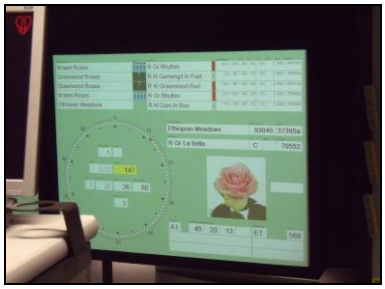
Ethiopia's Growth Set to Bloom? A Global Production Networks Analysis of an Experiment in Economic Liberalisation



University of East Anglia

School of International Development

Ben Taylor

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Abstract

This study examines the emerging floriculture industry in Ethiopia. For many years floriculture has been promoted by the major global financial institutions in structural adjustment programmes as a way for developing countries to increase export earnings. The resources required for its implementation, namely land and labour, are relatively cheap and abundant in the majority of developing countries whilst capital comes from either overseas aid or international investment. The high-value of flowers in developed countries together with high income-elasticity-of-demand means that if a country can establish their floriculture industry and remain competitive, then it can be a sustainable means of economic development.

Many developing nations have attempted to advance their floriculture industries over the past four decades with varying degrees of success. Each attempt has occurred in the context of a unique set of historical, geographical and policy circumstances which have affected the fortunes of the industry. Over the past two decades, Ethiopia has gradually adopted economic policies which have resulted in a focus on increasing export earnings, and in the period since 2004 focus has been placed on floriculture which has experienced huge growth. Previous academic literature on floriculture as a development strategy has been critical, asserting that power is retained by multinational investors and international institutions with little newly generated wealth reaching the developing states or workers in the industry (Korovkin and Sanmiguel-Valderrama, 2007; Hughes and Reimer, 2004; Hale and Opondo, 2005; Maharaj and Dorren, 1995; Hughes, 2000; Meier, 1999; Hale and Opondo, 2005; Donohoe, 2007). A limited body of work has raised questions of the validity of floricultural investment as a strategy for economic development but has concentrated on quantitative analysis and has failed to recognise the importance specific geographical, political and economic circumstances locally play in the industry (Whitaker and Kolavalli, 2006; Asea and Kaija, 2000).

This study uses the emergent Global Production Networks framework of analysis to examine the early stages of this industry and the relationships between its actors. Questions are asked on the future of the industry and Ethiopia's potential for changing their role within it. The study analyses a combination of primary and secondary data sources including a quantitative survey conducted with the majority of flower exporters in Ethiopia; in-depth interviews with 102 actors from a wide range of actors involved directly in the Ethiopian floriculture GPN in addition to some interviews to obtain background information; secondary analysis of trade and other economic data; and discourse analysis of policy documents and public statements of institutional actors. The conclusions of the study contribute to the literature on the utility of an agricultural export–led development strategy. Findings include rapid industrial growth attributable to a range of natural, institutional, socioeconomic and 'lifestyle' conditions and changes that have occurred therein, both within Ethiopia and externally. Value is seen to have been captured by a range of actors with conclusions about the developmental potential of the industry more positive than previous studies, attributable to specific economic and natural characteristics of the geographical location in which the industry has developed. The study argues that institutional actors can best secure the benefits from engaging in global production networks by targeting industries in which they have a competitive advantage by discovering the underlying cost structure and then attempting to manufacture territorial embeddedness amongst investors in order spread the gains and risks involved with industrial specialisation.

Acknowledgements

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List of Abbreviations

ACP	Africa, Caribbean, Pacific
ADLI	Agricultural Development-Led Industrialisation
BOPP	British Ornamental Plant Producers
CBD	Convention on Biodiversity
CCA	Commodity Chain Analysis
CETU	Confederation of Ethiopian Trade Unions
CFC	Common Fund for Commodities
CIOPORA	Communaté Internationale des Obtenteurs de Plantes Ornementales et Fruitières à Reproduction Asexuée
COMESA	Common Market for Eastern and Southern Africa
CoP	Code of Practice
CSR	Corporate Social Responsibility
DfID	Department for International Development
DIY	Do-it-Yourself
EAC	East African Community
EBA	Everything But Arms
EC	European Community
ECEA	Ethiopian Customs and Excise Authority
EHDA	Ethiopian Horticulture Development Agency
EHPEA	Ethiopian Horticulture Producers and Exporters Association
EHSC	Ethio-Horti Share Company
EIA	Ethiopian Investment Agency
EIPO	Ethiopian Intellectual Property Office
EIU	Economist Intelligence Unit
ENHP	Ethio-Netherlands Horti Partnership
EPA	Economic Partnership Agreement
EPRDF	Ethiopian People's Revolutionary Democratic Front
ETB	Ethiopian Birr
ETEP	Ethiopian Transitional Economic Policy
ETI	Ethical Trading Initiative
EU	European Union
EUCARPIA	European Association for Plant Breeding Research
EVC	Enhanced Value Chain
EVD	Agency for International Business and Cooperation
FDI	Foreign Direct Investment
FFFP	Fair Flowers Fair Plants
FMO	Entrepreneurial Development Bank of the Netherlands
FPA	Flower and Plants Association
GATT	General Agreement on Trade and Tariffs
GCC	Global Commodity Chain
GDP	Gross Domestic Product
GDS	Global Development Solutions
GLOBALGAP	Global Good Agricultural Practices
GPN	Global Production Network
GSP	Generalised System of Preferences
GTP	Growth and Transformation Plan
GVC	Global Value Chain
HPTC	Horticultural Practical Training Centre
HS	Harmonised System

IDB	Industrial Development Bureau
IFIs	International Financial Institutions
ILO	International Labour Organisation
IMF	International Monetary Fund
ISI	Import Substitution Industrialisation
IPC	International Policy Community
IPR	Intellectual Property Rights
LEAF	Link Environment and Farming
LSC	Large-Scale Commercial
MIGA	Multilateral Investment Guarantee Scheme
MMF	Mix-Matching Facility
MOFED	Ministry of Finance and Economic Development
MPS SQ	Milieu Project Sieteelt Socially Qualified
NAT	Non-Auction Turnover
NIAB	National Institute for Agricultural Botany
NTAE	Non-Traditional Agricultural Exports
OAU	Organisation for African Unity
ODA	Official Development Assistance
OLF	Oromo Liberation Front
ONLF	Ogaden National Liberation Front
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PEA	Political Economy of Agriculture
PPE	Personal Protective Equipment
PRSP	Poverty Reduction Strategy Paper
PSI	Private Sector Initiative
PSOM	Programma Samenwerking Opkomende Markten
PVCU	Poly Vinyl Chloride
R&D	Research and Development
SADC	Southern African Development Community
SAF	Structural Adjustment Facility
SDPRP	Sustainable Development and Poverty Reduction Paper
SOP	Systems of Provision
SSA	Sub-Saharan Africa
TFA	Tele Flower Auction
TPLF	Tigrayan People's Liberation Front
TRIPs	Trade Related Intellectual Property Rights
UK	United Kingdom
UN	United Nations
UPOV	Union Internationale pour la Protection des Obtentions Végétales
US	United States
USDA	United States Department for Agriculture
VBA	Bloemenveiling Aalsmeer
WDI	World Development Indicators
WGI	World Governance Indicators
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation
WUR	Wageningen University and Research Centre
YED	Income Elasticity of Demand

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1. Introduction

Media reports and empirical observations in recent years have created an awareness of the rapid and unprecedented growth of the Ethiopian floriculture industry. However, the industry has yet to receive academic attention and, as such, the nature and extent of the growth, and how and why this growth has occurred, remain undocumented. At the broadest level this research is intended to address these gaps in the literature and subsequently provide an analysis of the developmental potential of the industry. Analysis of the potential for export floriculture, as one of a number of high-value agricultural export commodities promoted by International Financial Institutions (IFIs) and academics alike in developing countries, as a mechanism by which economic development may be achieved, shall form the major contribution of the research. The thesis aims to document and analyse the Global Production Network (GPN) of the Ethiopian floriculture industry. It identifies the actors involved and how the relationships between these actors affect the benefits that accrue to them in the interest of the long-term economic sustainability of the industry. The overall objective of the research is to assess how the policy of the Ethiopian government and similar policies in other countries, of promoting non-traditional agricultural export commodities (NTAEs), affect developing world actors.

NTAEs bear many of the same characteristics as cash-crops, differing only in that cash-crops may be traditionally cultivated but are not primarily intended for household consumption. Cash-crops can be defined as:

> High value agricultural products are often differentiated from lower value goods due to their perishability, scarcity, historical and cultural significance and/or difficulty in either production or delivery at quality to market. Higher returns are achieved because these products possess attributes for which the consumers are willing to pay premium prices (Davis, 2006; 7).

The *neoliberal* perspective on cash-crops is summarised here by Masanjala, explaining their promotion as part of trade liberalisation programmes:

> Since cash crops earn higher value than food crops, the production of cash crops enables the farm households to obtain more income and food than it could by devoting the same resources to their own food production (Masanjala, 2006; 231).

NTAEs have formed a significant part of developing countries' economic development strategies for more than two decades and developing countries now account for more than half of global trade in NTAEs (Little, 1994; Hallam et al., 2004; Friedmann and McMichael, 1989; Watts and Little, 1994). The Singer-Prebisch hypothesis has led governments in developing countries to target higher-value or processed agricultural products in the hope of obtaining potential gains in foreign currency earnings, employment, and taxation income available from a movement into export sectors with higher income elasticity of demand than staple crops (Cramer, 1999). The employment these industries provide is often in rural areas where alternative employment opportunities are few, particularly for women, and together with the increased returns-per-hectare available in NTAEs, developing country governments have seen such industries as having great developmental potential (Thrupp et al., 1995; Chandra, 2006; Damiani, 2000). Furthermore, successful NTAE industries have the potential to mitigate the negative impacts of rural-urban migration in developing countries, which acts as a further boon incentivising the promotion of such industries (Temu and Temu, 2005).

> With its relationship to rural agriculture and its potential for creating employment for rural unskilled, and often landless, labour the export horticulture sector offers important potential poverty gains (Nadvi, 2004; 22).

However, empirical evidence for poverty gains from NTAEs is at best mixed and there are a number of key areas in which debate is created (Hallam et al., 2004; Conroy et al., 1996; Carletto et al., 2007). Page (2006) following from the debate of Ravallion and Kakwani, raises the question of whether growth must disproportionately benefit the poor to be considered pro-poor (Kakwani), or whether an overall reduction in absolute poverty is sufficient (Ravallion) (Ravallion and Chen, 2003; Kakwani and Pernia, 2000). Much of the empirical evidence on NTAEs has found the latter to be more common, with aggregate growth resulting in a reduction in absolute poverty but with investors reaping a far greater proportion of the benefits from these industries than the poor. Furthermore, smallholders have found integration into export markets difficult (Victor, 2007; Ponte, 2009; Damiani, 2000; Dijkstra, 2001).

With regard to direct impacts of NTAEs on the poor, criticism revolves around three related major issues. The first issue surrounds the inclusion of smallholders in export markets which is significantly affected by the nature of the commodities themselves which are commonly more knowledge or capital intensive than those normally grown by smallholders. This issue is made more acute by the high quality requirements demanded in export markets which determine the ability of smallholders to compete (Diao et al., 2003; Collins, 1995). However, for those households that have been able to participate in NTAEs, incomes have in general increased (Victor, 2007). Indeed, Bigsten et al. (2003) use household panel survey data to show how the increase in production of the cash-crops coffee and chat (a stimulant used throughout East Africa and the Middle East) since the fall of the *Derg*, in Ethiopia, documented in Chapter 4, has had significant effects in improving the livelihoods of the rural poor in Ethiopia.

The second criticism of how NTAEs impact directly on the poor concerns the distribution of benefits. Carletto (2007) displays how the pro-poor objectives of Guatemala's NTAE policies became less effective over time and more than two thirds of the initial adopters of the industry had dropped out by the time of the study. For subsistence farmers, specialisation in favour of short-term profits in markets which are subject to price volatility can be risky and so they may participate sporadically, which has negative implications for quality. Furthermore, much criticism has arisen around issues of worker welfare in the NTAE industries. This relates primarily to waged labour rather than smallholder engagement in NTAE industries. Criticism ranges from issues of safety in the workplace to low wages and health care provision. However, the prevalence of these issues vary significantly depending on both the location and the industry in question (Barrientos et al., 2009; Dolan, 2007; Whitaker and Kolavalli, 2006).

The third criticism of the direct impact of NTAEs on the poor, which is closely linked to their decision to participate in export markets, relates to food security. There are, however, two distinct effects on food security that relate to the different types of NTAE participation in developing countries. The first treatment of the issue relates to households that participate, or don't participate, in growing NTAEs at the expense of subsistence food production. For these households food security issues can be complex as intra-household decisions are made over potential profits amid price volatility, climatic variations, and market access, as has been documented extensively elsewhere (Goetz, 1993; Fafchamps, 1992; Longhurst, 1988; Govereh and Jayne, 2003). Masanjala (2006), for example, provides evidence from cash-crop producing

households in Malawi showing no significant link between food purchases and the increased income seen from involvement in cash-crops.

A second and academically neglected aspect to the question relates to the effect on food security of households through participation in NTAE production by surplus labour. This involves a completely different set of considerations for the household including the impact that engaging in extraneous labour has on subsistence production, the remuneration received for the work conducted and the impact of NTAE production on aggregate food availability and prices.

The second aspect of Page's identification of possible 'pro-poor' effects of a given phenomena - the macro-level impacts on developing countries – has drawn criticism with regard to NTAEs. NTAEs commonly require foreign investors in order to fill knowledge and capital gaps. However, much of the investment made is mobile and consequently "commodity areas may appear and disappear, labour forces are created and dispersed, firms go in and out of business" (Carter et al., 1993; 3), meaning that any benefits realised from the industry are fragile. Further criticism centred on the limited scope of NTAEs to provide any real poverty impacts. Diao et al. argue that of agricultural enterprises, NTAEs "have the fewest constraints and remain the most profitable option for increasing export earnings" but "...because of their relatively small base they only have limited potential to raise incomes on the scale required to affect overall economic growth and poverty reduction over the next 10-15 years" (2003; iv). This argument is further advanced by Thrupp et al.:

> [T]here is a lack of concrete evidence showing a causal link between NTAE growth and broad based economic growth nationally...[E]xporting country governments have gained very little in direct revenues or debt alleviation from NTAEs since most governments have eliminated export taxes (1995; 63-64).

This draws out the dual considerations in the limited scope of NTAEs to provide poverty gains in that they are both relatively small scale, meaning they make only a small contribution to alleviating problems such as unemployment, and that, partially as a consequence of this scale but also because of governmental incentives offered to NTAE investors, they provide little by way of direct tax revenues.

A final group of overarching criticisms relate to the impact of the industry as a whole, affecting developing country actors on both a macro and a micro scale, through the impact of NTAEs on resources. Firstly, the contentious issue of the land on which NTAEs are produced. From a household perspective, in certain locations government policy on NTAEs has resulted in displacement of smallholders, which can have serious negative poverty impacts. At a national scale, land resources have been transferred to NTAE production with significant opportunity cost incurred as a result. Secondly, there are multiple examples of NTAEs degrading resources in developing countries including negative environmental impacts on water resources and land quality (Hengsdijk and Jansen, 2006; Stonich, 1991; Thompson and Scoones, 1994).

The examples from the literature show that the effect of NTAEs on an economy can be limited, in some cases, to low-waged labour but, in other cases, can provide large numbers of stable jobs in many different income-bands and allow for organic growth of support industries. The specific experience of one country with one crop can, seemingly, be affected by a large number of factors; primarily concerning public policy on the introduction of a new industry with regard to fiscal revenues, knowledge transfer, and engendering entrepreneurship.

In recent years Ethiopia has made a dramatic entry into the international floriculture market, growing from negligible export earnings to the fourth largest producer of roses globally, in little over half a decade. This research is motivated by a desire to understand the reasons behind this growth and the nature of it, the consequences it has had and will continue to have for different actors and, finally, the implications of the growth and how it has occurred for other developing countries targeting growth in NTAEs as a developmental priority.

1.1 Research Questions

The undocumented nature of the subject matter at hand has resulted in an unusual, two-stage approach to the formulation of research questions. The first stage consisted of formulating research questions based on what was known about the industry, and similar NTAE industries in developing countries, and the ultimate goals of the research, as opposed to examining existing research to identify areas for further development. Based on these research questions, a theoretical framework was selected which both addressed the aims of the research and allowed for flexibility in the research design to accommodate the undocumented and changing nature of the industry. The theoretical framework is selected inductively in order to provide an analytical schema guiding how the questions should be answered. While academic research on the subject had not yet been produced, occasional media reports and empirical observations by the author were sufficient to postulate that the cut flower export industry in Ethiopia had grown rapidly to a point where, when this research began in 2007, the industry had made an impact on international floriculture and it is upon this assumption that the following research questions were designed:

- Why did the cut flower export industry in Ethiopia grow as rapidly and to the size that it did and why did this growth occur when it did?
- What is the structure of the industry in terms of the actors involved and the relationships between them including the geographical origin and industrial histories of firms involved?
- Who have been the primary beneficiaries of this growth to this point and how might the distribution of benefits change in future?
- What, if any, are the multiplier impacts of the industry on the broader economy?
- What are the developmental impacts of the industry, both now and in the longer term?

1.2 Structure of the Thesis

The thesis is divided into 12 chapters. This introductory chapter, Chapter 1, has served to outline the problem and set it within the context of the wider literature on NTAEs. In the following chapter, Chapter 2, a review of literature on theoretical frameworks for the analysis of internationally and inter-regionally traded commodities is conducted before the most appropriate framework is selected and its strengths and weaknesses outlined. Chapter 3 considers the possible methodologies which could have been employed in order to satisfy the research questions within this theoretical framework and the methods selected are then justified. This chapter includes a discussion of ethical and positionality issues which had to be considered during the course of the research. The chapter also explains that, owing to the undocumented nature of the network and the iterative nature of the framework, empirical findings and secondary data are then interwoven in the remainder of the thesis.

Chapter 4 then describes the recent political and economic history of Ethiopia as it relates to the growth of the flower industry. This is followed by Chapter 5 documenting the nature of the GPN of floriculture including the recent changes that have occurred in the patterns of production and consumption. These two chapters form a key part of the local and industrial context which is fundamental to GPN research. Chapter 6 describes the Ethiopian floriculture GPN including the actors and nodes involved and the relationships between them. Chapter 7 examines how value is created within the GPN and the factors which act as constraints to the creation, enhancement and capture of this value.

Chapter 8 examines in greater detail how value can be enhanced and captured through the marketing strategies of growers. It examines the challenges that growers face in their integration into different marketing streams. Chapter 9 documents labour issues in the Ethiopian floriculture GPN. While previous studies of floriculture have focussed upon issues of worker welfare, this research seeks to examine labour dynamics from the perspective of corporate and institutional actors in order to look at the way in which they might influence the benefits that accrue to Ethiopian actors on a macro level. Chapter 10 then focuses more closely on how the industry affects Page's two different developmental metrics by looking at both the factors affecting the growth of the industry on a macro scale and factors affecting the distribution of benefits created by the industry.

Chapter 11 then examines how the growth of floriculture has impacted upon other industries, both those that support the floriculture industry directly and those whose growth has been influenced by floriculture. Finally, Chapter 12 draws together the empirical findings from the previous chapters in order to provide some conclusions.

2. Theoretical Framework

2.1 Changing Development Paradigms

The growth of the Ethiopian floriculture industry has been facilitated by changes in patterns of global trade and investment referred to herein as 'globalisation'. In this chapter, theoretical approaches to economic development, globalisation and commodity analysis are explored as they relate to the research. The theoretical framework which guides this thesis is then justified and alternative approaches that highlight other factors important to the research are identified so that a comprehensive theoretical approach can be defined with which to address the research questions.

The Bretton Woods, post-war notion of an interventionist, top-down approach to development has to a large extent, at least ostensibly, been confined to the annals of history. Several powerful critiques (Escobar, 1995; Chambers, 1983; Crush, 1995), debates surrounding the conditionality of aid (Fischer, 1997; Stone, 2008) and the influence of unconditional capital from newly industrialised countries, in particular China, have led to a shrinking influence of the more prescriptive policies of the IMF and World Bank, which have recently sought more bespoke and country-led strategies in developing countries (Zafar, 2007; Wade, 2006). Developing countries increasingly rely on their attractiveness to foreign investment as a means by which they can develop economically, seeking to exploit competitive advantages over countries at similar stages of development (Gore, 2000).

As part of this shift in development policy, in the last two decades global patterns of trade and production have changed significantly. Although it is commonly perceived that there has been an increase in international trade and the global economy has become more integrated, in what has been termed globalisation, this phenomenon is academically contested. Nayyar (2006) compares global trade in the last quarter of the 19th Century with the last quarter of the 20th Century and reveals how figures can be misleading about the degree to which international trade has increased. Much of the increase in trade is composed of financial flows in foreign exchange, government debt trading and financial markets (Bridge, 2004). A significant proportion of trade is now also intra-firm trade between a firm and its vertically integrated subsidiaries, all of which distort the figures on international trade. Despite these contentions, it is commonly accepted that, if not the levels of trade, then the patterns have certainly altered in the post-Cold War era (Sachs et al., 1995).

Many production processes in the developing world are conducted solely to raise export revenue from developed world consumers. This differs from the historical pursuit of resource extraction in that the majority of developing countries are now sovereign nations, in the post-colonial era, and are now engaged in a range of industries from primary to quaternary. Since the new patterns of production and consumption began to emerge, several economies have witnessed sustained high growth rates, with China and Ethiopia averaging over 10% annually for the five years to the end of 2008 and many more consistently exceeding 5% growth, which, when compared with, the 1% growth of Britain during the industrial revolution for example, has led some to suggest that international development can be significantly advanced by the mechanisms of globalisation (Chang and Rowthorn, 1995; WDI, 2011). This led McMichael (1996) to assert that during the 1980s and 1990s, the 'development project' had given way to the 'globalisation project'.

Amongst the proponents of this shift in policy were the major IFIs of the IMF and the World Bank. The change in emphasis went in tandem with the promotion of Washington Consensus policies in the structural adjustment programmes of these institutions. Previous developing country policies of import substitution industrialisation (ISI) were, by and large, replaced with export-orientated policies of trade liberalisation. Developing countries sought to exploit comparative advantages they held over developed nations with the power to invest, as well as seeking to create new comparative advantages through trade liberalisation (Krueger, 1998). Firstly, lower wages, large populations, high unemployment, and lack of labour regulation makes labour-intensive activities far cheaper to conduct in the developing world. Secondly, many developing countries have higher land availability than many of the developed countries from which much FDI originates. Moreover, the climatic conditions in the tropical areas of the world in which many developing countries are situated make this land more suitable to the production of certain commodities. These natural factors of production give competitive advantages to developing countries over advanced nations as a whole in a large number of commodities, but developing countries must still compete amongst each other to attract investment. Trade liberalisation has taken place in order to negate deficiencies in factors of production where countries did not have a comparative advantage to producing goods where they see growth opportunities. To varying degrees, capital markets have been liberalised, taxes have been lowered or removed, and capital subsidies have been given. This model of export promotion and international trade liberalisation has contributed significantly to the new patterns that have emerged in the production and trade of goods and services internationally with which this study is concerned.

2.2 Global Production Networks

Here, the different academic approaches to the study of inter-regionally and internationally traded commodities and services are explored and their impact on development considered. These approaches all, broadly, come from a Marxist tradition in their attempts to subjectivise value, but range from heterodox to orthodox in their ideological disposition. The contemporary work of the 'Manchester School'[1] (Bathelt, 2006), in what they term GPN Analysis, forms the foundation for this research. This chapter justifies the selection of GPN although elements from other theoretical frameworks of commodity analysis and alternative analytical approaches from management, economics and other disciplines are integrated where GPN analysis is insufficient in explaining the dynamics of the interactions between actors in the network. Firstly, the GPN framework is defined and the tools it provides for this research identified before its characteristics in relation to other paradigms of commodity analysis are analysed. GPN analysis is born out of a long epistemological tradition of commodity analysis. The aim of such studies reflects the intention of this study, which is to:

> [E]xplain how global industries are organized and governed, and how, in turn, those relationships affect the development and upgrading opportunities of the various regions and firms involved (Coe et al., 2008b; 267).

[1] Coe et al. (2008b) acknowledge the simultaneous development of GPN theory by Ernst (Ernst and Kim, 2002) but the development of the theory and the majority of the seminal literature emerged from the 'Manchester School'.

Or, alternatively: "a means to the end of understanding the evolution of the world capitalist economy" (Bair, 2008; 348). These analyses of the production, distribution and consumption processes are born out of a desire to humanise commodities by considering the social factors which affect these processes:

> Notwithstanding Marx's definitive deconstruction and interrogation of the commodity (in Part I of the first volume of *Capital*), the discourse of commodities has long been captured by orthodox economics of whatever paradigm. As a consequence, it has transmuted into a reified language shorn of its social content. There is a need, therefore, to refocus attention on the social circumstances under which commodities are produced and consumed and thus avoid the ever present danger of slipping into a perception of commodities as de humanized building blocks involved in the making of other commodities (Henderson et al., 2002; 444).

A GPN is defined as:

> [T]he globally organized nexus of interconnected functions and operations by firms and non firm institutions through which goods and services are produced and distributed (Coe et al., 2004; 471)

This framework's nomenclature originates, firstly, because of the multidirectional interconnectedness of the nodes in such *networks*, which differentiates it from the concept of a *chain*. Secondly, *production* allows intangible goods such as telecoms to be analysed in the same way as material 'commodities'. Finally, *global* defines the spatial dimension and allows scope for analysis from a community, regional, national and international perspective[2]. More importantly, GPN analysis advocates a change in emphasis, as in Henderson et al.'s definitional paper, to focus more intently on issues of value, power and embeddedness summarising:

> In order to understand the dynamics of development in a given place, then, we must comprehend how places are being transformed by flows of capital, labour, knowledge, power etc. and how, at the same time, places (or more specifically their institutional and social fabrics) are transforming those flows as they locate in place specific domains (2002; 438).

