at localizing R&D that emerged from field work among mid-scale flower farms are the Crop Nutrition Laboratory Services (CROP NUTS) which came up in various interviews as a good, local private laboratory that conducts high quality greenhouse soil sampling analysis, so that farms do not have to fly out their samples to Europe for analysis. The second example is Pure Water Solutions Limited, a water filtration recycling firm. Both these R&D firms are owned by directors of British origin, which is correlated with access to European capital and networks. While research partnerships clearly exist in isolated cases, the challenge appears to be a lack of systematic, strategic institutional collaboration.

³⁰¹ In 2013, Wageningen UR Greenhouse Horticulture and DLV Plant in the Netherlands partnered with Jomo Kenyatta University of Agriculture and Technology and Van den Berg Roses in Kenya to evaluate coco-peat based hydroponics in rose production. They found that the cocopeat system performed better than soil in number and weight of stems produced (Ketter et al. 2015).

³⁰² Some of those mentioned which had bases in Kenya included Stokman Rozen, Olij, Kordes Roses, WAC international among others. The general relationship between breeders and growers is elaborated in chapter five which explains in sum that while Kenya has well trained plant scientists, they are mainly concerned with the mechanics of propagation and trialing rather than the science of innovation of new flower varieties which still takes place in Europe.

Besides building relationships with research institutions, flower farms are also sites of innovation and iterative research and design in production. Farm-R was outstanding in this regard and had been referred by the Kenya Flower Council as one of the most innovative pioneering flower farms in the country. Through trialing and adopting cutting edge technologies, the farm has tackled the challenge of water use, sub-soil pollution and energy inefficiencies in greenhouses. Farm-R pioneered³⁰³ hydroponic use in the mid-nineties so as to prevent sub-soil pollution, while also making it possible to produce cut flowers on murram soil. Lastly, the farm manager explained that the farm developed and pioneered a unique barcoding system that digitizes the traceability of each stem that is exported from the farm. To finance all these capital-intensive innovations, the French-owned firm sources for investment from a range of European sources notably long term, low interest (2-4%) agricultural loans from the Agence Française de Développement as well as the German Development Bank.

The africanization of farm management over the last twenty years was noted as a means of transferring knowledge. In the nineties, only a small portion of farm managers were African but currently most flower farms are managed by Kenyan managers. Farms also share information amongst themselves primarily through exchange of technical staff which has contributed to raising the overall standard of production. Being well respected in the industry for their experiences with consistently delivering quality, Kenyan farm managers are also frequently hired to set up and manage flower farms in Ethiopia. In this sense, the flow of knowledge circulates not only in enclaves of production nationally, but also regionally. Overall, the knowledge that these farm managers have is not systematically institutionalized in the local economy, which undermines the efforts of endogenisation³⁰⁴ (Melese & Helmsing 2010) of any potential gains over time. This reality points once again to the character of the industry that privileges tacit knowledge embedded in familial circles or gentlemen's networks.

³⁰³ The farm was also the first to invest in and pioneer the water filtration and recycling system by an innovative start up known as Pure Water Solutions (mentioned above) thereby managing to save on post-harvest chemicals, water and time.

³⁰⁴ Melese and Helmsing (2010) argue that endogenisation "depends both on the degree to which FDI has an interest to draw on domestic firms, enter into relationships and share technologies; and on the interest and ability of domestic firms to take up such opportunities, and on the creation of supporting institutions and infrastructures to make this take-up possible."

Field work interviews among flower farm managers showed weak linkages between the industry and local businesses and a heavy reliance on imported inputs, technology and R&D. Chemicals and fertilizer are bought from local subsidiaries of giant multinational firms³⁰⁵ while the water infrastructure³⁰⁶ and greenhouses³⁰⁷ are generally imported from German and Israeli manufacturers. Attempts to source for basic inputs such as cocopeat³⁰⁸ have unfortunately failed due to challenges with quality management and with production at scale. As illustrated, in many ways, the industry remains an enclave of production that utilizes mostly local labour and natural resources while importing all the major technological inputs, and there are few systematic, institutionalised efforts to support the endogenisation of introduced technologies.

In sum, the transfer of technology and the development of local R&D capacity are intricately linked to the question of finance and corporate ownership. In the sample of seven farms, ownership is split between directors of European origin and the Kenyan political class³⁰⁹. While the four decades of cut flower production in Kenya have led to the development of a body of technical experts in floriculture, and recently the localization of flower variety trialing by European breeding companies, the institutional delinking of the industry from local centres of knowledge production undermines endogenisation of industry R&D. Similar to the Ethiopian case, what we see are elements of ‘enclave formation’ where the industry generates knowledge and use of

³⁰⁵ Elgon Kenya Limited is a major input supplier including chemicals, fertilisers, greenhouse sheeting and packaging materials for the flower industry. It is the exclusive distributor for MNCs like BASF, Dupont, Sumitoma, Cheminova, Excel Crop Care Ltd, UPL, Chemtura, Russel IPM & Sinochem Ningbo while on Non-exclusive basis for Bayer E A Ltd, Syngenta E A Ltd, Arysta life Sc., Smaller suppliers include Topserve East Africa which distributes products from Bayer Ltd.

³⁰⁶ The FAO (Mendes & Paglietti 2015) identified the flower industry as providing excellent prospects for international companies interested in expanding irrigation investments in the near future.

³⁰⁷ Amiran Kenya is responsible for setting up and maintaining 90% of the greenhouses for Kenya’s flower industry. It is part of the Balton CP group of companies headquartered in the United Kingdom and spread throughout Africa and Israel.

³⁰⁸ Roses are propagated on a natural fibre made out of coconut husks known as cocopeat, which is imported from South East Asia.

³⁰⁹ This ownership structure raises the issue of *endogenisation* which is the process of building local capacities, as contrasted with *enclave formation* (outlined in the Ethiopian case in chapter one) (Melese & Helmsing (2010:2) This tension between industry and the territory in which it is embedded is synonymous with the concept of “strategic coupling” in Global Production Network Theory (Coe, Hess, Yeung, Dicken, et al. 2004) which explores the complex ways in which GPNs and regional development interact. Discussed in chapter three.

new technologies but circulates it only within its borders demarcated by familial ties or gentlemen's networks, and bound by the constraints and interests of capital.

6.6 Conclusion

This chapter has outlined the empirical findings from field work among a sample of seven cut flower farms in Kenya. The findings are presented in three categories detailing: (1) inter-firm strategies of variety selection and dynamics of labour management (2) intra-firm relationships between flower farms and consolidator-exporters as focal firms in the production network and (3) emergent disjunctures in the knowledge economy of the cut flower production network.

The research identified three strategies of variety selection among mid-scale flower farms that pertain to the choice of market and these include *diversification* for those targeting the auction, a "triple s" strategy of *specialization, standardization and scaling* for those targeting supermarkets and a strategy of 'going niche' for those targeting specialized direct markets. The emergent labour dynamics that were identified include tensions in hiring strategies that centre the level of education of workers in relation to worker retention and worker productivity. Flower farm managers argued that they preferred highly educated (secondary school) workers however, in practice they prefer to hire less educated workers because they can be retained for longer. The second contradiction was that farm managers hired less educated workers and expected high work productivity in the long run. However, the observed reality and a cause for great concern among them was that worker productivity was either declining or plateauing over time. The field work also showed the persistence of hiring strategies that default to pre-capitalist forms of contracting which privilege familial referencing, tacit knowledge over technical knowledge, and gendered norms.

In the second category of findings on intra-firm strategies, the research showcased three case studies of consolidator-exporters including a multi-national firm, a joint venture among four mid-scale flower farms, and an independent consolidation enterprise. The findings characterized the firms as 'focal firms' (Dembinski 2009) due to critical role they play in linking producers to buyers. Their power is centred on their *thorough knowledge* of all nodes in the production network from production, quality checking, cold chain logistics, marketing and establishing export markets in direct

markets. They exhibit deep *social embeddedness* (Hess 2004), and *network embeddedness* in markets which enables them to coordinate a production network that privileges informal ties, familial and gentlemen's networks. Lastly, the research establishes that size and economies of scale matter for consolidator-exporters. As the sector exhibits the 'cascade effect' (Nolan et al. 2008) due to consolidating pressure from supermarkets, large players such as the Dutch Flower Group stand a better chance of becoming preferred suppliers. Smaller players have to rely on strategies of circumvention to supply niche markets and capture some value.

The field work shows that the cut flower sector is a knowledge intensive industry. However, while there are isolated cases where knowledge is transferred, there are overall prevalent institutional disjunctures between the sector and local research centres. This undermines the possible endogenisation of industry R&D. Knowledge from the flower industry circulates within seemingly impervious confines of informal, familial trust networks, and is bound to the interests of capital, which is characteristically foreign, and political in origin. The chapter that follows leads us to the smallholder flower farmers' narratives of navigating an industry dominated by giants.

7. Survival amidst giants: The strategies and networks of small scale flower farmers in Kenya

7.1. Introduction

The existence of smallholder farmers in the flower industry outside of the global North is rare. Indeed, in Africa only Kenya has smallholders actively exporting cut flowers. As noted by Mather (2008:44): “in other African countries, including Uganda and Tanzania, there are no smallholder cut flower farmers”. Kirigia, Betsema et al (2016) also found smallholders growing flowers only in Kenya. Amongst Kenya’s global competitors in Latin America, Mytelka (2009)³¹⁰ established that in Colombia for example, smallholders have been absorbed as labourers in large scale farms. In Ecuador, Korovkin (2003) noted that flower production is entirely dominated by large scale farmers leaving smallholders with little opportunity.

Smallholders differ dramatically from large scale farmers in limitation of capital, technology and scale. They grow summer flowers or ‘fillers’ (so named because they are used to fill out bouquets of roses) outdoors, with minimal technology except perhaps basic drip irrigation on an average of a quarter acre of family owned land. Smallholders in the flower industry exist in a sector dominated by giants of industry – technologically sophisticated, vertically integrated entities growing mostly roses in high tech greenhouses on plantations that are hundreds of hectares in size, and that employ thousands of workers. These differences set smallholders apart from large scale farms in what is a bifurcated flower production network. This research found no systematic evidence of partnerships between small and mid-scale farmers beyond small orders made for summer flowers required to complete special order bouquets for supermarkets³¹¹. This is attributed to the unstandardized quality of their processes of production and post-harvest care which compromises the quality of the flowers as the quote below shows:

“Smallholders have very many crop husbandry issues. For example, their farms are full of weeds and they do not grow their flowers on raised beds. These

³¹⁰ Mytelka (2009: 10) noted the proletarianization of smallholders in Colombia. He explains, “As roses came to dominate flower exports, traditional micro-farmers (*campesinos*) with farms of only 0.5 to 1.5 hectares, *turned to supplying labour* as their main activity.”

³¹¹ The Flower Hub mentioned in chapter six works with a few select smallholder outgrowers to source summer flowers for special order bouquets.

simple practices have big effects on the overall quality of the flowers produced. Smallholders also have issues with packaging. They use the cheapest and poorest quality of boxes to pack their flowers. Sometimes the boxes arrive upside down and the flowers are damaged because they are not secured within the boxes.” – Local independent consolidator-exporter.

Not only are smallholders in this industry marginalised, they are also few in number. The last overall estimation of smallholder flower farmers placed them at between 5 and 10,000 farmers (Muthoka & Muriithi 2008) and their contribution was only 5-13% of cut flower exports, last estimated as amounting to between \$7 and 10 million between 2006 and 2009 (Fintrac 2010:2). Further, in the 2000s, as the mid and large scale flower sector grew, smallholder flower production was in decline³¹². Despite the odds, smallholders in Kenya persist. This chapter argues that Kenyan smallholders have survived and maintained their agency through a diversity of infrastructures of inclusion.

Smallholder farmers are excluded from direct markets by a fundamental challenge of collective action. Other major challenges are derived from this, including high costs of accessing information and technology, and high costs of compliance to certifications which is linked to the fact that few certification requirements cater to the realities of smallholder production. Even in areas where flower farmers cluster due to agro-ecological advantages, they are nevertheless fragmented in terms of association and proximity of farm parcels. Smallholder flower farmers lack systematic and visible national collective representation, even though this is technically handled by the Fresh Produce Exporters Association of Kenya (FPEAK)³¹³.

This chapter highlights a diversity of farmers’ groups characterised as ‘contractual collectives’ or outgrower groups and more loosely structured ‘collectives of convenience’. Research yielded no contemporary example of cooperative structures for smallholder flower farmers. Farmers expressed a general aversion towards the

³¹² A government policy was implemented to improve their participation in exports through enhancing farmer-exporter relationships (Bolo 2012).

³¹³ Doubts were expressed about FPEAK’s genuine representation of smallholders’ interests when its leadership is comprised of large outgrower firms such as Sunripe Limited and flower plantations such as Karen Roses. FPEAK’s role is discussed in detail in chapter eight.

idea of cooperatives being all too familiar with the mode of organisation from their experiences with tea, coffee, dairy and vegetable exports. They associate cooperatives with bureaucracy, lack of transparency, exploitative financial management by elites, poor time management and endless meetings. They also highlighted that the extreme perishability of cut flowers and quick turn-around required from field to vase as being incompatible with cooperatives' inefficiencies in time management. Further, the sheer range of varieties of cut flowers would make it very difficult to standardise supply as they do with coffee, which can be milled and stored awaiting sale.

The challenges with cooperatives as a form of collective action for flower farmers in the Kenyan context are more failures of function and the institutional environment than of form. For example, grower-led cooperative auctions have served Dutch smallholder interests well. Supportive policies³¹⁴ of the welfare state advanced smallholders' collective interests³¹⁵ and helped to transform the governance of the flower industry from buyer-driven to grower-driven (Patel-Campillo 2011:2520). Looking at smallholder production in the Netherlands, Colombia³¹⁶ and Kenya, it is possible to surmise that the game-changer in terms of increasing the competitive power and prosperity of smallholders in the flower sector is regulatory and institutional support.

My field work in Kenya showed that government representatives at the national level were dismissive of the contribution of smallholder flower farmers. This view was bolstered by the fact that there were no records of smallholders' exports kept by the national Horticultural Crops Directorate (HCD). However, at the county level, agriculture officials with knowledge of floriculture though few and far between, are

³¹⁴ Patel-Campillo (2011:88) explains that, "... [the] producer-led [flower production] system was consolidated by the Dutch government in 1916 through the enactment of the mandatory use of grower cooperatives. The government mandate legitimated the role of grower cooperatives as the main purveyors of cut flowers and enabled growers to secure their role within the sector and their position vis-à-vis buyers, illustrating the importance of the state in shaping power relations within the Dutch cut flower commodity chain."

³¹⁵ Dutch flower production is done by a large number of small family growers estimated to be 6000, who operate on small, evenly distributed 1-2 hectare parcels of land. These growers organised themselves into grower-led cooperatives so as to gain leverage over buyers in auction (Patel-Campillo 2011:2520).

³¹⁶ As summarised in chapter one, the Kenyan flower industry is much more akin to the Colombian industry, which is dominated by a handful of large growers and exporters who are also members of the landed elite. They are organised under a powerful lobby body known as Asocoflores, which has secured tax-free status for the growers (Patel-Campillo 2011).

much more engaged in advocating for smallholder flower farmers' interests. Although invisibility to national policy makers is overall problematic, smallholders capitalise on their marginality in the political sphere to exercise *non-decisional bargaining power*³¹⁷.

The smallholder production network illustrated in figure 7.1. below shows the web of institutional relationships that shape the small-scale flower sector. Kenyan smallholder flower farmers' interaction with the state institutions is limited to regulatory institutions such as Kenya Plant Health Inspectorate Services (KEPHIS) which provides phytosanitary certifications and the Horticultural Crops Directorate (HCD) which provides export licences. County governments provide public infrastructure such as grading sheds and refrigerated stores, as well as access to agricultural officers who are meant to advise farmers on technical aspects of production. However, in most cases, it is consolidator-exporters or outgrower firms which provide capacity building support to smallholders. From an interview with the county agricultural officer in Nyandarua county, who heads a team of 25 extension workers, it emerged that most county agricultural officers and extension workers though knowledgeable in agronomy generally, were ignorant of the technicalities of floriculture. Additionally, transfers of agricultural officers happen often which disrupt relationships, and the continuity of knowledge which is required to institutionalise new initiatives. Smallholders receive new planting material from the Kenya Agricultural and Livestock Research Organisation (KALRO) formerly Kenya Agricultural Research Institute (KARI)³¹⁸. Since the eighties, KALRO has introduced, domesticated and evaluated flower varieties of various flower crops including but not limited to Moby Dick, Anthurium, Gladiolus, Lily, Gerbera for smallholder production³¹⁹. Fieldwork³²⁰ did not establish a direct link between smallholders and Kenyan agricultural universities.

³¹⁷ Two forms of bargaining power - Non-decisional and episodic - are introduced in chapter two and operationalised in chapter three in a discussion of GPN 2.0's analysis of power. Here, non-decisional bargaining power is seen in smallholders' use of their marginality to circumvent regulatory "barriers" such as payment of cess tax.

³¹⁸ Smallholder interventions in floriculture commenced at the National Potato Research Centre (KARI-Tigoni) in 1978 and the National Horticultural Research Centre (KARI-Thika) in 1981

³¹⁹ KARI also established Farmer Field Schools to disseminate flower knowledge and technology among smallholders (Muriithi & Wasilwa 2008)

³²⁰ Bolo et al. (2006) outlined research priorities for the cut flower industry which incorporate smallholder farmers' perspectives.

Kenyan smallholder cut flower production network

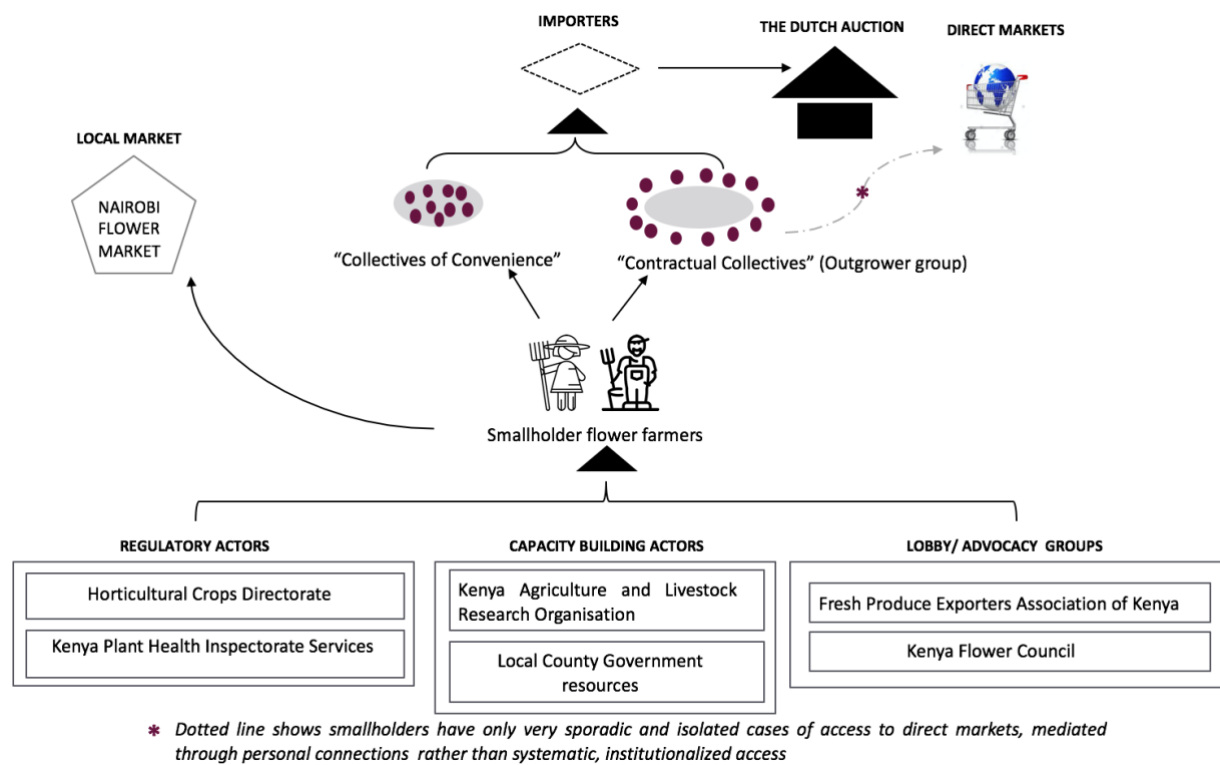


Figure 7.1.
Source: Author's analysis³²¹

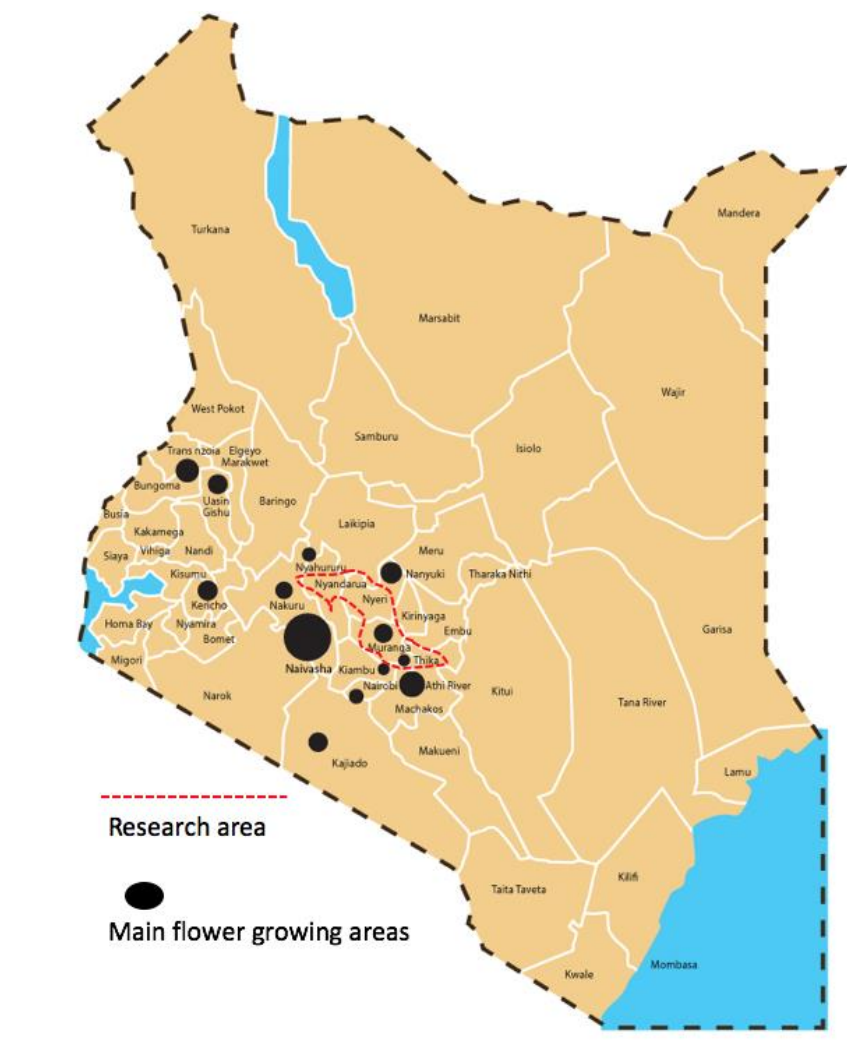
The following section discusses findings from field research interviews primarily with a sample of seven³²² smallholder farmers whose profiles are summarised in table 7.1. below. The interviews took place in central Kenya in Thika, Murang'a, Nyeri, Nyahururu and Nyandarua as shown in map 7.1. Smallholders are defined as farmers with between 0.125 to 3 hectares (7.5 acres) of land (Fintrac, 2005; Bolo, 2006) as laid out in chapter one. The chapter showcases the diversity of relationships smallholders have with their production networks by outlining what I term as "contractual collectives" consisting of outgrower groups, and "collectives of convenience", as well as one case of an individual farmer entrepreneur who navigates domestic and international export markets.

³²¹ Since the field work was conducted in 2016, the KFC and FPEAK have come together to form an umbrella body known as the *Kenya Horticultural Council* to bolster lobbying efforts for enhanced export market access. Accessed at <http://www.kenyaflowercouncil.org/blog/?p=6299>. This is summarised in chapter 8.