Henderson et al. (2002; 448) produce this diagram showing a disaggregation of the various facets of a GPN, and a framework for how they may be studied.

[2] Coe et al. (2008b) acknowledge that *transnational* would be a more appropriate term than global but chose to use global owing to current prevalence of usage.

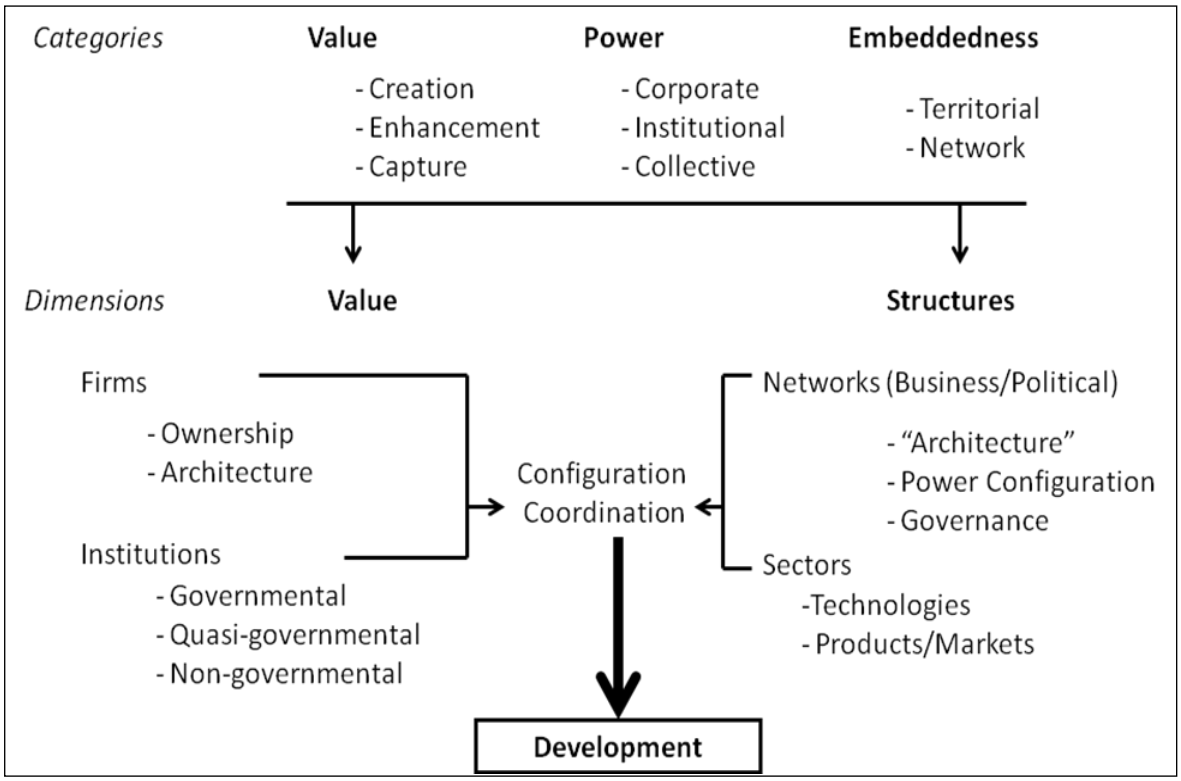

Figure 2.1 A Framework for GPN Analysis; Source: Henderson et al. (2002; 448)

The GPN is concerned with three conceptual categories; value, power, and embeddedness. Value refers to economic rent and Marxian surplus value and looks at how this can be: i) initially created within firms, nodes or collective actors in a GPN; ii) enhanced, via mechanisms including technology transfer, entrepreneurship at the site of production and yield improvement; and iii) captured for the benefit of a particular location within the network through government policies or firm ownership structures.

Power is divided into i) corporate, the ability of a lead firm to influence the distribution of resources and other actors' decisions within the network; ii) collective, this is power held by trade unions, employer associations, NGOs and informal organisations, used to pressure other bearers of power including corporate and state actors; and iii) institutional, which includes power held by local[3] and national state actors, international agencies such as the EU, the Bretton Woods institutions, UN agencies and international credit rating agencies. This structural view of power used in this initial conception of the GPN framework mainly relates to the empirically observable notions of power and how it determines the ability of actors and nodes within the network to negotiate outcomes. As such this element of the GPN framework has since received criticism and

[3] The term 'local' has been used to apply to a diverse range of actors at a range of spatial scales with a plethora of criteria qualifying them as such. It is, therefore, important to clarify the meaning of the term 'local', which is critical to many aspects of the analysis herein, as it is used in this study so that a consistent definition can be applied throughout. For the purposes of this research, 'local' refers to respondents that self describe as Ethiopian. For the reasons described in Chapter 6, many of these respondents do not formally hold Ethiopian nationality. They do, however, view Ethiopia as their permanent country of residence.

attempts have been made to further develop its conception in the framework. Institutional power and the *dimension* of 'institutions' are seen as concrete organisations – whether formal or informal – composed of groups of people. Neilson and Pritchard (2009), following from Hodgson (2006), seek to expand the definition of institutions[4] to encompass the more intangible notions of societal norms and values which can shape outcomes in a production network. However, as an expansion of the institutional concept within a GVC framework this merely serves to compensate for the paucity of explanatory power owing to the absence of notions of embeddedness within that framework. As is discussed below, territorial embeddedness introduces the place specific dynamics of societal norms and values which this broadening of the concept of institutions seeks but allows the *categories* of Value, Power and Embeddedness to retain their individual contributions to the configuration of the GPN.

The concept of embeddedness has influenced work across disciplinary boundaries from economics (Polanyi, 1944; Polanyi, 1971) to sociology (Granovetter, 1985) but the term began to enter geographical discourse in the early 1990s (Dicken et al., 1994). The meaning of the term embeddedness has evolved with its use across academic disciplines. The original conception of embeddedness views systems of exchange as operating on a scale from market exchange which considers only price in determining terms of transactions (disembedded societies) to those which consider social and cultural factors in transactions reflecting the extra monetary value in the governance of exchange (embedded societies). However, patterns of global trade were very different at the time of Polanyi's (*ibid.*) initial development of the embeddedness concept and as such its spatial dimensions were not explicit and did not consider the global nature of firms as they exist today (Hess, 2004; 168-169).

Recent developments related to the concept of embeddedness are closely linked to the parallel literature on business systems and business cultures discussed in the context of the Ethiopian economy in Chapter 4 (Whitley, 1994b; Whitley, 1994a; Whitley, 1999). This literature sees that systems of economic coordination and control are spatial differentiated according to the dominant social and institutional norms at the spatial scale concerned - commonly the nation state. The evolution of the embeddedness concept including its definition in GPN literature discussed below, has frequently led to an examination of questions surrounding the subjects – who is embedded, the objects – in what, and the scale – where does this embeddedness occur. While other conceptions of embeddedness have viewed these dynamics as ranging from purely firm-level actors being embedded in institutional frameworks on a national scale to individuals being embedded in interpersonal relationships at the regional scale, GPN analysis is concerned with a range of firms, institutions, individuals, sectors and networks at local to global scale. However, there has been a degree of debate within GPN analysis about what this wide range of actors and networks at a range of geographical scales are embedded in (Hess, 2004).

[4] The authors do this as a development of the GVC framework but in doing so are attempting to introduce the explanatory power of institutional dynamics from GPN analysis into GVC research and are therefore proposing an expansion of its conception in GPN research by extension.

Embeddedness refers to the extent to which each of the actors is attached to both the network itself and the location, which in turn affects the power and value structures. *Network Embeddedness* is defined as:

> ...the connections between network members regardless of their country of origin...It is most notably the architecture, durability and stability of these relations, both formal and informal, which determines the agents' individual network embeddedness as well as the structure and evolution of the GPN as a whole (Henderson et al., 2002; 453)

Territorial Embeddedness is the concept that GPNs, and any constituent part(s) of them, can become embedded in a place such that they "absorb, and in some cases are constrained, by the economic activities and social dynamics that already exist" in the places in which they locate (Henderson et al., 2002; 452). These two forms of embeddedness are intertwined and in some cases the degree to which one form of embeddedness exists can influence changes in the other form of embeddedness.

Since the inception of the GPN framework the concept of embeddedness has been developed by some to include a third dimension beyond network and territorial embeddedness, to consider the impact of 'societal embeddedness' (Hess, 2004; Polanyi, 1971). This links back to the origins of the GPN framework in the work of Polanyi (1944), discussed below, in which forms of exchange or types of economy are seen as differentially embedded in a society. *Societal Embeddedness* as defined by Hess (2004) examines the influence of cultural and political background of individuals and collective actors on their actions and interactions within a GPN. This concept has synergies with path dependency theories of development in that an individual's or firm's future strategy is strongly influenced by their past (Nelson and Winter, 1982).

For the purposes of this research the original conception of embeddedness will be used for two primary reasons. Firstly, the literature on this triple conception of embeddedness within the GPN framework is not yet fully developed and it was unclear how the additional element of societal embeddedness would add explanatory power. Secondly, and perhaps more importantly, the concept of societal embeddedness seeks to explain phenomena which can be sufficiently explained by a combination of territorial and network embeddedness, and existing literature has yet to successfully argue that this is not the case. The concepts of territorial and societal embeddedness are inextricably linked in a way that network and territorial embeddedness are not. Actors, firms and institutions can move between networks and space, but societies are firmly grounded in space. Individuals and collective actors can be territorially embedded in the location from which they came, effectively removing the need for a concept of societal embeddedness. For example, a firm can be embedded in more than one place simultaneously and to different degrees. A Dutch investor in the Ethiopian floriculture industry can be embedded in the norms or and the business systems of the Netherlands. Similarly, networks themselves have their own norms and business systems and it is difficult to separate out the contributions of an actor's personal from their industrial history in ascertaining the influence of their embeddedness in social values and norms. It is possible to explain such phenomena by using the nuances allowed for within the conception of territorial and network embeddedness in influencing actors' behaviour.

It therefore seems that societal embeddedness is a facet of territorial embeddedness and so, for the purposes of this research and without a full engagement with the subject as the literature is still developing, 'embeddedness' will be conceptualised here in its original, bimodal form.

For corporate actors, high levels of territorial embeddedness result in reduced geographical mobility while high levels of network embeddedness result in reduced sectoral mobility. For labourers, high levels of territorial embeddedness can limit mobility and thus the capture of value but increased network embeddedness may lead to increased possibilities for training and increased capture of value. The exact dynamics affecting the territorial and network embeddedness of different actors within a GPN are, like the other conceptual categories of the GPN, situationally-specific as is explored in the present research for Ethiopian floriculture. The 'dimensions' of firms, institutions, networks and sectors are, in effect, the instruments through which the concrete effects of the conceptual categories are played out. The relationships between these dimensions represent the current outcomes of the interplay between the conceptual categories in terms of public policy, wages, unionisation of labour etc. The cumulative outcome of these dimensions, configuration/coordination, is what determines the development outcomes.

Throughout these conceptual categories and dimensions, knowledge is seen as a key component in the shaping of outcomes and actors' abilities to change these outcomes over time, as it has in many other frameworks of commodity analysis. However, previous frameworks have concentrated on formal training, technology transfer, and emergence of research and development (R&D) capabilities as the only means by which knowledge can change outcomes, despite knowledge transfers outside of these mechanisms, or incidental knowledge transfer, often being more influential. In what is explicitly termed a 'Global Value Chains Study', Oliver et al. (2008) conclude the following about their case study of the ceramic tile industry:

> ...the main knowledge transfer and acquisition process within clusters is based on informal relationships related to cooperation and information exchanges, which are underpinned by mutual trust and face to face contact which lead to information flows utilization to combine ideas and capabilities for supporting entrepreneurial actions within the cluster (508).

GPN research acknowledges the potentially integral role of what is termed, in this research, as 'incidental knowledge' transfer but has been referred to in other GPN studies as 'embrained' or 'encultured' (Ernst, 2000; Ernst and Kim, 2002) and refers to the transfer of less formal and codified forms of knowledge than are traditionally accounted for in studies of globalisation.

This research looks firstly at the potential of the industry to create, enhance and capture value for each of the nodes within the network through the relationship between these nodes, across spatial scales. Secondly, the research considers the current structures of corporate, institutional and collective power in floriculture and explores what potential the interaction of the three has to change their relations over time. Herein, a structural conception of 'power', whereby actors and nodes within the network are able to exert economic and political control over other elements of the network, is used in keeping with its conceptualisation within the GPN framework. However, where appropriate, more sociological views of power are incorporated as Foucauldian notions of knowledge and control, and the use of discursive language are influential in determining relations between certain groups of actors. Finally, the research examines the extent and effects of territorial and network forms of embeddedness in the unique context of Ethiopian floriculture. A

high or growing degree of territorial embeddedness will generally result in a shift in the power structures increasing the power of local actors to influence outcomes in the network over time (Coe et al., 2004; Henderson et al., 2002; Hess and Yeung, 2006; Coe et al., 2008b; Hess, 2004). Furthermore, high levels of territorial embeddedness have been shown in a number of other contexts to result in greater multipliers at the site of production (Dicken et al., 1994; Yeung and Li, 2000; Amin and Thrift, 1994; Conti, 1997). Embeddedness, particularly network embeddedness, can also assist in the capture of value through the formation of trust between actors in the network (Vieira and Traill, 2008; 463). The GPN framework draws substantially from evolutionary and heterodox economics in analysing each of its conceptual categories and here, the situationally-specific agency of different groups of actors to alter the structures of value, power and embeddedness is seen as a target for study (Chang and Grabel, 2004; Schumpeter, 1961; Nelson and Winter, 1982). Methodologically, Henderson et al. (2002) identify five central foci for study:

i) The networks of firms involved in R&D, design, production and marketing of a given product, and how these are organized globally and regionally

ii) The distribution of corporate power within these networks, and changes therein

iii) The significance of labour and the processes of value creation and transfer

iv) The institutions – particularly government agencies, but also in some cases trade unions, employer associations and NGOs – that influence firm strategy in the particular locations absorbed into the production chain

v) The implications of all these issues for technological upgrading, value-adding and capturing, economic prosperity and so on for the various firms and societies absorbed into the chains. (447)

To demonstrate the utility of this framework, what follows is a set of examples from the literature, illustrating how the GPN approach can be applied to particular networks. Bridge (2008), as part of a special edition of the *Journal of Economic Geography* exploring GPN analysis, uses the framework to analyse the extractive sector. He begins by using the literature to explain the functions of the oil industry and discusses the states, firms and non-state actors involved at each stage of the process. He then uses diagrams to show how each node within the network interacts with each other in the process from exploration through to disposal, recycling or carbon capture. This focus on relational analysis is a key feature of the GPN approach and one that Bridge believes makes it superior in the analysis of this sector (406). Bridge then explains the changes that have occurred within the network in recent years and how this has affected relationships by creating tensions that alter the structures of power and value within the network. By applying a GPN perspective to an industry on which the existing literature was highly developed, Bridge is able to show the advantages that such an approach brings when compared with other frameworks of analysis:

> The greater attention that a GPN perspective gives economies of scale, scope and the organization of technological innovation, however, reveals how competitive conditions can produce some forms of local and regional advantages (2008; 411).

Lim (2006) uses a GPN analytical lens for a more practical exploration of the film industry in Hong Kong. Lim summarises how the three primary elements of GPN analysis are intrinsically linked:

> [A] film production house may be an active participant in a product innovation network (thus creating or enhancing value in the making of a film), but the value (or relational rent) created may not be captured for the firm's benefit due to unequal power relations in that network (i.e. the bigger and more powerful financiers call the shots and seek to appropriate rents, often disproportionate to the effort they invested). This could consequently be due to that production house's low degree of territorial and network embeddedness, such as lack of both local and foreign institutional support and poor social connections (341).

Dilts (2001; 16) contends that much of the literature on commodity networks 'deals with results, not steps to achieve the results', a strategy justified in the GPN approach. As argued by Lim (2006), the GPN both allows and requires an open-mindedness in the methodological approach with the end result of explaining the functions, actors and interactions of the network seen as far more important than the way this information is obtained:

> On the methodological front, then, the GPN demands a concoction of quantitative analyses, actor network tracing, *in situ* research and abstraction/deconstruction (342).

As such, Lim uses extensive secondary sources including both academic publications and interviews with targeted respondents from journalistic sources in addition to his own qualitative interviews and quantitative data, a similar model to that used in this study as examined in Chapter 3. Lim also advocates flexibility in the scope of a study. Referring to Henderson et al.'s five suggested methodological foci for study within a GPN, Lim argues that all may not be feasible within a single study depending on both the current level of knowledge about the network and on each element's 'empirical observability'. This argument is also advanced by Phyne and Mansilla (2003) who see providing an exhaustive account of all dimensions of a given network as an improbable and difficult task. This is an allusion to the potential of corporate actors to withhold information; a key consideration in this research, as documented in Chapter 3.

2.3 Alternative Approaches to Commodity Analysis

Since the late 1980s the patterns of production, distribution and consumption of goods and services have changed considerably. These new patterns demanded academic attention as they had significant implications for a wide range of disciplines in social science. This set of studies, including GPN Analysis, which is referred to herein broadly as 'commodity analysis', has its roots in the seminal works of Polanyi (1971; 1944) and received substantial academic attention in the 1980s through the work of Hopkins and Wallerstein (1982), and Porter (1985; 1990). It was not until 1994 however, with talk of globalisation rife in media and academic discourse and an atmosphere of global economic cooperation that the field of study was popularised by Gary Gereffi (1994). In the short time since then, this interdisciplinary area of social science has undergone something of an identity crisis. A brief scan of the literature would find analyses under the names of global commodity chains (GCC) (Raikes et al., 2000); global value chains (GVC) (Humphrey and Schmitz, 2002); systems of provision (SOP) (Cook and Crang, 1996); Commodity Circuits (Leslie and Reimer, 1999); commodity networks (Hughes, 2000); commodity cultures (Jackson, 1999); new regionalism (Ethier, 1998); the filière approach; enhanced value chains (EVC) (Hauknes, 2001); political economy of agriculture (PEA) (Goodman, 2004); and finally, GPNs

(GPN)(Henderson et al., 2002), completing a list which is by no means exhaustive. The majority of these theoretical frameworks continue to co-exist, with research still being conducted under each label. In practical terms however, the differences between the analyses, though important, are few and the key points of contention are now identified.

2.3.1 Commodity Mapping

The first major area in which these analyses differ is in how they conceptualise the processes which take a commodity from production through distribution and consumption, which is referred to here as *commodity mapping*. Early conceptualisations, such as Commodity Chains and SOP, followed later by GCC and GVC frameworks, focus on a mono-directional linear relationship between actors (Raikes et al., 2000). A dichotomy is implied between 'core' and 'periphery' in value extraction, economic and social costs and, therefore, power (Gereffi et al., 1994). In these frameworks, the core is seen as externalising economic pressures towards the periphery, whether this is in the buyer-driven chains of low technology branded goods or in the producer-driven chains of high tech goods with their high barriers to entry. The linear nature of this form of *commodity mapping* affords little or no agency to 'peripheral' actors, which is often an inaccurate portrayal of the 'realities' the framework seeks to highlight. Such analyses have been criticised for being structuralist and reductionist in nature, imposing a generic, preconceived framework onto inappropriate localities and industries, removing them significantly from the Marxist basis of much of the commodity analysis literature (Cramer, 1999). They also tend to ignore institutional frameworks, such as industry collectives and regional and national governments involved in commodity processing, focussing instead on purely inter-firm relations.

Early reactions to Commodity Chain analysis sought to address these criticisms by conceptualising a more fluid construction of the interactions between actors at different stages of the production process. The first attempt to do this came from Commodity Circuits analysis, which visualised production, distribution and consumption as interacting in a circular fashion whereby the driving force for production could be initiated at any point, and in any direction in the circuit (Leslie and Reimer, 1999; Hughes, 2000). However, Commodity Circuits allow little room for the explanation of relationships between horizontally associated actors, often part of geographical or political associations or clusters (Grote and Täube, 2007). A more flexible conceptualisation of *commodity mapping* emerged more recently in the form of commodity networks. In this model, actors can interact between all levels and the potential exists for power to be exerted from raw material extraction or other primary stages of production right through to the consumption of the product. This 'flatter' conception in *commodity mapping* represents a significant departure from the hierarchical structures of GCC and GVC (Hughes and Reimer, 2004; Thrift and Olds, 1996).

Pilot research conducted into the floriculture industry, together with secondary data, strongly indicated that the relationships between actors were more complex than allowed for by chain or circuit mapping. Some firms in the industry are almost entirely vertically integrated, operating farms, transportation, marketing and import elements, and delivering a finished product into retailers, but they operate alongside firms involved in networks with no vertical integration. Other studies into floriculture have shown evidence of horizontal integration of firms which can be clustered geographically, based on nationality, path dependency or social ties. Industrial collectives govern the terms of interaction in some areas with state actors playing a minimal role while in other areas these roles are reversed. Neither of these groups can be accounted for in the GVC conception of *commodity mapping* making it an inappropriate framework. The network

mapping concept allows for the exploration of the complex and diverse relations involved in Ethiopian floriculture and the power relations that govern them in different geographical areas.

2.3.2 Core Objectives

The second area in which the frameworks for commodity analysis vary is in their core objectives. GVC, GCC, SOP and PEA state policy relevance as their primary, if not their sole objective, by 'unveiling the economic realities at sites of production' (Hughes, 2000). Commodity cultures and Commodity Circuits frameworks reject this goal, seeking instead to look deeper into the qualitative aspects of the assignment of meaning to commodities by different individuals or groups at different stages of the process from production right through to consumption. Social scientists from political and economic perspectives have criticised these frameworks for underestimating the significance of power relations and switching from the producer-centric approach of the previous paradigm to a consumer-centric approach. Subsequently, GPN, Commodity Networks and EVC frameworks set out a more balanced set of objectives involving evaluating the distribution of power within a network whilst avoiding the prioritisation of one sphere of commodity circulation over another (Hughes, 2000). Such approaches aim to be policy relevant whilst accounting for geographical and cultural variations as opposed to creating a 'model' which is entirely generalisable across spatial and cultural contexts as well as applying to any value chain.

2.3.3 Scope

The final area of disagreement between the frameworks is over the scope of the study. GCC, SOP and PEA studies tend to focus on national-level government policies and the actions of transnational corporations. Commodity cultures and Commodity Circuits approaches concentrate on micro-level interactions between local level, regional and sub-regional actors, and the meaning they assign to the commodities with which they are involved. Finally, GPN, Commodity Networks and EVC approaches set their scope at a 'trans-local' level, breaking down the state- and firm-level units to examine interactions between actors, or nodes, at all spatial scales.

The Global Value Chains framework aims to synthesise literature on the cross-border linkages within and between firms involved in global production such as Global Commodity Chains with literatures on industrial clustering and local level determinants of firm competitiveness. As such it shares a multi-scalar focus with GPN research and is the most viable alternative framework for the analysis of Ethiopian floriculture. In practice however, GVC research lacks the empirical flexibility to examine the local-level interactions allowed for within the GPN framework and so ignore the influence of individuals and community level actors in determining outcomes.

2.4 The Selection of the GPN Framework

The central aims of this research are to find the likelihood of the flower industry providing a sustainable form of export income for Ethiopia, examine the benefits that accrue to different actors within the network and the potential for this distribution of benefits to change over time. It aims to evaluate how local actors are changing their level of involvement in the industry in order to improve economic outcomes. Ethiopia is a culturally, climatically and politically heterogeneous country. The outcomes achieved, and the strategies employed by actors at all levels to alter these outcomes, vary greatly by region and a broad-based macro-level study using a chain framework would be inappropriate. However, the goals still include regional, national and potentially

international policy relevance and so a network framework is seen as more beneficial than a circuit style approach.

The Commodity Networks approach is then, in practice, a combination of both CCA and Commodity Circuits, focusing on individual nodes within the production/consumption process and examining the relations between them. Nodes are understood as groups of actors that perform a specific function within the commodity chain or network. The network is understood in terms of a web where it is possible for all strands to be connected to one another and where influence can be exerted in any direction. A network is the most useful way to disentangle the complex relations between different nodes in the floriculture production sphere and it is one that has been frequently used to analyse other aspects of horticulture (Barrett et al., 1999; Hughes, 2000; Whatmore and Thorne, 1997; Klooster, 2005). For example Barrett et al. (2004) use the Commodity Networks approach to analyse the workings of the market in high-value vegetables exported from Kenya to the UK focusing on four nodes: sites of retailing and consumption; sites of production; sites of import; and sites of export. Through this framework of analysis it is possible to investigate processes at work from a local to an international level. However, since 2002, a new form of commodity analysis has emerged in the form of GPN, changing the emphasis of Commodity Networks to one that is far more appropriate for this study.

The Global Value Chains framework aims to synthesise literature on the cross-border linkages within and between firms involved in global production such as Global Commodity Chains with literatures on industrial clustering and local level determinants of firm competitiveness. As such it shares a multi-scalar focus with GPN research and is the most viable alternative framework for the analysis of Ethiopian floriculture.