³²² The table contains a list of eight smallholder farmers although this thesis focusses on findings from seven. Farmer Joseph Wamburu Maina was away when I visited his farm therefore I received a description of his production from an accompanying agronomist from Wilmar Agro Ltd.

The data discussed in this chapter was derived from farm visits³²³ and semi-structured interviews with smallholder farmers and their immediate networks³²⁴. The number of farmers interviewed was limited because although meetings were organised over the phone with the intention of meeting a farmers' group and having a focus group discussion, on arrival at the farm site only one farmers' representative was present for the interview. For these reasons³²⁵, the findings presented herein are more illustrative than representative of the Kenyan smallholder flower farmer sub-sector.

Location of smallholder flower farmers interviewed in Central Kenya



Map 7.1.
Source: Kenya Flower Council; author's analysis (in red)

³²³ All pictures shown are author's own and were taken with permissions for academic use.

³²⁴ See appendix C for full list of people interviewed in relation to smallholders listed in table 7.1

³²⁵ See full discussion on interviews in methodology. Only one of the smallholder farmers interviewed kept financial records and therefore the revenue and cost data obtained on specific varieties was obtained from conversations with agronomists.

Profiles of smallholder flower farmers interviewed in Central Kenya

Name of farmer	Name of consolidator - exporter	Location	Varieties grown	Farm size under flower production	Years farming flowers in 2016	Approximate age of farmer	Other crops grown and livelihood activities
Felista Thuo	Phinna Flowers	Njabini, Nyandarua	Alstroemeria, Agapanthus, Craspedia, Lilies, Eryngium	7 acres (4 leased)	34	70's	Potatoes, maize (for fodder), peas, carrots and green beans for export
Boniface Musyoka	Munyu Farm	Gatunyaga, Thika	Ammi Visnaga, Moby Dick, Craspedia, Arabicum	1.5 acres	3	40's	Kale, tomatoes
Peter Murimi	Mult Grow	Njabini, Nyandarua	Craspedia, Agapanthus, Eryngium, Alstroemeria, Hydrangea (trials)	Started with half acre now has 10 ha scattered in different parcels	9	40's	Previously worked as an IT manager. Other farmers in Mult Grow grew mainly horticultural crops
Robert Mwangi	Wilmar Agro Ltd..	Gatunyaga, Thika	Moby Dick, Tuberose	Started with eighth of an acre now has 1 acre	7	60's	Spinach, kale, peppers, chillies, coriander, tomatoes
Joseph Baaro Mahianyu	Wilmar Agro Ltd..	Othaya, Nyeri	Arabicum mainly, Crocosmia & Moby Dick (previously)	Eighth of an acre	8	70's	Tea and Dairy; trees for timber harvesting; vegetables and maize
Joseph Wamburu Maina	Wilmar Agro Ltd..	Othaya, Nyeri	Arabicum, Craspedia	Quarter of an acre	3	30's	Not present in farm / explained by agronomist
Julius Muiriria Kimani	Wilmar Agro Ltd..	Mathioya, Murang'a	Arabicum	1 acre	5	30's	Tea, green beans, tomatoes, other vegetables, occasion photography
John Mahia	Tegmak Group	Kinangop, Nyandarua	Craspedia, Eryngium, Agapanthus, Molucella, Alstroemeria, Scabiosa	3 acres	9	50's	Previously worked at Safaricom, Kenya Breweries

Table 7.1.
Source: Author's analysis

7.2. Discussion of empirical findings on smallholder production strategies and relationships with exporters

Farmers' profiles

Six of the seven farmers in the sample were male and middle aged, with two-thirds of the farmers being above the age of 40. They were located in Thika, Nyeri and Nyandarua. These are cool areas in the central highlands with an abundance of rainfall or alternatively located next to rivers, with fertile soils. Tea and potato growing areas such as Nyeri³²⁶ seem particularly inclined towards flower production. With the exception of the two larger farms, the average flower farm size was 1.15 acres and part of a larger parcel of farm land dedicated to growing vegetables, as well as cash crops such as tea for export. This farm size is larger than the average flower farm which is typically quarter of an acre. This could be because the sample smallholders were all considered “model farmers”, which is they were put forward for interviews by the Kenya Flower Council and by the exporting agent – Wilmar Agro Ltd. The seven farmers represented were all members of contractual collectives or collectives of convenience aimed at delivering economies of scale for export of varieties for sale at the Dutch auctions.

Smallholders grow flowers as part of a strategy of risk reduction through diversification. All of the farmers interviewed had uprooted a portion of their tea bushes, potato crop or vegetables to create the flower farm parcels. They explained that this enhanced their food security because they could afford to purchase what they do not grow. An example of the diversification of farm land to incorporate flowers is shown in image 7.2 below. The flowers were grown on family land with the exception of one farmer who had leased additional land for flower farming. With an average of 6.2 years in flower farming³²⁷, the farmers were experienced, relatively sophisticated horticulturalists who are confident in the adaptability of their skills, and diversified into flower production to enhance their incomes.

³²⁶ A baseline value chain study by Fintrac (2010:14) on the demographics of Kenyan smallholder cut flower farmers found that only 3% of the land by Nyeri farmers was used for summer flower production.

³²⁷ Excluding the outlier with 34 years of experience in cut flower farming.

Smallholder's farm showing cut flower production as a diversification strategy



Figure 7.2. Left – maize, middle strip cultivated to plant Arabicum, far right – tea bushes
Source: Author's own. Joseph Baaro Mahianyu's farm.

Smallholders' summer flowers are grown outdoors and do not require high capital investments required for greenhouse varieties such as roses. There are twelve



Figure 7.3: From top left to right - Tuberose, Arabicum, Yellow Craspedia and Eryngium summer flower varieties

summerflower varieties grown by smallholder farmers in my research sample including Arabicum, Alstroemeria, Agapanthus, Ammi Visnaga, Craspedia, Lilies, Eryngium, Moby Dick, Tuberose, Crocosmia, Molucella, and trials of Hydrangea, the most popular of which are displayed in image 7.3. All the farmers in the sample grew more than two varieties. The most popular flower among the farmers was Arabicum (*Ornithogalum saundersiae*), due to its profitability, which is discussed further in the

section that follows.

The smallholders' points of entry into flower farming were twofold. The first was contact with European exporters who were farming in central Kenya in the eighties and early nineties³²⁸, who provided the initial plant material, invited the farmers to cultivate varieties such as *Alstroemeria*, and bought the flowers at farm gate for export. Once these Europeans left or transitioned into rose cultivation, the local farmers stopped growing summer flowers for lack of market. The second entry point is through references from family and neighbours who are doing well with earnings from cut flowers, and who provide planting material to initiate production.

It was however puzzling to see that flower farm parcels were not clustered together as one might expect but were geographically scattered. The reasons put forward for the lack of widespread uptake of flower farming despite its proven profitability centred around incompatibility with existing agricultural practices. Some flowers such as *Arabicum* are poisonous to cattle and so some farmers experienced casualties among their open grazing dairy cows, which are a vital source of food and income in central Kenya. Cut flowers are also purely aesthetic and easily prone to waste when the harvest does not meet market standards. This is unlike food crops which if not market-worthy, can either be consumed within the household or used as animal feed thereby minimising waste. Secondly, summer flower production requires long term planning and investment since some crops such as the popular *Arabicum* only provide two harvests per year. Farmers tend to go into flower farming with the expectation of quick returns and therefore are disappointed with the wait. Similarly, some farmers go into flower farming with no knowledge of how to align production to the seasonality of demand in export markets, and therefore end up without a market. Discouraged with the minimal returns, they are dissuaded from the crop. Lastly, unlike vegetables there is great variety in summer flowers and careful, patient research is required in order to understand which varieties would do well in one's farm, and what is required to produce and correctly harvest the different varieties. This kind of demanding attention to detail is often discouraging for new farmers who also do not have access to knowledgeable extension workers who can provide technical advice.

³²⁸ Prior to this they were growing vegetables (kale, cabbages, potatoes) and cereals such as maize. Some were in commercial employment.

Livelihoods impact of flower production for smallholders

The livelihoods impact from cut flower production is significant. When asked about the financial impact of flower production on their livelihoods, farmers interviewed explained that they were able to feed and educate their children from the proceeds of flower sales, lease more land to expand their production and set up side business such as hardware and photography. The perceived profitability³²⁹ of flower production is explained by two farmers in the quotes below.

“I have also farmed tomatoes, other vegetables and green beans. I started with the one sack of [Arabicum] bulbs. When [the broker] came to buy the flowers from me, they offered a flat rate of KSh 8 per stem. So, in total I was to earn KSh 800 (\$8) [for only 100 stems] the first time! I then saw that maybe there is money in flowers after all.” – Julius Kimani, Muranga.

“One eighth of an acre of flowers will give greater profits than 10 acres of potatoes. If I sell Agapanthus from this one piece of land from December to February, I can even wait and sell the following year comfortably.” - Felista Thuo, Phinna Flowers, Njabini.

Farmers who are in the process of experimenting with flower production decide to take it up seriously when they experience that flowers are on average more productive and earn more revenue *per square metre* compared to vegetables. This is very significant because of the increased fragmentation of family-owned land in central Kenya based on inheritance claims.

“The maximum I can sell a cabbage for is KSh 50 (\$0.50). I can only plant four per square metre, so that comes to a total of KSh 200 (\$2). Now, when it comes to flowers for the same square metre, you can plant 36 Arabicum bulbs and sell each stem at between KSh 10 and 20 depending on the season.” - Joseph Baaro, Nyeri.

The only significant input costs are for fertiliser (and where necessary chemicals). Smallholders affiliated with Wilmar have soil tests carried out that determine fertiliser

³²⁹ Flower production is considered very lucrative compared to other crops because for example, smallholders reap from a quarter of an acre of flowers, the same value as they do from two acres of tea (Buxton 2012).

use, and the firm supplies them with the necessary fertiliser³³⁰ which is used often only as top dressing. Based on the Wilmar agronomists' experience with Arabicum production, it costs KSh 0.60 cents to produce one stem of Arabicum. This is summarised in table 7.1.3 below. In one harvest season, seasoned farmers can supply up to 6000 stems per week for three months. Most farmers have on average 2 harvests a year³³¹.

Estimated cost of production for a quarter acre of Arabicum

0.25 acres in m2	Bulbs planted per m2	Average cost of production per stem (KShs)	Total estimated cost of production for 0.25 acre (KShs)
1,011	36	0.60	21, 837.60

Table 7.2.
Source: Farmers' data; author's analysis

Wilmar agronomists also provided sales information on Arabicum as shown in the quote below:

“You can get a good sales price of KSh 10 (\$0/10) per Arabicum stem. That is KSh 360 (\$3.60) per m2. And sometimes the price can go higher than KSh 10.”– Wilmar Agronomist, Mr. Kariuki, Nyeri.

Estimated revenue earned from quarter acre of Arabicum production

0.25 acres in m2	Bulbs planted per m2	Average farm-gate sales price per stem	Total revenue earned for 0.25 acre (KShs)
1,011	36	KSh 10	363,960

Table 7.3.
Source: Farmers' data; author's analysis³³²

As the tables above illustrate, smallholder farmers who grow Arabicum can earn approximately \$3400³³³ from a quarter acre which is a significant, even transformative boost to their annual incomes from vegetable sales for the local market. Farmers stand to earn even more when they grow different varieties as they often do, and can stagger

³³⁰ Fertiliser for cut flowers is normally sold in five kilogram packs and amounts to KSh 70 (\$0.70) each (2016 prices)

³³¹ Tuberose takes about 4-5 months to maturity at harvest. This does not include the dormancy phases of the tuberose bulbs which is normally about 2 months or less

³³² Prices fluctuate heavily depending on the season and can be as low as KSh 2 or as high as KSh 20 per stem. Wilmar's farm gate prices for the season (2016) were KSh 5 per stem of Arabicum.

³³³ Calculated as revenue – costs for 0.25 acres and converted into dollars using the exchange rate KSh 100 = \$1

their earnings depending on the seasonality of demand for each variety. For those in tea-growing economies, the income from flowers complements³³⁴ the annual bonus tea farmers receive in October.

The distribution of profits between farmers and exporting firms was a bone of contention. Overall, the farmers were concerned only with farm-gate prices and were not aware of the prices at the auction. The lamentation of one of Wilmar's outgrowers concerning the perceived unfair distribution of profits is captured in the quote below and image 7.4. that follows. It shows an understanding of the disproportionately high cost of freight, the expense of selling flowers at the auction, and the split with the exporter.

“You see, if the auction handler is receiving about 20%, the farmer and the company is left with 40%. This is because freight takes up 40% and handling takes up 20% so the remainder is 40%, which is split between the Farmer and the company. 60% is gone. That is why you see I'm farming and I speak very well of flowers but I am not able to buy a car for instance.” - Farmer Robert Mwangi, Wilmar Agro Ltd., Thika.

While a farmer receives 0.042 to 0.085 euro cents (KSh 5 - 10 for stem) per stem at farm-gate, the whole sale price at the auction ranges from 0.40 to 0.60 Euro cents meaning that Kenyan smallholder farmers receive between 15-20% of the wholesale cost of a stem of Arabicum. This breakdown of value distributed between farm and auction is summarised in figure 7.4 below.

³³⁴ While the guaranteed lump sum received from tea sales is useful in terms of providing security for bank loans, farmers growing Arabicum for export are paid weekly at harvest time.

From farm-gate to auction bid: Who gets what when a stem of *Arabicum* is sold

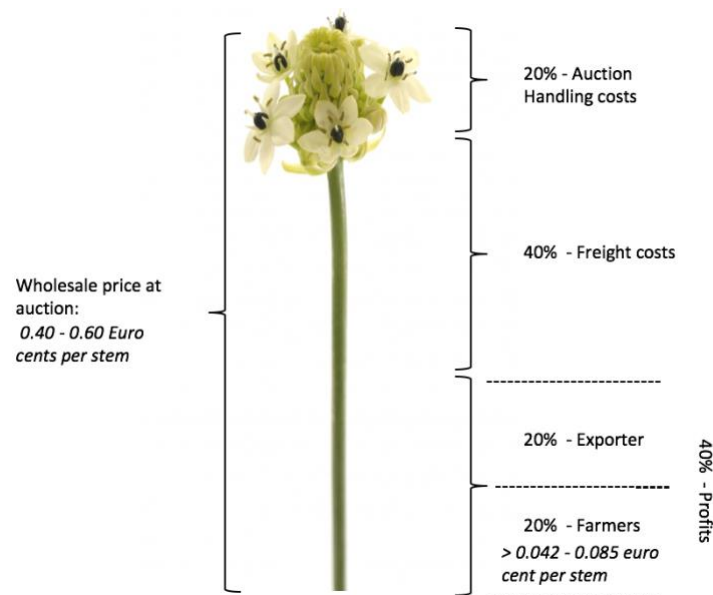


Figure 7.4.
Source: Author's analysis

7.3. Smallholder selection strategies for summer flower varieties

The varieties which smallholder flower farmers grow are delimited by suitability to the agro-ecological conditions, the technical complexity of growing a variety, relative profitability and access to planting material. The information costs of conducting one's own research are enormous and therefore smallholders tend to rely on locally accessible varieties available via personal references. They obtain their plant material from three main sources – fellow farmers, contractual collectives (or outgrower exporter firms) they may be contracted to supply or government research institutes³³⁵. Many smallholder flower farmers first learn about viable varieties from observing their neighbours' successes and they then obtain plant material from the first-movers. For example, the experienced farmers interviewed converged on the relative ease of growing *Craspedia* for first-timers and they offer the planting material to neighbours and friends.

The main disadvantages of obtaining plant material from fellow farmers are that since no royalties have been paid to breeders for access, the flowers produced thereof cannot be accepted for sale in regulated export markets such as the Dutch auctions. Flowers grown this way are therefore often destined for local sale at the Nairobi Flower

³³⁵ These findings are similar to research done by Muriithi (2011) on Tuberose production.

Market or other regional markets. Secondly, farm-saved flower planting material tends to lose its robustness over time and therefore is more susceptible to pests and diseases and might also have a shorter shelf life. Furthermore, the uniformity of the produce is also often compromised and this is a critical consideration in the exportability of the flowers. Deficiencies in quality can also be transferred from one farm to another in close proximity and farmers deal with this issue by sourcing for plant material in a different county which has different agro-ecological conditions. It is however important to note that in as much as farmers cannot afford the royalties for access to protected varieties of flowers, farmers are constantly coming up with new varieties. However, they lack the knowledge of how to institutionalise, protect and commercialise this knowledge as intellectual property. A KEPHIS official explained that one smallholder in Nyeri obtained Plant Variety Protection for a new variety of *Alstroemeria* that passed the DUS (Distinct, Sufficiently Uniform and Stable) test.



Figure 7.5. Foreground - Harvested Moby Dick flowers in Wilmar's cold store.

The second way in which farmers obtain plant material is through contractual collectives or outgrower schemes, such as Wilmar. A commercial flower export firm will have paid the royalties due to breeders for the plant material in order to ensure the viability of the cut flowers at the auction and other export markets.

Local outgrower export firms also engage agricultural research institutes that may be developing more robust varieties of summer flowers, domesticating and commercialising indigenous varieties such as *Moby Dick* shown in the image on the left. These ventures have historically been carried out often under donor funded programs and therefore their continuity over time is seldom guaranteed. For the smallholder, obtaining plant material from an exporter firm means that they can trust that the variety provided is robust and is in demand in that season. The quote below from Wilmar's director highlighted the lack of sustained institutional efforts to develop

summer local flower varieties and the resultant dependency on imported plant material. It is indeed ironic that to be commercially viable, the plant material for Moby Dick, a domesticated local wild flower, must be imported.

“For a variety like Moby Dick, we would send some farmers to fetch the plant material from Kinangop and Aberdares and bring it to their home areas for sale. With time this stopped working because the seeds have been so thoroughly recycled in farms, that when there is too much rainfall, the plant quickly turns brown. So now Wilmar begun importing the seeds from Holland. The company there sources the seeds from Japan. This reinforces the huge gap that exists when it comes to sourcing for plant material for summer flowers locally. There is nobody working on these products locally.” – Ruth Muiruri, Director, Wilmar Agro. Ltd.

Third, enterprising farmers can obtain plant material directly from government research institutes such as KALRO in Thika which specialises in Horticulture research. The availability of plant material cannot always be ascertained due to general lack of funding for the floriculture research portfolio, which is considered lower priority to food crop research.

The main challenge for smallholder summer flower farmers is not only accessing suitable varieties but also balancing the planting and crop cycles with the seasonal cycles of demand at the auction. From the interview with Wilmar Agro Ltd. it emerged that for example, the prices at the auction in January are low but improve in February and March with Valentines’ Day and Easter. The colour and variety of summer flowers in demand also changes with the seasons³³⁶. Independent farmers who are not linked to exporting firms have a more difficult time accessing information about these trends and many have abandoned cut flower production due to lack of this information. Additionally, access to this market information without practical support, does not necessarily translate into adaptable production patterns. The section that follows elaborates how smallholders use their networks to access not only production inputs but also crucially, export markets.

³³⁶ For example, in December blue flowers such as Eryngium are in demand for the Christmas season. In February, customers seek out red flowers such as Alstroemeria while in March, yellow and white flowers such as Craspedia, Agapanthus and Lilies are in demand.

7.4. “Contractual collectives vs. Collectives of Convenience”: The diversity of smallholder farmer-exporter relationships

For smallholders, the most crucial relationship in the production network to facilitate access to export markets is with the outgrower firm that doubles up as a consolidator and exporter. In chapter six, the consolidator-exporter was defined as the “focal firm” (Dembinski 2009) which adds value in both production and marketing. This chapter expands Dembinski’s view to argue that their power comes not only from command in economies of scale and standard setting, but more specifically from their deep embeddedness and knowledge.

Three categories of farmer-exporter relationships are identified from an analysis of field work data including contractual collectives, collectives of convenience and the farmer-entrepreneur. These are depicted below in figure 7.6. below. The only contractual collective identified is Wilmar Agro Ltd., while Munyu Flower Growers group which is now defunct, Tegmak Blooms and Mult Grow Ltd are categorised as collectives of convenience. In the third category, Phinna Farm is discussed as an exporting farm enterprise. Though too few to be representative of organisation amongst smallholders, the four examples are illustrative of farmer agency in addressing the challenge of collective action to enhance export market access.

Sample smallholders’ main exporting networks

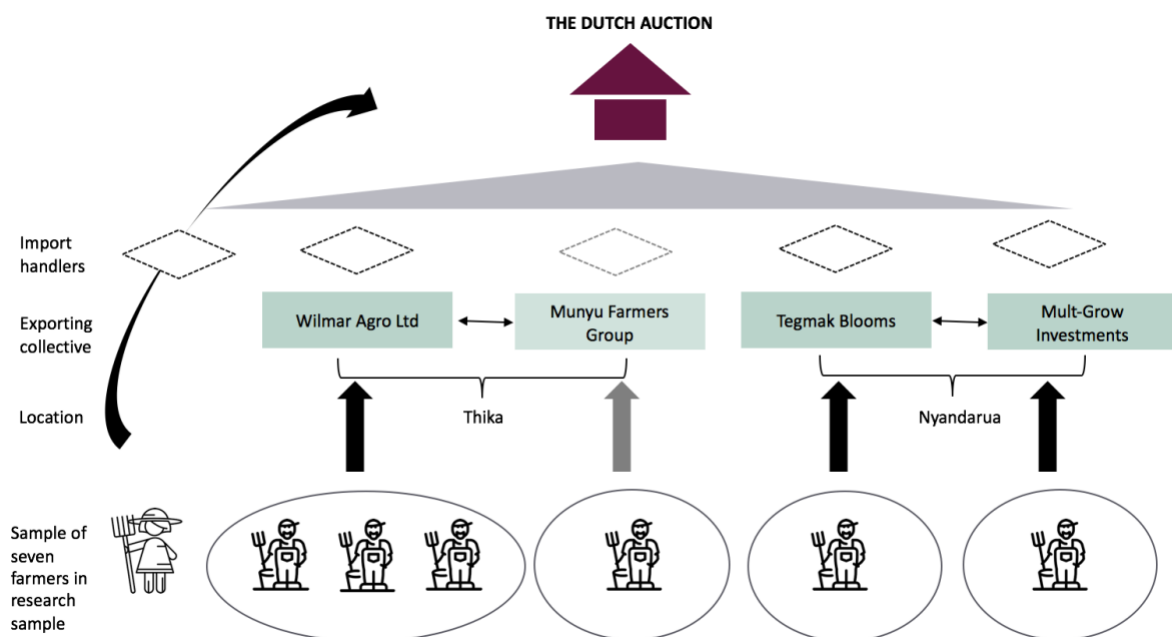


Figure 7.6.
Source: Author’s analysis

Contractual collective

Wilmar Agro Ltd. Case Study (Out-grower farmers' group)

The data feeding into this section was obtained from in-depth semi-structured interviews with the managing director of Wilmar, three agronomists employed by Wilmar to provide on farm capacity building support for its smallholders, four farmers who are Wilmar's outgrowers (outlined in table 7.1. above), Vrolijk Bloemen and IQ flowers which are importing agents at the Dutch auction.

Wilmar is probably the best-known smallholder flower farmers' contractual collective in Kenya. Set up as an outgrower firm in 1998³³⁷ by Wilmar Kamami, an experienced flower farmer, it exports summer flowers primarily to the Dutch auction. The firm is characterised as a *contractual collective* because it has enforced contracts³³⁸ with 2000 active outgrowers³³⁹ organised into farmer groups for ease of collection. For economic viability of collection, logistics and training, each group must have a minimum of seven farmers. The contracts are signed both by the farmer and by the Horticultural Crops Directorate, which arbitrates in case there is a breach of contract. Wilmar keeps detailed records of individual farmers' production and through calculated projections can estimate each farmer's harvest and thereby detect any side-selling. If a farmer is caught side-selling contracted flowers to independent brokers, Wilmar may suspend sourcing for a time or permanently. Over five years, Wilmar has retained about 80%³⁴⁰ of the farmers they have worked with under these terms. Approximately nine varieties of summer flowers³⁴¹ grown by Wilmar's smallholders are consolidated and packaged in the refrigerated godown in Thika, and transported to the airport within 48 hours. Wilmar works with Panalpina Airflo (discussed in the technical chapter) for freight forwarding to the Dutch auctions. At 40% of total costs, freight charges³⁴² are the highest fraction of costs of getting the flowers to market for the outgrower.

³³⁷ The Kamami family had a private flower farm in the Masinga Dam area and were exporting flowers from 1995. However, it was in 1998 that a group of 20 smallholders approached him and asked him to help them export their flowers as well, that firm developed into an outgrower.

³³⁸ A sample contract is shown in appendix D.

³³⁹ Previously, the number of smallholders they worked with was 4-5000. Since 2015 Wilmar realised that many of these farmers were not relying on flowers for a living and were not as active. Wilmar then decided to streamline their contracts and work only with the farmers who were actively exporting.

³⁴⁰ Farmers will mostly stop growing flowers when the soil is depleted or when they experience a change in family circumstances.

³⁴¹ *Ornithogalum saundersiae* (Arabicum), *Ornis*, *Ammi Visnaga*, *Moby Dick*, *Tuberose*, *Molucella*, *Craspedia*, *Alstroemeria*, *Eryngium*.

³⁴² \$ 1.93 per kilogram.

Income for the average Wilmar outgrower growing flowers on a quarter acre of land ranges about KSh 20-30,000 *per month* (\$200-\$300), well above the living wage³⁴³. The farm-gate prices Wilmar offered its farmers in 2016 for the three most popular varieties are shown in table 7.3.2. Farmers are paid at farm-gate through vouchers and payment is remitted through bank transfer. What farmers value most about the Wilmar model is the regularity of payment which secures a steady monthly income despite seasonality of prices. Wilmar maintains steady payments by tapping into profits earned during high season to cover possible losses off-season. Independent brokers take advantage of this price buffering by appealing to farmers' desire for short term gain by offering them a slightly higher farm gate price than Wilmar's offer in the low season. However, unlike Wilmar, they do not offer a steady market.

Sample of Wilmar's farm gate prices for three popular varieties

Summer flower variety	Farm-gate price (April 2016) KSh
Ornithogalum saundersiae (Arabicum)	5
Ornis	3
Moby Dick	4

Table 7.4.
Source: Wilmar Agro. Ltd.

An exemplar of collective action in this sector, Wilmar provides capacity building support for its farmers in various ways. Hired agronomists act as extension agents who provide on-farm technical support to farmers for crop husbandry, variety selection, soil testing, production planning and quality assurance. They also hold policy meetings to share systems and marketing information with the farmers particularly around planning for seasonal dynamics. Farmers value these contractual collectives for their payment stability, capacity building support, provision of inputs and market access.

³⁴³ Anker and Anker (2017:7) estimated that the living wage for rural Mount Kenya is KSh 13,943 (\$140) gross living wage for October 2016

The organisation and stability of the 'Wilmar model' has also attracted donor support seeking to catalyse the inclusion of smallholder flower farmers into direct markets as elaborated in the *case study box* below (Buxton 2012). The role of the "ethical agents" stands out in advocating for Wilmar's position in the bargaining process with Rainforest Alliance certification and the supermarket. They exhibit capabilities similar to the capabilities that consolidator-exporter firms as focal firms exhibit in terms of having deep knowledge of production and marketing, and export trading networks. Secondly, while the certification constitutes the rules, they are malleable to the combined influence of smallholders' collective power and the institutional power of influential INGOs under the banner of ethical trade. The *episodic bargaining*³⁴⁴ process here points to the adaptive power of integration into institutional, philanthropic and financial networks for smallholders.

New Business Models for Sustainable Trading Relationships (NBMSTR) case study

Through the NBMSTR project funded by the Gates Foundation, IIED, the Sustainable Food Lab and commercial experts worked with Wilmar Agro Limited to help them expand from the Dutch auction to direct markets. Under this pilot, market intermediaries known as 'ethical agents' helped Wilmar to obtain Rainforest Alliance for its smallholders. In 2010, the first smallholder bouquets were to ASDA (Walmart's UK subsidiary). Unfortunately, the pilot ended after 15 weeks when Wilmar was unable to consistently supply according to ASDA's specifications. The ethical agents again stepped in to renegotiate the Rainforest Alliance Certification. Bouquets were allowed to contain fewer summer flowers, allowing for substitution when smallholders struggled to meet the requirements. Secondly, Wilmar was allowed to sell bunches of only one variety of summer flowers which could be packed in Kenya to add value locally. With this support, Wilmar supplied 100 Sam's Club (another Walmart subsidiary) stores from July 2011.

Source: Buxton, A., 2012. Linking Smallholders to Markets. IIED *Reflect and Act* Report (January, 2012)

The strengths of contractual collectives such as Wilmar lie in the ability to reduce coordination costs by organising and training farmers, reduce information costs by

³⁴⁴ Outlined in chapters 2 and 3 as the moment an actor makes use of their strategic resources (in this case funding from the Gates Foundation, and an alliance of influential INGOs) in order to compel the other (namely the certification agency and the supermarkets) do something they would otherwise not do.

managing and disseminating production *and* market knowledge and the ability to address challenges of scale by consolidating production. Their stability enables them to invest in innovating around new varieties and deepening export trade networks. However, under this arrangement which harks back to captive forms of governance (Gereffi et al. 2005b) farmers are 'locked in' to production since there is little incentive to develop farmers' capabilities in say marketing or value addition which are the exporting agent's terrain (Bolo, 2012). This situation effectively renders smallholders into what Lenin once described as "propertied proletarians, workers cultivating company crops on private allotments" (Little & Watts 1994:64). Despite the market access and stability Wilmar provides, some farmers are disgruntled with the distribution of profits and, break away to form independent collectives with mixed success as is illustrated in the next case study.

Collectives of Convenience

Munyu flower farmers group

When a number of outgrower farmers' produce was rejected for poor quality by Wilmar in 2014, they broke away and set up Munyu flower farmers group. There was no mention of contracts binding the group. Rather, they banded together under a mutual frustration and for the convenience of managing themselves – hence becoming what I describe as a 'collective of convenience'. The group of fifty farmers sought to independently export their summer flowers to the auction which included Ammi Visnaga, Craspedia, Tuberosa, Eryngium and Moby Dick. To do so, they obtained an export licence and an auction number from FloraHolland.

When they began exporting they had little knowledge of market requirements in terms of grading, quality, post-harvest treatment, packaging and certifications. They also lacked an understanding of seasonality of demand for summer flowers at the auction. Much of the produce came to waste as the chair of the group, Boniface Musyoka explained:

"At harvest [in June], we then found the market at off season period from July to September. Our hearts were broken".

They also faced challenges with pests and diseases and meeting the minimum chemical residue levels and therefore could not obtain the phytosanitary certificate from KEPHIS that is required for all exported fresh produce to the EU. Another

crippling hindrance was the enormous cost of freight to the Dutch auctions which was priced at KSh 6 per stem. Auction handling costs are also calculated in tens of euro cents per stem, meaning that exporters need to meet economies of scale in order to meet the costs of getting to market. Compounded with the very low demand and low prices at the auction, the group was quickly going at a loss.

The other major challenge was with group governance and financial management. The management of the group failed to anticipate the costs of getting their produce to the auction. In trying to increase volumes, the group managers suggested purchasing summer flowers from a different locality but this was met with suspicion by the group. Further, as they registered losses, the group began to suspect foul play in financial management and disintegrated due to poor group governance. The misadventures of Munyu flower farmers group are illustrative of the critical need for market knowledge to allow for production planning, and strategic integration into export networks to complement production knowledge, which is the farmers' forte. Without this, smallholders will have to rely on savvy intermediaries who possess the knowledge, networks, and business acumen, and disproportionately split profits with them for their services.

Mult Grow Investments

Mult Grow is a flower farmers' exporting group in Njabini which was set up in 2008. It currently has 15 active members with a collective 50 acres (20 hectares) of land under summer flower production mostly *Arabicum*, *Craspedia*, *Eryngium* and *Alstroemeria*. Five of the farmers, who are also the directors have larger tracts of land than the other ten farmers, who also have substantial experience in horticulture production. Having come together as experienced, landed flower farmers and yet operating outside the bounds of formal contracts, this group qualified as another collective of convenience. The chair of the group was formerly an IT professional in a Dutch travel firm, and was introduced to floriculture by a Greek colleague. He therefore had the *societal embeddedness* (Hess 2004) exposing him to the sector, the business acumen and the trade networks but none of the agricultural experience, which he had to quickly learn. His experience is illustrative of the hierarchy of knowledge and experience required for successful integration into cut flower export markets. Mult Grow exports 100 boxes of cut flowers per week earning an estimated KSh 500,000 (\$5000).

Unlike Munyu flower farmers, Mult Grow's chairman also showed a deep understanding of the aesthetic value of summer flowers, as well as strong capabilities in meeting the grading and certification requirements required for export. The group's sophistication was also evident in that it is one of the national pioneers of the government's horticulture traceability program (discussed in chapter eight) and is undergoing training with 12 other cut flower exporting firms. The significant land area that Mult Grow has collectively amassed under cut flower production is also critical for achieving economies of scale. Further, the management has cultivated the required networks at the auction for ease of information as the quote below from the group chairman shows:

"We are in touch with the auction. I am working with the smallholder department at Royal FloraHolland here in Kenya and I ask them questions... we know exactly when the variety is selling well. We have a calendar of four, five years so we know what went around will come around at a certain time." - Peter Murimi, chairman, Mult Grow.

The epitome of this group's sophistication is in their ability to diversify from auction sales to direct markets in the UK and Russia, where they sell to florists and garden centres. However, the risk of operating in these markets (described as FOB below) as smallholders and without contracts is quite high financially as the quote illustrates:

"The challenge with the auction is the fluctuation of prices. The challenge with the FOB [Free on Board] is lack of payment surety. There is a very high risk of not getting paid. Like in the last four years, we have lost KSh 6 million. (\$60,000)" - Peter Murimi, chairman, Mult Grow.

The second risk that Mult Grow articulated was the risk of the proletarianization of smallholder flower farmers, who are up against giant flower firms from the UAE³⁴⁵ (such as Black Tulip³⁴⁶) which are establishing flower farms in rural Kenya. The quote below explains this new phenomenon and the future risk smallholders feel they encounter.

³⁴⁵ KFC (2017) reported that 2% of Kenya's cut flowers were exported to the UAE, which signalled to them that the region could be emerging as a flower market frontier (Ifedapo& Esposito 2018: 335)

³⁴⁶ This is a vertically integrated firm which controls production of roses and summer flowers and also controls marketing and trade in its home market, the UAE, a non-traditional export market.

“At the end of the day, what [Black Tulip] requires from us is labour. So, that way, they put us away from the Arab market. And I know that next, the Russians are coming. They will do the same. Give them three, four, five years.” – Peter Murimi, farmer and chair, Mult Grow.

The third risk of smallholder flower farming as raised by Mult Grow is the management of Plant Variety Protection (PVP) rights. He explained that they had been working on developing three new varieties of *Agapanthus* but before they could obtain the plant variety protection rights, the varieties were locally disseminated amongst the farmers and could no longer be protected. The group has only managed to get one locally developed variety of *Eryngium* protected. This experience raises the question of the protection and commercialisation of indigenous knowledge and innovation, a process which requires institutional support and farmer education.

As a more sophisticated collective of convenience, the Mult Grow example highlights the overarching importance of market knowledge and export networks to complement smallholders' high quality production. Starting off with deep social embeddedness and an abundance of land gave them a much higher chance of success than Munyu flower growers' group had. The model highlights the importance of being strategic around variety selection, long term planning around the seasonality of demand in the Dutch auctions, conducting a risk assessment of financial liability when seeking to diversify to direct markets, and the power of collective action in achieving economies of scale. However, as the next collective of convenience shows, transparency in distribution of profits and good group governance remain elusive practices for exporting small-holder groups, and undermine the cohesion and longevity of the collective.

Tegmak Blooms

This section is derived from an interview with John Mahia, one of the seven smallholder farmers in the sample and chairman of the flower farmers' group, Tegmak Blooms (henceforth referred to as Tegmak). Tegmak was part of an earlier larger group³⁴⁷ of flower farmers in the Njabini area established in 1997 and that later balkanized into Phinna farm, Mult Grow (both previously discussed). Mult Grow was

³⁴⁷ This larger group was organized as outgrowers who supplied summer flowers such as *Molucella* for export by a European agent who also grew roses in Naivasha. Before the agent left Kenya, he supported the smallholders with obtaining export licences and Mult Grow was the first among these.

managed by five dominant farmers who managed the export process but failed to effectively communicate auction prices and other market information amongst the wider group, which created tension and mistrust. As an act of resistance to perceived exploitation by the group of five, some farmers broke away to form a collective of convenience - Tegmak Blooms - in 2012.

Seeking out a form of organization that was adaptable to farmers' lifestyles, Tegmak's first initiative was to organize the flower farmers who were growing collectively in six small schemes in neighbouring areas³⁴⁸. Membership to the group is not binding and does not exclude farmers from exporting with other agents exporting firms particularly in the off-season. The group is made up of 42 farmers, each with on average a quarter or an eighth of an acre, which makes up a total of 60 acres (24 hectares) of land. The varieties they grow include *Craspedia*, *Eryngium*, *Agapanthus*, *Scabiosa* and *Alstroemeria*. Tegmak emphasized individual farmer responsibility and traceability for the quality of exportable flowers, which is enhanced through a bar coding system. Each farmer is assigned an alpha-numeric code which is displayed after the flowers have been inspected and graded. Having the individual codes facilitates traceability so that farmers can market their flowers with other collectives of convenience such as Mult Grow, or with Phinna flowers (discussed in the next section). The exporting agent usually takes a cut which is calculated per stem exported. In the peak season however, Tegmak rallies up its member farmers' collective energies so that they can capitalize on economies of scale for export to the Dutch auction.

Tegmak is also working to deepen its societal embeddedness in trade networks globally and with local government and with large scale farms. The group develops its export networks by participating in the annual International Flower Trade Expo (IFTEX) in Nairobi, which brings together prospective buyers from a range of global markets and growers. Having realized that the power of being in a farmers' collective under the newly established county government rests in being a cooperative rather than a limited company, the group is thinking of opportunistically rebranding as such. The cooperative status might strengthen their position in the case of an *episodic*

³⁴⁸ These include villages in Nyandarua county such as such as Kagongo, Buchi, Mukungi, Tulaga and Kipipiri

bargaining process with the county government. The collective's current priorities include lobbying the county for a refrigerated store and a grading shed. Uniquely, Tegmak supplies a large-scale farm³⁴⁹ by delivering 10,000 stems of Eryngium per week to a collection point³⁵⁰ and are then transported and packaged into mixed bouquets for export at the large-scale farm in Athi River. There was no mention of a contract for this transaction. Supplying a large-scale farm raises an outstanding concern for all smallholders seeking entry into direct markets, which is obtaining the necessary certification (discussed in section 7.5.). The partnership between the large-scale farm and Tegmak's farmers works because of the proximity of the collection point to the smallholders' farms which relieves the farmers of the cost and risk of organizing refrigerated transportation.

In addition to exporting collectives, it is also possible for experienced smallholder farmers with access to land to thrive as an entrepreneur exporter to the Dutch auctions. One such outlier is discussed below.

The Farmer- entrepreneur model

Phinna Flowers

Introduced to flower farming by contact with European flower farmers and exporters from Limuru in 1982, Felista Thuo has established a well-respected flower producing and exporting enterprise known as Phinna Flowers. She has seven acres of land in total (four of which are leased) for the production of Agapanthus, Alstroemeria, Lilies, Craspedia and Eryngium. Producing at this scale enables her to operate as an individual enterprise. Phinna farm is also registered as a producer member by the Kenya Flower Council, which enables her to confidently export her flowers. She has twelve workers on the farm who are paid a daily wage of KSh 250 (\$2.50) though she also works the farm herself and with her children. Her successes in flower farming have seen her transition from relying on dairy and vegetable sales locally and for export, to relying on flower earnings as the main source of livelihood. This is contrary to most other smallholders who diversify into flower production to boost incomes from

³⁴⁹ Tegmak's initial contact with the large-scale farm was developed at IFTEX, which underscores the importance of the trade forum in providing exposure to new markets, and forging the export networks that are so critical for smallholders' survival.

³⁵⁰ The collection point is located in Murungaru which is a short distance from the six groups and enables them to avoid the costs and complexity of managing the cold chain 160 kilometres to the large-scale farm in Athi River.

vegetable trade. Phinna flowers has over time invested in farm infrastructure such as a charcoal cooler and a grading shed as shown in image 7.7. which enables her to process the harvested cut flowers for export.



Figure 7.7. Phinna Farm's grading shed

One of the keys to her success as smallholder flower farmer is the diversity of markets she is engaged in as illustrated below in figure 7.8. A Dutch-owned, Limuru-based flower farm known as Tropiflora purchases her Alstroemeria variety from the farm-gate. She also has an exporting license and works with IQ flowers, an importing agent at the Dutch auction that sources summer flowers from smallholders. The export licence and

auction trading number allows Phinna flowers to act as a consolidator and exporter for other local smallholders who would like to export their flowers to the auction.

She has partnered with many European growers and exporters over the years who in addition to facilitating export market access, have also imparted knowledge on flower grading, quality assessments, certifications required, seasonality and post-harvest treatments. She transports the stems she does not export to the local Nairobi flower market, where her daughter has a flower stand, as well as to a florist at the Sarit Centre, a local mall in Nairobi. Phinna grows Molucella variety specifically for local sale. Access to the local market provides daily income for her daughter and also absorbs produce that might otherwise be classified as waste. As an enterprise, Phinna's successes come from her wide and deep social embeddedness into local and international trade networks, and her deep knowledge from three decades of exposure to the flower trade. By institutionalizing herself through acquiring the necessary certifications and relationships for export, she diversified her access to market.

Diversity of market options explored by smallholder flower farmer-entrepreneur

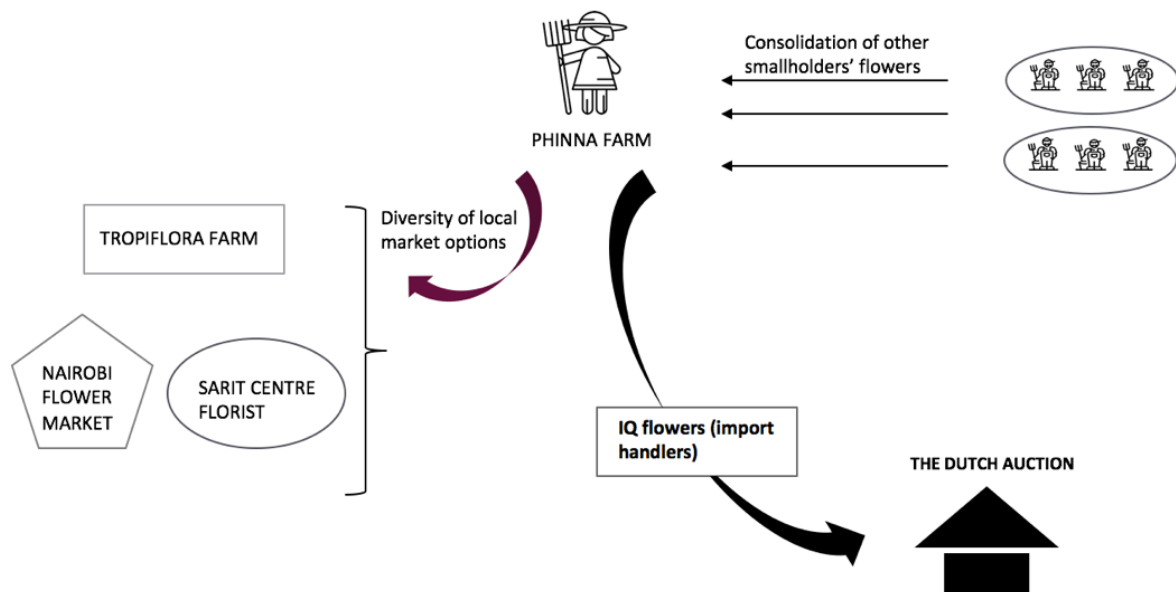


Figure 7.8.
Source: Author's analysis

The three categories of organisation discussed in this section present evidence towards the diversity of smallholder farmers' collective action as they seek out export markets. Two main forms of collective action emerge – contractual collectives and 'collectives of convenience'. Larger outgrower collectives balkanize over time into smaller collectives of convenience whose initial collective energy emerges from an act of resistance to perceived exploitation by outgrowers. The collectives of convenience persist by allowing side-selling in the low season, while banding back together at peak season to capitalize on economies of scale required for successful auction sales. The fluidity of these 'collectives of convenience' is also seen in the opportunistic readiness to rebrand from a limited company into a cooperative in order strengthen their position in the case of an episodic bargaining process with the county. The outstanding capabilities required for the success of the collectives emerges as deep social embeddedness, at least among the group managers. This comes from exposure to and long term relationships with European flower trading networks, which is once again testament to the fact that knowledge flows in the flower industry are predominantly through informal kinship ties and gentlemen's networks. The second factor linked to social embeddedness is deep market knowledge to enable production planning in line with market demands.

Collectives of convenience should be seen as powerful expressions of farmers' agency and critical short-term life-lines for market access but they do not qualify as 'focal firms'. This is because they seldom successfully link production and marketing because they lack the social embeddedness necessary, and only opportunistically harness economies of scale required for market access. On the other hand, contractual collectives may be considered 'focal firms' in the sense that they successfully link producers to the market and offer payment stability required for security of livelihoods in the long-term. Their stability of organization, which unfortunately necessitates the locked in effect discussed by Bolo (2012), consolidates their collective power and enables them to attract and form innovative partnerships, another testament to the importance of social embeddedness. As the NBMSTR case study showed, these multi-stakeholder partnerships are critical for advocating for the smallholders' position in episodic bargaining scenarios for access to direct markets.

Nairobi Flower Market

One of the most underexplored³⁵¹ aspects of smallholder flower farmers' survival is their engagement in the Nairobi Flower Market (NFM). The smallholders in my sample were all active in the NFM, either selling summer flowers that did not make the cut for export or flowers specially grown for local sale. Smallholders³⁵² typically send the overflow of their high-quality harvests to the local market rather than compost them. Although the local market is often regarded as the market of last resort and of much less value per stem³⁵³ than exports, local sales provide an important source of income flow for smallholders. A semi-ethnographic study³⁵⁴ conducted at the Nairobi Flower Market showed that smallholder farmers described cut flowers as "gold" and had bolstered their financial and food security by diversifying to lucrative varieties of cut flowers specifically *leather-leaf ferns*. Nairobi flower market is also the hub from which regional sales to Tanzania and Uganda are made, which sheds light on the opportunities for growth in the regional market. Export markets are inaccessible to

³⁵¹ Bolo (2012:25) provides a short descriptive paragraph on the Nairobi flower market

³⁵² Greenhouse varieties such as roses are sourced as export "rejects" at throw-away prices by local traders from mid and large scale flower farms in Naivasha.

³⁵³ A bunch of ten rose stems costs approximately \$1.

³⁵⁴ Open six days a week between 4 am and 7 am, hundreds of traders some of whom are also growers lay bunches of hundreds of varieties of summer flowers out for sale. The city council charges KSh 50 (\$0.50) for a trading permit per day. A floriculture researcher from KALRO estimated that the total amount traded daily was KSh 5 million (\$ 50,000).

many smallholders because they are not institutionally incorporated in terms of certifications, royalty payments and managing freight and auction costs to participate in global flower trading networks.

7.5. Following the path of least resistance: Smallholder farmers' experiences with navigating industry certifications

Access to certifications has been an enormous challenge to smallholder flower farmers. This is generally because the certifications address issues for large scale commercial flower plantations, rather than the realities of smallholder production. The cost³⁵⁵ and complexity of implementation (Ouma 2010) also hinders access to certification. Conversely, even if concessions for smallholders are made by certifying agencies, smallholder farmers generally lack the technical proficiency to consistently streamline their production processes³⁵⁶ as certifications might demand, which is illustrated in the discussion on Fairtrade and RainForest Alliance below. Indeed, part of smallholders' agency in navigating complex global markets is derived from their invisibility from certifications, which also strengthens their power in the case of non-decisional bargaining with regulatory institutions. This both compels and enables them to find alternative paths of least resistance to the market. Smallholders' summer flowers are still predominantly exported to the Dutch auctions where the gate-pass is the phytosanitary certificate from the Kenya Plant Health Inspectorate Services. KEPHIS provides each flower farmer whose farm is successfully audited with a number that ensures that the produce is traceable in case of any issues in the market.