Bair (2008) conducts an in-depth exegesis of commodity frameworks literature in which some of the many salient points reflect the criticisms of older frameworks documented above. Guiding the reader through the evolution of commodity analysis, Bair sets out various frameworks on scales of purely economically-governed to purely socially-governed concepts and from those that examine only international issues through to community-level focus. The article points to what Bair sees as the failings of both the GPN framework and Granovetter's 'New Economic Sociology' in not achieving in practice what they set out to in theory. Bair argues that while the GPN framework calls for attention to be paid to important elements omitted from GCC studies, such as institutional context, in practice studies and research agendas have differed little from those of GCC. While Granovetter calls for balance between social and economic forms of organisation (1985), Bair notes that, as acknowledged by Granovetter himself, studies under the banner of New Economic Sociology have tended towards local and social forms of organisation. However, Bair's rigour in following theory through to practice is not applied as thoroughly to GVC literature. Bair argues that GVC studies purposefully sideline 'institutional context and path dependent dynamics' in order to "develop a theoretical form of governance that is generalisable across space" (357). However, GVC studies such as that of Palpacuer and Parisotto (2003) dispute this assertion, in practice seeming to advocate a GPN analysis:

> Although the GVC approach is a fundamental tool to understand global production, we will argue that it should be combined with other 'territorially based' approaches...in order to better grasp the social and institutional context in which global networks operate at the local level, and how this context influences network dynamics (99).

Bair also makes a differentiation between GVC theory, where the inter-firm relations are governed by and built upon Coase's transaction cost theory and New Economic Sociology where network governance is based on trust (1937). However, some studies, such as Vieira and Traill's (2008) "Trust and Governance of Global Value Chains: The Case of a Brazilian Beef Processor", which define themselves as GVC, have used trust-based governance to explain certain networks. Nadvi's (2004) assessment of how GVC research can inform the policy debate appears to stray from the GVC's stipulation of scale, referring to the need to look at households, workers and 'poverty nodes' in terminology more commonly found in GPN literature. This is, then, a clear indication that GVC studies too, have strayed from their theoretical origins. This could be as a consequence of the prescriptive nature of the GVC framework. Until one collects primary data on a commodity network, one cannot determine who the key actors are or whether they conform to the assumptions of a GVC study. The flexibility granted by the GPN framework allows for a more iterative process. Bair concludes, in concurrence with the second identified difference of commodity analyses, that the choice of framework is largely dependent upon one's core objectives:

> Ultimately, the choice between the explanatory power of a parsimonious theory of GVC governance and the complexity and richness of the context specific case studies generated by the GPN approach may come down to larger questions of disciplinary location and substantive research interests (357).

Essentially, a GPN approach is iterative in that it examines production networks and attempts to discover the influences of power, embeddedness and value on the network. It leaves scope for any element, such as institutional power, to be insignificant in a particular network and does not ascribe a methods set to studies. The GVC approach, as the most viable alternative, seeks to generalise too widely. One cannot expect to apply the same 'model' to such a wide range of commodities in geographically disparate and culturally heterogeneous locations as, in certain industries, factors such as the local state institutions ignored by the 'model' are the primary factor determining the governance of the network.

2.5 Shortcomings of the GPN Framework

The iterative and flexible nature of the GPN framework means that few criticisms can arise from its analytical focus (the main criticism being that it is too flexible and can become unfocused). However, as a relatively young framework in the field of commodity analysis, the GPN framework and the literature that has employed it, have thus far not covered all of the scope allowed for within the framework. The majority of studies have been in the form of short articles which do not have purview to explore all of the issues which may influence the structures of power, value and embeddedness within a GPN. As such, studies have tended to focus on the potential for industrial upgrading amongst developing country firms. Whilst this is an important aspect of the explanatory capacity of the GPN framework, in an assessment of how these global industries affect developing country actors such studies have tended to neglect the impact on labourers' incomes and welfare. In developing countries, where poverty is widespread, the potential of these industries to create employment and improve living standards for the poor represents one of the major opportunities of export industries in high-value commodities. In many frameworks of commodity analysis and, to a lesser extent, in GPN analysis, the influence of labour processes on the success of an industry is largely ignored. Labour is often conceptualised solely as a factor of production that influences the location of industrial activity but the motivations and practices of labour show great geographical variation and are influenced by a range of economic, political and

social circumstances which have a significant influence on the success of the industry, as is seen in Chapter 9.

This study looks at the different, regionally specific ways in which a workforce can be created, transformed and maintained in order to ensure the success of the industry. To this end, elements of mainstream economic theory and political economy are drawn upon for the analysis of labour dynamics (Yamada, 1996; Munslow and Finch, 1984; Larner, 2002).

While the range of possibilities allowed for within the GPN framework have not been, as yet, fully explored, the emphasis on attempting to understand the dynamics of power, value and embeddedness from local to global scales means that, inevitably, some of the positive contributions of either ethnographic studies at a local level, or international relations studies on an international scale, will not be feasible within the scope of a GPN study. Such approaches would have offered different advantages in exploration of this problem. Meier (1999) uses an ethnographic method set to explore the impact of the floriculture industry in Colombia on women. This enabled the author to circumvent some of the more evasive practices engaged in by the actors in the network discussed below and is undoubtedly the most efficient way to obtain data directly from labourers. However, for the reasons discussed elsewhere this did not meet the objectives of this research. Similarly, Strange (1992), from an international relations perspective, examines new patterns in global trade and how lead firms have been able to influence national governments. While this approach enables a broader view to be taken of economic and political relations on an international scale, which is more generalisable across space, it does not allow for an in-depth understanding of the unique multi-scalar relations which this research sees as key to satisfying the research agenda.

In this section it has been argued that the specific emphases of GPN analysis, together with its aim of investigation transcending national and regional boundaries, make it the most appropriate framework for examining Ethiopian floriculture. In the following chapters, GPN analysis is used to determine the processes occurring at all stages of the Ethiopian floriculture industry and the structures of power, embeddedness and value governing them. To do this a suite of qualitative and quantitative methods is used to determine and document the interactions between the nodes within the network.

2.6 Analytical Schema

Having identified and justified a theoretical framework which provides the best tools for the analysis of an under-researched production network, the research questions outlined in Chapter 1 can now be addressed using the GPN framework to develop an analytical schema for the research. The following points for analysis are drawn from previous empirical evidence and theory in the fields of floriculture, high-value commodity exports and trade liberalisation.

- An exploration of how Ethiopian floriculture created, enhanced and captured value through the relationship between regional and national government, local employees and entrepreneurs, and the potential for each of these value transformations to change over time.

This point assists in addressing several of the research questions. Firstly, in examining the potential of the industry to create value, an assessment can be made of how the Ethiopian floriculture industry was able to grow so rapidly, although in order to determine why the growth

occurred when it did, issues of embeddedness and power structures from the subsequent question will be incorporated. Secondly, the potential of the industry to capture value is a key determinant of the distribution of benefits, with the question of for whom this value is captured encompassed within the analysis. The degree to which value can be enhanced within the industry, then, makes a significant contribution to determining how benefit distribution may change in future.

- An analysis of how territorial and network embeddedness affected the level and distribution of benefits accruing to different nodes of the Ethiopian floriculture GPN and how might levels of embeddedness change over time.

High levels of territorial embeddedness are likely to result in greater positive effects on the broader Ethiopian economy. High levels of network embeddedness are, over time, more likely to result in value creation, capture, and most significantly enhancement, which can change the structure of benefit distribution within the industry.

- An examination of the current structures of corporate, institutional and collective power in floriculture and the potential for the interaction between value and embeddedness to impact on power structures over time.

In addressing this point contributions are made to several research questions. Power structures within the industry can influence the benefits accruing to different groups and the ability of individual nodes to alter the distribution of benefits. Power structures within the industry also have an impact on actors that have been able to gain access to the GPN. Ultimately, power structures influence the developmental impact of the industry. One of the key contributions of the GPN framework, though, comes in the examination of how the structures and changes in value and embeddedness shape the distribution of power within the network, which is likely to have a significant impact on the changes in the distribution of benefits over time.

Any remaining aspects of the research questions are satisfied through elements drawn from a combination of these three points in the analytical schema. The structure of the industry and the nature of the interactions between the various nodes of the GPN are addressed using all aspects of the schema. The developmental impact of the industry is effectively an assessment of what benefits have accrued to which local actors as a result of the industry and how sustainable these benefits are, tempered by any negative impacts that industry has had. This question, too, is informed by a combination of all three aspects of the analytical schema.

3. Methodology

The interdisciplinary nature of the GPN framework allows a flexible lens to be applied to the subject matter, facilitating examination of phenomena through an array of quantitative and qualitative methodologies with the aim of either mutual reinforcement or uncovering plurality of causation not visible with the use of a single method. When working in sub-Saharan Africa, the necessity of using a large method set becomes even more acute. Much of the data produced by international agencies such as the UN and the World Bank is unreliable (Loup and Naudet, 2000; Murray, 1991). As discussed later in the study, there is very little academic work on Ethiopian floriculture and data and publications on floriculture in general are inadequate, making fieldwork a necessity. For those reasons, a mixture of secondary quantitative data sources together with primary quantitative and qualitative data are required for this research. This flexibility in methodology is advocated in the GPN theoretical framework discussed above and the methodology used was iterative with the method set altered based on the findings of initial data collection. Meier (1999) found, when studying the Colombian flower industry, that information must be obtained slowly and meticulously and, as such, the methodological focus shifts as results are analysed in the field.

This research employed a comprehensive methods set with the aim of triangulation. In-depth interviews were conducted with 40 of the 80 flower farms exporting at the time of primary research. Interviews were conducted with 62 further respondents in other nodes of the production network. A quantitative survey was conducted with 64 of the 68 farms exporting at the time of the survey. Secondary data on trade and other economic statistics were analysed as they related to the research. Discourse analysis was employed where appropriate in relation to government documents and policies. What follows, then, is an appraisal of the various methods that were considered for this research and a justification for the choices made.

3.1 Pre-Fieldwork Research

Before embarking on any primary data collection it was important that all existing information was gathered and the research design shaped accordingly so that fieldwork time could be used most efficiently. Contact time with key respondents is often limited and must be utilised fully. Pre-fieldwork research involved extensive reading of secondary sources, a series of telephone interviews and a small number of personal interviews in addition to a large number of preliminary email surveys. In the initial literature search conducted for the study, it became apparent that much of the secondary data on aggregate statistics for the Ethiopian industry and some of the macro-economic statistics for Ethiopia were not widely available. These statistics had to be sought from government agencies, banks and industry associations within Ethiopia which would likely entail access problems. The broad range of disciplines encompassed within this study, and the emergent and secretive nature of some of its subject matter, posed many problems in the sourcing and understanding of secondary data. Literature on some subject matter, such as floricultural genetic modification which initially appeared important for the research, is sparse. Consequently, information occasionally had to be sought from the authors of publications themselves, which was useful in establishing contact for future correspondence. Additionally, the diversity in subject matter meant that in order to gain a basic understanding, particularly of technical literature on IPRs and genetic modification, reading groups were engaged in with

academics and practitioners in areas including law and genetics while biotech firms in the UK were visited to gain an overview of their operations.

During the pre-fieldwork period approaches were made to several key actors in the industry which were followed-up during the pilot research period with a view to conducting further interviews with them during primary fieldwork. These approaches had varying degrees of success. This was the first element of what became a protracted and complex process of 'networking' in order to gain access to data and respondents. In this process it was important to graduate the level of contact with respondents and build a relationship over time. The remote contact by telephone or email engaged in at this stage was the first level of engagement with respondents, which was then built upon in the pilot study.

3.2 The Pilot Study

A logical part of methodologies for the investigation of undocumented production networks is the pilot study. This is not a traditional pilot study in which a prescribed methodology is conducted on a small scale in order to test for the sample size and scope of the final study; rather this is an exploratory process consisting of using as broad a range of methods as possible to collect as a wide a range of information as possible with a view to finding who the key actors in the industry are and how access to the required data may be gained. Many production networks, including that of Ethiopian floriculture, are, as yet, undocumented. Unlike the global value chain framework, GPN analysis sees spatial, institutional and social context as integral to explaining outcomes in a network and while studies have been conducted on floriculture industries in other countries, the absence of significant literature on the Ethiopian network in addition to an absence of literature which has examined the modern floriculture industry in the requisite detail means prescribing a methodology prior to an exploration of the network may result in an inappropriate focus. The initial pilot study was conducted in March and April of 2009 and consisted of informal interviews with as many key actors as could be accessed in Holeta to the north of Addis Ababa, Addis Alem to the west of Addis Ababa, and Debre Zeit and Ziway to the south of Addis Ababa, as well as with industrial collective and corporate actors based in Addis Ababa itself. It began with the Hortiflora 2009 conference held in Addis Ababa which provided excellent networking opportunities and opportunities to visit flower farms for the first time.

Previous first-hand experience of working in Ethiopia and experiencing the functional difficulties in conducting research there meant the presence of potential problems which may have arisen in primary fieldwork, which were reinforced by pre-fieldwork research, were clear:

> ...you have worked in Ethiopia so you know this is not particularly a very easy environment to work in...There are other countries in Africa where it is much, much easier to work. They will not very easily provide you with data, it's not very open, it's difficult, very difficult to get the stuff (IG1).

It was envisaged that an extended period of pilot research would be necessary in order to establish sufficient contacts to conduct the primary fieldwork, which had, in itself, been allocated an extended period of time due to envisaged operational difficulties. However, the flexibility of the GPN framework allowed this research design to be modified significantly during pilot research based on unforeseen circumstances. In the initial stage of pilot research in Addis Ababa attempts were made to reinvigorate social networks, none of which had previously been connected to floriculture. As documented below, many actors within this social network were now key actors in

floriculture, indicating the growth of status of the industry within the country, and through a technique of snowballing, access was gained to high-level actors throughout the industry. The conference too proved an unexpected opportunity to conduct some primary data collection. Initial communications with contacts in the industry revealed this to be a rare opportunity to obtain information from some of the key actors in the industry, normally dispersed over a large number of rural and relatively inaccessible farms and several other institutions and 500km, with poor telecommunications and postal links. Furthermore, several important international actors were spatially confined to the Millennium Hall, Addis Ababa, for the duration of the conference, with a number of periods where they were available for interview or survey. This allowed a quantitative survey to be conducted with a large number of flower growers, in addition to qualitative interviews with several other key actors.

3.3 Selections and Rejections

This section documents the methods that, with the information gathered during the pilot study, were selected for the final research design and the alternative methods that were not chosen, with justifications for each.

3.3.1 Approaches and Interview Methods

As described in the previous section, 'networking' was a vital element of this research and was engaged in during both the pre-fieldwork and pilot study phases. In this process, it was also important to identify and adapt to social and business systems. These systems are conceptualised by some theorists, particularly those operating under the banner of *New Institutional Economics*, as norms of a production network or economy (Pedersen and McCormick, 1999). North (1990) sees such norms as one of the 'rules of the game' that have evolved over time and shape human interaction within the network. These business systems vary significantly across national and regional boundaries and are attributable to 'deep-rooted historical and social reasons' (Pedersen and McCormick, 1999).

The different business systems in all of the countries in which research was conducted governed every element of the research and while the specific manifestations of how the business system affected each node within the network are explained more fully in Chapters 5-11, its relevance to the approaches and methodologies used are discussed here. The important features of Ethiopia's business system for the methods used in this research include the face-to-face business culture, which is more akin to a middle-eastern business system than a northern European system (Simiar, 1983; Fazel and Ray, 1979; Mole, 2003). It was also important to note normative business practices. In Ethiopia, common practices which affected research included appointments being made for the same day or the following day and no further in advance. The transnational nature of the fieldwork, together with the diverse nationalities of its respondents, meant that an appreciation of the different business systems present in each location and the expectations of each respondent was necessary.

Once a respondent was identified the best way to establish contact was assessed. The most effective way of obtaining a meeting with a targeted respondent was through a pre-existing connection (Laurila, 1997). Where successful, introductions were made through a mutual friend, colleague or associate, which was largely dependent upon luck (Hughes, 1999; McDowell, 1998; Parry, 1998). However, with increased personal network embeddedness in floriculture,

connections were made and developed making obtaining access to the vast majority of targeted respondents easier.

In pre-pilot work, relationships were developed by graduating the level of contact, beginning with a polite formal email explaining the study, personal background and the type of information required from the respondent. Over 1000 emails were sent, directed at various nodes of the GPN and the response rate was very low (<6%). People were more likely to respond if they were certain that they were not going to be of assistance, whilst some suggested alternatives. Of those that responded and were still involved in the industry, around 30% initiated dialogue that eventually resulted in an interview or telephone conversation. To those who did not respond, another email was sent attaching the original message explaining the importance of the research and their contribution to it. This achieved a further response rate of approximately 5% but the overall response was still poor.

Finally, telephone calls were made to the remaining respondents drawing attention to the emails and requesting an interview. A telephone interview may be used as "a good-compromise between postal and interviewer-administered questionnaires" (Parfitt, 2005; 103). The cost of telephone interviews is financially and temporally lower than face-to-face interviews, which made them feasible for the pre-fieldwork research (Oksenburg and Cannell, 1988). However, the poor telephone connections to the rural areas of Ethiopia with which this research was concerned made detecting subtleties in conversation difficult which, together with other inherent difficulties of telephone interviews such as short duration, limited the effectiveness of this method (Groves, 1988). Consequently, in the primary fieldwork, telephone interviews were only conducted when necessary, with respondents in disparate locations that provided contextual information, and not data which was integral to the conclusions of the study. Over 200 phone calls were made, most of which were to Ethiopia, the Netherlands or Israel. At this point of the pilot study, the decision was made to stop requesting information from respondents in small respondent pools. To risk alienation with these respondents would be to jeopardise the chance of obtaining an interview during primary fieldwork with both that respondent and their immediate network.

Face-to-face interviews were highly productive in all phases of the research as in the early stages of a GPN study, particularly when investigating an under-documented GPN, one's focus can change during the course of an interview as the relative importance of certain aspects appears to alter. This was a significant advantage of face-to-face interviews over self-administered surveys. The semi-structured nature of these interviews allowed avenues which had not previously been considered, and so would not have been included in the format of a structured data collection format, to be explored at length[5].

3.3.2 Quantitative Data

A key component of the framework selected for this research is the triangulation of methods. Whilst verification of phenomena through the use of multiple methods is the optimum way of conducting all research, it is particularly important in an Ethiopian context given the prevalence of two socio-cultural phenomena which are explained in detail in Chapter 4. The first of these

[5] See Appendix 1; *Typical Interview Schedule*

phenomena relates to the autocratic nature of the government. A legacy of the post-socialist society, an atmosphere of suspicion percolates through society, resulting in the majority of Ethiopians being guarded in their attitudes to enquiry and the information they provide (Young, 1998; 202). Furthermore, in many aspects of government, there is a lack of independent auditing with a percentile rank of 11.4 for 'voice and accountability' in the most recent Worldwide Governance Indicators (WGI). This compares with Uganda's percentile rank of 33.6 and Kenya's 39.8, giving Ethiopia by far the lowest score for accountability of any major flower exporter (Kaufmann et al., 2010). This afflicts a number of aspects of public life including elections, censuses and official statistics on industries including floriculture. The second phenomenon is something which has been found in previous empirical work conducted by the author; the strong fear among many Ethiopians of appearing ignorant leading to a proffering of answers to questions of which they are unsure (Levine, 1965). The first phenomenon leads to unreliability of quantitative data while the second phenomenon casts doubt upon qualitative interviews. As such, data must be triangulated using as many methods as possible in order to ensure the accuracy of conclusions. Where financial data is given in local currency, Ethiopian Birr (ETB), this is the accurate figure in local currency as given by the respondents, official statistics or document concerned. No accurate conversion could be applied due to the volatility of exchange rates, regular currency devaluations and the existence of a readily accessible black market in currency exchange. However, an approximate conversion has been applied to $US using historical nominal exchange rates in order to guide the reader as to the approximate level of the figure concerned.

The first component of quantitative data collection consisted of obtaining and analysing figures from government institutions, industry associations, auction actors, national banks and commercial finance organisations. This consisted of a personal process of trust and relationship building than the obtaining of secondary data would ordinarily entail. Data was often piecemeal and only available in person from disparate locations. On occasion, services such as web design, copyediting or speechwriting were required in order to gain access to the data.

The second component of quantitative data required was a survey. This gave the advantage of placing less importance on the questionable integrity of official statistics and gave some broader context to the qualitative interviews obtained. This survey had to be delivered in person in order to obtain the required response rate, given the difficulties encountered in pre-fieldwork research. The Hortiflora 2009 conference provided the ideal opportunity to do this with a captive audience including over 90% of currently exporting growers present. Being present while respondents completed the survey to assist with any difficulties and ensure the survey was completed improved both the data quality and the response rate.

3.4 Overarching Issues

3.4.1 Scale and Scope

In designing a methodology, decisions had to be made as to the scale and scope possible within the financial and temporal constraints of the research. Floriculture is a truly global industry with research institutions and capital investors based on six continents. In the absence of the available funds to visit all locations to conduct face-to-face interviews, decisions were made on which locations were feasible within the scope of the study. Furthermore, the locations of nodes within the GPN are fluid and so it was difficult to schedule research too far in advance. One potentially interesting option would have been to conduct a comparative study of the Ethiopian flower

industry with that of Ecuador. However, one of the primary contributions of this research is an analysis of the undocumented structures of power, value and embeddedness that govern the Ethiopian industry. Given this focus and the parameters of the study, it was decided that this research would focus solely on Ethiopia.

Within the Ethiopian floriculture GPN, there are nodes of the network that have not been fully explored in this research owing to the study's scope. The primary purpose of the research is to explore the benefits that accrue to various actors within the network as a means of understanding the developmental impact of the industry. Previous studies that have examined floriculture with a developmental lens have tended to focus closely on issues of worker welfare and the environmental impact of the industry, in locations including Kenya, Ecuador and Colombia amongst others (Whitaker and Kolavalli, 2006; Dolan, 2007; Hale and Opondo, 2005; Hengsdijk and Jansen, 2006; Hughes, 2001; Korovkin and Sanmiguel-Valderrama, 2007; Maharaj and Dorren, 1995; Meier, 1999). Worker welfare is an important aspect of any assessment of the development impact of an industry. In developing countries, the provision of income and other benefits which may improve the quality of life for large numbers of people are one of the primary ways in which an industry may benefit the country. However, for two main reasons, labour issues are not engaged with fully in this study.

Firstly, issues of worker welfare in floriculture are comprehensively addressed in the literature on floriculture. Although the GPN framework emphasises the importance of situational specificity and the studies that have focused on worker welfare have been conducted in different locations with different social and institutional contexts, work which has focused on labour issues has done so at the expense of broader issues of the sustainability of the industry and which other groups of domestic actors benefit from it. It was therefore considered more important for this study to prioritise the neglected aspects of studies into floriculture in developing countries than to investigate the specific issues that affect labour in the industry as they differ from other industries in other locations.

Secondly, interviewing workers in floriculture would require the employment of multiple translators for the different languages spoken in the various agro-ecological zones and would be highly time-consuming. Therefore, while labour issues of employment creation and wages are covered here, it would neither be possible nor productive within the scope of this study to fully address labour issues.

The issue of the environmental impact of the floriculture industry too has the potential to impact on the long-term economic impact of the industry. If, as has occurred in Kenya, water tables were to drop significantly and water courses were to become polluted as a result of the industry, this would impact on both the future of the industry and the future of agricultural land as a whole as the quality of arable land is degraded. The situation in Ethiopia, and also within the different agro-climatic regions of the country, is significantly different to that of Kenya and a full study of the environmental impact to build on that of Hengsdijk and Jansen (2006) is warranted but would be better approached, in the first instance, from a natural science perspective. As such, while the findings of others on the environmental impact of floriculture in Ethiopia, where available, are accounted for in the drawing of conclusions about the economic impact of the industry, no primary data has been collected on this issue.

3.4.2 Access Issues

Access, both to respondents themselves and to data, proved a significant obstacle to conducting this research and significantly altered the research design. Previous work and pilot research revealed that the industry and, due to the prevailing business system, a great number of Ethiopian respondents are both somewhat guarded in the information they provide. Commercial actors in any industry are understandably protective of any data which may compromise their competitive position. Services had to be offered in web design, copyediting and data analysis in order to gain access to data from certain actors. Some respondents requested contact details and information on other respondents which introduced ethical issues as detailed in the following section. Four specific groups posed individual challenges with regard to access.

Firstly, institutional actors, both state and industrial, required extensive networking and introductions by third party agents in order to gain access to the information required. Within many Ethiopian institutions there were no predefined rules about which data would be released and which would not, and the process of obtaining data was highly bureaucratic. All offices had to be visited in person and, commonly, several branches had to be visited in order clear each level of bureaucracy.

Secondly, breeders and intellectual property institutions, whose livelihood is often dependent on the protection of information, were understandably reluctant to grant access to information (Zucker et al., 1998).

> [M]ost of this work is kept secret by private sector breeding programmes until it is commercialised, one cannot know all that is being considered, investigated, or in progress (Harbaugh, 2006; 658).

After the pilot study, it became clear that IPRs and, particularly genetic modification, were not likely to significantly affect outcomes for Ethiopian floriculture. While interesting and a potential area for further research intellectual property proved to be superfluous to the objectives of this research.

Thirdly, supermarkets, whose role in GPNs is increasingly influential (Barrett et al., 2004), present well established access problems (Hughes, 1999). The importance of public relations to supermarkets means that information is carefully controlled to ensure studies do not reflect negatively upon them. Again networking was required to obtain names and contact details of the desired respondents and all interviewees insisted on complete anonymity.

Finally, flower farm investors, presented challenges not in the access to respondents which was relatively unproblematic using snowballing techniques, but, as a product of both the Ethiopian business system and the nature of the industry, in gaining access to specific data. Respondents were found to present different data to different people in order to protect their own interests as documented in Chapters 6-8.

> I do have [the data] on an individual basis but I am not allowed to hand them over. I am also in discussions with the government of Ethiopia to supply them info and they also would like to have all the data you are requesting (IG2).

Initially, the research design included a series of statistical analyses using firm profitability as the dependent variable with data on a range of independent variables obtained from the quantitative survey conducted. Despite persistent approaches to a number of firms and institutions, no data

could be obtained and an adequate proxy was unavailable. In the absence of this data, the influence of quantitative data in the triangulation of methodologies was limited to secondary data and more descriptive analysis of the quantitative survey data.

3.4.3 Positionality

One factor that must be considered in the design of all research phases is the positionality of the researcher. Whilst commonly perceived as primarily a problem of ethnographic research, researchers across the methodological spectrum must control for the influence of their own characteristics, physical attributes, personal history etc., on both the data given and the interpretation of it. Indeed, the preparedness of qualitative scientists to defend their methodologies against accusations of a lack of rigour has often led such approaches to be far more rigorous in controlling for such influences (Scheyvens and Storey, 2003).

For this research, numerous considerations were made in gathering and analysing data due to the influence of the researcher's position. Positionality affected the data gathered from different respondents, obtained using different methodologies in different ways. The position of the researcher as a young, white, English-speaking male undoubtedly eased the access to both quantitative and qualitative data from certain groups of actors. Among Ethiopian institutional actors, owing to a patriarchal society, and foreign corporate actors, due to a sense of identifying the researcher as being on *their side* of the social divide which exists amongst growers, data was given more freely than it would to a researcher with different characteristics. This was confirmed in conversations with Ethiopian academics attempting to conduct research with similar respondents. The influence of power dynamics must also be considered in data gathering. Respondents who perceive themselves as holding less power in their relationship with the interviewer may be more accommodating in arranging interviews and answering questions than those who perceive themselves as more powerful. However, analysis of the data must be tempered by the fact that respondents who perceive a negatively skewed power asymmetry between themselves and the researchers may seek to present information that they believe the researcher expects them to present. This is just a single aspect of positionality in which the dynamics of the interaction between interviewer and respondent must be considered in both data gathering and analysis and, as such, these dynamics have been considered in the presentation of data herein.

3.4.4 Sampling

As described above, the opportunity provided by the Hortiflora 2009 conference meant that there were very few considerations involved in the quantitative survey. Sixty-five of the sixty-eight currently exporting flower farms that are members of the Ethiopian Horticulture Producers and Exporters Association (the only flower farms that were not members of the association are those that were not yet exporting), at the time of the conference, exhibited at the conference and attempts were made to conduct the survey with all of them, although a small number did not agree to participate. Of the farms that did not participate, all were less than 14 hectares in size (small-medium), three were wholly Israeli-owned and one was Ethiopian-owned. These firms appeared to have a blanket policy of not engaging with researchers and no information could be gained from them at any time during the research. The survey was subsequently conducted with the three farms that were exporting at that time but were not present at the conference through farm visits, although a number of other farms have since begun exporting.

Sampling for qualitative interviews involved many more considerations. The initial research design included interviews with at least one respondent from a number of key nodes of the floriculture GPN including government institutions, industry associations and breeding institutions. Regarding flower farms, however, it was important to speak at length with a representative sample of a number of key groups including long established farms/new entrants to the industry, Ethiopian-owned farms/farms owned by foreign investors, small/medium/large farms and farms growing in each of the three main agro-ecological zones. With the small number of farms (a total of around 80 producing during the qualitative research period) and the access difficulties already discussed, it would have been difficult to obtain a statistically significant sample of each group. The necessity of networking in order to obtain respondents through snowballing meant that implicit targets were set to obtain at least one, but to strive for as many as possible from each of these groups. Additionally, a target for the total number of interviews with flower farms was set at a minimum of 20. This was set knowing the potential difficulties likely to be encountered in obtaining interviews. These in-depth interviews were intended to add detail and richness to the explanations of relationships within the network. Due to the success of the snowballing process, qualitative interviews were conducted with 40 of the 80 currently producing flower farms, commonly with interviews conducted with a number of respondents for each farm. Additionally, interviews were conducted with representatives of a large number of other nodes within the network, resulting in a total of 102 interview respondents, with whom multiple interviews were conducted. The flower farms with which qualitative interviews were conducted have been disaggregated by the origin of the investors, size of the production area and time in the industry in order to show the spread of the sample across different types of farms. The reason for farms being divided in this way is that these were found in pilot research to be key differentiators of the type of farm being considered, while the size and time parameters were taken as important points at which to separate small/medium from large farms and established farms from new entrants to the industry.

Respondent					
	Ownership Structure	Production Area	Time in the Industry		
			>3 Years	<3 Years	
Flower Farm Owners/Senior Employees	Wholly Foreign-Owned	>14 Ha	3	3	40
		<14 Ha	4	2	
	Mixed Locally/Foreign-Owned	>14 Ha	7	3	
		<14 Ha	2	2	
	Wholly Locally-Owned	>14 Ha	4	2	
		<14 Ha	2	6	
Auction Respondents					5
Supermarket Respondents					7
Institutional Respondents					16
Importing Agents					5
Consultants					7
Intellectual Property Actors					6
Others					16
Total					102

Table 3.1 Summary of Interview Sample

3.5 Ethical Considerations

Whilst this research, as broadly economic in nature, was not particularly ethically problematic, it was important to consider any ethical issues which may have arisen from the methods used. As discussed above, access proved the most significant problem in both the quantitative and qualitative methods used. Despite not interviewing labourers, the vast majority of respondents were answerable to someone whether it was a shareholder, direct line manager or board of directors, who was both responsible for granting the interview and influencing what information was released. A firm may seek to serve its own agenda in the provision of information, briefing employees or selecting which employees can be surveyed so that a particular picture is portrayed which introduces sample bias (Popper, 1959). Alternatively, gaining private access to individuals may be difficult primarily because the sampling frame, i.e. the names of the respondents able to provide the required information, would be obtained from the companies, which may be unwilling to provide the information. An alternative option for obtaining a sample is through personal referrals, which has implications for the validity of the sample strata, but given the comprehensive nature of the quantitative element of the research and the targeting of companies for qualitative interviews, snowballing was merely required to provide names and in some cases recommendations, rather than identifying respondents, minimising the chances of sample error (Scott & Yu, 2005). Regardless of the techniques employed, the validity of the information given may still have been influenced by the workers' fear of reprisals from their employer. To overcome this, attempts were made to gain the trust of the respondents, both by signing a confidentiality agreement and by spending time with respondents to manufacture mutual trust.

Yeung (1995) lists opportunism, social relationships, and withdrawal as the key elements of organisational research in order to obtain guarded information. This presents some difficulties for research design in the field as it is difficult to plan for opportunism. One must also exercise caution in the use of social relationships to gain access as they can compromise the objectivity of the data or the relevance of the sample (Goldstein, 2002). In this study in some cases access was

gained to the sampling frame through negotiation with employers, either giving assurances about the nature of the data and what might be published, or through sufficient in-kind remuneration. For this research, it became clear from the pre-fieldwork research and the pilot study that full disclosure and the building of relationships through spending time within firms were the most appropriate approaches, reducing the ethical problems of the research.

During field research, one particular ethical issue which had not previously been considered during the research design became very prominent. Interviews revealed that purposeful duplicitous tactics were being employed by growers in their relations with the auction house with regard to the reporting of Non-Auction Turnover (NAT), discussed in Chapter 8. Information received from one group of respondents conflicting with information they are obliged to provide to another group of respondents could seriously jeopardise their competitive position if confidentiality was not observed. Whilst this provided a very interesting point for investigation, for ethical reasons questions could not be tailored to Dutch auction respondents which may identify actors breaking their agreements and so compromise their future business relationship.

A further area where there were unconsidered ethical implications of the research was in respondents offering to provide financial data on firms in return for money. As discussed above, the provision of this key dependent variable would have been an integral part of any quantitative data analysis. However, the fact that this practice would have been ethically questionable, and illegal, would have jeopardised the future employment of the respondent and, as such, would not have been publishable meaning the offer had to be declined.

The final area in which ethical considerations had to be made in this research came in the reporting and dissemination of findings. Due to the sensitive nature of the data gathered, full disclosure of respondents' names, positions or companies had the potential to compromise them personally or professionally. Therefore, as both a means to obtain the data required and as a moral imperative to ensure no negative consequences occur for respondents as a result of their participation, assurances had to be given that steps would be taken in the presentation of research to protect their identity. From the point of view of the research however, it was important to provide some information as to the position of the respondent to provide context to the information they gave. Consequently, anonymity agreements were signed with all qualitative interview respondents and verbal agreements were made about how they would be referred to in the written research.

4. Ethiopian Context

The GPN framework sees an understanding of the geographical, cultural and institutional context of the study region as one of its key explanatory components. This study sees these local conditions as integral to explaining the outcomes in the establishment and growth of the Ethiopian floriculture industry. This chapter describes and analyses the relevant events and trends that have occurred in Ethiopia, which are then used in the analysis of primary data.

4.1 Recent Political History

Ethiopia has undergone a turbulent recent political past, the legacies of which demonstrably manifest themselves in the political and economic strategies pursued by the state today. Ethiopia is amongst the most culturally and ethnically heterogeneous states in the world, home to over 150 distinct ethnicities and over 80 languages (Vaughan, 2003). Power has traditionally rested with the Amhara[6] ethnic minority and was passed down along monarchical lines. Christianity has been the national religion and Amharinya the national language throughout Ethiopia's history. The coup of 1974, which resulted in the military dictatorship known as the *Derg*, sought to alter these traditions, deposing the monarchy, declaring equality of churches and plurality in the use of languages. The *Derg's* eventual leader, Col. Mengistu Haile Mariam, sought a move away from 'mono-ethnic' government (Kissi, 2006). After the overthrow of the *Derg* by a coalition of rebel groups and the subsequent secession of Eritrea removing Ethiopia's sea access, Ethiopia implemented a constitution that guarantees, at least legally, regular democratic parliamentary elections accessible to all ethnic groups. However, in the years since the constitution was adopted, the government has remained in the hands of the Tigrayan former TPLF (Tigrayan People's Liberation Front) leader, Meles Zenawi. Many ethnically-motivated rebel/paramilitary groups remain in Ethiopia, primarily the Ogaden National Liberation Front (ONLF) and the Oromo Liberation Front (OLF), and the country is now divided into nine federal states and two chartered cities, based broadly on ethnic lines. Government policies and spending are still influenced by political and ethnic objectives which have implications for the growth of new industries such as floriculture (Abbink, 2006).

Ethiopia then underwent, at least ostensibly, a relatively rapid transition from a feudal autocracy to a Marxist/Leninist (Stalinist) dictatorship (1974-1991) to a western-looking *neoliberal* economy (1991-present). The TPLF, from which the Ethiopian People's Revolutionary Democratic Front (EPRDF) came, was one of a number of explicitly socialist organisations operating in Ethiopia in the 1980s. Despite this, the government's Ethiopian Transitional Economic Policy (ETEP) of 1992, produced as a precondition for the first Structural Adjustment Facility (SAF) (1991-1993) funds from the IMF, had a distinctive *neoliberal* theme with Araia stating that the new government "seems to favour a diminished role of the state in the economy" (1995; 199). The exact political ideology of the government of Ethiopia, which has effectively been in power for two decades (with a further remit until 2015), differs between policy and discourse. Its ideology, and the

[6] Ethnicity in Ethiopia had become far more complex than is displayed here, with Emperor Haile Selassie himself partially Oromo and Gurage, the 'Amharicization' of Ethiopian society was more a matter of conduct than blood lines but was still used as grounds for discrimination (Clapham, 1990).

policies it results in, is of key importance to the growth of the floriculture industry and its developmental impacts and, as such, will now briefly be examined in conjunction with its relationships with the international community.

In order to overthrow the *Derg*, the Ethiopian rebel forces led by the TPLF required financial support. At the height of the Cold War, the 'Western World' and particularly the United States, saw a strategic and humanitarian incentive for the removal of the *Derg* regime and so were forthcoming with support to rebel forces (Woodward, 2006). Whilst the TPLF were not seen as ideal replacements for the *Derg* given their socialist leanings, their anti-Soviet sentiment led them to be viewed as the least worst alternative (Young, 1996). Despite the left-wing roots of the current administration, Ethiopia retains an overtly Western focus in its public discourse. Compliance with broader US objectives - including acting as a strategic ally in the 'War on Terror' with Prime Minister Meles stating that the relationship with the US was critical to securing peace and security in the Horn of Africa (Tekle, 2011) - has helped the country to remain 'the darling' of the policy community despite questions concerning human rights. As such, the country continues to receive high levels of overseas development assistance (ODA) in an attempt to improve its developing economy (Economist, 2007; Andrews et al., 2005). As Wallis (2010) contends, in Ethiopia "...development experts [are] arguing that a trade-off between growth and civil liberties is inevitable" while they "...hosted deeply flawed elections with little or no consequence for their relations with the outside world".

This fragile, post-socialist political context in which the floriculture industry has emerged has had a significant impact on the development of the industry. The economic context will now be analysed in order to further determine the political objectives of the government, adding an explanatory element to the development of the industry.

4.2 Recent Economic Performance

While a political move to the right and the government's express intention to move from a planned to capitalist economy were clear, whether the government's public discourse has been executed through their policies is less so. This section will give a brief synopsis of the major economic changes that have occurred in the last two decades in Ethiopia, which are partially responsible for the growth of the floriculture industry. Since the EPRDF took power, the party has governed the country, ostensibly adopting the policies prescribed by the Washington Consensus, although the compliance with the policies prescribed by the International Policy Community (IPC) has been less close in practice than in rhetoric. If this government's industrial policy of targeting the floriculture industry in Ethiopia proves successful in improving livelihoods of domestic actors then their approach to liberalisation is likely to have been key in achieving this result.

Ethiopia spans over one million square kilometres and has a population well in excess of 75 million people (estimates vary) of which 85% is rurally-based. Factor endowment models of growth suggest that there is a natural disposition to develop through agriculture (WDI, 2011). Agriculture constitutes just under half of national GDP (46.3% in 2007) with industrial production accounting for little over 10% (WDI, 2011). The fact that this balance has not changed greatly over the past 15 years during significant overall GDP growth is a reflection of the government's agricultural-led growth policies. The ETEP included a change of emphasis in government policy from industry-led to agriculture-led development (Alemu et al., 2003). The key principle of Ethiopia's Agricultural Development Led Industrialisation (ADLI) policy strategy (*sic*), which has

governed the EPRDF's economic policy throughout their tenure, is to direct resources to agricultural extension programmes and rural infrastructural development, prioritising rural agriculture over development in manufacturing or other urban-focused sectors. Specific provisions that have run throughout the individual development programmes during the government's tenure include inputs provision to peasants; promotion of small scale irrigation; improved livestock herds; environmental protection and natural resource management; grain marketing efficiency; promotion of farmers' organisations; rural infrastructure provision; and, critically for floriculture, expanding women's participation in agriculture (Holt and Dessalegn, 1999). Since the EPRDF took power, real GDP growth has been good and, although war with Eritrea and two notable droughts have had short-term impacts on growth, the last five years has seen sustained high growth rates, averaging over 11.5% (WDI, 2011). There is strong evidence that this growth has been pro-poor in nature and significant progress has been made towards achieving the millennium development goals by 2015 (MoFED, 2010).

A caveat must be applied to these statistics, as it must to statistics throughout the thesis, as discussed in Chapter 3. Here in particular though:

> It is an open secret that the double digit growth of recent years is supported by dubious statistics (Wallis, 2010).

Since 1991, the Ethiopian government has maintained a constant budget deficit of around 5% of GDP, contrary to IMF advice, in an attempt to induce growth. The government has been largely successful in ensuring positive real interest rates throughout its tenure. However, the liberalisation of financial markets is an area where there has been consistent disagreement. By 1994, the state had begun to allow the establishment of private domestic banks, but they continue to refuse to allow foreign banks to enter the country which has significant implications for capital availability for start-ups in capital intensive industries such as floriculture. Whilst still not truly market-determined with the availability of a black market, exchange rates are one area where the government has made clear and sustained progress in the eyes of the IPC.

A related economic objective is that of inflation which, until the fuel and food price increases beginning in 2007, the government had kept relatively stable at approximately 11%. The peak of around 62.4% in July 2008, caused by the Global Financial Crisis[7] leading to falling demand for Ethiopian exports combined with rising global food, fuel and construction material prices, has now passed and inflation is expected to return to 2006 levels (Reuters, 2009; WDI, 2011). This progress towards low and stable inflation has been threatened by the government's devaluation of the currency in 2010, which significantly increased the price of imports. One of the motivations behind this devaluation was to improve the balance of payments, which is also a key motivation behind the promotion of the flower industry as documented in the following chapters. Despite the increase in exports documented below, the balance of payments deficit has continued to increase as incomes have risen, leading to higher demand for imports (McClure, 2010). The

[7] The term Global Financial Crisis, referred to elsewhere as the global economic downturn, global recession and credit crunch amongst other terms, is used here to encompass the series of events felt primarily in the 2007 2009 period which had significant macro economic impacts on Ethiopia and specific effects on floriculture as documented throughout the present research.

devaluation of the currency, in addition to increasing the price of imports leading to a fall in demand, affects the other side of the balance of payments equation through a fall in the price, and consequent increase in demand, for exports. This is the first demonstration of the government using a "deliberately undervalued exchange rate...to pursue a more aggressive strategy of import substitution" (Davison, 2010). This attempt at import substitution runs contrary to Washington Consensus liberalisation policies promoted by the IMF, although recent policy dialogue has been more flexible in this regard (IMF, 2010). Many of the other mechanisms by which the balance of payments could be reduced are constrained by the government's desire to join the WTO and access the benefits that membership entails. This manipulation of currency is a controversial way in which the balance of payments can be improved and has recently been used by China in suppressing the value of the Yuan below market levels in order to increase exports (BBC News, 2010b).

International trade has been liberalised significantly under the EPRDF. Weighted mean tariffs have consistently been ~10% and Ethiopia's recent accession to the Common Market for Eastern and Southern Africa (COMESA) means they are tied to a common external tariff and WTO membership is likely to be completed by 2013 (Kidane, 2009). Furthermore, in October 2008, an agreement was made to create a free trade area between COMESA, the Southern African Development Community (SADC) and the East African Community (EAC), meaning the union now covers 26 African countries (BBC News, 2008).

Investors have also been able to take advantage of the preferential trade terms with the EU. A complex and changing set of regulations has governed trade between developing nations and the EU in recent years. Since 1971, the EU has had rules governing trade between the EU and *African, Caribbean, and Pacific* (ACP) countries guaranteeing unreciprocated, preferential treatment for the developing countries in terms of lower or eliminated tariffs on imports of certain items, formalised in 1976 with the Lome Agreement. This agreement was succeeded by the Cotonou Agreement in 2000 but WTO rules have resulted in the agreement having to be revised on two subsequent occasions, with the latest revision being provisionally enforced from November 2010. These revisions have been necessitated, in part, by the yet-to-be-concluded Doha Round of WTO discussions which have had significant implications for trade between the Least Developed Countries (LDCs) and major markets such as the EU and the US. The removal of tariffs on imports between all WTO member countries proposed in the Doha Round would remove some of the progress that LDCs had made with regard to their export industries using the competitive advantages created by agreements such as Cotonou, Everything But Arms (EBA), Generalised System of Preferences (GSP) and GSP+, known as *preference erosion*. Until 2000, quotas were imposed on imports of roses from all African producers which have now been removed. LDCs, of which Ethiopia is one while Kenya is not, benefit from tariff-free and quota-free access to EU markets under the EBA scheme which was agreed with WTO members. Further support is given to ACP countries attempting to enter EU markets through Economic Partnership Agreements (EPAs), which, while they require a graduated introduction of reciprocity in terms of trade, aim to offset any potentially negative impacts on developing countries in a number of ways including funding for infrastructural development by the EU. Ethiopia has not, as yet, signed an EPA unlike other COMESA members including Zambia and Zimbabwe, and all EAC members, including Kenya, as the terms of trade available would not be as favourable as they are under the above schemes. A further system of measures available to LDCs is currently being implemented under a revision to GSP+ which will provide further trade-related incentives to countries complying with a set of

labour, human rights, environmental, and good governance objectives. It remains to be seen whether Ethiopia will meet these requirements.

While the EU is the primary export market for Ethiopian roses, both flowers and a number of other commodities benefit from further preferential trade agreements including from GSP+ with Japan, Australia and Canada and under a separate agreement with China.

The most important area of macroeconomic policy for floriculture is the foreign investment code with a view to attracting FDI. There has been a continued and gradual improvement[8] of the investment code under the EPRDF and FDI has been pinpointed as a key mechanism to induce economic growth. While there is a general move within the EPRDF to encourage FDI, certain sectors, for various political, strategic and economic reasons, are protected from foreign investment, while others have been identified as priority sectors with additional incentives offered. Protected sectors include retail; import trade; export of several major primary commodities including coffee, chat and oilseeds; construction; leisure industries; air transport; broadcasting; telecommunications; and banking. The theory behind these exemptions is that the skills and resource bases exist for domestic actors to utilise opportunities in these sectors. However, in the priority sectors - horticulture, floriculture, agro-processing, textiles and garments, and leather products - the government considers there to be significant potential but a deficiency in the requisite skills or knowledge base. For these priority sectors the investment code has been designed to attract as much FDI as possible with measures including low-interest loans with long repayment periods; customs duty exemption on inputs and capital goods; provision of low-cost land with long-term leases; technical support where available; personal income tax and corporation tax exemption for up to seven years with a two-year loss carry-over period; and tax-free repatriation of capital and dividends.

In 1999 the government signed up to the Multilateral Investment Guarantee Agreement (MIGA) in the hope of instilling confidence in foreign investors (EIU, 2000). The investment code has had to be continually improved due to the non-response of investors and levels of investment in the country are still relatively low, attributable to political instability, corruption, instability in the banking sector and uncompetitive conditions presented by a bias towards EPRDF-owned enterprises. Some of these are factors which the government has tried to address with increased privatisation and anti-corruption commissions but progress has been slow.

[8] The term 'improvement' with respect to the investment code referred to here is taken from the economic perspective of the foreign investor whilst the specifics of the costs and benefits of such a movement are examined throughout the thesis.

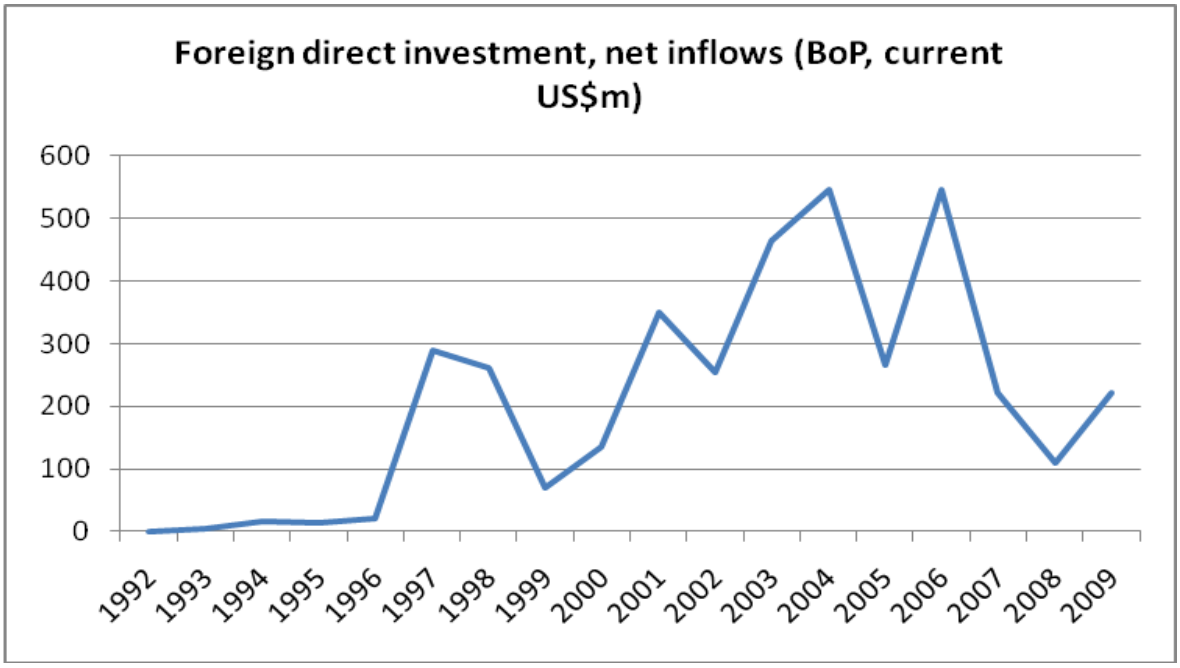

Figure 4.1 FDI Inflows Data: WDI, 2011

Although advocated by the IMF, the type of investment code offered in Ethiopia does have its critics. Stiglitz (2002) points to the offering of tax concessions to investors as a transferral of the burden of raising public revenue for investment in infrastructure onto the workers and, as such, a regressive measure. There is also a fear that after the period of incentives expires, the capital is fluid enough to move elsewhere without the investor incurring substantial losses; the result being a 'race to the bottom' in developing countries. Whether EPRDF policies on FDI have had a significant effect on the levels of FDI attracted is not clear. Despite numerous changes in the investment code, levels of FDI were largely non-responsive as can be seen from Figure 4.1. The Global Financial Crisis undoubtedly had a significant impact on FDI in Ethiopia but investment is increasing once more, and the profile of investors is diversifying. A range of agricultural investors from a number of countries including Egypt and India have been attracted as documented in Chapter 11, and foreign investment with a more mixed investment portfolio has also been attracted including that from Turkey with total investment, in areas including manufacturing and agriculture, increasing from $22.5m in 2008 to $819m in 2010 (Walta Information Centre, 2010b).