The Kenya Flower Council (KFC) recognizes the unique conditions of production for smallholders and began developing a smallholder code of conduct in 2015. The farmers interviewed appeared to confuse *registration* under the KFC as an exporter, with *certification* which requires detailed farm audits. The KFC has over 2,500 smallholders registered as affiliates, who are eligible for group certification where

³⁵⁵ Ouma (2010: 203) explains that in the case of GlobalGAP these costs can be separated into nonrecurring costs (one-off or time-limited investments in farm infrastructure, training, and certification to be able to achieve compliance) and recurrent costs (recertification, monitoring, training, labor, equipment, and analysis of pesticide residue) to maintain the system.

³⁵⁶ For example, MPS-ABC requires farmers to adhere to specific rules to ensure environmentally sound production including regulating use of fertilisers, chemicals, waste management and water use. Audits are carried out four times a year.

organized as such. Farmers organized under outgrower groups are more likely to receive market access support through government or donor initiatives³⁵⁷.

In the meantime, smallholders remain generally locked out of supplying supermarkets which have private voluntary codes of conduct that are consumer-facing such as Fairtrade or supermarket sustainability standards. The global sourcing manager for ASDA's procurement firm, IPL, explained the difficulties of sourcing summer flowers from smallholders:

"It would have been tricky for us to start with small holders. Because we look into things like certifications and small growers don't have them, and it is expensive for them so they mostly will not to go for them. For instance, all of our suppliers have to be Global GAP certified ³⁵⁸." - Global Flower Sourcing manager, IPL/ASDA.

Specialized direct markets such as florists and garden centres are less stringent on certifications and tend to make more specialized mixed bouquets that require summer flowers. These may prove to be the path of least resistance into direct markets for capable, enterprising and organised smallholders seeking to diversify exports from the Dutch auctions.

Notably, smallholder flower farmers are excluded from the Fairtrade flower portfolio. As Fairtrade was rapidly expanding its portfolio of commodities for certification in the early 2000s, so was its producer profile changing from predominantly smallholders³⁵⁹ (as in coffee, tea, bananas) to plantations specifically in flowers, fresh fruits, wine grapes and processed juices (Raynolds 2017). The Fairtrade flowers regional manager for Africa explained that 90% of Fairtrade flowers³⁶⁰ are roses, which can only be grown under greenhouses by large commercial operations. The Fairtrade

³⁵⁷ Refer to the previously showcased NBMSTR case study with Wilmar's farmers.

³⁵⁸ FPEAK led the development of KenyaGAP which was benchmarked to GlobalGAP certification in 2007. It was a localised certification to standardise the quality of mid and small scale horticulture farmers. However, it was deemed ineffective in assuring market access for local farmers (Ouma 2010: 218).

³⁵⁹ Coffee, cocoa, sugar, honey, rice and cotton are the only Fairtrade products which remain closed to large producers.

³⁶⁰ Until 2013, Fairtrade flowers were mostly single rose stems or bunches of only roses. In an effort to increase the sales of Fairtrade flowers, the organization began dealing in Fairtrade bouquets which require summer flowers.

standard previously demanded that 100% of the flowers in bouquets had to be Fairtrade. However, given the production patterns of commercial flower farms that specialize in one variety such as roses, it was difficult to source Fairtrade fillers. Realizing the need for flexibility, in 2017 Fairtrade introduced a new rule which allows up to 50% non-certified flowers and fillers in Fairtrade bouquets so as to increase the variety of Fairtrade flowers and increase sales among consumers, especially given the competition that Fairtrade is facing from supermarket certifications. A positive effect of this concession was that since non-Fairtrade fillers can be sourced from any origin, fillers grown by Kenyan smallholders can be considered for inclusion, though a smallholder-specific code for Fairtrade flowers is yet to be developed. Even then, given smallholders' inability to adhere to the requirements of existing codes, achieving compliance to Fairtrade certification is also likely to be elusive.

7.6. Conclusion

Analysing data from seven smallholder farmers and their production networks, this chapter first outlined the context and condition in which smallholder flower farmers operate, detailed their intra-firm strategies in terms of variety selection, the dynamics of their exporting networks and their interaction with the certifications that govern the industry. The contextual findings are that as a marginal segment in a bifurcated and tightly regulated export market, Kenyan smallholder flower farmers engage in flower production first as a diversification strategy from tea, coffee and other horticultural crops, and to enhance their food security through diversifying income streams.

Smallholder farmers' intra-firm strategies were observed in terms of variety selection. Variety selection is a highly knowledge intensive strategy. There are high information costs of researching what varieties to grow and therefore farmers tend to rely on personal networks, government research institutions and their outgrower-exporting firms. Secondly, farmers are excluded from the accessing varieties due to the costs of adherence to PVP (Plant Variety Protection) laws. However, farmers continue to innovate varieties though these are weakly institutionalized, protected and commercialized.

Smallholder farmers' extra-firm networks include contractual relationships, as in an outgrower scheme, and the loosely structured 'collectives of convenience' which are

independent farmers' groups. The contractual form (presented by the Wilmar case study) creates organized, stable, capacity-building collectives. Although farmers are mostly "locked-in" to production functions with little advancement in market knowledge, it is probably the only observed organizational form offering smallholders a stable route to direct markets. Contractual collectives can therefore be considered as focal firms for smallholders.

'Collectives of convenience' generally emerge as an act of resistance to perceived unfair distribution of profits by the exporter. These groups are therefore reactionary, rather than strategic, porous in terms of non-binding membership, opportunistic in that group members may sell via other exporters in the low season but re-assemble in the peak season to capitalize on economies of scale, and short-term because they are constantly in flux, disbanding and rebranding as convenient. The inability of these collectives of convenience to successfully and consistently link producers to export markets means they cannot be considered as 'focal firms' in the smallholder production network. From the one entrepreneurial case study, smallholder farmer entrepreneurs in this sector are likely to be highly experienced in floriculture, landed, deeply socially embedded into export networks, widely diversified in terms of varieties and access to local and global markets, and well institutionalized in terms of export certifications and regulatory performance.

This chapter's findings imply that for Kenyan smallholder flower farmers' survival and success, integration under globalisation is not necessarily about deeper inclusion into increasingly tightly regulated export markets, but rather a more strategic integration into a wider variety of markets. This entails forming strategic partnerships (as in the NBMSTR case study), capitalizing on their marginality in the political sphere to navigate possible market access barriers and innovatively seeking paths of least resistance such as specialized or local export markets that are less stringent on certification. Until the intertwined challenges of collective action and institutionalisation of knowledge among smallholders are addressed, any trade initiatives aimed at 'including' smallholders will only achieve aesthetic rather than transformative results.

8. Navigating the web of governance: Extra-firm contestations in the Kenyan cut flower industry

8.1. Introduction

The previous two chapters have discussed the empirical findings from research done among mid and small scale cut flower farms and their producer networks in Kenya and the Netherlands. They have highlighted intra-firm strategies revolving around managing production – how and why farms select the cut flower varieties they grow for export, as well as how they manage labour. They have also discussed inter-firm strategies that have to do with the relationships between farms and exporters, and the different forms of organisation deemed advantageous for entry into diverse markets. These relations of production are knowledge intensive and production networks act as centres of knowledge production, around which knowledge linkages along the chain and in the local economy are created or found missing. The politics of these knowledge linkages in Kenyan cut flower production networks have implications for the bargaining power of the players involved, as they navigate a web of certifications which police access to the lucrative direct markets that producers seek.

This chapter paints the landscape of certifications that the Kenyan producers in the research sample encounter, and discusses the various ways in which they negotiate these ‘rules of the game’ (North 1992). A general sentiment expressed within the industry is that the Kenyan flower industry has thrived because ‘the government has stayed out of the sector’ and that what is required for the industry to continue blooming is even less interaction with the state³⁶¹. This chapter shows that contrary to this belief, the success of the flower sector is underpinned by government support in terms of export regulation and traceability systems that build trust and confidence in European markets.

This chapter hones in on two of the three key variables in an analysis of value chain governance in GVC theory (Gereffi et al. 2005b) highlighted in chapter three of this thesis - the complexity of transactions and the codifiability of information in certifications³⁶². It elaborates how modular forms of governance are exhibited

³⁶¹ See for example Dolan and Humphrey 2000; English et al. 2004.

³⁶² See table 2.2. in chapter three for an overview of the five modes of governance in GVC analysis.

particularly in regard to the partnerships between capable mid-scale producers and consolidator-exporters, and captive governance in regards to the limited supply capabilities of small-scale farms. This chapter also crystallises the discussion on the various ways in which producers exercise their bargaining power to navigate the shifting landscape of regulation from the multi-scalar perspective adopted from GPN 2.0 analysis. Lastly, the chapter highlights various forms of institutional power³⁶³ Henderson et al. (2002:450), and the “nested” nature (Aggarwal 2005) of that power through the interplay of the public and private forms of governance.

8.2. The dynamics of certification on the sample of seven mid-scale cut flower farms

This section discusses the empirical findings from field work on the sample of seven mid-scale flower farms and their production networks³⁶⁴ and elucidates their perspectives on certification. It includes perspectives from an interview with the Kenya Flower Council (henceforth, KFC) CEO, the Fairtrade Global Sourcing Manager in Kenya, ASDA’s global flower sourcing manager and various flower trade representatives at the Dutch flower auctions.

Beyond obtaining the mandatory phyto-sanitary certificate from the Kenya Plant Health Inspectorate Services (KEPHIS), the seven farms in my field work sample displayed certification³⁶⁵ from MPS (Milieu Programma Sierteelt translated as 'Environmental Programme Floriculture') which is necessary for access to the Dutch market. The farms also displayed Max Havelaar³⁶⁶ the Fairtrade certification specific to Switzerland, Fairtrade certification and the KFC Silver Certification which is pegged to Global GAP standards. Beyond its acceptance broadly in traditional flower markets, the KFC certification was also considered by farm managers as a way of ensuring a healthy working relationship with the industry body representative. Other certifications mentioned in interviews with farm managers included FFP (Fair Flower Fair Plants), the Flower Label Program, The British Ornamental Plant Producers (BOPP) Certification Scheme and the Ethical Trade Initiative (ETI) base code. One of the farms

³⁶³ Previously outlined in table 4.2. in chapter four.

³⁶⁴ See appendix E for the list of people interviewed among regulatory actors.

³⁶⁵ Refer to table 6.1 for the summary of certifications for each farm in the field work sample.

³⁶⁶ The Max Havelaar Foundation is a non-profit which promotes the sale of Fairtrade products from developing countries in Switzerland. It is the Swiss member of Fairtrade Labelling Organisations (FLO) International.

in the central Kenyan highlands pointed out the Sedex³⁶⁷ Members Ethical Trade Audit or SMETA. This is an audit procedure which is a compilation of good practices in ethical audit technique which makes use of the ETI base code and local laws, but is not a code of conduct or a certification. SMETA deals with the operational struggle of audit fatigue among flower farms targeting a variety of markets each with its own certification by enabling farms to conduct one audit and share it with multiple customers, rather than having a new audit taken for each different customer. Lastly, supermarket certifications for UK supermarkets were implied but not explicitly mentioned in interviews. These certifications³⁶⁸ can be classified as cutting across northern and southern codes of conduct, multi-stakeholder initiatives, supermarket codes as shown below in table 8.1.

Compilation of certifications and codes of conduct in the sample of seven mid-scale flower farms

CODES & CERTIFICATIONS	EXAMPLES
Company Codes	UK Supermarket codes
Northern Sectoral Codes	MPS (MPS-A,B, C) MPS-SQ, MPS-GAP and MPS-Q BOPP (British Ornamental Plants Producers) Grower Standard
Southern Sectoral Codes	Kenya Flower Council Silver and Gold certifications (pegged to Global GAP) Kenya Plant Health Inspectorate Services Phytosanitary certificate
NGO consumer Labels	Fairtrade; Max Havelaar Criteria for Fairtrade cut flowers Flower Label Program (Germany) Fair Flowers Fair Plants (FFP) (ceased 2017)
Multi-stakeholder Initiative Base codes (<i>no certification system</i>)	Ethical Trading Initiative (ETI) Base Code

Table 8.1.
Source: Author’s analysis

For mid-scale flower farms, certifications do not appear to be a deterrent to entering new markets. The case for market entry is made largely on how lucrative and stable the potential market is. Once a new market and client has been established, mid-scale farms generally are able to make the necessary investments to meet the requirements for certification. Ultimately, compliance to the requirements is seen as a means to an end, which is to provide access to a variety of export markets.

³⁶⁷ Sedex is a collaborative platform for sharing responsible sourcing data on supply chains. (Sedex website <https://www.sedexglobal.com/>).

³⁶⁸ A literature review analyzing the origins, practice, politics and impact of the certifications is outlined in the literature review in chapter two.

Labour conditions on flower farms are a key focus for industry certifications. While membership to the Collective Bargaining Agreement (CBA) is not necessarily required by many certifications, Max Havelaar Fair Trade certification requires membership. This corroborates findings by Riisgaard (2009:331) that only the Max Havelaar certification calls for certified farms to join the CBA where it exists. The cost of compliance regarding improvements of labour conditions was deemed high because of the recurrent nature of the expenses involved. The two quotes below exemplify the centrality of working conditions to compliance.

“We subscribe to MPS, KFC, Fairtrade. All of them will consider working conditions and how well you are taking care of the workers. This makes your product more marketable. They put pressure since if you are not able to meet the bare minimum you cannot sell to those markets. If it is Holland, for example, you cannot sell if you do not have MPS.” – Human resources manager at Naivasha Flower Farm

“For you to comply, you need to meet extra costs because... at the farm level all the employees should have proper protective equipment. For sprayers, you have to perform the cholinesterase test. You have to check the level of chemical in their blood every three months. You need to change their cartilages and their respirators because after every three months the respirators are worn out. So, you have to incur a great cost. Sometimes like me, I even budget for Ksh 1.5 Million [\$150,000].” – Farm Manager, Farm-S.

While the business-as-usual tone cannot be conveyed in writing, the quotes illustrate the associated cost and the sense of fatigue expressed by farm managers. This implies that compliance is not seen as a tool to transform or improve labour relations and conditions but rather more aesthetically as instrumental to accessing export markets.

Certifications animate competition by differentiating between the quality of the production capabilities of farms producing flowers in Kenya. Through certification, farms are able to make their roses (such as the popular intermediates) stand out from a rival company's roses when they compete in similar markets. They provide checks

that the processes of production meet set standards particularly for labour and environmental protection.

“An intermediate rose is an intermediate rose. So, it's the way you produce it that matters. It is no longer a question of if you can produce, but how you produce.” - Farm manager, Farm-W.

While various codes ascertain the quality of the production processes, they do not necessarily say much about the actual quality of the flowers. For example, in answer to whether codes help to standardize quality in the industry, one well respected flower farm manager responded by saying:

“No, not for the product quality. For the procedures related to the environment and social rights, yes. You have quality standards for French beans and tomatoes calibrating residue levels etc. For flowers, you have some quality standards for product quality but generally, no. There is not yet a good quality chart and that's what we don't want to hear so much about because that [quality] is our edge.” Flower Farm Manager, Farm-R.

From this quote, it appears that producers use the lack of a standardized product quality chart to differentiate their flowers in a highly competitive market. It allows for creativity and an opportunity to develop a brand. At the two Dutch flower auctions in Aalsmeer and Naaldwijk, the wholesale buyers I interviewed did not mention certifications as one of their key considerations in bidding for flowers. Rather, they consider the product's Quality Index³⁶⁹. Cut flowers that do not meet the B1 criteria³⁷⁰ are not traded while growers who consistently supply high quality and reliable product information are rewarded with higher prices per stem.

Though certifications are very much in demand among wholesalers and supermarkets, they are much less demanded by specialized sales channels such as florists and market stalls in Europe (CBI 2016). Interviews revealed that younger, non-traditional export markets such as Japan and the Middle East place much less emphasis on

³⁶⁹ CBI (2016) For example, “A1 roses must meet all the minimum requirements on internal quality, freshness, freedom from parasites, damage, deficiencies, deviations, contamination, absence of leaves on the lower 10 cm of the stem, stems that are straight and sturdy enough to bear the flower, uniformity of colour, thickness, sturdiness and bouquet volume, and proper packaging.”

³⁷⁰ Criteria include either A1, A2 and B1 displayed on the auction clock, and are determined by the number of customer refund claims or complaints over the previous eight weeks (CBI 2016).

certifications for entry of cut flower exports. Many growers diversifying from the auction are circumventing traditional European markets and targeting these markets due to less stringent barriers to entry, and also so as to have a more diverse foreign currency base beyond the volatile Euro. This knowledge on the heterogeneity of export markets and their requirements is critical particularly for smaller or less capable producers in terms of seeking out the paths of least resistance to direct markets.

Flower industry certifications have also focused on the environmental dimensions of production particularly chemical usage and environmental management (Riisgaard 2009). Environmental regulations on the sample farms were enforced by a myriad of organisations with overlapping environmental mandates. These include³⁷¹ the National Environmental Management Authority (NEMA), the Water Resources Authority (WRA) and KEPHIS as well as other industry and civil society environmental groups outlined in section 8.2. NEMA requires farms to have a water sampling point where officials test farm water disposed from the greenhouses for chemicals every three months while WRA issues a levy that is included in the electricity cost rates (GIZ 2015). In terms of the costs of compliance, Naivasha flower farms pay about \$400 for an annual license enabling them to recycle and compost waste, and \$1000 for managing the effluent discharge. Two farms in the sample explained that to set up the required wetlands water purification systems cost them approximately KES 1 million (\$10,000).

International consolidators and flower trading houses such as the Dutch Flower Group which supply major supermarkets will only source from suppliers who have the necessary certifications for gaining access to European markets. In effect, certifications serve to create a new social contract that enhances trust and safeguards the farm's reputation. The quote below from ASDA's global flower sourcing manager shows the absolute importance of compliance to certifications for access to supermarkets, and how this requirement means they only work with very large capable farms.

“All of our suppliers have to be Global GAP certified. It's very hard to work with small growers. Apart from that, to supply any Walmart³⁷² store the producer has to be Walmart supply chain security certified. This is done by an independent

³⁷¹ Flower farms also engage the services of a private firm called the Environmental and Combustion Consultants (ECC) which manages and disposes of hazardous waste from flower farms.

³⁷² ASDA is Walmart's UK subsidiary.

third party auditing firm which is very strict on supply chain security issues. We have to take [the producers] through all this. So, when we started we started with the big ones - with 5 big suppliers in Kenya.” – Global Flower Sourcing manager, IPL/ASDA

Large producers therefore obtain the hallowed “preferred supplier” status with supermarkets which illustrates the “cascade effect” (Nolan et al. 2008). It further shows the need for smaller producers to creatively explore alternative export markets if they are to survive and thrive in the long term.

8.3. Analysing the web of Voluntary Private Initiatives in Kenya’s flower industry

Sample of codes employed in the wider Kenyan cut flower industry

CODES	EXAMPLES
Northern Sectoral Codes	MPS Flower Label Program GLOBAL GAP BOPP (British Ornamental Plants Producers) Grower Standard
Southern Sectoral Codes	KS 1758 part 1 for Flowers and Ornamentals Standard (2015) Kenya Flower Council Silver and Gold certifications FPEAK (Fresh Producers Exporters Association of Kenya)
Company Codes	UK Supermarket codes UK Importer codes
Independent Codes	Fairtrade; Max Havelaar Criteria for Fairtrade cut flowers Rainforest Alliance Fair Flowers Fair Plants (ceased 2017)
Multi-stakeholder initiatives (<i>no certification</i>)	International Code of Conduct for Cut Flowers - Fair Flowers Fair Plants (ceased 2017) Ethical Trading Initiative Base Code / SMETA Floriculture Sustainability Initiative Basket of Standard

Table 8.2.

Source: Adapted from Dolan & Opondo (2005:90) and updated (author’s own analysis)

Table 8.1. showed the codes governing the sample of seven flower farms in my sample, while table 8.2. above shows from documentary analysis the codes or private voluntary initiatives³⁷³ that are at play in the wider Kenyan flower industry.

Northern codes originated from the global North, typically European importing countries. They are typically business-to-business (b2b) codes such as GlobalGAP

³⁷³ Private initiatives here refer to those that are not public including certifications, codes of conduct and multi-stakeholder initiatives that collectively dominate the web of governance for the flower industry. (Henson and Humphrey, 2008; Tallontire 2007; Nelson & Tallontire, 2014)

and MPS which signal quality of the production process on social and environmental criteria to the institutional buyers of cut flowers in European export markets. They are often invisible to end consumers. MPS which until 2007 was the only certification that was displayed to buyers at the Dutch auctions, was developed by Dutch growers who also own the auctions. Setting the 'rules of the game' was arguably a way of exercising the power of Dutch growers over the industry. MPS³⁷⁴ has four categories of certification which deal with environmental and social criteria, demands from the retail sector and product quality. The Flower Label Program (FLP) is a German business to business (b2b) code set up as a joint initiative of human rights organizations, labour unions, churches, flower producers and flower retailers.

Southern codes are those originating from countries where cut flower production occurs in the global south. They developed from an awareness of the entrenchment of Northern commercial interests over those of producers in the global south, and therefore came in to promote the ethics of African horticultural operations (Barrientos, 2001). In Kenya, the KFC, a membership organisation has taken the lead in establishing an accredited quality certification scheme that enforces sustainable production practices on flower farms. KFC's producer members³⁷⁵ subscribe to the Flowers and Ornamentals Sustainability Standard (F.O.S.S.)³⁷⁶ and are audited annually against it ([GlobalGAP](#))³⁷⁷ in order to qualify for the silver certification which is mandatory for members and the gold³⁷⁸ which is voluntary. Secondly, KFC working with the Kenya Bureau of Standards (KBS) also helped to develop the national³⁷⁹ code

³⁷⁴ MPS-ABC: covers environment; crop protection, energy, fertilizers, waste and water. MPS-SQ deal with certification for social criteria (such as safety, health and working conditions). MPS-GAP covers certification for compliance with demands from the retail sector while MPS-Q covers all kinds of quality criteria

³⁷⁵ 65 of 117 producer members registered under the KFC according to the KFC database accessed at: <http://kenyaflowercouncil.org/wp-content/uploads/2014/07/KFC-Certificaton-Register-December-2017.pdf>.

³⁷⁶ F.O.S.S covers governance, good agricultural practices, human resource management, workers' welfare, employee health, environmental protection and post-harvest management (KFC website)

³⁷⁷ GlobalGAP website accessed at [https://www.globalgap.org/uk_en/media-](https://www.globalgap.org/uk_en/media-events/news/articles/Kenya-Flower-Council-Standard-Re-benchmarked-as-Equivalent-Scheme/)

³⁷⁸ There are only four gold certified Producer Members, all of which are large scale farms including Oserian Development Company, Finlay Flowers, Flamingo Horticulture, and Tambuzi Limited. As of December 2017, 55% of KFC producer members had achieved silver certification. (Ifedapo & Esposito, 2018: 341).

³⁷⁹ There was a previous national horticulture code developed in 2004 but according to the KFC CEO, "nobody around the table wanted new standards and nobody was using the old code because it was only national, unknown by the market and not internationally accredited such as MPS, Fair Trade." – Interview with KFC CEO, 12 Jan, 2016.

of practice for all flower exporters in 2015 - the KS1758³⁸⁰ Part 1 for Flowers and Ornamentals Standard. As a government standard, it is expected to raise the confidence of Kenyan flowers in export markets and create a “brand Kenya” product (KFC website)³⁸¹. In a self-regulated industry, the assertion of KFC standards on the global stage³⁸² can be seen as part of a power-play that challenges the dominance of buyer-led, northern-origin standards.

Kenyan domicile standards such as the KFC standards are anchored in consideration of local production conditions and work towards a greater inclusivity of the range of producers than northern standards do. In a neo-colonial stance, local domicile standards were previously looked down upon as compromising on quality standards, so to fix this perception Kenyan standard setters engaged in a benchmarking process. This is an example of the ‘nestedness’ (Aggarwal 2005) of local domicile regulations in international ones. Benchmarking also keeps KFC members up to date with global buyers’ standards, while reducing the cost to flower growers by offering a ‘one off’ audit (Riisgaard 2008:21). While benchmarking and accreditation³⁸³ to internationally recognised standard such as Global G.A.P. may in some regard have helped to reconcile power plays between northern and southern codes of conduct, they are contested because they place the KFC in direct competition with the global standard for Kenyan members.

Conversely, it is interesting to note that the localisation of northern standards in the Kenyan context has also been fraught with power struggles. For example, KenyaGAP (Kenya Protocol for Good Agricultural Practice), a version of Global GAP attuned by FPEAK to local production standards and therefore more accessible specifically to

³⁸⁰ KS1758 encompassed actors along the value chain such as breeders, consolidators and freighters, rather than only producers. Meeting KS1758 standard has become a mandatory requirement to qualify for an export licence.

³⁸¹ Kenya Flower Council website accessed at <http://www.kenyaflowercouncil.org/blog/?p=6285>

³⁸² Colombia, the world’s biggest exporter of cut flowers in the global South also developed its own certification known as *FlorVerde* in 1998, under Asocoflores, its powerful producers’ lobby group (Riisgaard 2011:441).

³⁸³ In 2005, KFC certification received recognition of equivalent status with Global G.A.P ornamentals standards and later gained accreditation from the globally recognised South African National Accreditation System (SANAS) in 2008. In 2015, the KFC standards were incorporated into the Floriculture Sustainability Initiative (FSI) basket of standards. As part of FOSS, the KFC standards are also now part of the International Trade Centre Standard Map. (Ifedapo & Esposito, 2018: 341)

smallholders, failed to register enough export companies (Carey 2008; Ouma 2010:22). The struggle to develop globally recognised country domicile codes of conduct shows the entrenchment of industry self-regulation and of the assertion of the power of producing countries in the global trade.

Supermarket codes in the UK evolved after the 1990 Food Safety Act (Dolan & Humphrey 2000) to provide benchmarks for the quality of production processes of source farms. The UK is a critically important export market for Kenya and imported approximately €64m worth of cut flowers in 2017 ([Floridata, 2017](#))³⁸⁴. Though UK supermarkets had been using third party certifications (discussed in the section below) such as Fairtrade, they have recently been developing their own internal sustainability certification systems³⁸⁵. These make the sustainable sourcing initiatives of the supermarket much more visible to its consumers, in the hopes of building greater brand loyalty and confidence. Having their own brands pits supermarkets' labels in competition against those of third party certifications, showing that certification is becoming a business unto itself, while transparency, integrity and independence of certification takes a back seat to the brand value. Supermarket codes are internally designed, implemented and audited using checklists (Opondo 2006). They are particularly stringent and demanding which sets into motion a "cascade effect" (Nolan et al. 2008) of consolidation among supermarkets' sourcing partners. This has exclusionary effects on smallholders due to challenges with coordination costs and quality standardisation.

The shift by capable producers towards direct markets, especially supermarkets, entrenches the buyer-driven power in the governance of the flower trade, where the strategy for inter-firm coordination is control³⁸⁶. Whereas the strategy for capable producers seeking to supply supermarkets is to simply comply with the requirements

³⁸⁴ Floridata website accessed at <https://www.hortweek.com/floridata-figures-show-top-uk-plants-import-export-nations/ornamentals/article/1448180>

³⁸⁵ These are for example M&S Plan A or Sainsbury's 'Fairly Traded'. However, other supermarkets such as the Co-op have affirmed their commitment to partnering with established third party certification by sourcing 100% of their cut flowers from Africa under Fairtrade ([The Co-op website](#)) Accessed at <http://www.co-operativefood.co.uk/food-matters/fairtrade-ethical-trading/fairtrade-product-stories/fairtrade-roses/>

³⁸⁶ As discussed in chapter three, control is often related to the captive and hierarchical form of governance (Gereffi et al. 2005b) where lead firms are working with suppliers with low capabilities.

for certification, this research identified a strategy of circumvention by producers on the margins through two case studies discussed in section 8.5. below.

Independent codes include certifications that are administered and audited by third parties. Unlike business-to-business codes, these certifications are consumer-facing. The independence of their auditing systems, and the ethically oriented identity of the labels builds consumers' confidence in the sustainability of supermarkets' trading practices. Until 2006, Fairtrade flowers in Switzerland were certified by Max Havelaar³⁸⁷ cooperating with FLP and MPS (Riisgaard, 2011:441). The unique appeal of Fairtrade lies in the Fairtrade Minimum Price which translates into the guarantee of a minimum wage for workers and a demonstrated effort of the farm to work towards a living wage under Fairtrade's Hired Labour Standards. Secondly, Fairtrade Premiums derived from 10 percent of the sales price are channelled directly to workers through Fairtrade Premium committees in farms³⁸⁸. The flower portfolio is Fairtrade's newest commodity sector, the standards for which were set in 2011 following a request from a major Swiss supermarket. Kenya is already Fairtrade's biggest flower producer with approximately³⁸⁹ 40 farms certified, which is 70% of Fairtrade's global flower portfolio. All of these farms are large or mid-scale farms which have the required capabilities to meet the social and environmental criteria. The viability of independent codes depends on sustaining demand among buyers. For example, in failing to meet this demand, Fair Flower Fair Plants (FFP) ceased to operate in 2017³⁹⁰.

³⁸⁷ Fairtrade ideals connecting consumers and disadvantaged workers are embodied in a set of non-profit organisations. These include Fairtrade International (FLO) which establishes rules specific to various commodities, FLO CERT which carries out independent audits and checks compliance on farms and third, national labelling organisations (such as Max Havelaar) which promote Fairtrade in country (Raynolds, 2012:501).

³⁸⁸ Fairtrade committees typically allocate funds to for example, payment of a percentage of school fees for workers' children, hiring additional teachers in school, paying for short term skills development courses such as driving, tailoring, hairdressing and computer skills. They also meet workers' 'home improvement' needs by providing interest-free loans for essential household items such as iron sheets, sewing machines, water tanks, cement, solar panels and cookers. In 2014, 56 % of the Fairtrade Premium was spent on services for workers on the farms and their families and 24 % on initiatives to support the wider community Fairtrade Africa (2015) accessed at <https://www.fairtradeafrica.net/wp-content/uploads/2016/05/FLOWER-IMPACT-BROCHURE.pdf>

³⁸⁹ This figure is approximate because farms can either be registered as single estate or multi-estate which is where one owner has multiple flower farms.

³⁹⁰ The FFP website explained that, "for the florists there was no sufficiently wide range of Fair Flowers Fair Plants products and too large a number of growers did not participate because of low demand." Accessed at <http://www.fairflowersfairplants.com/en/home-2/>

Among smallholders, two case studies showed that certifications as institutions are deeply contested, relational entities. In the NBMSTR multi-stakeholder case study³⁹¹ there was a renegotiation of the requirements of the Rainforest Alliance certification standard by 'ethical agents'. This allowed Wilmar's smallholders to supply smaller quantities and single variety bunches in line with their production capabilities. This bargain shows a re-evaluation of the GPN notion of 'value-creation' in direct markets (specifically supermarkets), which traditionally place value on large, standardised volumes and multi-varietal bouquets. In this scenario, the episodic bargaining power of smallholders was dramatically enhanced when backed by influential American philanthropic capital (the Bill and Melinda Gates Foundation) and technical support from powerful northern intermediaries (the IIED). These north-south dynamics also points to the geo-politics involved in the exercise of institutional power. The episodic bargaining process qualifies as such here because the institutional concessions only held for that moment with the support of the partners, and proved unsustainable when the funding for the pilot was withdrawn. Another point to note is that the societal embeddedness of the ethical agents³⁹² emerges as critical for bargaining intermediaries.

The second example of concessions made by third party certifications so as to include smallholder produce is the introduction of Fairtrade's "bouquet rules"³⁹³ in order to increase the variety of Fairtrade flowers and increase sales. Whereas the Rainforest Alliance certification example showed the malleability of certifications under institutional power, this Fairtrade example shows how these institutions can be remoulded under market pressure. Even though many certifications are often enforced by non-market institutions (e.g., by NGOs) they are in the end market instruments that derive their viability from meeting market demand.

³⁹¹ The case study was detailed in chapter seven. The New Models for Sustainable Trading Relationships (NBMSTR) funded by the Bill and Melinda Gates Foundation and supported by the International Institute for Environment and Development (IIED), the Sustainable Food Lab and commercial experts.

³⁹² Buxton & Vorley (2012:1) describe the ethical agents as "having both industry knowledge and expertise in export market chains and networks, as well as knowledge about the needs of low-income households in developing countries".

³⁹³ This example was previously described in detail in chapter seven.

Multi-stakeholder initiatives are the fifth category of codes governing the flower industry and bring in a variety of actors including consumers, buyers, flower farms, trade unions, NGOs, civil society organisations and workers' committees (Barrientos et al. 2003; Opondo 2006; Riisgaard 2009; Riisgaard & Hammer 2011; Nelson & Tallontire 2014). They developed from concerns about the unilaterally developed company or supermarket codes which had limited stakeholder consultation and checkbox audit systems (Nelson & Tallontire 2014:487) and which were therefore accountable primarily to company interests. Examples include the International Code of Conduct for Cut Flowers (ICC), the Ethical Trading Initiative (ETI) Base Code in the UK, the now defunct Horticultural Ethical Business Initiative (HEBI) in Kenya and the new Floriculture Sustainability Initiative (FSI). Broadly, MSIs are seen as base codes and have no certification body but are designed to act as a reference point for various certification schemes. The ICC stands out as an inclusive code³⁹⁴ in its origination because it uniquely involves trade unions³⁹⁵ and NGOs in the formulation of the base code. It provided the social underpinnings for reputable certifications in the flower industry such as MPS-SQ, FFP, FLP, FLO and HEBI (Riisgaard 2011) and sets the gold standard for the social requirements of flower industry certification.

The Ethical Trading Initiative (ETI) includes “companies, trade union organisations and NGOs that seeks to identify and promote good practice in the implementation of codes of labour practice³⁹⁶ in workplaces supplying the UK” (Opondo 2006). Famously, the ETI member Women Working Worldwide (WWW) ran a campaign which highlighted labour injustices in Kenyan flower farms and challenges with social auditing. This contributed to the development of the Kenyan multi-stakeholder platform, HEBI in 2003 (Opondo 2006; Riddselius 2011). It adopted the ETI Base Code to the local

³⁹⁴ It was developed by a coalition of European NGOs and the International Union of Food and Agricultural Workers (IUF) in 1998. This was a pioneering initiative due to the central involvement of the IUF and which provided a base code on labour rights and environmental protections (Riisgaard 2011).

³⁹⁵ Uniquely, the ICC calls for the involvement of trade unions and NGOs in social auditing of flower farms, a promising but highly contentious way of producing substantive and transformative farm checks. This is a difficult requirement to execute uniformly and each certification has a different way of going translating the requirement and implementing it (Riisgaard 2011:446).

³⁹⁶ ETI's base code deals with labour practices, based on International Labour Organisation (ILO) conventions and though it is not an auditable standard, the ETI has established a set of best practices that members should adhere to.

context and began conducting training on participatory social auditing³⁹⁷. HEBI was a landmark initiative and very promising in its unique efforts to incorporate a wide range of industry actors³⁹⁸ and to implement participatory social auditing³⁹⁹, which was endorsed both by the KFC and FPEAK although they continued to use international audit procedures. It is unclear whether and to what extent HEBI is still functioning. This retreat from participatory social auditing which is aimed at empowering workers' rights and back to a more quantitative, checklist form hollows out attempts to alter power dynamics in labour relations. The obsolescence of HEBI brings to light power struggles among key local actors, such as workers unions⁴⁰⁰ and with northern actors.

The third and newest example of an MSI is the Floriculture Sustainability Initiative, which is a basket of fourteen voluntary certification standards and schemes developed by 25 sector stakeholders with the goal of moving towards a mainstreamed sustainable floriculture space. The various certifications are independently benchmarked for social and environmental criteria to globally recognised standards GLOBAL GAP for environmental criteria and the Global Social Compliance Program (GSCP) B for social criteria.

Riisgaard & Gibbon (2014:18) noted that as a result of buyer pressure which has led Kenyan producers to adopt this myriad of certifications, "Since 2005 the sector has become one of the most comprehensively subject to private regulation globally." But does the layered and widespread adoption of all these certifications contribute to

³⁹⁷ Nelson & Tallontire (2014:488) "The approach includes training of workers before audits to enhance their understanding of the process and then including workers in the audits, as well as drawing on evidence from civil society bodies, and draws on methods from participatory research as opposed to more "tick-box" approaches."

³⁹⁸ Tallontire et. al (2011:8) "This included Kenyan civil society organizations and trade associations/employers, observers (including donors and some UK-registered NGOs), and government representatives. The aim was to include unions but have they did not accept the invitation." The Kenya Plantation and Agricultural Workers Union (KPAWU) perceived HEBI as northern driven, and inimical to the Union position.

³⁹⁹ HEBI's efforts at participatory social auditing were undermined in part by the demands of UK retailers that require that "suppliers submit their audit data to SEDEX, which dictates an audit format that is quantitative and far from participatory in nature" (Riisgaard, 2011:447; Riisgaard, 2010; Tallontire, 2009) and further creates a "command and control" approach at the international level where southern stakeholders have little say (Nelson & Tallontire 2014:489).

⁴⁰⁰ Riisgaard (2009a:332) Thus, "where adoption has occurred, there has been little labour union participation, no significant increase in unionisation, and actually worse relations between national unions and national NGOs promoting labour rights".

greater sustainability in the industry? The following section discusses this question based on the literature on the governance of the cut flower industry.

Standards and sustainability in the cut flower industry

There are three main apparent manifestations of the effects of certifications on driving sustainability in the industry, though the overall general effects remain inconclusive in the literature. These are parallelism, the trade-off between principles and scale, and the effect of standards on enabling rights versus outcome rights for workers.

The main reason that farms continue to subscribe to certifications is to enhance their market access, rather than to advance the sustainability of their production practices. Farms therefore subscribe to multiple certifications to increase their access to an array of export markets and since the certifications converge around roughly the same requirements, the additional cost of subscribing to another certification is marginal. One manifestation of this is “parallelism” (Riisgaard 2011) which is where a wide range of standard schemes operate in parallel in roughly the same issue area. The challenge with parallelism is that it leads to a ‘race to the bottom’ with convergence around the lowest common standards or upholding the status quo, rather than actually raising the bar in terms of processes of production.

Secondly, there is the trade-off between principles of sustainable production and size or scale of production (number of farmers adopting the standard) identified by Ingenbleek & Meulenber (2006:808). Standard schemes that value scale over principles will have lower or less stringent sustainability standards which will often not be communicated to consumers. Those that value principles over scale have more stringent requirements that differentiate their producers from the mainstream and this has great value when communicated to consumers⁴⁰¹. The implication here is that consistent forms of empowerment among workers will only be achieved in marginal standard schemes, which also explains why it is so difficult to scale up certifications to high principle standards (Macdonald 2007).

⁴⁰¹ This resonates with the findings by Henderson and Humphrey (2008) that differentiate between risk management standards which pertain to those who privilege size over principles, and differentiation standards which apply to those whose focus is on principles of sustainable production.

The third effect draws a distinction between standards that focus on process rights and those that focus on outcome standards (Barrientos & Smith, 2007:716). Process rights or enabling rights refer to principles of freedom of association and freedom from discrimination which are the basis for core ILO conventions, and provide a route to negotiating for entitlements such as health and safety policies, living wages, better working hours, pensions which are outcome standards. The literature⁴⁰² converges around a finding that most certification schemes have made advances in achieving outcome standards but do poorly in fortifying process rights, and further fail to reach the most marginalised workers such as casualised migrant women labourers. This has to do with whether the farms are audited using technical checklist mechanisms or through participatory social auditing that gives wide-ranging voice and power (Barrientos & Smith, 2007; Dolan & Opondo, 2005) The dominance of the technical, checklist, self-assessing means of auditing means that issues relating to process rights are overlooked and power asymmetries are maintained.

Ultimately, concerns about the sustainability of the flower industry have become enmeshed in the nuts and bolts of private voluntary standards and certification which are themselves bound up in power struggles⁴⁰³ between northern commercial and consumer interests and southern producers and workers' priorities. Increasingly, also the certification landscape has become corporatized as far as auditing and branding is concerned and therefore has its own agenda. The desired standardisation or mainstreaming of sustainability comes with a price tag that gives the conscionable consumer purchase into a system that, almost as though mirroring the commodity it is built around, has become increasingly aesthetic. The following section explores the role of Kenyan regulators in governing the cut flower industry amidst the proliferation of private voluntary codes of conduct.

⁴⁰² See for example Barrientos & Smith, 2007; Dolan & Opondo, 2005; Nelson et al., 2007.

⁴⁰³ A sharp critique launched from cultural anthropology asserts that certifications as a form of private governance of the flower industry emerge as instruments of control exercising a mode of 'governmentality' that reinforces the consolidation of power by Northern commercial interests (Dolan, 2007; Kuiper & Gemählich, 2017).

8.4. The Kenyan regulatory system in relation to the cut flower industry

The institutional landscape of Kenyan flower sector regulators

The main role of advocating for adoption and compliance of standards in the Kenyan cut flower sector lies with the KFC, a private voluntary membership organisation whose mandate is to lobby for the interests of its members (large, medium and small scale) and foster the responsible and safe production of cut flowers in Kenya. It is also the industry lobby body, and the focal point ensuring compliance to standards and safeguarding the reputation of the industry so as to secure and expand export markets. KFC was set up by large scale farmers to enhance the interests and image of the industry. As explained in an interview with the outgoing CEO, Jane Ngige:

“The KFC was hived off FPEAK in 1996 by five exporters who realised that for the business to be successful, they had to focus on market access, which is the gate to this business.”

The Fresh Produce Exporters Association of Kenya (FPEAK) was founded in 1975 as a membership based trade association that is seen as representing mid-tier and smallholder interests, and advocates for a favourable trade environment for its members and enhances their ability to meet international standards and therefore access export markets. It developed its own code of practice in 1996, and thereafter developed producer compliance guidelines specific to smallholders. As the leading private membership based organisations that also govern Kenyan floriculture, KFC and FPEAK, have recently reorganised themselves into an umbrella body forming the Kenya Horticultural Council (KHC), under the leadership of the former KFC CEO. The CEO of FPEAK clarified that the KHC is not a merger but a joint body that will be concerned with mutual challenges in the industry such as lobbying, traceability and marketing but both organisations will continue to exercise their separate mandates ([ABC website](#))⁴⁰⁴.

In the public sector, the main regulatory bodies interacting with export preparedness for the cut flower industry are the Kenya Plant Health Inspectorate Services (KEPHIS),

⁴⁰⁴ Africa Business Communities website. Accessed at <https://africabusinesscommunities.com/features/column-hosea-machuki-kenya-can-double-its-horticulture-export-earnings/>

the Horticultural Crops Directorate (HCD), the Kenya Revenue Authority (KRA) and the less well acknowledged Pests Control Products Board (PCPB)⁴⁰⁵.

Established in 1996 as the lead regulator in agriculture, KEPHIS is responsible for issuing phyto-sanitary certificates and ensuring that cut flower producers meet the stringent maximum residue levels (MRLs) required for export access to the EU, which began mandatory pesticide inspections⁴⁰⁶. The KEPHIS seed and plant variety protection office is also responsible for managing plant breeders' rights in Kenya, which are crucial for the commercialisation of flower varieties grown in Kenya.

The HCD established in 1967 is mandated to facilitate the development, promotion, coordination⁴⁰⁷ and regulation of the horticultural sub-sector in Kenya. It is also responsible for issuing export certificates to cut flower exporters. The KRA is responsible for collecting corporate tax from cut flower exporters, and has in the last decade been embroiled in court cases against flower farms arraigned for transfer pricing, which will be discussed in a later section in this chapter.

There is also a range of government organisations with environmental mandates that conduct audits on farm production processes. These primarily include the National Environmental Management Agency (NEMA) and Water Resources Authority (WRA)⁴⁰⁸, which are under the Ministry of Environment and Forestry and the Ministry of Water and Irrigation⁴⁰⁹. NEMA is the principal agency in charge of environmental management and coordinates environmental conservation activities. WRA is mandated to regulate water use among competing users, control pollution,

⁴⁰⁵ The PCPB is mandated to by An Act of Parliament (1983) to "regulate the importation, exportation, manufacture, distribution and use of products used for the control of pests and of the organic function of plants and animals and for connected purposes." Accessed at <http://www.pcpb.or.ke/>

⁴⁰⁶ This was a particular challenge in 2013-14 when Kenyan cut flower exports were increasingly intercepted at entry into EU markets for breaching the maximum residue levels of pesticides such as Dimethoate. As a sustainable alternative, the flower industry has increasingly adopted the use of bio-controls to deal with cut flower pests and diseases. Accessed at: <http://agritrade.cta.int/Agriculture/Commodities/Horticulture/New-EU-maximum-residue-levels-hit-Kenyan-vegetable-exports>

⁴⁰⁷ To facilitate market access and minimise post-harvest losses, HCD has also provided refrigerated trucks for hire by farmers, built marketing centres and collection depots (Bolo, 2012).

⁴⁰⁸ WRA was known as the Water Resources Management Authority (WRMA) before April 2017, pursuant to the enactment of Section 11 of the Water Act, 2016. Accessed at <https://www.wra.go.ke/>

⁴⁰⁹ The portfolio of Ministries in Kenya is regularly reshuffled under different political dispensations. For example, in 2002 when NEMA was formed, it was under the Ministry of Environment, Water and Natural Resources but is currently Ministry of Environment and Forestry.

disseminate information on water resources and facilitate adaptation to climate change.

In addition, there are civil society organisations in the Lake Naivasha area that provide a platform for collective riparian and environmental management⁴¹⁰. These include The Lake Naivasha Growers Group which helps farms to manage the ecosystem around the lake and the shared natural resources. The Lake Naivasha Water Resource Users Association (LANAWRUA) deals with linking farm management and the local community on water catchment issues while Lake Naivasha Riparian Association (LNRA) is a community based organization that was established in 1927 by landowners⁴¹¹ around the lake to ensure sound environmental management of the lake's resources. Despite the various agencies commissioned to handle environmental compliance, there remain loopholes⁴¹² in the parameters considered. As an export-oriented industry, three key state institutions are mandated to enhance trade. These include the Ministry of Industry, Trade and Co-operatives (MITC), the Export Promotion Council (EPC) and the Kenya Investment Authority (KIA). The department of external trade under MITC facilitates Kenya's external trade and as such is responsible for negotiating trade policy under WTO terms. In 2017, MITC⁴¹³ launched the National Trade Negotiations Council (NTNC) to handle trade negotiations, which include the Economic Partnership Agreement between the East African Community (EAC) and the European Union.

The Export Promotion Council was established under the Ministry of Trade in 1992 to facilitate the growth of Kenya's exports at the onset of the Structural Adjustment

⁴¹⁰ The law on riparian zone protection is not in a piece of a single legislation, but rather is fragmented in numerous pieces of legislations like Environment Management and Coordination Act (EMCA) 1999, the Water Quality Regulations (WQR) (2006), Water Resources Management Rules (WRMR) (2007), the Agricultural Act (Cap318), Forest Act, 2005, the Land Act 2012, the Water Act, 2002 and the Wildlife (Conservation and Management) Act 2013. This presents a problem of overlapping mandates and lack of coordination in enforcement (Matunda 2015).

⁴¹¹ LNRA has a diverse membership of actors with a stake in maintaining the ecological integrity of the wetlands.

⁴¹² One farm director in Central Kenya explained that neither the government environmental regulations nor NEMA considers pollution of sub-soil water in its checks, implying that they do not check whether farms allow pollutants in the soil. This is why it is important for farms to grow their flowers in soil-less matter using hydroponic technology which enables growers to make use of otherwise infertile land and to recycle up to 40% of their water use.

⁴¹³ MITC also hosts Brand Kenya which is working on supporting the branding and marketing of Kenyan flowers in export markets.

Programs. It provides trade information through the Centre for Business Information and training for exporters. It also supports product development and facilitates the expansion and development of export markets. The KIA was set up under the Investment Promotion Act of 2004, thereby succeeding the Investment Promotion Centre created in 1985. KIA has an expanded mandate in regards to investment promotion and facilitation and policy advocacy and acts as a one-stop shop for investors.