As part of both the privatisation and liberalisation of the Ethiopian economy and as part of the drive to increase food production in the country, Ethiopia has become a focal location of the much publicised global 'land grab'. The government has allocated a total of 3 million hectares of land with a view to developing large-scale, mechanised agricultural production, about which the Ethiopian Ambassador to the UK wrote in *The Guardian*:

> The phrase "land grab" implies that wealthy foreign investors are misappropriating land and that Ethiopia has no control over the process. In fact, Ethiopia chooses to allocate land to investors depending on best use. The key is to achieve balance. Commercial farms tend to become hubs that link smallholders to value chains and help spread knowledge and best practice to other farms. So the debate is not about big versus small. We will continue to support commercially viable small farms, which offer increased food supplies, jobs and incomes in both the farm and non farm

economy. This will help Ethiopia achieve wider economic development and prosperity (Kebede, 2011).

Privatisation of former state-owned enterprises has occurred in Ethiopia but has been slow. In addition to the liberalisation of the banking sector, privatisation of land ownership is another issue about which there has been major disagreement between the government and IMF, and an area which has a significant impact on the floriculture industry.

The peculiar system of land tenure in Ethiopia merits special attention here as it affects the growth potential and distribution of benefits from the majority of industries in Ethiopia to some degree, as is explored specifically for floriculture below. Prior to the revolution of 1974, two main systems of land tenure existed in Ethiopia. *Rist* saw land allocated to any member of a community that could sufficiently demonstrate *kinship ties* to the land. Land would then be divided equally amongst a landholder's children upon their death, but could not be sold, gifted, or otherwise bequeathed. The community as a whole would pay the state for the land, with individual members contributing according to the size of their holding. Security of tenure under this system was low as land claimants frequently emerged to challenge existing agreements. *Gult* consisted of large estates being granted to a small aristocracy, often seen to have given service to the crown. Famers would then pay in goods or labour for the right to farm the land. Additionally, there were a large number of other tenure systems including those through which both the Orthodox Church and the State held vast tracts of land (Rahmato, 1984).

The system of land tenure was one of the major driving forces for the revolution and in 1975, the *Derg* nationalised all rural land without compensation. Each rural family was given usufruct rights to land less than or equal to 10 hectares. During the 1980s a number of other measures were implemented in order to combat the associated problems of low productivity and increasing land insecurity. These included the formation of peasants associations intended, amongst other things, to promote advanced agricultural techniques and the formation of cooperatives, and the resettlement of large numbers of people from food insecure areas. Furthermore, many of the larger private commercial farms were transformed into state farms under the *Derg*, intended to combat food shortages. These farms then received a large proportion of the available inputs to agriculture but were unsuccessful in improving food security. Under the EPRDF regime land policy has continued largely unchanged and ownership by the 'State and Peoples of Ethiopia' is now constitutionally entrenched. Despite opposition from IFIs the government have remained belligerent in their defence of the policy on grounds of fairness and equality (Crewett and Korf, 2008).

Some general consequences of land policy relating to the EPRDFs broader political and economic agenda are addressed here. Firstly, the distribution of land means that farms, an important factor of production in such agrarian economy, are highly constrained in size. Neoclassical economics lists a lack of intensive agricultural techniques and flexible specialisation, discouragement of foreign investors and ultimately a decreased yield lowering food security as consequences of such a policy (Holden and Yohannes, 2002; Deininger et al., 2003). Secondly, the policy also has implications for entrepreneurship as there is no opportunity for individuals to use land as collateral and no scope for limited liability companies. The government justifies the policy on grounds of equality, however in practice it has led to an espousal of subsistence farming. In 2005, the government introduced a certification scheme whereby individuals could use land as collateral in order to obtain loans despite not owning the land, the results of which have yet to be

analysed (EIU, 2006). Furthermore, in a bid to increase food production, the government has begun to issue ultimatums to all tenants that their land will be reclaimed by the government if they fail to build on it or use it effectively, although they will be compensated for this expropriation under the 'certification' scheme (EIU, 2009; Kifle, 2010).

As part of the improvement in investment codes, much bureaucracy has been removed from the process of doing business. As a consequence, in the WB's 'Doing Business' report (World Bank, 2009a) which measures ease of conducting business around the world, Ethiopia was ranked 116th in the world and, although it represents a fall of seven places from the previous year leaving the country third behind Kenya and Uganda as the best place in East Africa for doing business, it is a great improvement on the country's position a decade earlier. It has now slipped a further five places in the rankings due to the political violence in recent times but remains well placed within East Africa. The main elements of the report on which it scores badly are registering property, for the reasons listed above, and trading across borders which is unsurprising given that is country is currently almost entirely surrounded by conflict zones[9].

It can be seen from this brief review of recent economic trends that the Ethiopian government is not strictly following the model for economic liberalisation recommended by IFIs. The government has adopted a cautious and controversial approach, while largely maintaining the financial support of the donor community, which has resulted in regular conflicts with the IMF, the primary IFI operating in Ethiopia.

In the latest five year development plan (2010-2015), *Growth and Transformation* (GTP), versions of which have shaped government economic policy since 1991, emphasis has been placed firmly on infrastructure, with a view to further facilitating ADLI outlined in previous strategies. Five thousand kilometres of railway are to be laid, including two thousand kilometres between Addis Ababa and Djibouti, which should reduce costs and expedite sea freight. New roads will be built at a cost of ETB122Bn (~$7.2Bn US), financed and planned primarily with Chinese capital. The plan also includes increasing power generation by five times with the majority of additional capacity allocated to increasing agricultural output. A further mechanism for increasing agricultural output is the construction of a fertilizer production facility, designed to provide a significant proportion of the country's needs in this area. This will have the additional impact of improving the country's balance of payments through ISI, the importance of which is documented in Chapter 6 (Sisay, 2010). Fertiliser is a vital input in such an agriculturally-based economy and its procurement and distribution has proven highly contentious during the EPRDF's tenure. The foreign exchange necessary to procure fertiliser has been largely limited to state governments or para-statal enterprises which has affected prices and ultimately reduced access for smallholders (Jayne et al., 2003; Croppenstedt et al., 2003). Domestic production of fertilisers should increase competition and transparency, ultimately increasing access for smallholders. Overall, the plan predicts average annual growth during the five year period of 11-14.9% (Reuters, 2010).

The development plans, which have governed Ethiopian economic policy during the EPRDF's tenure, are an example of a developing country pursuing an active industrial policy, the utility of

[9] Northern Kenya, Somalia, and Eritrea as well as conflicts in Sudan and Gambella in the West of Ethiopia.

which is controversial among development academics and practitioners. It is a commonly held perception that post-war East Asian growth occurred as a result of an active industrial policy which involved 'picking winners', facilitated by the size and strength of the state. Proponents of this view hold that such a 'developmental state' is not possible in sub-Saharan Africa due to the prevalence of corruption and rent-seeking activities, contributing to relatively weak states. This weakness of state combines with a purported absence of possible winners to pick, i.e. there is an absence of sectors, industries or firms with the potential for growth, to make such a strategy impractical. However, Wade (2009) contends that rent-seeking and corruption were at least as prevalent in Taiwan and South Korea in the immediate post-war period as they are in much of SSA today. Furthermore, Wade (*ibid*) states that Taiwan's Industrial Development Bureau (IDB) was key to their development by identifying growth sectors and 'betting on success'. It did not entail 'picking winners' so much "as an incremental process of upgrading and diversification...based on dense interaction between IDB officials and private firms in an informal and bilateral way" (ibid: 359; also - Maxwell, 2005; Lall, 1995).

Institutional economics would suggest that weak state, legal and financial institutions would preclude the successful pursuit of an active industrial policy, and act as a barrier to the growth of an export-orientated business such as floriculture (Gwartney and Lawson, 2008). However, Wijnands et al. (2007) find that, although growth in GDP-per-capita is strongly correlated with good institutions, the growth of exports in cut flowers had no correlation with the strength of institutions. The reasons for this, they suggest, stem from the absence of a domestic market and skills base necessitating foreign expertise and capital, resulting in foreign institutional frameworks often being imported for floriculture as a 'special case'. The GPN framework accommodates this potential for the strength of states to shape the fortunes of production networks through its examination of power within institutions. However, the flexible nature of the framework allows for the situational specificity of different production networks in different locations to be differentially affected by the strength of institutions.

Unlike Wijnands et al., Blattman believes that it is, in fact, the strength of the Ethiopian state which has allowed an active industrial policy to be pursued and has assisted in the growth of the industry, when compared with, for example, Uganda (Blattman, 2009). Whether growth in the floriculture sector is an example of the Ethiopian government 'picking winners', or if it represents far more of an 'incremental process of upgrading and diversification', which, as Wade displays proved successful in Taiwan's export development (2009), will be examined further below. The strength of the Ethiopian state and institutions and their ability to influence the development of floriculture together with any evidence for the import of foreign institutional frameworks is discussed in the following chapters.

4.3 Export Profile of Ethiopia and How to Grow Export Sectors

Ethiopia has had a relatively stable export profile, both in terms of commodities and volumes, since the end of the WWII. Table 4.1 compares Ethiopia's export profile in 2001 and 2010 including commodity groups and values. The figures for 2001 broadly reflect those of the preceding half century, while those for 2010 show how the Ethiopian economy has grown and changed in the past decade and as such these are not exceptional years.

HS Code	Product label	Nominal Exported value in 2001		Nominal Exported value in 2010	
		(Thousand $US)	% of Total Exports	(Thousand $US)	% of Total Exports
'09	Coffee, tea, mate and spices	149824	37.2	805717	34.6
'41	Raw hides and skins (other than furskins) and leather	74636	18.5	74418	3.2
'14	Vegetable plaiting materials, vegetable products	54271	13.5	NA	0
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc,	38665	9.6	382463	16.4
'07	Edible vegetables and certain roots and tubers	27613	6.9	452736	19.4
'10	Cereals	18952	4.7	NA	0
'26	Ores, slag and ash	10151	2.5	NA	0
'52	Cotton	8897	2.2	26241	1.1
'71	Pearls, precious stones, metals, coins, etc	4541	1.1	203696	8.7
'13	Lac, gums, resins, vegetable saps and extracts	2833	0.7	NA	0
'06	Live trees, plants, bulbs, roots, cut flowers etc	NA	0	182848	7.9
'01	Live animals	NA	0	146649	6.3
'84	Machinery, nuclear reactors, boilers, etc	NA	0	58660	2.5
'02	Meat and edible meat offal	NA	0	54870	2.4

Table 4.1 Ethiopian Exports in 2001 and 2010 Data: (International Trade Centre, 2011)

The total value of exports in 2001 was marginally over $400m US while in 2010 it was just over $2.5Bn US. The share of the top 10 exported commodities in exports total was 77% in 2001 and rose to 93% by 2010, which is an indication of the rapid export growth within some of these groups and also the low overall level of exports in 2001. The overall growth in exports from 2001 to 2010 was 641%. Between 2009 and 2010 alone, the value of exports grew by 59%, largely attributable to a rise in market prices for some of Ethiopia's key exports, in addition to the rise in exported volumes. In 2001, 14 groups had exported values of over $1m and by 2010 this had risen to 41 groups, showing a significant diversification in the export profile. Several of the groups which include food items saw increases in export levels during this period, a trend which looks set to continue as documented in Chapter 11. Within group '09, coffee makes up 96% of the total export value and still remains Ethiopia's primary export commodity. Whilst, as yet, no significant export industry exists in the extractive sector, Ethiopia can be said to experience a degree of the resource curse paradox more commonly associated with areas dominated by extractive industries. Coffee is endemic to Ethiopia and is a high-value export which has dominated the country's export profile for many centuries, potentially at the expense of other industries. Today, other significant export commodities include oil seeds (primarily sesame, linseed and niger seeds) (Wijnands et al., 2009), gold, and chat – comprising a large proportion of group '09. Ethiopia is also a major producer of potash, a principal component of soil fertiliser but, to date, little fertiliser production has taken place in the country, which the government intends to rectify in the development plan outlined above.

Whilst the majority of Ethiopia's exports remain unprocessed primary commodities, increasingly attempts are being made to process commodities into consumer products, particularly in the export of leather goods. Indeed, the government has recently both banned the export of raw hide and skins (APA, 2011) and removed leather from the list of priority sectors, preventing foreigners from obtaining export licences (Yewondwossen, 2011). The government has predicted a 10% growth in exports during 2011 while the IMF estimates 7% increase (Malone, 2010). Many of the commodities that have seen significant growth in export values have done so with the aid of government programmes targeted at particular sectors. This model of export promotion is strongly advocated by the World Bank, which views this as a successful element of Ethiopia's structural adjustment programme (World Bank, 2002). One such industry that has been targeted by the Ethiopian government to promote exports is floriculture, as documented in the following chapters.

One of the key arguments of this thesis is that the factors determining economic sustainability and the success of an industry are contextually specific and socially nuanced. Sutton and Kellow (2010) conduct a comprehensive profiling of lead firms in Ethiopia's 13 largest industrial sectors as well as the major multi-sectoral firms, analysing a total of 50 firms. The historical analysis of the development of these firms gives an indication of common characteristics among firms that have successfully grown in this environment. Twenty-four of the 50 largest companies across all sectors began as import-export companies while two were started by managers who had gained knowledge of their sector within another firm in Ethiopia. Nine of the top 50 firms were traceable to foreign companies starting operations within Ethiopia while the remainder were formerly public sector enterprises. The authors see the importance of traders in the development of lead firms as demonstrative of the importance of a detailed knowledge of the local and international market, viewing it as far more influential in the success of these firms in this context than technical knowledge (*ibid; 4)*.

Having reviewed firms in all of the largest industrial sectors, the authors identify two key components for success in this specific context;

1. The presence, or ability to create, a well-organised and efficient team of substantial size.
2. Market Intelligence – what to produce and where to position the firm in relation to existing distribution networks and how to develop new distribution channels.

It is in the second of these components where import-export firms are well positioned to succeed within the market. If such knowledge is not available within the geographical context, i.e. if no trading relevant to the industrial sector in question has occurred in the country previously, then the importance of foreign actors who hold this specific knowledge becomes more relevant. Foreign actors may however be deficient in the capabilities necessary to satisfy the first component of success. These two issues emerged in primary research as key components in the success of the floriculture industry and as such are addressed broadly in Chapter 7 and more specifically in Chapters 9 and 8 respectively.

5. The Floriculture GPN

In this chapter, the literature on floriculture, economic liberalisation, and literature on other GPNs is used to inform this study. As is common in studies conducted using the GPN framework to analyse an undocumented network, primary data from interviews, surveys and other research is integrated with secondary literature in order to further explain the network.

5.1 The Flower Trade – A Growing Sector

> One of the key challenges for the millennium development goals is to provide the organisation, market linkages, technology, and know how that will enable a proportion of poorer producers to participate in markets for higher value crops and livestock products in the rapidly expanding urban centres in developing countries and for export to the more industrialised nations (Davis, 2005; 6).

5.1.1 Historical Context

The culture of cut flowers as gifts in what is now the developed world has existed for centuries and waned in Roman times before its Renaissance revival in the Netherlands when flowers were given as gifts between the ruling Dukes (Goody, 1993). More intensive floriculture began in the 19th Century with the production of flowers for display in the homes of the upper-classes in England. By the early 20th Century production had primarily shifted to the Netherlands partially due to its flat, fertile land and ease of transport to the growing market in continental Europe but also because the Dutch market had become the largest in Europe with the fashion of floristry percolating down the social hierarchy. Until the 1960s the Netherlands was firmly established as the undisputed centre of world floriculture and the vast majority of commercial cut flowers had, if not been grown in the country, at some point been through its well-established flower auctions. Despite a general move into tertiary industries, the high value-added nature and exponentially rising demand in the floriculture sector meant it remained a focus for economic activity.

5.1.2 Shift of Production

The potential profitability of the market was observed by many outside the Netherlands who sought new ways to increase yields, increase quality and decrease costs. Concurrently, in the American market which is not as dependent on the Netherlands, production began to shift from the main consumption centres in the east to the western and southern states in the 1950s, made possible by the inception of regular commercial air transport. The western and southern states had the advantages of cheaper land and labour and better climates for production. The shift was also facilitated by technological advances in post-harvest technology, decreasing senescence. There was also an increase in farm size as the market grew and firms began to seek economies of scale.

In the early 1960s, an American student entered parameters, such as wage rates, temperature, hours of sunlight, and altitude, into a computer programme attempting to find the best place to grow carnations and the location it returned was Bogotá, Colombia (ILO, 2001). Between 1966 and 1980 the country grew to become the second largest exporter of cut flowers globally. Mendez (1991) sees the growth of the Colombian flower industry as a continuation of the internal relocation of flower producers within the US, in search of cost advantages facilitated by technological advances. This is evidenced by the fact that the first producers to commercially export flowers from Colombia were American producers that had chosen to relocate to Colombia. While the government had periodically attempted to implement policies to facilitate the growth

of the industry, it cannot be said that the growth of the industry was attributable to government policy in any way. The government did begin to implement policies throughout the 1970s to reduce the country's anti-export bias but none of these measures had a specific impact on the growth of the floriculture industry. Indeed throughout the industry's growth, several of these policies were reintroduced in addition to the implementation of some new policies which resulted in an anti-export bias. In Colombia, "the government's general economic policies have been a burden on cut flower growers" (ibid, 1991; 17). However, the most significant obstacle to growth during the 1966-1980 period was protectionist measures implemented by the US government (Mendez, 1991).

Other countries including Chile, Ecuador, Uganda, the Gambia, India, Kenya, and Zimbabwe subsequently attempted to emulate Colombia and flower exports are now a notable part of the economy in these countries (Wainwright and Hart, 1999; Sawers, 2005). This was part of a wider trend in what has been termed the *peripheralisation of production* (Amin and Thrift, 1994). In many industries, particularly those with characteristics such as labour or land intensity, all or part of the production functions have been relocated so that a large number of commodities are now produced in the 'periphery' solely for consumption in the 'core', representing a departure from the historical situation of industries locating close to their market (Leslie and Reimer, 1999; Maharaj and Dorren, 1995; Hughes, 2000; Wainwright and Hart, 1999).

In addition to changes in production, as disposable income has increased throughout the developed world so too has the market for the consumption of cut flowers and, in doing so, has changed in structure. If incomes continue to grow, the potential exists for the cut flower market in every country to reach the mature market stage (Figure 5.1). The UK, Europe's second largest consumer of cut flowers, is still viewed here as an emerging market where the majority of flowers are still bought for special occasions. Whilst reductionist in assuming that consumption in each market will follow the same pattern, Figure 5.1 does give a visual representation of how the global market in cut flowers, which has seen continued strong growth for over 40 years, still offers prospects for continued growth. Implicit within this is change in the composition of demand. In immature and emerging markets the majority of consumption is of quality flowers with low levels of price sensitivity: consumers tend to be less concerned about the price of flowers for weddings and funerals than they are for a discretionary weekly purchase. In mature markets, the majority of demand is for 'own use' and so there is a greater degree of price sensitivity. However, demand for 'own use' flowers does not come at the expense of flowers for special occasions as, in mature markets, aggregate demand is far greater. Global trade flows in cut flowers now amount to over $70Bn US annually, although a significant proportion of this, particularly of the almost $40Bn US attributable to the Netherlands, is the resale or handling of flowers (UN Comtrade, 2010).

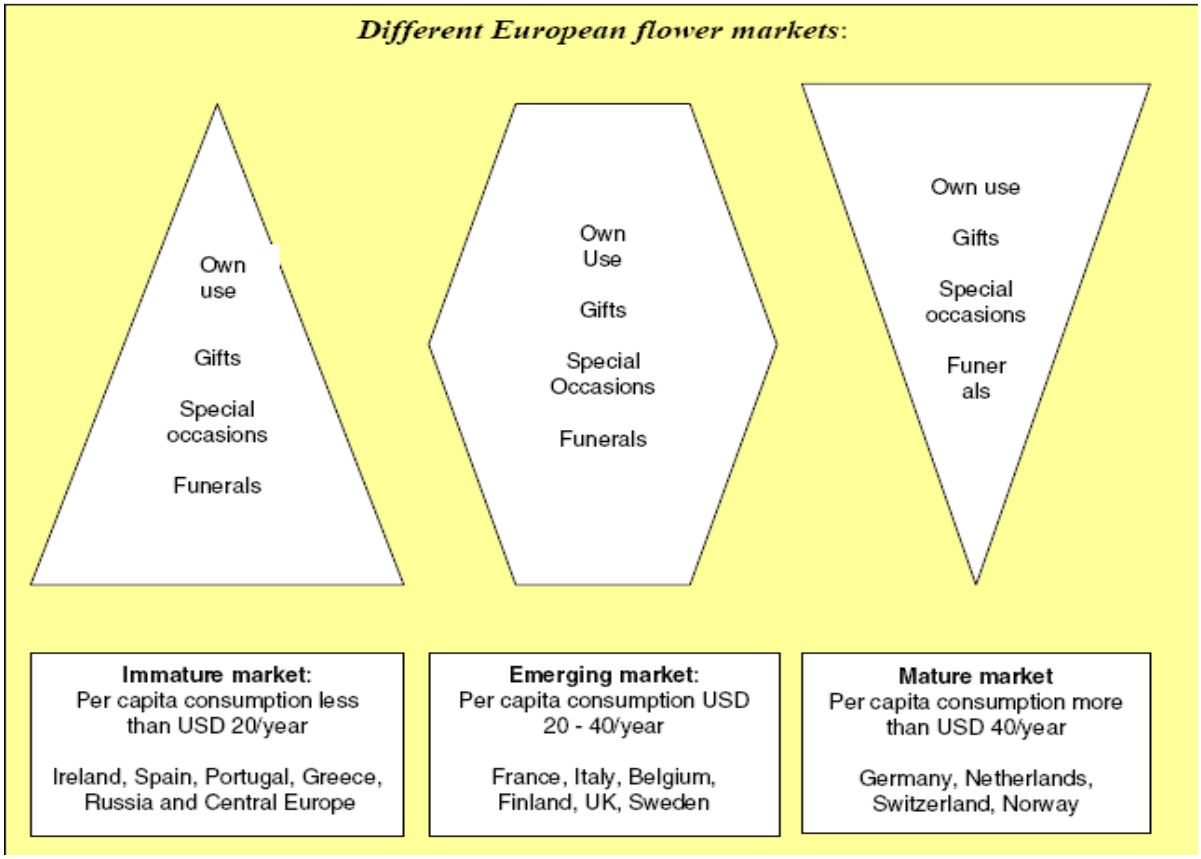

Figure 5.1 European Flower Markets; Source: (Labaste, 2005; 43)

Whitaker and Kolavalli (2006) argue that countries such as Kenya have 'challenged the historical dominance' of Europe in flower production; this ignores the influence of European actors in this transferral process, something which is discussed in subsequent chapters. Hughes (2000) details how the cut-flower industry has been championed in the SAPs of the IMF and World Bank since the 1980s while Maharaj & Dorren (1995) describe it as an 'ideal activity for encouragement in an SAP' owing to its use of private investment and its ability to command foreign exchange. The industry simultaneously satisfies the dual objectives of agricultural development and the promotion of exports. Furthermore, this ties in with the WTO agenda of growth through trade liberalisation, with Ethiopia hoping to join the organisation by 2013 (WTO, 2008; Kidane, 2009). In the following sections the reasons behind the shift of production are examined before the specific conditions affecting Ethiopia's floriculture industry are analysed in Chapter 7.

Flower producers in the traditional production hub of the Netherlands have had to modify their market strategy as production has shifted to lower-cost production locations. The initial shift of production came in lower-quality, higher-volume varieties where the knowledge and skill requirements for optimum production were lower. This led traditional producers to refocus their production on these high-value varieties where, being located closer to the market, they could be more responsive to consumer demand and take flowers to market in optimum sale condition without considerations of perishability during transit. However, as the production capabilities of developing countries have improved, they have begun to encroach on the market for the highest quality products, and continue to produce these varieties at a greatly reduced cost, narrowing the Dutch production scope to those varieties which are most easily damaged in transit, or can be easily produced without energy or labour inputs (IG2).

5.1.2.1 Why Companies Choose Developing Countries

One of the primary reasons behind the shift in production was the agro-ecological conditions available in tropical regions. Although each variety has specific requirements of soil type, temperature, light intensity and water for optimal growth, there are a set of general conditions which are conducive to good flower growth. These include high sunlight intensity, moderate daytime and cool evening temperatures, mineral rich soil and plentiful fresh water. Such conditions will result in the long-stemmed, large-budded flowers that command the highest price at auction and will produce these flowers in the shortest possible time. These conditions are most commonly available in the tropical, high-altitude, volcanic regions of the world, which are, by and large, developing countries.

Production by the traditional methods used in developed countries, including the Netherlands, entailed the use of heaters and coolers and comparatively high levels of inputs in order to replicate the conditions described above, which are naturally available in some developing countries. This meant that energy costs were one of the principal components of overhead costs for flower production. Whilst suitable growing areas in developing countries are located further away from the primary markets in Europe and North America than the traditional growing areas, the energy required to transport the produce to market is significantly lower than the energy costs involved in producing flowers close to the market (Williams, 2007). Whilst flowers require the same inputs as traditional agricultural commodities in terms of land (although not in the same quantities) - labour, and good growing conditions - the return-per-hectare is significantly higher for flowers. The high sales price mean that the high transport and storage costs that cannot be covered with some agricultural products can be absorbed. Agricultural commodities which do not demand the same level of freshness of flowers can be transported by sea and land to reduce transport costs which is opening up other segments of agriculture to developing countries.

Another cost significantly reduced by production in developing countries is labour. Floriculture is a labour-intensive industry, and in developed countries this constitutes the majority of production costs. Flowers are a delicate commodity and each must be picked by hand which, along with packing, are the unskilled jobs which form the primary labour requirements of the industry. Many developing countries have a surplus of unskilled labour and the wage costs are significantly lower than in developed countries. Indeed, Schumacher and Marsh (2002) found the labour and energy prices to be by far the largest element of the final cost of a flower produced in the US. Average wages in countries such as Ethiopia are as low as 1.5% (2008 World Bank Estimates) of those in the U.S. and energy requirements are negligible by comparison. By contrast, in Ethiopia 74% of the costs in floriculture are attributable to transport and marketing, showing just how significant location is for labour and energy costs (GDS, 2006). The cost of labour, in addition to other labour dynamics such as unionisation and productivity, varies significantly between developing countries as documented in Chapter 9.