The network of local institutions, both public and private, forming the regulatory landscape of the flower industry is summarised in figure 8.2. below.

Network of institutions regulating the Kenyan flower industry

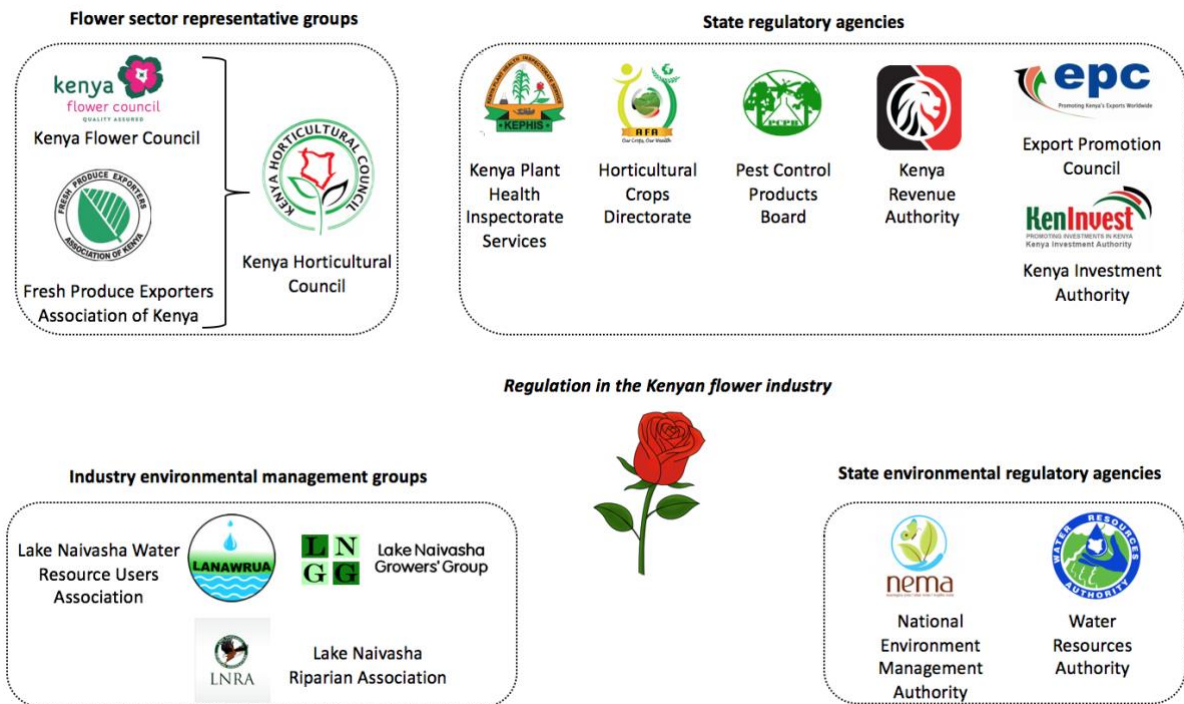


Figure 8.1.
Source: Author's analysis

Beyond certification: Three instruments of governance in the Kenyan flower industry

There are three instruments governing the Kenyan flower sector – the Horticulture Traceability System, taxation and trade policy under the Economic Partnership Agreement with the EU which are discussed below.

1. Traceability mechanisms

In the wake of interceptions and rejections from 2011 of horticultural produce from the EU that breached MRLs ([Agritrade](http://agritrade.cta.int))⁴¹⁴, horticulture sector stakeholders⁴¹⁵ launched the Horticulture Traceability System (HTS)⁴¹⁶ in 2016. It traces back to the farm any produce that is non-compliant, and with the live feedback loop, prompts the implementation of immediate remedial measures (AFA⁴¹⁷ website).

The traceability system creates individual farm accountability for the quality and compliance of the produce they export, and avoids penalties for the industry as a whole. The relational nature of the firm advocated in GPN 2.0 theory is evident in the working of this system. HTS facilitates a more transparent firm-territory relationship (Dicken & Malmberg 2001) by breaking down the boundaries between local production operations and European export markets. The resultant stronger relationship has increased confidence in Kenyan cut flower produce in export markets. It is also expected to boost the participation of smallholders in export markets though the extent of this is yet to be established. It is also possible that the traceability system could operate as a 'technology of surveillance'⁴¹⁸ that identifies, isolates and unwittingly enables a black-listing of smallholders in particular who have limited recourse to capacity building support.

2. Taxation in the Kenyan flower industry

Taxation in the Kenyan flower industry is a hotly contested regulatory issue around three main issues – the multiplicity of taxes at county and national levels, the implementation of Value Added Tax (V.A.T.) on locally traded flowers and in the

⁴¹⁴ Accessed at <http://agritrade.cta.int/Agriculture/Commodities/Horticulture/New-EU-maximum-residue-levels-hit-Kenyan-vegetable-exports>

⁴¹⁵ KFC, FPEAK, KEPHIS, PCPB, Kenya Vegetables and Fruits Exporters Association, KALRO with funding from USAID.

⁴¹⁶ The HTS is a cloud-based system which includes a mobile application to capture and upload information at the farm, a web reporting portal which stores data in a central location, as well as a labelling system enabled with quick reference codes.

⁴¹⁷ Agriculture and Food Authority. Accessed at: <https://www.agricultureauthority.go.ke/kenya-government-launches-system-to-track-horticultural-products/>

⁴¹⁸ Dolan (2007) used the term to make an argument about the use of Fairtrade as a mode of governing the African as subject in global ethical trade initiatives.

delayed payment of rebates, and transfer pricing. The multiplication and duplication of taxes (or ‘double taxation’) at the county and national level were prominent grievances articulated by the flower farm managers in the research sample and the KFC. With the onset of devolution of administrative power to 48 newly established counties⁴¹⁹ in 2013, came the implementation of a new layer of taxation. Devolution highlights the nestedness (Aggarwal 2005) of state regulatory institutions between the national and county levels, which though meant to enhance the relationship between the industry and the state, in this case creates friction.

“What is challenging us at the moment is devolution - in terms of double taxation. You find something is being asked for by the national government and then the county government also wants a share. For example, cess tax. Last year 2014/2015 we spent a good amount of time fighting cess tax from the Nakuru County government where they wanted to charge something for every shilling we sell. I think the ridiculous figure they had come up with was 2% of our sales turnover. I mean that's KRA now. Then if we had branded the truck [transporting to the flowers to the airport], then we would pay so much. By the time I am in Limuru, Kiambu county is also asking me for the licence and when you go to Nairobi, the county also wants money. This is why we are fighting with these guys. It has come through devolution.” – Flower Farm-M Director.

As the quote shows, the number of business licences that farms need to operate has increased with the decentralisation of government. According to the KFC there are now about 40 different levies that exporting commercial farms have to deal with. Over-taxation has become a thorn in the flesh of the flower sector and the KFC argues that to evade the burdensome taxation regime, some industry actors are setting up new operations in Ethiopia where the cost of production is lower, although none has fully relocated ([The Star Newspaper, 2016](#))⁴²⁰. In an exercise of non-decisional bargaining power (Bachrach & Bachrach 1962) discussed in chapter two, smallholders who are few and relatively invisible when in the eyes of the tax authorities, are able to circumvent the system and avoid paying cess tax.

⁴¹⁹ Previously Kenya’s had a provincial administrative system with nine provinces and therefore considerably less bureaucratic charges to operate trade across provinces.

⁴²⁰ The Star Newspaper. April 22, 2016. Accessed at https://www.the-star.co.ke/news/2016/04/22/kenya-flower-industry-resilient-despite-high-taxes_c1335371

A second taxation challenge that affects primarily local consolidators is the 16% V.A.T. charged to locally traded cut flowers from 2013⁴²¹ which makes local consolidators' flower exports less competitive in export markets. For mid-scale producers, the main challenge is with delays experienced in processing VAT refunds due to many years of backlog at the KRA, a situation which has been described as the "Achilles heel" of the government in supporting the flower sector, as in the quote below.

"Producers pay VAT on all their inputs and can then claim back. These VAT claims for the industry are amounting to Ksh 50 Billion (approximately \$500 million) but last year (2015) they were looking at Ksh 100 Billion. It is one of the Achilles heels of the government in terms of supporting the industry." – Jane Ngige, KFC CEO.

The Kenyan treasury explained that these delays are caused either by exporters double-filing claims on both the online portal (i-tax) and the paper forms. Secondly, if an exporter is indebted to KRA, refunds will not be paid until the outstanding debt is cleared ([Flowerweb](#))⁴²². The Export Processing Zones (EPZs) are also out of reach for the industry since as explained in the quote below, producers are in a double-bind since on the one hand they are exporting a primary product but on the other hand, they engage in value addition by packaging bouquets for export.

"Exporters are seen on one hand as primary producers and so cannot benefit from the EPZs which are valid only to exporters who prove value addition. On the other hand, they are seen as manufacturers since they add value by packaging and so have to pay the Kenya Bureau of Standards (KEBS) levies which are paid by manufacturers." - Jane Ngige, KFC CEO.

The third issue under taxation is that of transfer pricing, which has received significant press coverage in the last decade. Transfer pricing⁴²³ is used to inflate profits in

⁴²¹ The Value-Added Tax Act was passed in 2013 adding 16% tax on locally traded cut flowers. Prior to this cut flowers were zero rated goods. The KFC unsuccessfully lobbied for zero rating on local sales of cut flowers in the same way that coffee and tea exports are treated. (Kenya Flower Council blog) Accessed at: <http://www.kenyaflowercouncil.org/blog/?p=4798>

⁴²² Flowerweb website. Accessed at <http://www.flowerweb.com/en/article/172733/Kenya-Flower-Council-meets-Revenue-Body>

⁴²³ The 'transfer price' is the price at which transactions are carried out between companies in the same group.

jurisdictions with low tax and to decrease profits in countries where the tax is high so as to reduce the firm's overall tax burden⁴²⁴. Transfer pricing legislation based on OECD guidelines⁴²⁵ was introduced in Kenya in 2006 to enhance tax enforcement capacity. Since then large scale, high profile Kenyan flower farms such as the now bankrupt Sher Karuturi flower farm and Van den Berg Roses⁴²⁶ have been sued by the KRA for dodging taxes by conspiring with overseas partners. KRA launched audits when it was noted that many flower farms were consistently recording tax losses or minimal tax profits. In April 2013, the court established that Sher Karuturi, then the world's biggest producer of roses, used transfer pricing to avoid paying the government \$11 million in corporate income tax. Overall, Kenya could be losing up to \$5 million a year through transfer pricing from its flower exports ([Guardian newspaper report , April 1, 2011](#))⁴²⁷. This case marked the first time that an African government had brought a large multinational company to court for transfer pricing through a fully public process." ([ITC, 2014](#))⁴²⁸. The impact of transfer pricing is significant and predatory for the economy and is also evidence of the high-stakes struggle for accountability between developing countries and multi-national companies which engage in regulatory arbitrage.

Power struggles in the flower industry occur not only at the sub-national level between the state and producers, and at the local-global interface as states do their best to hold multi-national companies accountable, but also at the regional level in the negotiation

⁴²⁴ This is done, for example, by overstating the price of a rose stem produced within a low tax jurisdiction 'K' and sold to a sister firm in high tax jurisdiction 'D'. In this way, the firm in 'D' could report high costs and lower profits, while that in K, the low tax jurisdiction, would report a profit and record a lower tax burden overall. In this regard, The Standard Newspaper (April, 2014) reported that Sher Karuturi which was found guilty of tax evasion. The firm paid only KSh 4.80 for a rose stem, while it sells the same flowers through its Dubai-based subsidiary at as much as Sh100. Accessed at: <https://www.standardmedia.co.ke/business/article/2000108060/taxpayers-could-lose-sh600m-in-kra-tax-deal-with-karuturi>

⁴²⁵ OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations from the OECD Model Tax Convention.

⁴²⁶ Nation newspaper, July 26, 2016. In 2016, KRA sued Van den Berg Roses for tax evasion through transfer pricing in the amount Ksh 1.1 Billion (approximately \$11 million). KRA accused VDB of withholding transaction details required to calculate the end customer buying price on a transaction by transaction basis, while VDB contended that KRA calculated the tax due using a general formula (comparable unit price (CUP) method) rather than one based on actual sales (resale price mechanism (RPM)). Accessed at: <https://www.nation.co.ke/business/KRA-accuses-flower-dealer-of-playing-dirty-with-parent-firm/996-3316130-qop2pz/index.html>

⁴²⁷ Guardian Newspaper, April 1 2011. Kenya Flower Industry's taxing question. Accessed at <https://www.theguardian.com/environment/2011/apr/01/kenya-flower-industry-tax-investigation>

⁴²⁸ International Trade Centre website. Accessed at <http://www.intracen.org/itc/blog/market-insider/Tax-authorities-investigate-flower-farms-in-Kenya/>

for access to European export markets. This discussion of the multi-scalar reality of governance in the flower GPN (Coe & Yeung 2015) gives equal importance to sub-national and regional dynamics. The following section on regional contestations in trade policy explores trade relations between Kenya and the EU, as the blueprint on which other private governance mechanisms such as the afore-discussed certifications, traceability and taxation become viable.

3. The Economic Partnership Agreement and regional contestation

This section is developed primarily from an analysis of documentary sources on trade policy, as well as interviews with the KFC and two mid-scale flower farm managers (Farms M and W). The Cotonou Partnership Agreement of 2000, (henceforth referred to as the Economic Partnership Agreement, 'EPA') redefined the trade relationship between African, Caribbean and Pacific ('ACP') countries and the EU. It succeeded the Lomé Convention⁴²⁹ which enabled preferential trade terms and so was argued to be in contravention of WTO rules. The EPA rendered trade reciprocal and differentiated according to the abilities of ACP countries. Negotiations would therefore be organised with trading blocs such as the East African Community (EAC)⁴³⁰, and in conformity to WTO rules (Kenya Human Rights Commission 2014). The EPA also has safeguarding provisions which allow each side to reintroduce duties if imports from the other side threaten to disturb its economy ([European parliament](#))⁴³¹.

Intra-regional negotiation challenges began in 2007, when the EAC directed its members to harmonise their positions on the EPA and give a market offer to the European Union (Kenya Human Rights Commission 2014). While some area negotiations were concluded, the deliberations failed to conclude the full EPA negotiations leading to the implementation of a Framework EPA in the interim. In 2014, the EAC was on the verge of moving to "the 'Generalized System of Preferences (GSP)', where its exports to the EU were to attract import duties of between 5% and

⁴²⁹ The Lomé Convention was signed in 1975 between the EU and ACP countries as a non-reciprocal, preferential trade agreement. It exempted agricultural goods and minerals from tariffs and duties thereby providing special access to the EU market and the EU also pledged development assistance. It was renegotiated every 5 years and finally expired on Feb 29th, 2000 after 25 years with the onset of a global trade liberalisation agenda.

⁴³⁰ The East African Community is comprised of Kenya, Uganda, Tanzania, Burundi, and Rwanda. South Sudan which joined the EAC in September 2016 is not part of the agreement.

⁴³¹ Accessed at <http://www.europarl.europa.eu/legislative-train/theme-a-balanced-and-progressive-trade-policy-to-harness-globalisation/file-epa-with-east-africa>

22% while the other EAC partner states would continue trading under the 'Everything But Arms' (EBA)⁴³² initiative thus making Kenya more disadvantaged than the rest of EAC Partner States.”(Kenya Human Rights Commission 2014). Further, given that Kenya’s cut flower industry supplies 38% of the cut flowers in Europe (KFC website), it was likely to be hardest hit economically of all the countries in the region if the bloc did not sign and ratify the EPA by the October 1st 2014 deadline. Failure to ratify meant that exporters would face a tax bill equivalent to KSh 100 million (\$1 million) per week, and amounting to a potential loss of 150,000 jobs ([Trade Law Centre, 2014](#))⁴³³.

The major objection to the EPA is the requirement for gradual opening of up to 80% of EAC markets to EU imports. Tanzania argued that the EPA’s requirement to open Tanzania’s markets to EU imports, most of which are manufactured goods, antithetical to the development of infant manufacturing industries⁴³⁴. The second argument against signing the EPA was that it would undermine regional trade. Almost 50% of the total EAC exports within Africa is made up of manufactured exports ([AllAfrica.com](#))⁴³⁵. Under the EPA, manufactured goods from the EU would enter the EAC duty free and local manufactures would not be competitive against them. Burundi refused to sign the agreement because the EU had imposed sanctions for President Pierre Nkurunziza’s unconstitutional clinging to power, while Uganda chose to stand in solidarity with Burundi and Tanzania’s opposition.

The central position of the Kenyan flower industry in the negotiations meant that the KFC was heavily engaged in lobbying for the signing and ratification of the EPA to ensure favourable market access. In August 2016, a trade delegation comprised of the KFC, Union Fleurs (The international flower trade association) and Kenya’s Minister for Trade travelled to Brussels to make the case that failure to have a special agreement between the EU and Kenya would have disastrous consequences not only

⁴³² This difference in trading status is because Kenya is classified as a developing country while the other EAC members are least developed countries eligible to trade under the EBA.

⁴³³ Accessed at <https://www.tralac.org/news/article/6442-kenya-eu-sign-epa-agreement.html>

⁴³⁴ AllAfrica. Com (28th July, 2016). In 2016, only 6% of EAC exports were manufactured goods, while 91% of the trade is comprised of agricultural goods and primary commodities. Further, Tanzania argued that while 348 of its commodities are in the EPA’s “sensitive list” and enjoy a protected status, the industries producing Tanzania’s remaining 648 tariff lines would have to compete with EU imports. Accessed at: <http://allafrica.com/stories/201607280743.html>

⁴³⁵ Accessed at <https://allafrica.com/stories/201607280743.html>

for Kenya's flower trade and economy, but for the global flower trade ([Florinews](#))⁴³⁶. The uncertainties in trade posed by Brexit made the situation even more urgent. Kenya and Rwanda went ahead and signed the EPA but only Kenya has ratified it. This means that the EPA still cannot come into full effect, though Kenya can still benefit from the EU Market Access Regulation (MAR)⁴³⁷ ([European Parliament](#))⁴³⁸.

The EPA negotiations are a prime example of the exercise of episodic bargaining power (Clegg, 2002). In this scenario, the flower industry's institutional power is derived from a combination of its economic heft given that it contributes 1.45% to Kenya's GDP, its political and industrial capital in Kenya and foreign elite interests. Further, its collective power is displayed under the banner of the powerful and articulate lobbying voice of the KFC. The industry's power was then altogether employed in bargaining this minefield of trade policy negotiations and competing developmental interests with great dexterity.

The negotiations pitted Kenya, which is the only country in the region with 'developing country' status against the long-term industrial policy agendas of the rest which are categorised as 'least developed countries', thereby straining the firm-territory relationship at the regional level. The flower industry's flexed muscle in these EPA negotiations has also shown it to be yet again⁴³⁹ a powerful liberalising force in trade policy. It highlights the immense power of mid and large scale flower farms most of which are owned by the political, industrial and foreign elite (as explained in chapters 1 and 6 of this thesis) over those of smallholders, who protested against the EPAs in Kenya for being excluded from negotiations (Grain 2017). The section that follows elaborates on various bargaining strategies employed by small and mid-scale producers in this global competitive landscape.

⁴³⁶ Accessed at <http://www.florinews.com/index.php/past-featured-articles/40-past-featured-articles/260-how-the-kenyan-flower-industry-was-saved-from-a-disaster>

⁴³⁷ Florinews online Report. EU Market Access Regulation (MAR) grants Kenya duty-free access to the EU market on a long-term basis and without any specific deadline for expiry, but it remains a unilateral instrument in the hands of the EU. Accessed at: <http://www.florinews.com/index.php/past-featured-articles/40-past-featured-articles/260-how-the-kenyan-flower-industry-was-saved-from-a-disaster>

⁴³⁸ Accessed at <http://www.europarl.europa.eu/legislative-train/theme-a-balanced-and-progressive-trade-policy-to-harness-globalisation/file-epa-with-east-africa>

⁴³⁹ Previously, the flower industry was instrumental in leading Kenya to sign up to the International Union for the Protection of New Plant Varieties (UPOV) which limits access to protected varieties through plant breeders' rights (discussed in chapter 6).

8.5. Extra-firm bargaining strategies by Kenyan cut flower producers

Extra-firm bargaining strategies include the contestations which take place between cut flower producers and the plethora of institutions governing the cut flower market at a local, regional and global level. To gain access to export markets beyond the auction to the more lucrative and more strictly policed supermarkets, Kenyan cut flower producers employ a variety of strategies to navigate the trade landscape. The three strategies include compliance, contestation, and circumvention which are summarised in table 8.3. below.

Extra-firm strategies for market access for Kenyan cut flower producers

Extra-firm strategies			
Market	Institutional regulation	Mid-scale farm strategy	Small scale farm strategy
Auction	KEPHIS Phyto-sanitary certification Business-to-Business codes e.g., MPS International regulations e.g., UPOV	Comply	Comply Excluded Excluded
Supermarkets	Supermarket regulations Third party certifications e.g., Fairtrade	Comply	Generally non-compliant/ excluded due to weak capabilities Circumvent through partnerships and informal networks
Specialized markets (florists) Non-traditional markets e.g., Japan and UAE where certifications are weakly applied)	Third party certifications though not in demand	Circumvent	Excluded due to weak export networks
National trade environment	National regulations e.g., tax, trade policy (Economic Partnership Agreement)	Lobby	Capitalise on their relative invisibility to circumvent (Weak collective action)

Table 8.3.
Source: Author's analysis

The rising dominance of supermarkets as preferred markets by capable cut flower producers entrenches the buyer-driven governance of the trade. Producers supplying supermarkets must be consistently compliant to the stringent supermarket certifications which stipulate exact volumes and varieties in line with seasons, and demand consistency of supply year-round from its suppliers⁴⁴⁰. The mode of governance exhibited in this relation between large capable producers and supermarkets is 'modular' (Gereffi et al. 2005b), whereby suppliers are capable enough to meet the demands of complex transactions and decipher highly codified information.

⁴⁴⁰ As outlined in chapter 6, supermarkets therefore increasingly source from a small, select group of very technologically sophisticated, large scale and vertically integrated farms that are capable of complying to the certification requirements, a scenario which exemplifies "the cascade effect" (Nolan et al. 2008).

Contestation through lobbying is the main bargaining strategy employed for more favourable regulation in the public sector. This is seen in various examples highlighting episodic and non-decisional forms of bargaining. This chapter has explained how, the collective power of the industry organised under the banner of KFC, the mid and large scale cut flower industry is lobbying the Kenyan government to streamline the duplication of taxes at the county and national levels. The KFC is also lobbying for the timely repayment of VAT to cut flower producers. This chapter has also illustrated high profile contestation between various firms and state around the issue of tax evasion through transfer pricing, as some multi-national flower firms seek to lower their tax burdens, and the state seeks corporate tax accountability to enhance its own revenues.

Secondly, the political might of the flower industry has been witnessed in trade policy negotiations, as the KFC lobbied for the signing and ratification of the EPA by the East African Community. At a global level, a multi-scalar alliance showcasing the institutional strength of the Kenyan flower industry represented by KFC, the state (represented by the Minister for Trade) and the global flower sector (represented by Union Fleurs), lobbied the EU in Brussels for European market access for the Kenyan industry given the failure of the EAC bloc to agree on the terms of the EPA. These forms of contestation between the industry and regulation in the public sector have serious effects on the nature of the firm-territory relationship. The weak overall collective action of the considerably few small-scale flower farmers has meant their exclusion from the processes of public lobbying over trade policy, although that might change with the formation of the Kenya Horticultural Council that brings together KFC and FPEAK. In a classic case of non-decisional bargaining, smallholders who make up a marginal tax base, and those who sell locally under informal trade at the Nairobi flower market capitalise on their relative invisibility to avoid dealing with the tax-man.