The final reason why floricultural firms have chosen to relocate their production operations to developing countries is the government incentives offered to investors in the sector. Although these vary by country they include tax exemptions, discounts on land, cheap finance and grants, and other specialist incentives aimed at facilitating growth of the industry (Barrett et al., 1999; Gereffi and Korzeniewicz, 1994; Watts and Little, 1994; Hughes and Reimer, 2004; Ernst and Kim, 2002). The question that is examined below is why do governments offer these incentives?

5.1.2.2 Why Developing Countries Choose to Promote Floriculture

In the modern global economy, many developing countries have few resources that command a high price. Highly skilled or educated labour, high-value natural resources such as diamonds or oil and geographical advantages such as location and facilities integral to trade routes are in short supply in most of the world's poorest countries and Ethiopia's dearth is particularly acute (Homer-Dixon, 1995; Bhorat et al., 2002; Campbell, 1991). Historically, countries with abundant fertile land and cheap labour have focused on food production explained by the Heckscher-Ohlin factor endowment model of trade. Whilst this increases food security and is stabilised by domestic demand, prices for agricultural products are low and the relative transport and tariff costs are high. Global protectionism on food products remains high as countries seek self-sufficiency in the event of conflict (Swinbank and Tanner, 1996). Additionally, the opportunity for growth in many traditional agricultural products has a ceiling based on low income elasticity of demand. As incomes in the developed world increase, they are unlikely to want substantially more wheat, maize or rice, whilst demand for meat, and therefore feed crops, may increase slightly among low-income households. These factors make the prospects for high export earnings from agriculture bleak, despite the anomalously high price of agricultural commodities since 2006.

As a luxury consumer good, flowers have a high income elasticity of demand (YED). If developed world consumers have more money to spend, the likelihood is that they will spend some of it on flowers. This means that the country can continue to develop their exports to cater to market trends and continue to receive premium prices for their products (Storck, 1970). As argued by Appelbaum et al. (1994) the key difference between rich and poor countries is the relative values of the commodities produced in each area and, in order to ensure higher value commodities are produced, the prevailing conditions can be altered:

> Comparative advantage is created (and designed) by the combined effects of human actors (Sawers, 2005; 63).

As described above, many developing country governments have offered specific incentives to investors in floriculture, but what are the incentives for these governments to develop this sector? Developing countries experience high levels of unemployment, contributing to high levels of poverty. The introduction of an industry which requires high levels of unskilled labour has the potential to address this problem and, while some argue that wages are too low, a wage is better than no wage. The wages and power dynamics of labour in the Ethiopian flower industry are examined in Chapter 9.

In offering incentives to foreign investors, the government hopes to increase FDI. Whilst developing countries may have the natural resources necessary for the industry to succeed, they are unlikely to have the capital necessary to invest in the industry in order to exploit these assets. Foreign investment brings capital, but also knowledge. Both sector-specific and generic business knowledge is welcome in developing countries and can possibly be transferred to local actors. In order to maximise the profitably of their investment, it is common for foreign investors in floriculture to contribute to the improvement of several aspects of the regional infrastructure. The building of this infrastructure and the provision of several other services are potential multiplier effects that may result in further job creation as a result of the investment. Furthermore in developing an export industry the government hopes to create direct, indirect and induced multiplier effects and generate broader economic growth as has occurred in Uganda

(Asea and Kaija, 2000). Evidence on the extent to which each of these effects have occurred in Ethiopia is examined in Chapter 11.

Many developing countries also experience a balance of trade deficit, which is exacerbated by the weak position of their currencies. The introduction of a large export industry has the potential to increase the availability of foreign exchange, which in turn will assist in the purchase of imports to further assist growth of the industry (Coe et al., 2004; Collins, 1995; Damiani, 2000; Davis, 2005).

5.1.2.3 Critiques of Floriculture in Developing Countries

Some of the general critiques applied to NTAEs are relevant to floriculture in developing countries. In terms of the direct impact on the poor, the integration of smallholders into export markets is near impossible with flowers due to their knowledge and capital intensive nature. One reason for this is that farmers in developing countries are more likely to diversify their income streams, minimising the risk of income failure at the expense of total income. In countries like Ethiopia, the historically founded fear of crop failure has meant that subsistence farmers are not willing to focus production on single crop, particularly if it has no calorific value or for which there is limited demand in local markets (Reardon et al., 1992). Indeed, in 1992 in Zimbabwe, where, owing to a number of historical legacies, the agricultural sector is comprised of small subsistence and large export-orientated farms and many farmers had switched production to cash-crops, widespread famine was seen when the country exported $60m US of flowers but had to import $70m US in food aid as the irrigation for floriculture had left certain areas in drought (Maharaj and Dorren, 1995). The hope of developing country governments is that through the 'trickle down' effect, the benefits of increased GDP and decreased unemployment will permeate down to smallholders (Hirschman, 1958).

Secondly, critics have noted the distribution of benefits from floriculture as favouring large and commonly foreign companies over local entrepreneurs and labourers. Kenya's floriculture industry is examined for the World Bank by Whitaker and Kolavalli (2006). Their opinion on the industry is evident from the book's title '*Technology, Adaptation and Exports: How Some Developing Countries Got It Right*', yet the chapter fails to show any evidence of pro-poor growth admitting that: the industry is dominated by a small and declining number of large firms with primarily foreign ownership; the country is unlikely to move up the production chain due to its capital intensity; and that there has been a large outflow of human capital to neighbouring countries as a result of the training programmes implemented by the Kenyan government. The bank's position is made clear: where growth has not occurred, it is due to "the inability of the government to liberalise and privatise in a timely and effective way" (349-350), confirming floriculture's position as ideal for promotion in structural adjustment policies. Other studies have displayed the poor standards of worker welfare in floriculture for local labourers which, together with low wages, make commentators pessimistic about the developmental potential of floriculture (Dolan, 2007; Korovkin and Sanmiguel-Valderrama, 2007; Meier, 1999; Hale and Opondo, 2005).

Finally, in relation to the direct impact of floriculture on the poor, the limited work that has been done suggests a negative impact on food security as a result of the growth of the floriculture industry. One of the few studies to conduct research into these alternative effects of NTAE production was that of Patel-Campillo (2010), who investigated the impacts of participation in the flower industry in Colombia on food security. The study claims negative effects on food security as

a result of the flower industry using flawed statistics to imply diminishing purchasing power for labourers in the industry. In fact, between 1992 and 2007, in the context of a growing population and soaring world food prices incentivising exports, real average wages increased significantly and food production-per-capita increased by a total of 5%. Production increases include those in the primary subsistence crop of maize, the price of which increased from $160 US/tonne in 1990 to $307 US/tonne in 2007, an annual increase of 4.35%. Between the periods 1990-92 and 2006-08, undernourishment in the total population decreased by 40%. Further statistical misinterpretations include the assumption that there is a direct causal relationship between one region's specialisation in a single crop - flowers, and their increased food insecurity. Furthermore, the author points to increases in production area and volume in percentage terms but the relative land areas of different crops differ greatly. For example, in 2004, 6544 Ha of flowers were under production compared with 616,000 Ha of maize. The author's reported doubling in the production area of flowers in the 1995-2006 period therefore represents an addition of approximately 3000 Ha to the production area.

The author seems to ignore a key consideration in the assessment of participation in waged labour in floriculture as opposed to smallholder production, namely the agency of workers in their decision to work in the industry. If subsistence farming was more profitable, they are not bonded and could re-engage in subsistence production. The primary contribution of the paper comes in the identification of comparative advantage as a key factor in improving or maintaining food security. As previously identified by Maxwell, the combination of cash-crops and food production for domestic consumption is ''the best route to food security, following the principle of long-term comparative advantage rather than of self-sufficiency for its own sake'' (1996; 164). This case study highlights the importance of local and industrial context and the shortcomings of research in this area. This thesis therefore seeks to address the current deficiency in research in this area.

In terms of the macro-economic effects of floriculture on developing countries, the general criticisms of NTAE production have specific implications. Firstly, criticism has been drawn to the fragility of gains made from floriculture due to the tendency towards capital flight, as examined in this chapter, and price volatility. Maharaj & Dorren (1995) point to the historical example of cut flowers' 'ancestors': tea and coffee. There are clear similarities in terms of the high barriers to entry, government incentivisation and even the countries with conducive growing conditions. For a number of reasons, the literature on the potential of floriculture is largely pessimistic. The potential for overproduction due to increased competition and the ease with which an unskilled investor can enter the market with very low risk levels - as it is not necessarily the barriers to entry but the barriers to prosperity that are high - are commonly cited as reasons for this pessimism. In essence, readily available cheap capital, labour and land mean that it is possible for developing country governments to target floriculture and allow unskilled investors to enter the market. These investors may not be able to operate their farms efficiently or sustainably but the low risk to investors means that there is a treadmill of investors willing to supply the market leading to oversupply (Wainwright and Hart, 1999; Maharaj and Dorren, 1995; Hughes, 2000). As is documented in subsequent chapters, it is possible for foreign investors to enter the market as a gamble, contribute to overproduction and leave the market with little or no personal liability.

> Rapidly increasing production of higher value niche market products will lead to rapid oversupply of markets, causing a collapse in prices and a need to produce more to achieve the same level of income (Davis, 2005; 4).

This is an example of what Abegaz (2004) sees as the reasons for Ethiopia's persistent economic failure. These 'myopic agricultural practices' combine with a focus on 'unsustainable exports' to drain all the potential resources for growth. However, this research contends that the significant impact of multiplier effects, at varying degrees of abstraction from floriculture, have had positive consequences in diversifying the export profile of the country, documented in Chapter 11. Further contributions have been made in the improvement in the balance of payments, job creation and improving worker welfare as documented in subsequent chapters, without suffering from some of the negative consequences associated with other NTAEs.

Benefits available to new entrants to the flower industry have been limited by the number of developing countries who have sought to enter the industry for the reasons described above.

> ...after many years of an undersupplied market, world cut flower supply, especially for the most common varieties, has now expanded to match or exceed what has been relatively slow growth in demand in the past few years (Trade Matters, 2007; 2).

Whilst this is true to some extent within mature markets, new markets are continually opening up and demand for flowers globally continues to grow. Floriculture had until recently been seen as a rare opportunity to utilise the assets of developing countries in the production of a product with high-YED and, as such, demand would continue to increase with global growth. However, the Global Financial Crisis displayed how an export profile focused on high-YED goods can leave an economy vulnerable during less prosperous periods. In mature markets, such as Germany, where the impact of the Global Financial Crisis was severe, several trends were seen as a result of the crisis:

> In simple terms it was a steadily growing market until 2007...the number of stems in the UK would have bombed, and what has happened now...is that we've kind of gone back to where it was before. So it feels like it was kind of a blip (IG5).

During the crisis there were also changes in the composition of demand. One might have expected 'trading down' to occur, which would have had an asymmetric impact on the growers in developing countries as they primarily produce roses, which are among the most expensive flower varieties.

> We didn't see customers trading down...we didn't see customers that would normally buy a bunch of roses for £5 suddenly start buying a bunch of roses for £3 but...customers that we would term price sensitive would start buying flowers less often or would kind of drop out of the category all together because it's a discretionary purchase...We didn't see a big drop in sales of our [most expensive] flowers and a big increase in the cheap ones which is I think what you might assume. If a retailer doesn't do a good job you can damage your own sales irrespective of the market because it's not a product that's needed, it's not like baked beans or carrots...sometimes a retailer's performance is as much about what they've done this year versus what they did last year as well as other factors (IG5).

During the contraction of the industry, coinciding with the Global Financial Crisis and due to the different costs and benefits involved with export from different locations, in order to compete on price certain governments have subsidised industries running at a loss in the hope that they would force other producers out of the market and prices would eventually rise. Due to the comparative advantages Ethiopia has in the production of cut flowers, the government hopes to

benefit from this exogenous shock with the weaker producers removed from the industry (BBC News, 2009).

> ...prices have been poor, we expect this to, well, not to be solved next week, we think that 2010 will still be the same situation, hopefully slightly recovering, our hopes are 2011 we will start going the right way again but I think the general line of thought is that it will take many years before we are again where we already were. We're not easily going to get there. And you know production is not so easily influenced by prices because production is up even when they go bankrupt there is probably someone who is going to buy it at a cheaper price and is going to continue production so...production will be there (IG2).

As a mechanism to minimise capital flight governments have traded off tax revenues in order to attract new investment to floriculture and retain that which they have already attracted, prompting a 'race to the bottom' amongst developing countries (Korovkin and Sanmiguel-Valderrama, 2007). A further concern with NTAEs which is of particular relevance to floriculture is the small scale of the industry and consequently its limited scope to provide developmental impacts. Although labour intensive relative to it spatial extent, floriculture is by no means a panacea and if it were to attract focus and investment away from other industries with growth potential then the marginal returns would quickly diminish from a governmental perspective.

Issues concerning opportunity cost of land use and environmental degradation which are among the primary criticisms of some NTAEs are less pertinent in floriculture due to the relative size of the industry, but in particular areas such as Lake Naivasha in Kenya, the high level of chemical inputs to the industry have caused concern (Collinson, 2001).

5.2 Supermarket Influences

Since the mid-1990s there has been a further change to floriculture's GPN (Hughes, 2001). As a commodity with a significant market in the UK and Germany, two countries where supermarkets form the major component of consumer spending, and with annual growth rates of between six and nine percent globally (Wainwright and Hart, 1999), major European supermarkets have sought greater involvement in floriculture in search of economies of scale and greater influence over the nature and timing of production (Thrupp et al., 1995; Trade Matters, 2007; Barrett et al., 1999; Hughes, 2000; Barrett et al., 2004; Asea and Kaija, 2000).

The traditional network for flowers grown in developing countries consisted of all of the following elements, with two or more stages amalgamated into the same organisation in some instances. Figure 5.2 shows the transition of a flower from concept to vase.

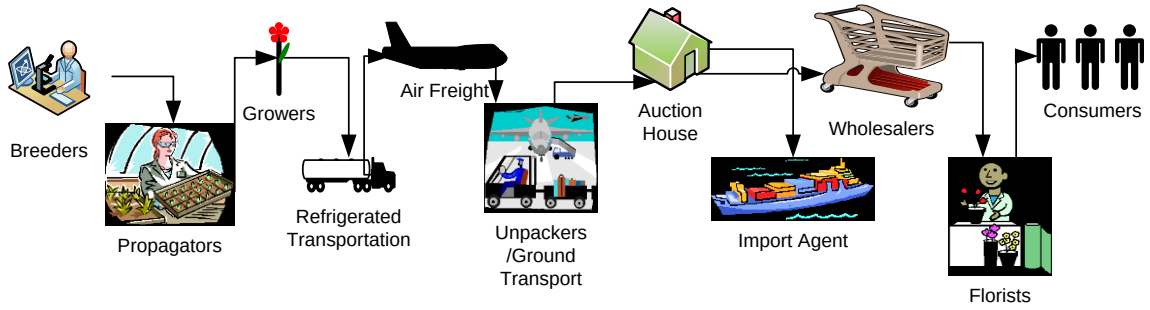

Figure 5.2: Process Diagram for Cut Flowers

Many more actors, including input and packaging manufacturers, distributors, service suppliers and marketing agents, are involved in the production process but differ in each GPN and have not been directly affected by recent changes in the organisational structure of the industry. Additionally, there are several regulatory and industrial actors that can influence the network but they are also too contextually specific to be factored into this process flow and are examined in relation to the Ethiopian network in detail below.

Firstly, genetic material produced by breeders is propagated and then sold to growers with royalties paid on a per-plant basis. Roses are then grown in greenhouses, picked and packed and put into refrigerated storage facilities on the farm site. The flowers are transported, primarily in refrigerated trucks, and usually transferred directly to waiting aircraft and flown to airports in Belgium or the Netherlands for sale at the Dutch auctions or other national airports for sale direct to buyers around the world. The flowers are handled by airport staff and transported to the auction house. One relatively recent development at this stage of the process is the introduction of electronic auction systems. These involve flowers being bought while they are still at the farm and then shipped and distributed from regional centres, such as Miami for South West USA. From the Dutch auction houses, flowers were then bought by wholesalers/exporters and transported back to warehouses in the destination country where florists would buy them and sell them on to consumers. This includes wholesalers/exporters from other parts of the world buying flowers and flying them back to North America, the Middle East or Asia. These flows have been reduced with the growth of auctions in the Middle East and the increase in electronic auctions and direct purchasing, but remain the primary way of buying flowers globally. The only element of this process which differed prior to the relocation of the industry to developing countries was the removal of the need for air freight prior to auction sale.

The major change that has occurred in this production process in the past 15 years is the increase in the influence of supermarkets. Previously, supermarkets sold a narrow range of varieties in relatively low volumes and, as such, acted as a large florist, purchasing from wholesalers at a slightly reduced rate due to bulk purchasing. In the last decade, however, supermarkets' share of the market – particularly in the UK and Germany – has grown exponentially and, as such, the supermarkets have sought vertical coordination[10] in the production process for flowers and the

[10] This has not commonly been in the form of a supermarket establishing buying, growing or transport functions. Instead they have divested responsibility for the shortening of time to market to a new group of

creation of organisational rents. Vertical integration has been sought for many reasons: i) cost reduction – fees would be eliminated at the Dutch auction houses and reducing the number of stages in the production process would mean less of the profit being extracted at various stages; ii) improved product quality – decreasing the time-to-market of the products would improve freshness; iii) increasing the influence of corporate power on the GPN – with vertical integration supermarkets could dictate to the producer what they require and when; iv) increasing demand for traceability and control over horticultural markets with the increased prevalence of cross-border agricultural control procedures. With food produce this is governed in the UK by the Food Safety Act 1990 but supermarkets prefer to keep tight controls on the movements of all horticultural produce (Hale and Opondo, 2005; Coe and Hess, 2005).

The large UK supermarket chains have not sought full vertical integration within floriculture, stopping short of setting up their own farms or transportation companies in developing countries. This is because they do not want to bear all the economic risk of investing in what is often a politically uncertain environment and so the risk is externalised by competitively offering contracts to grow certain varieties or bouquets. The companies to which these contracts are offered have experience in the field and, while extra profit taking actors are added to the production network, the risk of geographical or product fixation, as well as the potential for inefficiencies through diseconomies of scale, are removed.

The lack of direct primary involvement in a country gives a supermarket the option and more pertinently the threat, of being able to move their custom to another company in another country; an option not so easily available to growers (Coe and Hess, 2005). In such a situation, the influence of corporate power relative to institutional power can force governments – pressured by growers who have been pressured by supermarkets for lower costs and greater reliability - into expenditure on infrastructure as happened with the Kenyan government building a new airport at Eldoret (Barrett et al., 1999). This is close to the floriculture areas of Lake Bogoria and Nakuru and will ease the pressure on Jomo Kenyatta Airport in Nairobi, which handles the majority of passenger traffic and produce from the Lake Naivasha area.

This is one example of how the mobility of capital in floriculture has been used to exert pressure on developing country governments. Korovkin and Sanmiguel-Valderrama (2007) explain how this mobility has been used in different ways in both Colombia and Ecuador to diminish the rights of labour. In addition to the fiscal and monetary incentives that a government can provide, they argue that labour rights and the environment are being used in the competition to attract or keep investment; a claim examined in an Ethiopian context in Chapters 6-11.

Despite the potential pitfalls of supermarket involvement in floriculture, some see it as a way to achieve consistent growth for the industry in developing countries. According to Asea and Kaija (2000), in order to achieve cheaper prices, supermarkets place longer-term orders giving greater stability to firms allowing them to grow. This strategy is being employed by some Ethiopian

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actors referred to here as 'Importing Agents' (see Chapter 6). They exert a great degree of influence over these actors and are able to obtain many of the benefits of traditional vertical integration, whilst minimising their own risk.

growers with Karuturi Networks accepting a large, long-term order for roses, carnations and hypericum from the UK-based Morrison's supermarket in 2006 (Melaku, 2006). Joosten (2007) believes that the influence of supermarkets in Ethiopian floriculture will continue to increase and with it, price competition will increase both between companies and between countries, putting increasing pressure on growers. Whilst supermarkets have limited their integration to the consumption end of the production network, this report recommends that in order to attract supermarket orders by becoming cost leaders in their sector, producers should seek production-end integration amongst growers, logistical services and importers and wholesalers. Ethiopia must seek to out-compete countries in different market sectors, each of which make different demands of policy makers and producers. Competition in high-quality, high-price niche markets would require high levels of market information and the development of a strong R&D sector, while competition in the higher volume supermarket flower sector requires consistent output and membership of a number of international environmental and labour welfare standard schemes, as discussed in Chapters 8 and 9.

The future of floriculture in Europe remains uncertain. Whilst there has been a shift in consumption patterns across much of Europe away from traditional florists to supermarkets, trends have differed in both their speed and their reach across national borders. With other commodities, including many food items, the proportion of the commodity sold in supermarkets as opposed to smaller independent retailers has continued to increase and the vast majority of food products are now sold in supermarkets in the majority of European countries (Kacker, 1993). This does vary, however, across national borders, with supermarkets commanding a far larger market share for example in the UK and Germany than they do in Italy. Whether the pattern of consumption for cut flowers will mirror that for food commodities remains to be seen and, as described throughout the following chapters, this will have a significant impact on the marketing strategy of Ethiopian flower producers.

> You have to analyse the different systems in the market and no one knows how the future will be...Supermarkets every day lower prices. You just have to look what has happened in Holland, in Germany, in England, they are fighting with the dairy farmers every day. That is where [major importing agents] sell to. Connected to that is the long term contracts...The industry is for those type of people, and it will grow, but everybody assumes that the supermarket parts will grow, the florists will go down...But the claim that long term contracts will be better, I completely deny cause the end user is the supermarket and the supermarkets are only there to do this [squashing action] (IG7).

Regardless of the extent to which the supermarkets increase their market share, patterns of production are changing as a result of their power within the GPN. The security they have been able to offer growers has meant that the traditional auction system has been challenged for the first time and has had to adapt in order to continue to attract growers. These changes are documented in the subsequent chapters but include the creation of organisational and relational rents, simplifying their logistical operations and externalising pressures of quality control onto growers.

> [Quality control]'s the responsibility of the growers themselves. We used to work that way; that the grower sends and we determine what quality it is but it's a lot of work because you have to see each flower each day (IG2).

In diversifying their activities, the auctions have begun to encroach on the territory of some of their members, removing their functions from the network. Exporters, wholesalers, and importers have seen the function they occupied within the traditional auction system change as the auctions have moved towards a more direct marketing system where flowers are sold whilst still on the farm.

> So basically [the exporter] is not buying or selling but just organising for the product to get to his clients. It's still a big job in the sense that it's not an easy product to export to transport because you know you have to unpack, you have to gather, you have to build. To load a truck efficiently it's quite a job still of course, it's not like this wholesaler in Italy can just make sure there's a truck there waiting and get in the flowers and off it goes. So they still have a big job, a big position but it's changing (IG2).

Any new entrant to global floriculture, whether at national or firm level, has to be mindful of these changes in order to conduct a successful marketing strategy.

5.3 Breeding

Whilst - barring the 'blip' of the Global Financial Crisis - demand continues to rise in the cut-flower trade, it remains important that new and innovative varieties are regularly produced in order to maintain this level of demand (Hornberger et al., 2007). It is therefore important for developing countries to adopt a sustainable strategy for floriculture by "target[ing] growth markets so that new entrants can be absorbed into the supply chain" (Davis, 2005; 4). Due to the relative factor endowments of traditional and new production centres, breeding remains firmly territorially embedded in developed countries. However, the protection of the intellectual property for these new breeds is a relevant issue for developing countries so that they may obtain the best varieties and, consequently, the best prices on the open market. This represents an interesting area for further research but, as outlined in Chapter 12, has not been explored here as it has yet to have a significant impact on the Ethiopian industry.

6. The GPN of Ethiopian Floriculture

This chapter begins by providing a brief narrative of the floriculture industry in Ethiopia based on primary data collected from qualitative interviews and data collected from government agencies. Key statistics about the growth of the industry are then identified. Following this abbreviated history and a set of descriptive statistics, the network is explored in greater detail, by outlining the functions of Ethiopian floriculture's GPN and the interactions between its actors, again based on the primary data obtained from qualitative interviews with a wide range of actors in many of the multiple countries involved in the network in addition to survey data.

6.1 Brief History and Profile of Ethiopian Floriculture

The first private farm to produce cut flowers for export from Ethiopia was a locally-owned summer flower (open field) farm that began exporting in 1994/5. This consisted of low volumes of low input flowers without the need for greenhouse growth. In post-socialist Ethiopia, even such embryonic forays into private commerce attracted international attention as a development to be nurtured and, in 1995, the European Union, in conjunction with Ethiopia's Ministry of Trade and Industry, sent a delegation to view the farm and suggest programmes for its further development. Subsequently, an agricultural consultant was commissioned by the EU to investigate the available inputs, market opportunities and climatic conditions in Ethiopia to recommend particular varieties and market strategies to be trialled on a commercial scale (IG8). The first variety trialled, with a plot of half a hectare, was carnations which were, again, low-input summer flowers. Whilst the industry lacked the critical mass to make it cost-competitive enough to make an impression in major markets, producers began to see the potential of the industry and by 1999 production of roses for export under wooden greenhouses was underway, followed in 2000 by the introduction of modern PVCU greenhouses. The industry was still limited to just a handful of small producers and in 2002, the Ethiopian Horticultural Producers and Exporters Association was formed after overcoming a struggle to form an association, for which the minimum legal requirement in Ethiopia is five members. In 2004 there were six growers that regularly exported to the auctions in the Netherlands and by 2005 the Ethiopian floriculture industry was the fastest growing in the world (see Figure 6.3). The government had offered incentives as part of ETEP including waiving corporate income tax for two, and then three, years but it was not until 2004 that the government became interested in the floriculture industry in any significant way, following the reports of EU and other consultants, and they began to improve the investment code for foreign investors to the point where it is now one of the best on offer to investors in floriculture globally.