The third way to manoeuvre the meshwork of industry certifications is to use 'strategies of circumvention' by selecting to operate in emerging markets in the flower trade such as the UAE and Japan, that are known to be less stringent. Alternatively, rather than target non-traditional markets, producers can target specialised retailers such as florists and garden centres in Europe that are less keen on certification and are more concerned with obtaining a diversity of varieties of high quality. This strategy is

employed by the less capable or marginal supplier such as smallholders, or mid-scale flower farms that are struggling to transition to supermarkets in Europe. This chapter highlighted one notable example of a strategy of circumvention involving smallholders where through informal networks, the sourcing manager of a supermarket identified smallholders to supply their non-certified though high quality summer flowers to a mid-scale farm that then consolidated them into ready-made bouquets that are certified for sale. The success of these strategies of circumvention relies heavily on the degree of societal embeddedness, and building trust between the producer and the buyer.

8.6. Conclusion

This chapter has outlined the landscape of regulation in the form of private voluntary standards as certifications and codes of conduct, as well as state sanctioned regulation in the form of taxation, traceability mechanisms and trade policy. The public and private modes of governance intersect with each other and are inextricable in operation, and this chapter has argued that the public domain sets the blue print on which private modes of governance operate.

The suitability of GPN over GVC analytical frameworks for the Kenyan flower industry becomes evident. The engagement with GVC theory here is only to highlight the existence of modular governance in the compliant relationship between large capable producers and supermarkets, and captive governance (Gereffi et al. 2005) in regards to the limited supply capabilities of small-scale farms to supermarkets, thereby necessitating their various strategies of circumvention. The GPN framework emerges clearly first in the location of the contestations between the industry and the web of governance as extra-firm strategies where firms bargain for market power, proprietary rights and social and political legitimacy (Coe & Yeung, 2015).

The complexity of the 'web of governance' also lends itself to GPN's network metaphor, thereby avoiding deterministic or unilateral interpretations of the exercise of power among industry actors. The three locations of power materialise, specifically institutional power as embodied in the range of regulatory actors, and collective power as exhibited in the KFC's organisational and representational force. Producers' bargaining power using the examples of episodic and non-decisional modes of bargaining is seen as a practice intersecting those locations. Further, these

contestations highlight the GPN notion of multi-scalarity – occurring sub-nationally as far as taxation is concerned, regionally as in the case of trade policy and globally all across the production network as compliance to supermarket codes. The successes of actors' extra-firm strategies are tied to the “societal embeddedness” (Hess 2004) of the firm, which is related to the GPN notion of the firm-territory nexus expounds on how contestations shape the relationship of the firm to the territory be that at the county level, nationally or regionally.

Three extra-firm bargaining strategies of compliance, contestation and circumvention (summarised in figure 8.3.) are introduced as testament to the agency of producers in buyer-driven markets. The strategies are dependent first on producer capability and scale so that those who are capable, comply and therefore access the lucrative direct markets, while those who are less capable find more creative ways of circumventing the meshwork of certifications that polices entry by seeking emergent markets or specialised retail centres. Contestation through lobbying is the main way in which the industry as collectively organised under KFC can bargain with public-sector regulators. There is evidence of the Kenyan flower industry flexing its collective and institutional power as expressed in its economic and political identity to sway trade policy (the EPA) in its favour, in the process arguably subverting the long-term industrial policy interests of other countries in the East African community.

The geopolitics of extra-firm bargaining is seen through benchmarking processes carried out by regulators in the global south which is testament to the ‘nestedness’ of these institutions of governance. Change in certifications as institutions of governance also emerges under pressure from ethical and market concerns. The institutional power of philanthropic capital (as in the Gates Foundation) and influential northern intermediaries can lead changes in certification to accommodate smallholder production, and thereby facilitate market access. The sustainability of relationships of dependency of this nature is however questionable.

Governed by an increasingly complex meshwork of private voluntary certification, supermarkets roll out a ‘cascade effect’ (Nolan et al. 2008) which entrenches the dominance of larger more capable producers as preferred suppliers and weeds out the smaller less capable suppliers. Even so, producers continue to build

infrastructures of inclusion through a diversity of bargaining strategies which rely on collective action, cultivation of deeper societal embeddedness, and a functional understanding of the heterogeneity of export markets. This chapter's narrative overall challenges the notion that certifications and codes of conduct are immutable gatekeepers of market access and views them as contested institutions of governance which are in the process of constantly being made and remade.

9. In Conclusion: The flower industry as a late bloomer

This chapter provides an overview of the underpinnings of the thesis narrative and brings together the overall empirical and analytical findings of this thesis in relation to the research questions. It then discusses the novelty and implications of the research and finally suggests areas for future research.

9.1. Empirical and analytical findings

In a bifurcated global trade landscape dominated by giants of industry and characterised by low demand growth, buyer-driven governance, and a proliferation of private codes of conduct, this thesis asks: **“What strategies do Kenyan cut flower producer networks use in seeking greater bargaining power amidst shifts in export markets?”**

For greater clarity, the main research question was split into three sub-questions. The first research was aimed at exploring the suitability of the GPN lens in application to the Kenyan cut flower industry and thereby developing an analytical framework:

Thesis sub-question 1: To what extent does the Global Production Networks framework explain how cut flower producers adapt to shifts in end markets?

- a) To what extent does GPN theory explain the interests and position of the variety of actors in the Kenyan cut flower production network in line with the shifts in end markets?
- b) To what extent does GPN theory help us to understand the strategies of actors as they bargain for market access?
- c) What are the strengths and limitations of GPN theory in explaining the development implications for the localities where the Kenyan cut flower network is embedded?

In answer to sub-question 1 (a), chapter three categorises the diversity of actors into firms, intermediaries and extra-firm actors as defined by GPN theory. This supports the segmenting of firms outlined in the production network summarised in image 5.1. including breeders, producers, freight-forwarders, import handlers and the markets. A

case is made for the consolidator-exporters as the key intermediaries for producers to direct markets, while extra-firm actors include the community of regulatory institutions described in chapter eight. Dembinski's (2009) notion of 'focal firms' is used to characterise and highlight the central role of the consolidator-exporter, which utilises its embedded knowledge, technology and networks to link the production to the marketing ends.

Sub-question 1 (b) expounds on strategies emerging from mapping GPN 2.0 network configurations to the Kenyan cut flower producer networks. The *intra-firm*, *inter-firm* and *extra-firm* categories in GPN 2.0 prove useful for analysing the strategies particularly of mid-scale flower production networks. According to Coe & Yeung (2015) these GPN categories enable us to think of actors in the production network as relational entities whose relative power is always under contestation, in addition to their role in minimising transactions costs.

In answer to sub-question 1 (c), this thesis finds that GPN 2.0 provides a useful threefold focus on the *value capture trajectories*, *strategic coupling* and the *sub-national scale*. The notion of *value capture* provides an embedded political economy understanding because it depends on the capabilities of the firm and considerations of the asymmetry of power between actors such as between supermarkets and farms. The concept also encompasses the difficulties of replacing a firm with specific knowledge such as a consolidator-exporter, specificities within the industry such as demand fluctuations with seasonality, and local conditions in the territory where the firm is anchored such as with negotiating for duty free access to European export markets.

The notion of *strategic coupling* is also useful in that it explains the linking of the advantages of regions to the needs of GPN through a dynamic bargaining process. The contestations involved in strategic coupling are explained for example in the national and *sub-national* processes of lobbying by the Kenyan flower industry for streamlining of taxation, and regionally through the Economic Partnership agreement negotiations within the East African Community, as elaborated in chapter eight of this thesis.

The second thesis sub-question probes the practices and experiences of cut flower producer networks in Kenya in adapting to shifts in export markets, as well as to local production challenges.

Thesis sub question 2: What are the experiences of Kenyan cut flower producer networks in seeking greater bargaining power in European export markets?

- a. How do cut flower producer networks manoeuvre local production challenges to gain greater bargaining power in export markets?
- b. What is the role of intermediary firms in positioning cut flower producers in the changing export markets?
- c. What are the institutional pressures / constraints that cut flower producer networks face in seeking greater bargaining power in new export markets?

Chapters six, seven and eight detail the empirical observations and analyses from mid-scale, small-scale production networks and the web of governance institutions through which they negotiate export market access.

In answer to question 2 (a), the first finding is concerned with intra-firm strategies on *selection of varieties and labour management*. While mid-scale farms supplying the Dutch auctions tend towards *diversification* of their varieties, those supplying direct markets especially supermarkets adopt what this thesis calls a ‘Triple S’ strategy of selecting varieties – *specialization, standardisation and scaling*. This is summarized in table 6.2. Smaller farms within the mid-scale segment that cannot meet supermarket demands perhaps due to constraints of scale and production capabilities were observed to ‘*go niche*’. They opt to secure markets for the supply of ‘occasion’ varieties such as delphinium and bouvardia which are demanded in limited quantities for special occasions. Smaller farms are also better able to provide the required attention to detail necessary to grow unusual varieties.

The second key finding on intra-firm strategy has to do with *labour hiring strategies*. Field work elucidated *two internal tensions in farm hiring strategies* which are linked to the two desired outputs – higher worker productivity and higher worker retention. The first tension links *levels of education with worker retention*. Farms say they require at least secondary school educated workers but they prefer to hire the under-educated because they are more easily retained over a longer period of time. The second

tension links *levels of education with worker productivity*. Farms actively hire workers with lower education (despite their desire for more productive workers) thereby overlooking the notion that educated workers are more likely to train better, add greater value, and make more informed decisions at work. These findings are complemented by a third observation on labour hiring strategies, which was the preference for tacit or hands-on knowledge over technical knowledge. Overall, there is a history of employment in this sector that is influenced by hiring strategies that default to pre-capitalist forms of contracting which privilege familial referencing, tacit knowledge and gendered norms.

The research found that smallholders plant two or more flower varieties as part of a diversification strategy. They obtain plant material from their peers, from contractual collectives or from government research institutes. The source matters because farmers cannot commercially grow summer flowers for export to the auction unless they have paid royalties, which are collected at the auction. For smallholders, the main challenge is not only accessing suitable varieties but also balancing the planting and crop cycles with the seasonal cycles of demand at the auction. In terms of labour, smallholders use family labour, which is sufficient given that flowers are grown typically on a quarter acre of land.

Inter-firm strategies on the relationship between flower farms and other actors in their production networks are intertwined with the central role of consolidator-exporters, which is referred to in thesis sub-question 2 (b). Consolidator-exporters are focal firms in smoothing out supply between producers in the global south and buyers located in the lucrative direct markets the global north. They add value by converting flowers from a product to an aesthetic commodity through consolidation in the form of bouquets. Using their sophisticated logistical and cold chain technologies, they provide just-in-time delivery which is of paramount importance in maintaining the integrity of highly perishable aesthetically valued commodities. Indeed, they are becoming an entirely new locus of power as strategic partners to supermarkets, which are becoming more dominant in shaping demand and governance. Chapter six analyses three case studies of inter-firm relationships centering the consolidators-exporters. These included a multi-national consolidator, a joint-venture consolidator formed through collective action of four farms, and an independent consolidation

enterprise. These case studies showed that these relations are diverse, strategic and attuned to overall consolidation in the flower industry as a directive from direct markets.

The key finding in terms of intra-firm strategies for smallholders, was that those outside formal contractually bound (outgrower) groups are organized around what this research identifies as 'collectives of convenience'. They are characterised as such due to their opportunistic, fluid and short-lived nature. Collectives of convenience should be seen as essential manifestations of farmers' agency and important short-term life-lines for market access but they do not qualify as 'focal firms'. This is because they seldom successfully link production and marketing because they lack the social embeddedness necessary, and only opportunistically harness economies of scale required for market access.

Overall, the thesis finds that inter-firm strategies point to processes of consolidation shaping direct markets in the global flower trade. As supermarkets become increasingly dominant in shaping demand for cut flowers, they prefer to form strategic partnerships with fewer, larger and more capable suppliers as 'preferred suppliers', who in turn prefer to work only with very large, sophisticated, capable producers to minimise coordination costs. This gives rise to what Nolan et. al (2009) describe as the 'cascade effect' in play. Smaller players have to rely on strategies of circumvention to supply niche markets and capture some value.

Question 2 (c) establishes in chapter eight that the institutional constraints that cut flower producers are in the form of a proliferation of voluntary private initiatives that are either business-to business codes of conduct or mediated by third party certifications and often visible to consumers such as Fairtrade. These private initiatives are concerned primarily with communicating the quality of processes of production using environmental and social parameters. Secondly, cut flower producer networks also have to negotiate their way through the Kenyan regulatory system which is comprised of a myriad of taxation measures, traceability initiatives and regionally articulated trade policy around which there is intense contestation.

In answer to question 2 (c) there are three identified extra-firm strategies of bargaining - *compliance, circumvention and contestation*. These relations are summarised in table 8.3. and manifest bargaining power in two forms, episodic and non-decisional as outlined in chapter 2. *Episodic bargaining power* (Dahl 1961; Clegg 2002), refers to decision making situations shaped by rules, relations and resources which an actor uses strategically to get their way, while *non-decisional bargaining power* (Bachrach & Baratz (1962; 1963) is where one actor limits the scope of the political process available to the other actor, when issues are deliberately left out of the agenda by one of the actors. Capable mid-scale producers *comply* with the stringent supermarket certifications which stipulate exact, standardised volumes and varieties in line with seasons, and demand consistency of supply year-round from its suppliers. They do so in order to gain the coveted 'preferred supplier' status from supermarkets that ensures stability of market access.

Producers such as smallholders who are typically less capable find creative ways of *circumventing* the meshwork of certifications that polices entry. For example, by seeking access to emergent markets such as Japan and the Middle East or specialised retail centres which much less emphasis on certifications for entry of cut flower exports markets. In the process of circumvention, the thesis identifies a case of *non-decisional bargaining power* where smallholders capitalise on their marginality in the political sphere to get around regulatory "barriers" such as payment of cess tax.

The third intra-firm strategy is in relation to state regulation and involves *contestation* often between the Kenya Flower Council, the flower industry's powerful lobby group and state/regional actors. In a show of *episodic bargaining power*, the KFC harnesses the collective power of the mid and large scale flower industry which is anchored in elite ownership. With its considerable economic foothold in Kenya, the flower industry lobbies for preferential trade policy such as the Economic Partnership Agreement. These bargaining and manoeuvring strategies showcase the agency of producers in otherwise buyer-driven markets.

The third thesis sub-question is premised on the acknowledgement of the flower industry as a knowledge intensive industry and asks:

Thesis sub-question 3: What is the nature of the interaction between cut flower producers' activities and Kenya's knowledge economy?

- a) To what extent do producer networks introduce new technologies and methods of production?
- b) How has the flower industry contributed to the systems of knowledge management in Kenya?
- c) To what extent are there linkages between producer networks and Kenyan systems of knowledge production/ management?

The analytical framework developed in chapter three of this thesis lays out the cut flower knowledge economy in terms of *knowledge infrastructures, systems and relationships*, visualised in figure 3.4.

In answer to question 3 (a) which refers to knowledge infrastructures, the thesis establishes from field work that the cut flower industry has been at the forefront of introducing new technologies of production such as automated greenhouses, hydroponic systems and the use of IPM. There is a disjuncture from the local economy in localising the supply of simpler inputs and few systematic, institutional efforts to support the endogenisation of industry knowledge on the technology front. This situation is reinforced by the geo-politics and interests of transnational and local elite capital. The outcome is elements of 'enclave formation' (Melese & Helmsing, 2010) whereby the industry generates knowledge and use of new technologies, but circulates it only within its borders bound by the constraints and interests of capital.

In answer to question 3 (b) which ties back to knowledge systems, the research finds that terms of systems of proprietary knowledge management, returns for breeders' R&D efforts (described in chapter five) are secured through a tightly intermeshed system of Plant Variety Protections (PVP) under UPOV. While UPOV has helped to secure PVPs for multi-national foreign companies in the industry and thereby stimulated their investment in the industry, smallholder farmers have been increasingly marginalised from accessing export markets by its protocols of royalty collection and limitations on commercialising farm-saved and exchanged planting material. This imbalance shows the systematized dominance of European knowledge in the R&D for the sector, which contributes significantly to the reproduction of north-south

asymmetry of power in the cut flower production network. European technical managers still own and control the scientific knowledge behind these processes, and Kenyan technical managers whom they work with are only exposed to the mechanics of the same. This undermines possible value enhancement that could improve the global positioning of flower industries in the global south in the long-term.

In regards to question 3 (c), related to knowledge relationships, connections in knowledge transfer are weak for example, between Kenyan flower farmers and the local research system. This disjuncture originates from the fact that public-sector research bodies are aligned to the food security agenda and flower sector research of commercial utility is deprioritized. The opportunities for collaboration are therefore sporadic and dependent on donor funding. The africanization of farm management over time since the 1990s has led to a transfer of knowledge between former European management and incoming African managers. However, the industry still relies on foreign consultants to oversee the upper reaches of technical issues. While managerial expertise abounds, the thesis argues that there is slow and limited endogenisation occurring at the uppermost levels of knowledge management. While research partnerships clearly exist, the challenge is a lack of systematic, strategic institutional collaboration.

In sum, the core argument of my thesis is that in an industry characterised by low demand growth, buyer-driven governance, a proliferation of private codes of conduct, and dominated by giants of industry, Kenyan mid and small scale cut flower producers nevertheless *maintain agency and bargaining power* in seeking access to European markets. They do so through *three main strategies* which enable them to navigate the shifts in export markets. These include intra-firm strategies of managing supply that revolve around selection of flower varieties, labour and knowledge management; inter-firm strategies for export market access focussed on a diversity of relationships with consolidator-exporter firms, and thirdly extra-firm strategies of bargaining with governance institutions, which include compliance, contestation through lobbying and circumvention. The argument was formed in response to the European industry

official⁴⁴¹ (noted in the introduction) who expressed doubts as to how any farm smaller than sixty hectares might survive in this industry.

This thesis has two overall empirical findings. The first is that to survive and thrive, mid and small scale producers must diversify. *Diversification* is the common factor in producers' strategies for securing new lucrative export opportunities in a bifurcated market. The second finding linked closely to diversification is that knowledge of export market dynamics and deep social embeddedness in trade networks are the critical capabilities for the success of producers' market access strategies.

9.2. Contributions to knowledge

My research has contributed to the advancement of knowledge first and foremost by shifting the orientation of knowledge production in this sector from the usual north-to-south to an African-centred conversation, by focussing on the perspectives and experiences of producers from the global south, as analysed by a Kenyan researcher. The research pointed to the reproduction of the geopolitics of knowledge production in the enclaved concentration of R&D initiatives on cut flowers in Europe, and the limited transfer and endogenisation of knowledge at the R&D frontier that has occurred among Kenyan technical managers in over forty years of production experience.

The research demystifies the production and marketing activities of mid-scale and smallholders by analytically segmenting them from large scale farms. Doing so enables us to hold a lens over their activities which are often overshadowed by the handful of dominant large-scale producers. It acknowledges the agency and creativity of Kenyan mid and small scale cut flower networks navigating shifting export markets, while manoeuvring through a complex governance web.

The thesis also postulates new knowledge by identifying and characterising “*collectives of convenience*” among smallholders as a testament to their agency and the heterogeneity of modes of collective action. Relatedly, I characterise ‘consolidator-

⁴⁴¹ Anonymized. Receiver-manager of a large-scale flower farm in Naivasha.

exporters' and make the case for their critical role as focal firms linking producers to the lucrative and previously uncharted direct markets.

The thesis makes a number of novel theoretical contributions responding to the gap in literature engaging the GPN framework to analyse the dynamics of the Kenyan flower industry as a model high-value export horticulture sector in a developing country. It maps the GPN 1.0 categories of value, power and embeddedness to the Kenyan cut flower sector as summarised in appendix A. as a first step to macro analysis that illuminates political-economic realities of the industry. Secondly, it operationalises the GPN 2.0 lens by providing a schematic outlining the intra-, inter-, and extra-firm bargaining strategies of cut flower producers shown in table 3.1. Third, I critique GPN theory as doing little beyond the identification of the locations of power (corporate, institutional and collective) to explain the contestation and bargaining that occur given the asymmetry of power among actors. The thesis therefore argues that bargaining power is not so much a location as it is *a practice intersecting* corporate, institutional and collective power as shown in figure 3.3.

By acknowledging the knowledge intensive nature of the cut flower industry, this thesis has uniquely introduced a discussion of the knowledge economy in relation to the flower industry, thereby expanding our understanding of the industry's development impact.

9.3. Implications of research

This thesis sought to provide a deeper understanding of these producers' perspectives, practices and power dynamics in the production network, rather than to provide policy prescriptions. With this caveat in mind, the main implication of my research for policy makers in the sector is to underscore that diversification is not a fall-back option but a conscious strategy in production and marketing for small and mid-scale producers.

My research also underscores that any initiatives for market development in the sector must be premised on an understanding of the *knowledge-intensity* of the sector and *the informality of trade networks* therein. Despite the fast-paced façade of the day-to-day operations of the sector, this industry is at its heart "a late bloomer", in which

actors spend lifetimes and invest generations in the slow cultivation of deep societal and network embeddedness that are absolutely critical to thriving in the trade.

For smallholders seeking export market access, the main message of this thesis is then to cultivate deep network embeddedness by seeking out or forming stable contractual collectives to enhance opportunities for long-term, stable export market access, rather than to be part of multiple collectives of convenience. True to the nature of the late-blooming nature of the industry, the critical market knowledge is embedded in those informal networks and ties of trust which take time, strategy and consistency. There are no quick gains from participation in flower production, and as one farmer explained (in chapter seven), many “hearts have been broken” from this false expectation. From this vantage point, it is possible to successfully partner with a capable consolidator-exporter who can provide knowledge on structure, dynamics and requirements of desirable export markets.

Lastly, given the nature of demand that is increasingly being shaped by supermarket chains that seeks large, specified, certified volumes of cut flowers and packed-at-source bouquets the survival of all producers other than the very large scale depends on collective action. For researchers and policy makers, this implies that only contractual collectives present real possibilities for strategic integration into global markets. Therefore, it is important to resolve weaknesses of group governance, cultivate institutional access to market knowledge, and build adaptive capabilities to enable groups to utilise and transform that knowledge into bargaining power.

9.4. Areas for future research

This thesis outlines a few areas where further research is required in the areas of cut flower production, policy, value-addition and local linkages and marketing and governance.

In the realm of production in Kenya, these include: research on the reproduction of elite ownership structures in the Kenyan flower industry, and a longitudinal study of the factors affecting the productivity of general workers over time in flower farms. It would also be of interest to look into the impact of transnational capital in the form of

new trend of private equity investment⁴⁴² in the Kenyan and Ethiopian flower industries (Silici & Locke, 2013), given the general expectation of fairly quick profits which are rare in the flower industry. Research on the participation of smallholders in the sector should begin with an updated baseline study (the last one being in 2010 by Fintrac). Since Kenyan smallholders are also involved as or linked to traders in the Nairobi Flower Market which is a mainstay of Nairobi's daily economic activity, more research is required on quantifying the local flower trade, the dynamics of the local trade, florists and the link to the service economy that caters to corporate clients and special occasions such as weddings.

At the top of the list for priorities in the sphere of policy is research on mobilising the opportunities arising out of devolution in Kenya to more creatively link the debate on the security of livelihoods of smallholders diversifying to cut flowers to the food security debate. Regarding the disjunctures identified in the knowledge economy, research is required on ways of building more robust knowledge flows between the Kenyan flower industry and Kenyan research bodies. Research is also required on building long-term institutional linkages between floriculture institutes in Europe and Kenyan agronomic research institutes. In terms of trade policy, there is a gap in knowledge on the nature of demand for Kenyan cut flowers in other African markets in particular Nigeria, which has a notable wedding planning service economy. Research on developments in trade policy between Kenya and Nigeria on the same would inform a growing south-south agenda in trade.

There is also need for more research in the field of value-addition and local linkages to the economy for example: a feasibility study on the production of high quality cocopeat as a substrate for cut flower propagation. It is also necessary to explore the possibilities of manufacturing hydrosols and beauty products. Second, there is work to be done to develop mobile and farm-based refrigerated units adapted to the challenges of access to electricity (possibly linked to the renewable energy agenda) and poor road connectivity in rural areas, which would be suitable for and affordable to smallholders. There is also a booming and lucrative service industry linked to the

⁴⁴² Examples of PE investments are highlighted in chapter six.

flower sector that is locally under-explored such as developing courses on cut flower arrangements for special occasions.