Following a meeting between the Ethiopian Prime Minister and the UK's then Secretary of State for International Development, Clare Short, it was agreed that the Department for International Development (DfID) would assist in the growth of the industry through the provision of expertise and equipment. They discussed the unrealised potential of horticultural exports from Ethiopia and as a result DfID commissioned a study entitled 'Horticultural Exports from Ethiopia and EU Supermarket Sourcing'. This was the start of one of many key relationships between the Ethiopian government and international partners that have assisted in the growth of the floriculture industry. Subsequently, a consultant was placed within the Ethiopian Horticulture Producers and Exporters Association (EHPEA) for three years in order to provide technical advice to guide government strategy on the industry (IG12). This consultant continues to work within the association over five years after the job began. The industry is now firmly established in

greenhouse floriculture, specialising in the high-value market for roses, known as the 'Rolls Royce of the flower world' (IG6). The industry now employs over 100,000[11] people, 70% of whom are women. There are approximately 90 farms currently exporting flowers from Ethiopia, with 1550 hectares under greenhouse production (Walta Information Centre, 2010a).

Flowers vary in terms of the optimum agro-ecological conditions for production. The majority of growers in Ethiopia have chosen to specialise in roses due to the high sales price they command and the good growing conditions available. Roses can be commercially produced without the use of heaters at altitudes between approximately 1000m and 3000m above sea level. Higher altitudes produce longer-stemmed, larger-headed roses which command higher prices but are lower yielding and more susceptible to disease due to the increased rainfall. Conversely, lower altitudes produce shorter-stemmed, smaller-headed roses which command lower prices but are higher yielding and less susceptible to disease due to lower levels of rainfall. Producers must, then, base their location decision on the precise product and the route they want to take to market. As such, growers have located in a number of different areas which satisfy their agro-climatic requirements, in terms of altitude, soil quality, access to water, rainfall levels etc., and have easy access to the necessary infrastructure of Addis Ababa (Figure 6.1).

[11] The integrity of this data is questionable as it is comes from a government source and no methodology for its collection is given; it is however the most recent statistic available. This figure was repeated by government sources in several interviews, while EHPEA literature produced in 2009 estimate the figure at 70,000 – the figure targeted by the government in PASDEP (2006). EIA data collected during primary research, which as documented elsewhere is based on *ex ante* evaluations, puts the figure at 60,000 permanent and 90,000 temporary employees. Based on a production area of 1550 hectares and a high estimate of 40 employees per hectare, direct employment would still amount to only 62,000 and so this figure must be taken to include employment in associated support industries.

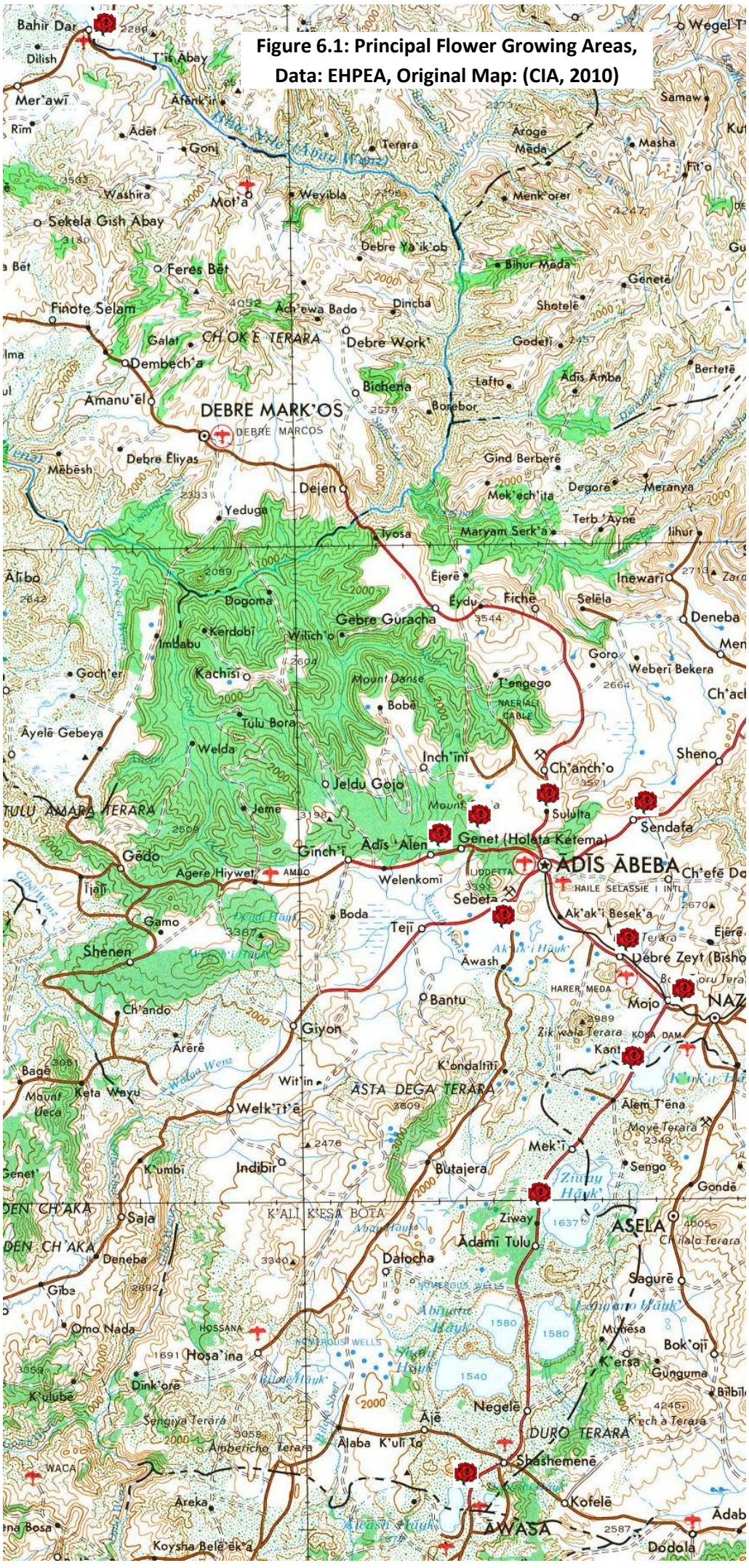


Figure 6.1: Principal Flower Growing Areas, Data: EHPEA, Original Map: (CIA, 2010)

-1840m (Bahir Dar)

Areas where flower farms are located

-2391m (Holeta)

-1920m (Debre Zeit)

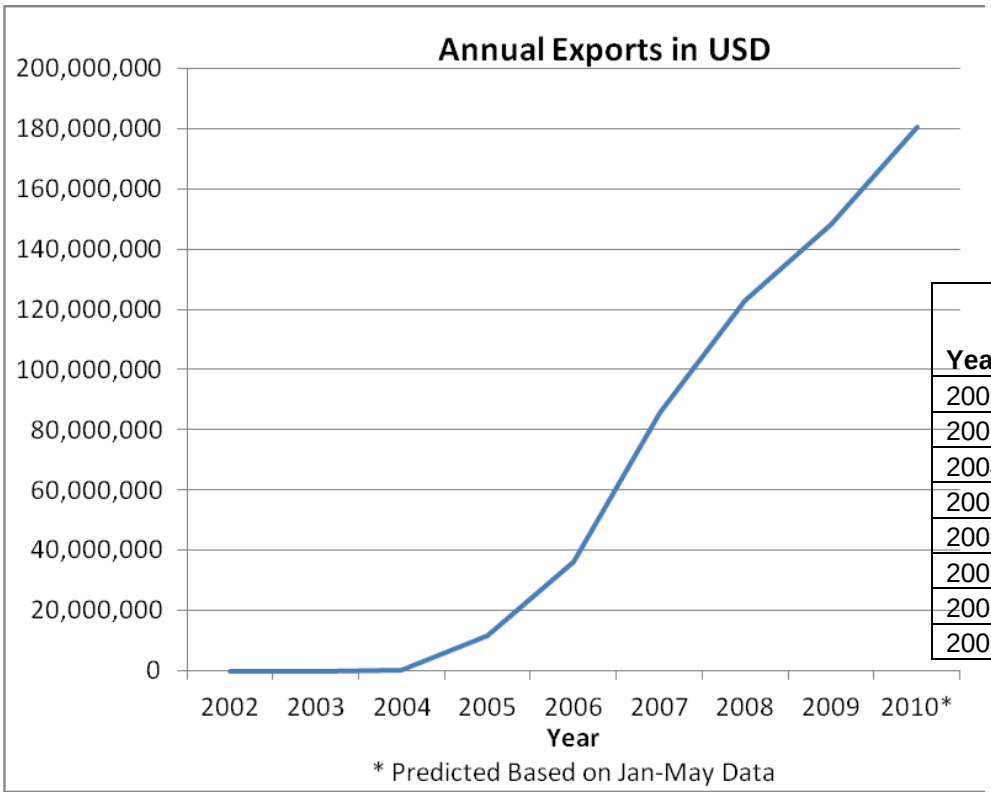
-1595m (Koka)

-1643m (Ziway)

-1708m (Awasa)

6.2 The Growth of the Ethiopian Flower Industry

Before beginning a descriptive analysis of the statistics behind the growth of Ethiopian floriculture it is important to reiterate a cautionary note from Chapter 3 regarding the integrity of quantitative data. In addition to the issues of vested interest which cast doubt on a wide range of official statistics in Ethiopia, floriculture presents its own issues with regard to sales figures. As is explored in greater detail below, flower producers have a financial incentive to underreport sales figures in Ethiopia, as is commonly the case with subsidiaries of foreign companies operating in developing countries (Chiao et al., 2009), and a robust system to prevent this has yet to be implemented. This problem is thought to be at its most acute in Ethiopia although it has also been observed to a degree in Kenya (IG8). Mirror data shows the discrepancy between reported exports of floricultural products from Ethiopia and reported imports of floricultural products from Ethiopia by Ethiopia's trading partners has decreased significantly in recent years, from 19.3% in 2006 to 1% in 2010, averaging 8.6% over the five year period, with the relative sizes of direct and mirror data fluctuating. By comparison the discrepancy in Kenya ranges from 27.9-53.3%, with mirror data always exceeding direct data, and the Netherlands where discrepancies average 3% with direct data most commonly exceeding mirror data (International Trade Centre, 2011). Furthermore, the methodology for the collection of mirror data cannot control for some of the elusive practices engaged in by exporters as examined throughout this research. The result is that the size of the Ethiopian industry is, in reality, larger than is reported below, although the exact size is impossible to document accurately given the number of evasive practices engaged in by the producers in the industry.



Year	Annual Growth Rate
2002/03	-39.2
2003/04	261.9
2004/05	19614.1
2005/06	210.0
2006/07	137.9
2007/08	43.1
2008/09	20.6
2009/10	22.0

Figure 6.2 Annual Flower Exports from Ethiopia Data: Consolidated from NBoE and ECEA

Whilst export floriculture in Ethiopia began in the mid-1990s as described above, Figure 6.2 displays the significance of the remarkable growth since 2004. In six years the industry has risen from a negligible actor in floriculture to the fourth largest exporter of flowers in the world. The country overtook Kenya in rose exports in 2010, a flower which comprises over 85% of total

flower exports from Africa, and may soon challenge the two largest global exporters, Colombia and Ecuador, with the government envisaging exports of $1bn annually by 2014 (van der Ploeg, 2009)(IG2). This growth has occurred both as a result of rising demand in existing markets and the opening up of new markets but more as a result of capturing market share from competing nations. As displayed in Figure 6.2, between 2004 and 2007 the growth in the industry was exponential. The growth rate then slowed, possibly as a result of the fall in demand caused by the Global Financial Crisis, and has resumed a slightly higher, but linear growth rate in the 2009-2010 period:

> ...flowers is still expanding but not at the rate that it was. Obviously you're not going to get 200% growth...200% growth when you've got 5 hectares is very easy because it just takes it to 15 or 20 hectares. But once you get to 1000 hectares, 100% growth to get to 2000 hectares in the next year, these type of things don't happen. It was inevitable that the growth was going to slow down (IG8).

It is important here to discuss the significant impact of the unforeseen Global Financial Crisis, which induced a recession throughout the developed world, on demand and prices for cut flowers. The Global Financial Crisis challenged the positive perceptions of the industry based on assumptions of a continually growing market, which could affect the overall impact on developing countries.

With regard to the effect of the Global Financial Crisis on Ethiopia, Getnet (2010) found that, in the period 2007-2009, FDI and the demand for and prices of exports declined. However, the data presented by the author shows that even during this period, the flower industry continued to grow. The growth, in value terms, of floricultural exports slowed from 200% in 2006 to around 25% in 2009. Demand and prices in Europe dipped considerably during 2008 and 2009 but have now surpassed pre-crisis levels and continue to grow (IG5). During this time, primary research revealed that in Ethiopia growers were exporting as little as 30% of their stock and that which they did export was at a loss but they did so simply to maintain a presence at the auction for marketing purposes, the reasons for which are discussed in Chapter 8 (IG6).

The timing of the crisis meant marginal positive growth was maintained throughout both of the crisis years and strong growth has resumed in the industry as a whole throughout 2009 and 2010. The Global Financial Crisis did impact on the seasonal sales pattern of the industry which is why this pattern is not clear in Figure 6.4. The data does, however, show the strong and rapid growth the industry has experienced since 2005 and the resumption of growth that has occurred in the months since the Global Financial Crisis:

> In relation to the effect of the recession, it's obviously started to come at the same time as some of the beginning farms are starting to realise that growing flowers isn't a licence to print money. So I think there are two pressures on the industry. One is the natural pressure that comes when an industry is 3, 4, 5 years old. Bank loans have to be paid, crops have to be replanted. It's the time when you realise the money's gone and the income is not quite as big as you thought it might be. So that is natural. And I think it's fair to say that recession has had a significant impact on price in real terms in the last 18 months. It recovers a bit periodically but it's not an exciting recovery. So on that basis the DBoE has rescheduled the loans for a significant number of farms. This gives them breathing space to consolidate and get their act together (IG8).

This analysis is confirmed by another (IG7) respondent who believes that growers are not necessarily finding the fortunes they sought when entering the industry. Dividing Ethiopian growers into three groups, the respondent stated that a group of incompetent growers that failed

to implement the required control procedures have had institutional support removed and have left the industry. A second group are effectively speculators who saw the industry as a 'golden egg' but have failed to make the financial or temporal commitments necessary to succeed in the industry during the Global Financial Crisis. The final group are those that have invested the necessary time and money to continue to develop in the industry and have been successful as a result. This final group has more in common with the Dutch growers in Ethiopia, with floriculture forming their primary business interest.

The opinion that flower farms are perhaps not as quickly and sustainably profitable as had first been assumed by some investors, given the strains placed on the industry by the Global Financial Crisis, is best characterised in this extract from an interview with a flower farm investor:

> Flower farms have lives, they continually demand inputs. You can't just quit and say 'let things get better' (IG13).

The decrease in the rate of growth has not dampened the government's enthusiasm and support for the sector having set a target of trebling floriculture exports by 2014, with the industry having recovered from the recent crisis (The Ethiopian News Agency, 2011).

Figure 6.3 displays the major nations that export flowers to the EU. The graph shows Ethiopia to be the only country to have increased exports year-on-year for the whole of the displayed period. Despite the aggregate rise in demand, some countries have experienced significant declines including Israel, the second largest exporter at the beginning of the displayed decade, and Zimbabwe, which had previously had a vibrant flower sector as a legacy of colonialism in a similar way to Kenya. Other African producers such as Uganda, Tanzania, South Africa and Zambia saw their exports remain at relatively low and stable levels. The relative positions of the two South American producers, Colombia and Ecuador, reversed during the periods shown, while the combined contribution to total imports from those two countries fell from 31.3% in 2000 to 29.9% in 2010. Some experienced actors within the industry predict that this decline will continue:

> Ecuador and Colombia, maybe they will go too I think. If you know the Chinese will be big. They all start with primary industries like textiles. But then they went to hi tech. So when other people like Colombia move to hi tech we can probably take over the flowers (IG10).

Kenya's flower exports to the EU had been growing since the early 1990s and continued to do so until 2009 when they fell by more than 7% and again by more than 3% in the subsequent year. Ethiopia's growth has continued at a significant rate during this period. The Ethiopian Minister for Agriculture and Rural Development has recently stated that in the 10 months to September 2010, Ethiopia earned $250m US from floriculture, making flowers the second most important export after coffee (The Ethiopian News Agency, 2010)[12].

[12] Note that this contradicts the data supplied by the UN International Trade Centre given in Figure 4.3, in both value and the relative size of exports. It also significantly exceeds the predictions made for that period from Figure 6.2. It is difficult to know the true value of exports because, as documented in this chapter, their value is widely believed to have been underreported and growth has not been linear, in addition to the influence of various agendas in the presentation of statistics. However, this statement serves both to add weight to the significant and growing importance of floriculture in Ethiopia and use of triangulation of methods in the present research.

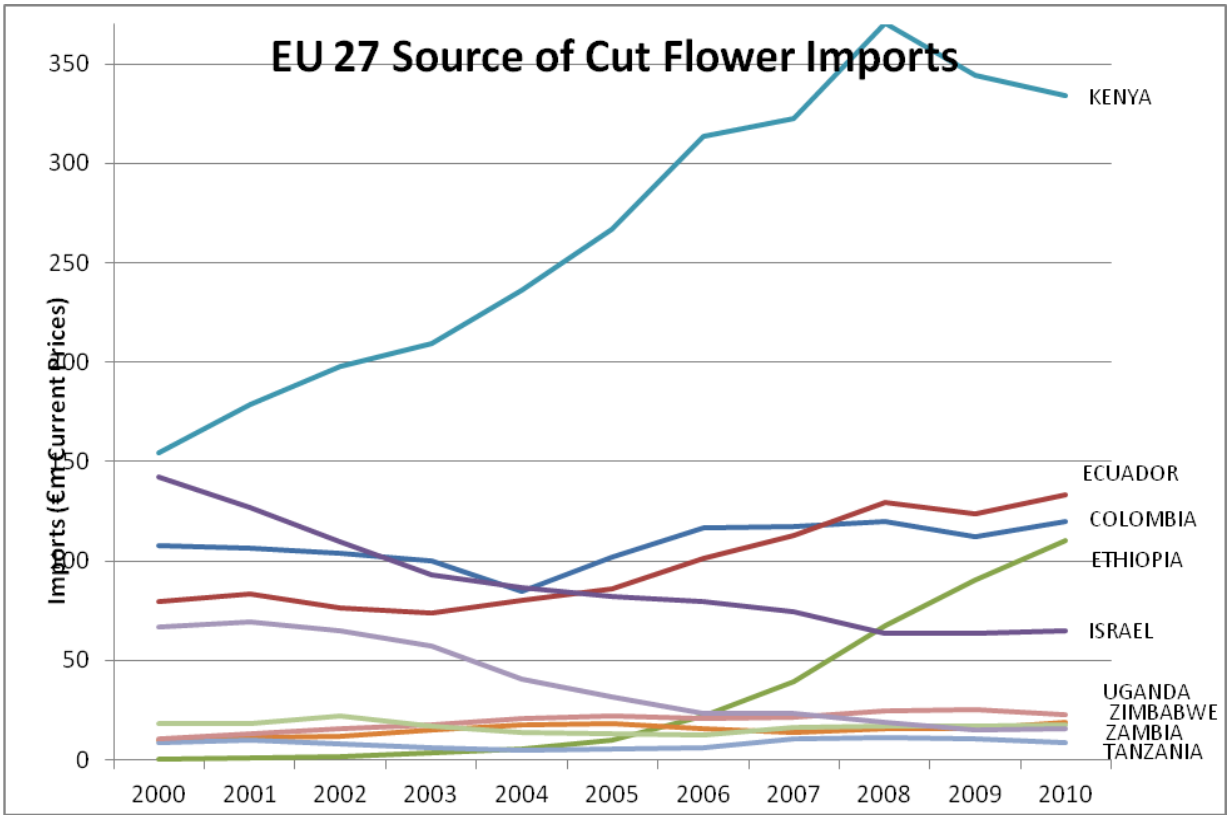


Figure 6.3 EU27 Cut flower imports by country; Data: EuroStat

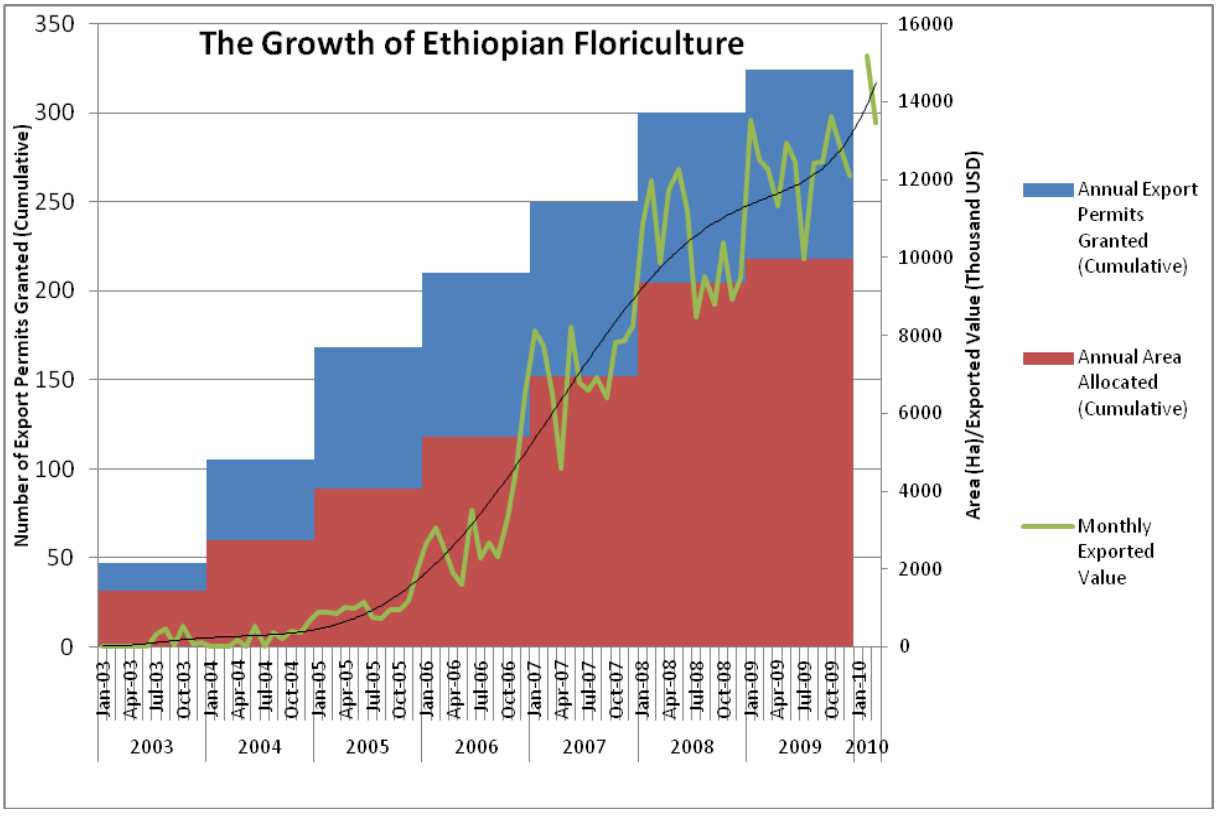


Figure 6.4: Ethiopian Monthly Flower Exports; Data: NBoE/EIA

Figure 6.4 displays the growth of the Ethiopian flower industry according to a number of different metrics. The exported value shows the rapid growth of the industry since 2005, the seasonal fluctuations in sales and the reduction in the growth rate during the Global Financial Crisis. The annual change in the number of investment permits granted gives a good indication of the

number of new entrants to the industry over time and also shows the lag between entry to the industry and when these entrants' production is realised in exported value, although there are evidently demand side factors involved in the total value exported. Finally the an0nual change in area allocated, when taken in conjunction with the granting of investment permits, gives an indication of the extent to which the growth in export value has occurred as a result of the expansion of existing firms or as a result of the entry of new firms. It can be seen from this relationship that during the early stages of the industry's growth, the rate of growth in the number of new investment permits outstripped the growth in the area allocated for floricultural production. More recently, however, the growth in the area allocated has been far closer to the rate of growth in the number of new investments and has exceeded it in two of the years displayed, indicating a trend towards larger farms for new investors and the expansion of existing farms.

At the Dutch flower auctions – the primary export market for Ethiopian floriculture – sales of imported flowers follow a very clear seasonal pattern. When European producers can offer competitively priced flowers in the spring and summer, prices and sales volumes of imported flowers fall. Sales and prices increase significantly in the European winter and peak around St. Valentine's Day. Revenues increase for certain varieties to coincide with particular religious and national celebrations in sales markets and producers will time production so that supply and quality peak during these premium sales periods. Conversely, direct buyers look for a steady supply of varieties based strictly on what customers want at a given time of year (IG5).

This gives African producers an advantage for the varieties they are able to produce as the climate is relatively stable. Conversely, supply of flowers grown in cooler climates may have to be sourced from different hemispheres at different times during the year provided the demand exists.