Looking to marketing and governance, branding of Kenyan cut flowers is an emergent area of research interest⁴⁴³. While traceability mechanisms are strong, the visibility of Kenyan provenance in exported cut flowers is not. Research is required exploring the relationship between branding and the politics of provenance in the sector, and a quantification of possible value-added from branding. Other emergent areas for research linked to branding include the impact of digitisation of markets on the integration of developing country producers into global export markets. In terms of the politics of certification, research is required on the impact of the new trend of replacing third party certification (such as Fairtrade) with in-house supermarket certification on workers' welfare.

⁴⁴³ This angle already has some local institutional backing. *Brand Kenya* partnered with the International Flower Trade Expo for a press-conference to highlight the sector's strong global performance. Noting that flowers lose their country of origin tag on sale at the auction for example, the Brand Kenya board showcased the 'Mark of Identity' which seeks to distinguish Kenyan premium products locally and internationally. Accessed at: <http://brandkenya.go.ke/brand-kenya/ach-9.php> There are also opportunities to link the flower sector to tourism. Kenya already has a well-oiled marketing machine to promote tourism that could benefit the flower sector.

APPENDICES

APPENDIX A (1). VALUE IN GPN FRAMEWORK

GLOBAL PRODUCTION NETWORK FRAMEWORK - MAPPING ONTO KENYAN CUT FLOWER EMPIRICAL STUDY		
HOW PRODUCERS MANOEUEVER LOCAL PRODUCTION CHALLENGES TO GAIN GREATER BARGAINING POWER		
VALUE CREATION	VALUE ENHANCEMENT	VALUE CAPTURE
<p>Value creation is concerned with the use of technology to generate value, the various ways of converting labour power into labour, and the possibilities thereof of capturing various forms of rent.</p> <p>Examples:</p> <p>“(a) Technological rents derived from asymmetric access to technology</p> <ul style="list-style-type: none"> - Access to breeders' rights for special limited access to high value varieties - Access to high value technologies such as automated greenhouses, water systems, hydroponic technologies 	<p>Value enhancement is derived from inter-firm processes of knowledge and technology transfer and industrial upgrading</p> <p>Examples:</p> <p>(a) Technology transfer</p> <ul style="list-style-type: none"> - The extent of technology transfer is significant though the degree to which knowledge has been endogenised is arguable - Knowledge from the flower industry is delinked from institutional interaction with research centres and is siloed within the industry 	<p>Value capture is dependent on government policy and corporate governance which facilitate the repatriation of profits or more indigenous ownership Chapter nine outlines contestations between the flower industry and the state on value capture issues including taxation.</p> <p>Examples:</p> <p>Government policy</p> <ul style="list-style-type: none"> - Taxation policies: The flower industry takes issue with duplication and multiplicity of taxes in Kenya after the institution of the county governments in 2013. - There are also differing formulas of calculating tax revenues leading to contestation between farms and Kenya Revenue Authority (KRA) officials. - Enactment of the transfer pricing rules in 2006 has empowered KRA to sue some large-scale flower farms for tax evasion.

<p>(b) Organisational rents <i>Labour</i></p> <ul style="list-style-type: none"> - Gendered hiring policies and exclusive gentlemen's mentorship networks that mean on flower plantations, men get promoted to managerial positions but women have performance ceilings - Hiring permanent rather than seasonal labour due to shifts to stable direct markets that require labour year-round - Labour incentive structures that reward higher and higher productivity per worker e.g., paying extra per stem packed over daily targets - rewarding tacit rather than technical know-how (degrees) with promotions <p><i>Variety management practices</i></p> <ul style="list-style-type: none"> - "Triple S" : Specialisation, Scaling and Standardisation - Going niche 	<p>(b) Capacity building between firms</p> <p>Little capacity building support between buyers and mid-scale farms which are already highly capable suppliers</p> <ul style="list-style-type: none"> - Critical linkages between focal firms (consolidator-exporter) and smallholders in contractual collectives for agronomic support, training, inputs, certification <p>Contractual collectives that partner with philanthropic capital and 'ethical agents' may receive support to meet the requirements of supermarket certification (see the Wilmar Agro. Ltd. - IIED case study in chapter eight)</p>	
<p>(c) Relational rents</p> <ul style="list-style-type: none"> - Development of marketing and value addition cluster among mid-scale farms. Case study: The Flower Hub - Development of mid-scale farms as hubs where smallholder fillers are brought and incorporated into bouquets for 'at-source' packing for UK supermarkets 	<p>(c) Workers' skills development over time in flower plantations</p> <ul style="list-style-type: none"> - Mid-scale flower farms struggle with stagnant or declining worker productivity. There is an inherent tension between hiring under-educated workers and expecting an increase in productivity over time. Farms investment in 3-6 months of worker training when they are first hired. - Fairtrade farms can institute skills training through stipulations of Fairtrade Premium 	

	committees e.g., workers can receive training on tailoring, driving	
<p>(d) Brand rents</p> <p>- Strategic market choice for producers: Entering the auction and building international image among big buyers for quality and consistency, and then transitioning into direct markets which are more stable</p> <p>- Product differentiation among consolidator/exporters: Suggestion of seasonal bouquets to supermarket that only they can supply from Kenyan producers, or production of niche varieties for occasional bouquets e.g., Bouvardia by the smaller mid-scale farms</p>	<p>(d) Linkages to local firms</p> <p>- Supply of cocopeat - a production input in greenhouses by local firms is a possibility but has not been successfully piloted</p> <p>- Local innovation of water recycling systems using banana and arrowroots plantations along water ways to absorb chemical outflow</p> <p>- Development of a local packaging industry specific to the flower industry</p>	

APPENDIX A (2). POWER IN GPN FRAMEWORK

PRODUCTION NETWORK FRAMEWORK - MAPPING ONTO KENYAN CUT FLOWER EMPIRICAL STUDY		
HOW PRODUCERS MANOUEVER LOCAL PRODUCTION CHALLENGES TO GAIN GREATER BARGAINING POWER		
<i>CORPORATE POWER</i>	<i>INSTITUTIONAL POWER</i>	<i>COLLECTIVE POWER</i>
<p>Corporate power refers to the lead firm’s capacity to influence decisions and resource allocations, decisively and consistently in its own interests, through the control over key resources, like information, knowledge, skills and brands within a GPN (MacKinnon, 2012)</p> <p>Lead firms have power to some extent to shape decisions and influence resource allocations. However, small firms also have autonomy to develop their own strategies (Henderson 2002:450)</p> <p>Examples:</p> <ul style="list-style-type: none"> - Mid and small scale flower farms have: Intra-firm strategies for production that revolves around (1) managing variety supply through diversification to the auction, ‘triple S’– specialisation, scaling and standardisation’ to direct markets, and going niche to differentiated direct markets (2) lowering costs of production through labour management - Inter-firm strategies for managing relationships with focal firms (consolidator-exporters). 	<p>Institutional Power is embedded in those actors who set and enforce the “rules of the game” (North, 1990)</p> <p>Examples:</p> <ul style="list-style-type: none"> - National and local state power exercised through enforcing regulation e.g., KRA (Taxes), KEPHIS (Phyto-sanitary regulations), EPC, NEMA, WARMA (Environmental regulations) - International or inter-state agencies on enforcing trade policy e.g., EU for the negotiation of the Economic Partnership Agreement with the East African Community; Accession of Kenya to the 1991 act of the Union for the Protection of Plant Varieties (UPOV) convention which protects Plant Breeders’ Rights. - Private Voluntary Initiatives ascertaining the quality of processes of production including Business-to-Business codes (MPS, FFP); Kenyan certifications such as KFC silver and gold certifications Third party certification such as Fairtrade, Rain Forest Alliance; Supermarket codes such as Waitrose, Sainsbury’s, Tesco 	<p>Collective Power means the power of collective agents seeking to influence companies within the GPN</p> <p>Examples:</p> <ul style="list-style-type: none"> - Smallholders form ‘collectives of convenience’ as acts of resistance from perceived exploitation by outgrower firms (contractual collectives) - Trade Unions (KPAWU) which negotiate the Collective Bargaining Agreement every two years with the Flower Growers Group within the Agricultural Employer Association (AEA) - Industry associations such as the Kenya Flower Council, Fresh Produce Exporters Association of Kenya, lobby for the signing of the EPA, and for streamlining of industry tax structures - Royal FloraHolland, the Dutch flower Auction was set up as a growers’ cooperative structure, which managed to alter the governance of the trade from buyer-driven to producer-driven (Patel-Campillo 2011)

<p>- Extra-firm strategies of navigating through web of governance in the flower industry through <i>compliance, contestation and circumvention</i></p>	<p>- Bretton Woods Institutions e.g., IMF and World Bank that set up the push for liberalization in the sector</p> <p>- NGOs lobbying for improvement of working conditions such as Kenya Human Rights Commission, Women Working Worldwide, as well as those exposing financial exploitation within the industry e.g., Christian Aid, Oxfam</p>	
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APPENDIX A (3). EMBEDDEDNESS IN GPN FRAMEWORK

PRODUCTION NETWORK FRAMEWORK - MAPPING ONTO KENYAN CUT FLOWER EMPIRICAL STUDY		
HOW PRODUCERS MANOEUEVER LOCAL PRODUCTION CHALLENGES TO GAIN GREATER BARGAINING POWER		
<i>TERRITORIAL EMBEDDEDNESS</i>	<i>NETWORK EMBEDDEDNESS</i>	<i>SOCIETAL EMBEDDEDNESS</i>
<p>Territorial embeddedness captures how firms are anchored within a specific locality which affects prospects for development in that area</p> <p>Examples:</p> <ul style="list-style-type: none"> - The embeddedness of firms in Lake Naivasha area for the ideal agro-ecological conditions and Mount Kenya region in search of higher altitude locations which enables them to diversify production to higher-value varieties <p>Cut flower production in Kenya grew to take advantage of the liberal labour market policies which meant that wages were relatively lower than other comparative locations. The industry also attracts migrant labour and women who tend to be retained for longer due to lack of work options.</p>	<p>Network embeddedness refers to the social connectivity within the GPN, the stability of the relationships and the importance of the network for its participants (Coe &Yeung 2015: 17)</p> <p>Examples:</p> <ul style="list-style-type: none"> - Smallholder farmers in stable contractual collectives exit the group due to perceptions of financial exploitation to form more fluid 'collectives of convenience' which are less stable, more opportunistic and based on trust between the farmers - Network embeddedness includes the process of building trust between agents, firms e.g., gentlemen's agreements; compliance with taxation, attending trade fairs in non-traditional markets; facilitating on-farm visits for potential buyers in new markets, record of compliance to industry codes and certifications 	<p>Societal embeddedness developed by Hess (2004) refers to the 'genetic code' of the actor considering the importance of the cultural, institutional and historical origins of the actor in question e.g., this has an impact on work culture, attitudes to worker relations. Working conditions are carried by the firm from its home base to its new place of operation</p> <p>Examples:</p> <p>Might account for differences in work culture within foreign-owned firms e.g., between Indian owned vs. Kenyan or European owned firms though this was not explicitly explored in field work.</p> <p>Smallholder farmers often have little understanding of the aesthetic value of the cut flower as commodity being that they do not personally keep flowers on display in their homes)</p>

Appendix B: Additional interviewees linked to mid-scale flower farm field work sample

	Date	Name	Institutional affiliation	Title	Location
1	2/25/16	Elias Thuku	The Flower Hub	Logistics Manager	Nairobi
2	5/3/16	E.N.	Dutch Flower Group	Quality Manager	Nairobi
3	3/24/16	I.S.	Sher- Karuturi	Receiver-Manager	Nairobi
4	10/4/16	C.G.	Local independent consolidation enterprise	Director	Nairobi
5	3/10/16	Dr. Lusike Wasilwa	Kenya Agricultural Livestock Research Organization (KALRO)	Director, Crop Systems	Nairobi
6	3/1/16	Bernard K'Ocholla	Top Serve East Africa	Agrochemicals supplier	Nairobi
7	12/4/16	Paul Kitheka	Kuehne + Nagel	Freight Forwarding	Nairobi
8	16/4/16	Art Wright	Panalpina Airflo	Freight Forwarding	Nairobi
9	3/10/16	Masila Kanyingi	Floriculture Magazine	Editor	Nairobi
10	3/3/16	N.M	Flower Farm-N	Human Resources Manager	Naivasha
11	3/4/16	Richard McGonnell	WAC Breeder farm	Breeder and Lobbyist	Naivasha
12	3/5/16	Simon Ndirangu	Stokman Rozen (Rose propagator)	Head, Tissue Culture	Naivasha
13	22/6/16	Marco Schouten	Willem Lieftieng	Purchasing Manager	Aalsmeer, Netherlands
14	23/6/16	Bram van Mill	Marginpar B.V.	Managing Director	Aalsmeer, Netherlands
15	24/6/16	Ruben Bas Dew	FloraHolland	Relationship Manager, Kenya	Naaldwijk, Netherlands
16	24/6/16	Jeroen van Sprang	FloraHolland	Auctioneer	Aalsmeer, Netherlands

Appendix C: List of people interviewed in the smallholder production network

	Date	Name	Institutional affiliation	Title	Location
1	4/8/16	John Ngige	Wilmar Agro- Ltd	Agronomist	Thika
2	3/31/16	Ruth Muiruri-Kamami	Wilmar Agro- Ltd	Executive Manager	Thika
3	3/23/16	Linah Muhonja	Kenya Agricultural Livestock Research Centre - Horticulture Research Centre (KALRO)	Horticultural researcher	Thika
4	4/28/16	Mr. Kariuki	Wilmar Agro- Ltd	Agronomist Small holder farmer	Nyeri
5	4/28/16	Janet Mwaura	Wilmar Agro- Ltd	Agronomist	Nyeri
6	9/29/16	Joseph Wathinja	Ministry of Agriculture - County of Nyandarua	Agricultural officer Agronomist	Oi Kalou, Nyandarua
7	4/9/16	Rahab Magoti	KALRO - Embu	Research Organization/ Small holder support	Embu
8	4/4/16	Paul Kamau James	Horticultural Crops Directorate (HCD)	Agricultural Economist	Nairobi
9	4/18/16	Jared Onsando	KEPHIS	Plant Examiner, Plant Variety Protection Office	Nairobi
10	20/9/2016	Nick Mwaura	International Procurement and Logistics (IPL) – ASDA	Direct Sourcing Manager - Kenya	Nairobi
11	6/21/16	Jeroen Vrolijk	Vrolijk Bloemen	Summer flower import and handling agent	Royal FloraHolland, Aalsmeer, Netherlands
12	6/24/16	Foxy Van Der Sluys	IQ Flowers	Import and Export agents of summer flowers	Royal FloraHolland, Naaldwijk, Netherlands

APPENDIX D. SAMPLE CONTRACT BETWEEN CONTRACTUAL COLLECTIVE AND FARMERS⁴⁴⁴

AFRICA FLOWERS LTD AND CONTRACTED GROWER

Contract Form No: CA/2015 _____ .

This Agreement is made this _____ day of _____ **Two Thousand and** _____ is made **BETWEEN WILMAR FLOWERS LIMITED**, a Limited liability company of P.O. Box 1682 - 01000, Thika, Kenya (hereinafter called "Wilmar"), _____ ID no _____ (hereinafter called "Grower") who is a member of _____ Group registered with the Ministry of Culture and Social Services registration No _____ .

1. WHEREAS:

- 1.1 The GROWER has land and willing to produce Passion Fruits specified in Annex 1.2 and
- 1.2 The GROWER has requested WILMAR to provide marketing and extension services for

Sweet Yellow Passion Purple Passion Fruit

(Hereinafter called "contracted fruits") and

- 1.3 WILMAR is an exporter of fresh produce licensed exporter by HCD under cap 318 of the agricultural act and owns the facilities to purchase, grade, pack, cool and export Passion fruit has agreed to provide the services upon the below stated terms and conditions

2. DEFINITIONS AND INTERPRETATION

In this Agreement, unless the context otherwise requires:

- 2.1 "Agronomist" means field officer assigned to given area and paid by Wilmar
- 2.2 "Contracted fruits" means the fruit specified in 1.2 above

3. CONTRACT GUIDELINES:

- 3.1 Both parties have agreed not to engage in with intermediaries for the produce under contract.
- 3.2 The grower may have multiple contracts with more than one exporter as long as the multiple contracts are not for the contracted fruits and it does not create conflict of interest.
- 3.3 Both parties agree to refrain from any unscrupulous business practices which could disadvantage either party.

4. GROWERS RESPONSIBILITY

GROWER agrees with WILMAR the following:

- 4.1 He or she is an active member of a production group that is registered with the Ministry of Culture and Social Services in Kenya
- 4.2 To produce and supply the contracted fruits of good quality at a designated collection centres.
- 4.3 To plant only the type and quantities of fruits agreed with the WILMAR
- 4.4 To undertake Good Agricultural Practices and procedures that is conducive in producing the highest quality fresh produce for the export market. Such practices include but not limited to; |
 - 4.4.1.1 To undertake soil sampling annually to ensure effective use of inputs and optimum production
 - 4.4.1.2 Proper use and application of approved pesticides
 - 4.4.1.3 Proper use and application of fertilizers
 - 4.4.1.4 Proper use of protective clothing
 - 4.4.1.5 Proper Record keeping of all the activities done in the farm
- 4.5 To follow the advice of WILMAR'S agronomists
- 4.6 To allow the WILMAR'S staff access to the units under contracted fruits at all times as required.

⁴⁴⁴ Sample contract obtained from the Director of Wilmar Agro Ltd.

- 4.7 The GROWER is required to grade the fruits as per the agreed general standards before they are re-graded by the WILMAR staffs that are responsible of ensuring the Fruits meet the required standards at the grading station.
- 4.8 Not to enter into any other contract with another exporter for the contracted fruits.
- 4.9 To provide bank account details to WILMAR to facilitate payment of purchased fruits
- 4.10 To be paid for all collected produce through deposit into the GROWERS bank account and no cash payments shall be made.

5. WILMAR'S RESPONSIBILITIES WILMAR

agrees with the GROWER:

- 5.1 To market the contracted fruits which meets the quality standards specified and commercial
- 5.2 To communicate to the GROWER in advance about any market situation that will affect collection of produce. This may be due to but not limited to demand and supply of the contracted fruits and new market requirement.
- 5.3 Any circulars to GROWERS for will form part of this agreement. The following are some of the circulars to the GROWERS;
 - 5.3.1 New purchase instructions.
 - 5.3.2 Collection schedules and the change there after.
- 5.4 To communicate changes in area of collection before the GROWER has harvested the contracted fruits.
- 5.5 To provide free agricultural extension service to the GROWER within the contracted period, this will be through an agronomist.
- 5.6 To source and supply to the farmer, quality inputs which the Agronomist have recommend at the market rates. Where these inputs are not available from WILMAR, the GROWER may buy the same from other sources but WILMAR shall not be held responsible for the performance of these inputs supplied from other sources.
- 5.7 To maintain a complete record keeping system for production and handling of produce in order to ensure full traceability & accountability,
 - 5.8.1 At the collection of the contracted fruits the GROWER will be issued a document called Farmers Purchase Voucher (FPV) which shows the fruits purchased, quantity and price per kilogram.
 - 5.8.2 In case of any rejection of the contracted fruits brought to the collection Centre the reasons for the rejection are given to the GROWER or his representative
- 5.8 To pay the farmer for all collected produce by direct deposit into the GROWERS account. The payment processing time is a maximum of 7 days and Payment Acknowledgment Vouchers (PAV) will be delivered to the GROWER during the next collection day.
- 5.9 To provide the GROWER with trainings on a periodic basis through an agronomist, on the following but not limited to;
 - 5.10.1 Proper production, handling & grading techniques
 - 5.10.2 Proper production practices.
 - 5.10.3 Group governance
- 5.10 To work with other stake-holders e.g. KARI, KHCP, AFFA, County Governments and Min. of Agriculture among others to improve the production and marketing of the contracted fruits.

6. DURATION AND TERMINATION

- 6.1 This Agreement shall remain in force and shall apply to both parties for a period of -----24 ---- - months from the date of this Agreement. Thereafter and upon expiry of the period hereof, this Agreement shall automatically renew unless terminated by either party.
- 6.2 This Agreement may be terminated at any time by either party giving three (3) month's written notice to the other party of its intention; provided that such termination shall not affect any activities that would have been transacted at the date of notice or absolve either party from any liabilities accrued at the date of termination.

- 6.3 Either party shall be entitled to terminate this Agreement with immediate effect upon the happening of the following:
 - 6.3.1 If the GROWER fails to offer for sale the contracted fruits for a period of 2 consecutive fruits collection days unless the WILMAR agronomists have visited the farm and said the fruits do not meet the specified quality requirements.
 - 6.3.2 If WILMAR does not buy the fruits that meet all the quality requirements and it has not communicated new quality standards
 - 6.3.3 The non-terminating party ceases, threatens to cease, or to carry on business;
- 6.4 In the event of natural calamities (such as floods, hail, earthquakes, etc) and non-commercial risks (such as war, insurrection, and national labour strikes) affected either party(s) shall not be deemed as breach of contract.
- 6.5 The rights to terminate this Agreement given by this clause shall be without prejudice to any other right or remedy of either party in respect of the breach concerned (if any) or any other breach.

7. INTELLECTUAL PROPERTY RIGHTS

- 7.1 Nothing in this Agreement shall give WILMAR or GROWER any rights in any trade name, trade mark, brand names, images, logos, patent, copyright, registered design or other intellectual property rights owned by or associated with WILMAR or GROWER.
- 7.2 In the event WILMAR or GROWER wishes to use and/or utilize any trade name, trade mark, brand names, images, logos, patent, copyright, registered design or other intellectual property rights owned by or associated with the other party in advertising and/or promotion materials of any kind and through any medium including but not limited to media advertisements and press releases, WILMAR or GROWER as applicable, shall seek and obtain prior written approval for the same from such other party.

8. RESOLUTION OF DISPUTES

- 8.1 Any dispute whatsoever and howsoever arising out of this Agreement shall at first instance be resolved by good faith negotiations between the parties.
- 8.2 If after 90 days the dispute is not resolved, it shall be referred to arbitration in accordance with the provisions of the Arbitration Act 1995 for determination by the arbitration of a single arbitrator to be appointed by mutual agreement of the parties or, if the parties cannot agree upon the appointment, by the Chairman for the time being of the Chartered Institute of arbitrators Kenya Chapter (the "Institute").
- 8.3 Such arbitration shall be conducted in accordance with the Rules of Arbitration of the Institute. Each party shall bear its own costs in the Arbitration.
- 8.4 To the extent permissible by law the determination of the arbitrators shall be final and binding upon the parties and shall not be subject to any appeal.

9. NOTICES AND SERVICE

- 9.1 Any notice or other information required or authorized by this Agreement to be given by either party to the other may be given by hand or sent (by registered post) to the other party at the address referred to in herein below:

WILMAR FLOWERS LIMITED
 PRODUCTION MANAGER
 Wilmar Flowers Limited

Munene Industries
 Wilmar Go down
 P. O. BOX 1682 - 01000 THIKA
 TEL: +254 20 2096452 (wireless)
 MOBILE: +254 734 ~~273133~~
 +254 708 728 989

EMAIL: info@wilmar.co.ke

GROWER
 Name of the Grower:

P.O. Box _____

Code _____

Town _____

Mobile Telephone: _____

9.2 Any notice or other information sent by e-mail or comparable means of communication shall be deemed to have been duly sent on the date of transmission, provided that a confirming copy is sent to the other party at the address referred above within 7 days after transmission.

10. GENERAL PROVISIONS

10.1 This agreement constitutes the entire agreement of the parties with regard to its subject matter and supersedes and cancels all previous negotiations and agreements. This agreement may only be varied by agreement in writing of both parties.

10.2 This Agreement shall be governed by and construed in all respects in accordance with the Laws of Kenya.

IN WITNESS WHEREOF all parties have executed this contract as of the day and year first herein before written.

EXECUTION

Signed by the duly authorized representative of)

In the Presence of:

WILMAR FLOWERS LIMITED

Name: _____)

Position: _____)

Signature: _____

Wilmar Rubber Stamp

Name: _____)

Designation _____)

Signature: _____

Signed by (Grower)

In the Presence of (Group Official):

Name: _____)

ID No: _____)

Signature: _____

Group Rubber Stamp

Name: _____)

ID No: _____)

Position: _____)

Signature: _____

HORTICULTURAL CROPS DEVELOPMENT (HCD)

Name: _____)

Position: _____)

Signature: _____

HCD Rubber Stamp

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