6.3 Ownership of Ethiopian Floriculture

This section uses a number of sources to determine the firm ownership structures in Ethiopian floriculture.

Country of Origin	Hectares Under Ownership (%)	Rank
Ethiopia	33.57	1
Israel	12.09	2
India	10.29	3
Netherlands	8.26	4
USA	7.28	5
Jordan	4.86	6
Sudan	4.86	7
Nigeria	4.29	8
Canada	2.03	9
Britain	1.96	10
Saudi Arabia	1.95	11
Egypt	1.50	12
Austria	1.00	13
France	0.65	14
Italy	0.52	15
Russia	0.48	16
Yemen	0.47	17
Lebanon	0.43	18
Palestine	0.38	19
Panama	0.28	20
Australia	0.25	21

Country of Origin	Hectares Under Ownership (%)	Rank
Oman	0.25	22
Kenya	0.22	23
Angola	0.20	24
Ireland	0.20	25
South Africa	0.20	26
Sweden	0.20	27
Switzerland	0.19	28
Germany	0.18	29
Rwanda	0.15	30
Syria	0.15	31
Uganda	0.11	32
Belgium	0.10	33
China	0.10	34
Hungary	0.10	35
UAE	0.10	36
Ukraine	0.08	37
Somalia	0.05	38
Benin	0.02	39
Liechtenstein	0.02	40
Iraq	0.00	41
Jamaica	0.00	42

Table 6.1: Hectares under Ownership by Nationality; Data: Compiled from various EIA sources

Every investor in the floriculture sector must obtain an investment permit from the EIA in which they must document the land area required and the number of permanent and temporary employees involved in the project. They must also give the name and nationality of the primary investor. There are multiple problems with this data. The data is taken from an *ex-ante* investment permit application and as such is based on projections. As one of the incentives being offered to investors in order to expand the industry, land is an inexpensive factor of production.

Many investors have therefore taken leasehold of plots of land vastly in excess of that on which they produce. Some of this is for storage, office space and other non-productive uses but much of it has been taken to allow for future expansion and for possible use for other agricultural investments. There is an average of 155% discrepancy between the data obtained from the EIA on land size required and the data obtained on production area for the same farms during the quantitative survey, with a standard deviation of 59%.

A further problem of the EIA data is the bias introduced by the initial regulations imposed by the Development Bank of Ethiopia (DBoE) on loan applications. Loans were initially offered only to foreign investors which resulted in the applicant for the investment permit being a minor- or non-shareholder from a foreign country. Alternatively, returnees to Ethiopia who had obtained citizenship from a foreign country applied in the name of this country. Ethiopians are not permitted to hold dual citizenship and so are classed as foreign even after the DBoE regulations changed to allow Ethiopian nationals equal rights to loans. The distinction drawn by this research, which is discussed later in the thesis, sees the main difference between foreign and domestic investors as being the permanent residence of the investor and the remittance of profits overseas, however, this data does not allow this distinction to be drawn accurately.

Despite these issues with the accuracy of the data, some inferences can be drawn which can be triangulated with other data sources. Ethiopian owners account for slightly over one third of the total hectares allocated to the flower industry. This tallies closely with the statistics obtained from the Ethiopian Horticulture Development Agency (EHDA) that foreign ownership within Ethiopian floriculture accounts for approximately 70% (IG4). The next most significant country of origin is Israel (12%), closely followed by India (10%), Netherlands (8%) and the USA (7%). Overall, 42 countries are represented in the data.

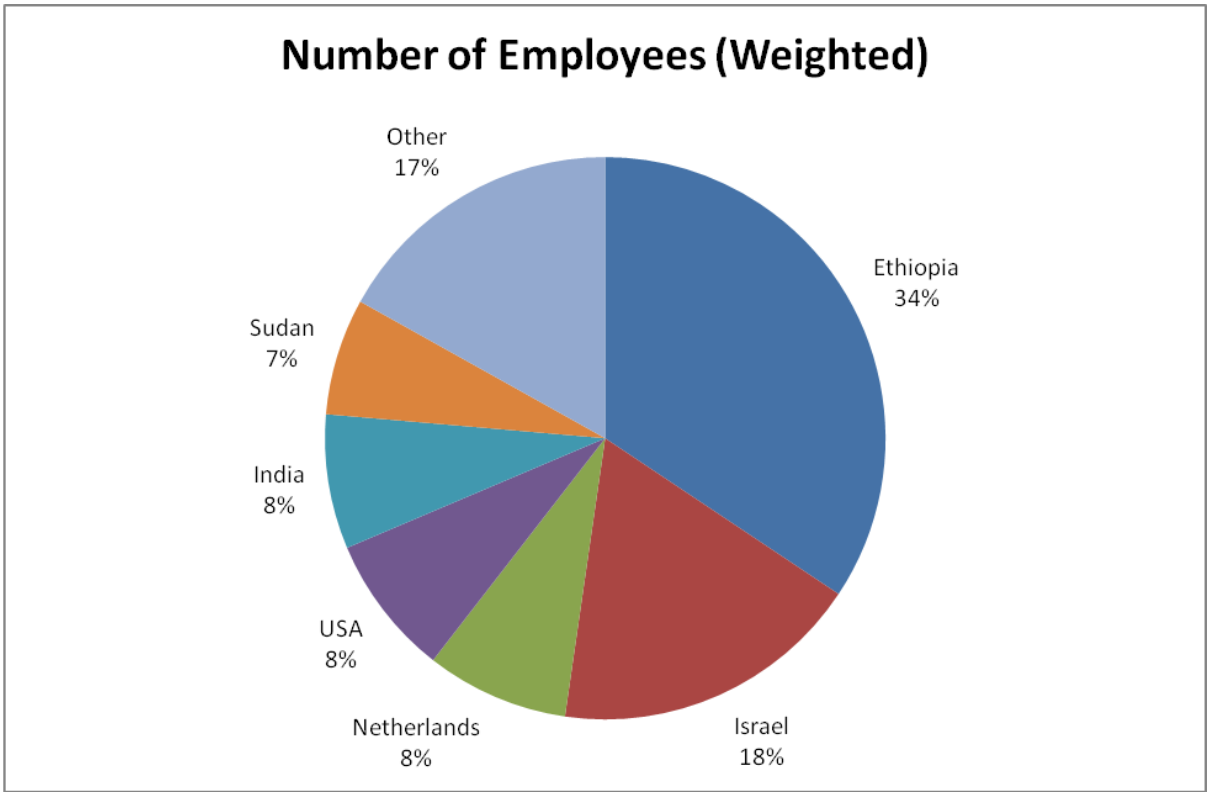
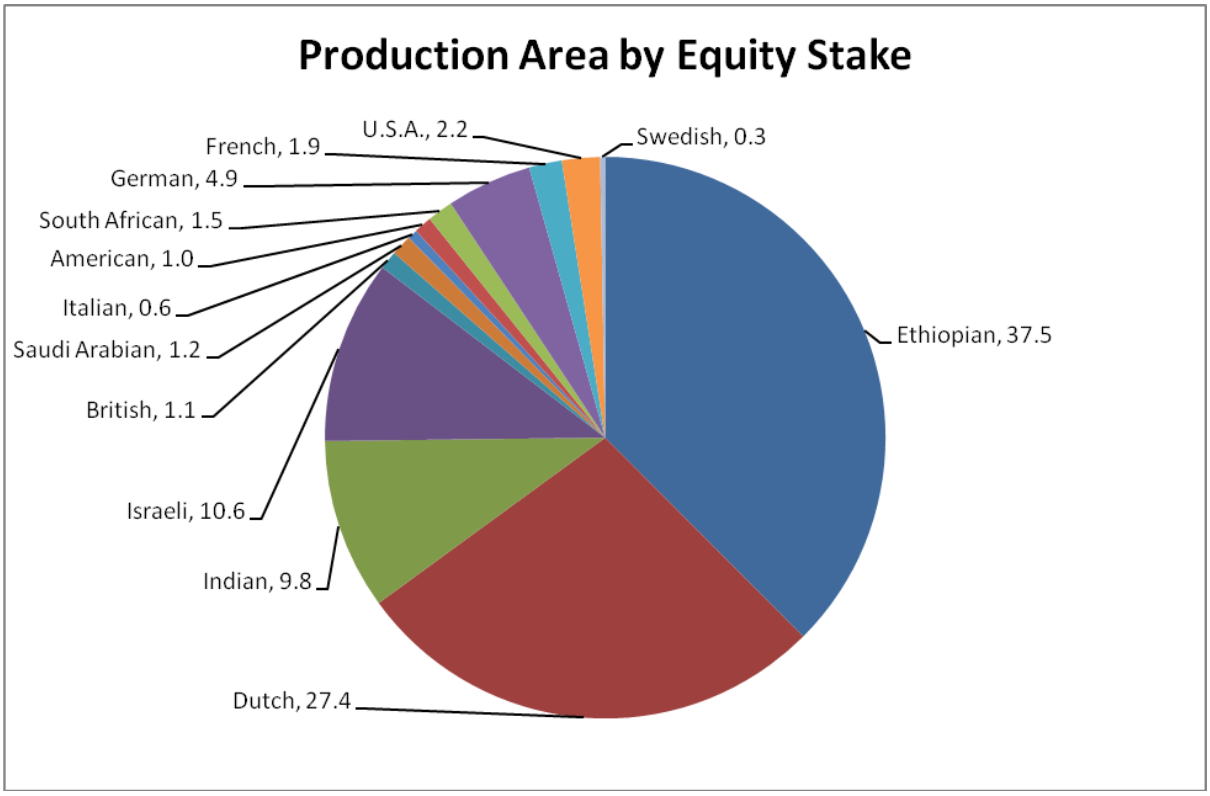


Figure 6.5: Number of Employees on Ethiopian Flower Farms by Owner Nationality; Data: EIA

Figure 6.5 is intended as a further measure of the influence of capital from different countries in the floriculture industry. In the absence of turnover and profitability data for farms, this diagram

together with Table 6.1 and Figure 6.6 are intended to give an indication of the proportion of value in the industry that is captured by capital from each country. The data in this diagram was also obtained from the EIA and has been transformed so that permanent employees are given double the weighting of temporary employees. This transformation was performed based on interviews in which it emerged that while employment models vary across farms, over the course of a year temporary workers work for half the hours of permanent employees (usually being employed full time but only during peak production seasons). The 'Other' category summarises employment attributable to a total of 36 other countries with fewer than 5000 employees individually. The data should again be treated with caution because it is based on the *ex-ante* predictions of employment levels. Some farms may have grown unexpectedly and employ more people than predicted while others may have exaggerated the level of employment they would create in order to improve their chances of obtaining an investment permit or DBoE loan, playing on one of the government's stated objectives for the industry. A further problem arises in that the farms with the greatest number of employees are not necessarily those that make the largest contribution to the export earnings or profit of the industry, nor does the number of producing hectares correlate directly with turnover. Due to the differences in relative sales prices and costs for different flower varieties, labour and land intensity may differ. However, the combination of all of these statistics gives a robust indication of the ownership of the industry.

The broad patterns of ownership shown in Figure 6.5 are closely correlated with Table 6.1. The relative importance of Israel increased with 18% of the labour force, while the proportion of labour working on Indian-owned farms is lower than the proportion of land leased to Indian investors. This is likely to be largely attributable to both the higher presence of Indian investors in the lower volume, higher value highland flowers which have a lower labour intensity than the lower altitude agro-climatic regions, where there Israeli investors have a stronger presence and to the fact that one major Indian investor has leased a great area of land which they intend to use for other horticultural production.



6.6 Production Area by Equity Stake, Data: Quantitative Survey

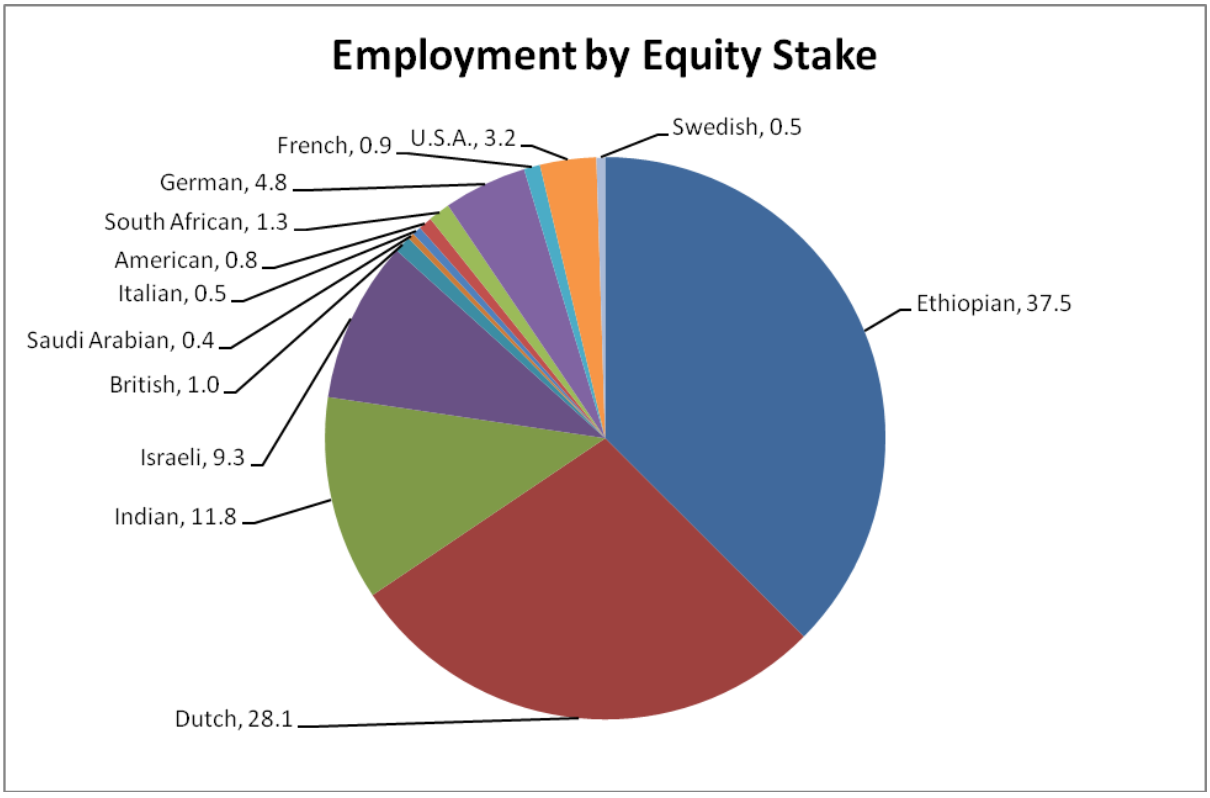


Figure 6.7: Nationality of Ownership; Data: Quantitative Survey

Figures 6.6 and 6.7 show the production area and employment levels attributable to each nationality of investor as given by respondents in the quantitative survey. Whilst the survey could only be conducted with 64 of the approximately 90 farms currently exporting, this data has the advantage of respondents being able to self-determine the ownership profile of their firms, allowing plurality of countries of origin and a guarantee of anonymity removing any fear of an alternative agenda that may have existed with the EIA data. For example, as documented

elsewhere in this thesis, in the initial stages of the industry it was advantageous for a firm to present itself as foreign-owned and so a 40:30:30 equity split between Dutch, Israeli and Ethiopian investors respectively would be reported to the EIA as Dutch-owned and so all of that firm's production area and employees would be calculated as Dutch. However, in the quantitative survey analysis, individual firms' equity distributions could be reported and so accuracy is improved.

The most striking difference between this analysis and the EIA data is the significant increase in the influence of the Dutch moving from 8% in both of the previous analyses to 27-28% and the second largest stakeholder in this analysis. The two primary reasons for this are the ability to include several equity holders in response to the question and the fact that none of the governmental agencies or QUANGOs involved in the industry take an interest in the equity share of individual companies, with no record kept (IG4).

The two primary sources of finance for investors in the industry are DBoE loans and funding from the Dutch government in the form of the Mix-Matching Facility and PSOM and subsequently PSI. All of these schemes require partnerships to be formed between investors or firms in the host country – in this case Ethiopia - and the applicant. In the early stages of this scheme, when growth in Ethiopian floriculture was at its peak, applications were restricted to Dutch applicants before an EU ruling required the scheme to be opened to applicants of all nationalities. Even now, interview evidence revealed that there is still a strong bias towards Dutch investors in these schemes as they are not widely publicised outside the Netherlands. This has resulted in a large number of Ethiopian/Dutch partnerships in the industry in addition to the solely Dutch-owned farms which have been funded by private capital. The remainder of this analysis broadly reflects that of the EIA data with significant influence of Indian and Israeli investors in the sector.

6.4 Describing the GPN

Here, the central actors involved in Ethiopian floriculture are identified and the relationships between them explored. This GPN, like the GPN for the majority of globally traded commodities, is incredibly complex and non-linear and so each actor's role and interactions with other actors in the network must be explained. In order to do this, the GPN is first distilled into diagrammatic form before the role of the individual actors is elaborated upon. Due to the complexity of the Ethiopian floriculture GPN and the number of actors involved in it, the diagram is divided thematically into three key segments; institutional actors; production actors; and transport/retail actors. This division is made as production actors operate primarily in Ethiopia, transport/retail actors are commonly based outside of the country of production and institutional actors act across the entire network with some actors spanning these operational spaces.

6.4.1 Institutional Actors

Firstly, the institutional actors involved in the Ethiopian flower industry must be described because it was this group whose shift of focus onto the industry has had the greatest impact on its recent rapid expansion. Figure 6.7 identifies the actors involved in the industry in an institutional capacity and some of the primary interactions between them.

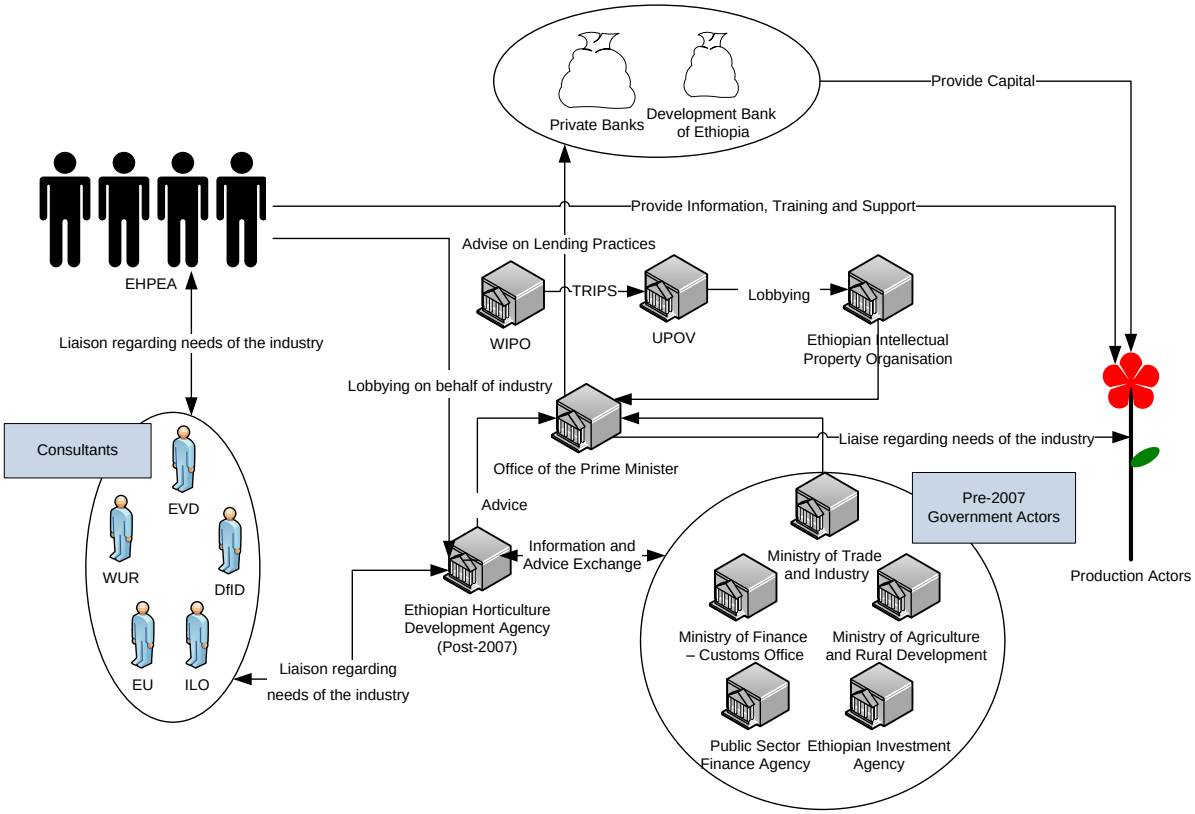


Figure 6.8 Institutional Actors involved in Ethiopian Floriculture

As described in the earlier part of this chapter there were many institutional actors involved in the early development of the industry including the Ethiopian Prime Minister himself, international consultants and the industry association. This diagram is intended to represent the production network once the industry was established as a significant international production centre and while this continues to evolve, the actors involved, with the exception of the government involvement described below, has remained broadly static.

The office of the Prime Minister, in the centre of the diagram, is representative of central government and has been integrally involved in the growth of the industry. Prior to 2007, several government departments were responsible for different segments of the industry, as it was both industrial and agricultural in nature and required both public and private investment in order to develop and achieve the exports the government desired. All of these departments were tasked by the Prime Minister's Office with assisting in the growth of different elements of the industry as documented fully in Chapter 7. These included the allocation of land to growers, the organisation of finance through the DBoE and the designing of an investment code aimed at attracting investment to the industry as one of the government's priority sectors. In 2007, these government functions were then unified under the remit of the newly created QUANGO - the Ethiopian Horticulture Development Agency. The agency liaises with existing government ministries in order to provide a 'one-stop-shop' for investors in the floriculture industry. This agency acts as the direct government point of contact for flower producers, both individually and collectively, in the form of EHPEA. However, such is the Prime Minister's interest in the industry that he maintains direct contact with producers in the form of quarterly meetings where he receives feedback on producer issues and government policy on the industry. Part of the motivation for the creation of the EHDA was the simplification of the administrative system, as requested by the EHPEA, for the benefit for the floriculture industry (IG8). Collective power within the EHPEA takes two primary forms and there is a substantial overlap between collective, institutional and corporate power. Firstly, the EHPEA is primarily an agent of collective power.

However, the members of the EHPEA are corporate actors and so their actions within the network are tempered by corporate power. Furthermore, the association has been legitimised by donors, as documented below, as a recipient for funding with a view to institutional shaping within the network, and so the association also bears the characteristics of a semi-autonomous institutional actor, wielding institutional power. The second form taken by collective power within the Ethiopian floriculture GPN is the more conventional conception of labour unionisation as documented in Chapter 9.

Consultants are involved in all sectors of the floriculture GPN. They have played, and continue to play, a vital role in the development of the Ethiopian floriculture industry. Commissioned by the EU, foreign national development institutions such as DfID and EVD, the ILO, the EHDA or by the EHPEA, consultants have assisted by advising on issues such as technical floricultural practices, investment codes, market strategies and capacity building.

The EHPEA's primary task is advocacy, conducted through lobbying the EHDA for their members' interests. However, the association has emerged, in the minds of donors, as an independent and suitable recipient for targeted funding and as such has acquired the role of conducting training and a certification scheme for the industry. This *mission creep* could be viewed as a conflict of interest as an organisation run for the benefit of its members is made responsible for the dissemination of information and training, particularly as membership is not universal amongst exporters and the potential exists for a bias in the dissemination of information towards members. However, donor concerns about the current competencies and impartiality of other potential recipients of funding, together with the donor advocated control mechanisms such as the independent auditing of environmental standards documented elsewhere in this study, mean that the EHPEA is currently seen as the most suitable recipient for funding.

The EHPEA lobbies government actors, donors and research institutions in order to address the problems being experienced in the industry. This is an important function in attempting to address market failures, such as conducting research on technical aspects of the industry including integrated pest management or developing locally adapted varieties in the absence of international breeders through its lobbying of the Ethiopian Institute of Agricultural Research (EIAR) (IG4).

> Internally the association has many problems, but externally the association is effective. It has the small scale project which works well, it has the training project which works well. It has introduced successfully the Code of Practice (CoP). It's very effective at lobbying with government to achieve favourable conditions to help the sector to expand and sustain. It's an active partner in the Ethio Netherlands partnership programme [Ethio Netherlands Horti Partnership (ENHP)] which has a number of developmental projects attached to it (IG12).

The financial institutions on the diagram, namely private banks and the DBoE, should have a simple role within the industry of providing capital to investors, which remains their primary role. However, as explained below, the DBoE has been required to become more directly involved in the sector through the repossession and interim management of defaulting farms. These farms are eventually auctioned at as-close-to-market-price as possible.

The final set of institutional actors involved in Ethiopian floriculture is the international intellectual property and trade institutions. The World Trade Organisation (WTO) is involved in direct negotiations with the Ethiopian government regarding accession to the organisation, expected to be completed by 2013, which could directly benefit floriculture exports to non-

European Union member countries. One of the outstanding conditions required for WTO membership are technical barriers to trade including sanitary and phytosanitary services, which relate directly to horticultural exports (Kidane, 2009). Another of the conditions of this membership is compliance with the *Trade Related Intellectual Property Rights (TRIPs)* agreement, under which countries are obliged to protect intellectual property on plants. One of the more common systems of protection is the *Union Internationale pour la Protection des Obtentions Végétales* (UPOV), which lobbies the quango responsible for Ethiopian policy on intellectual property, the Ethiopian Intellectual Property Office (EIPO). The EIPO then liaises with government to design the most appropriate strategy on intellectual property for the industry.

6.4.2 Production Actors

At this stage only a cursory examination of the processes involved in the production of flowers for export is required before the elements that have a more significant impact on the research questions are engaged with below.

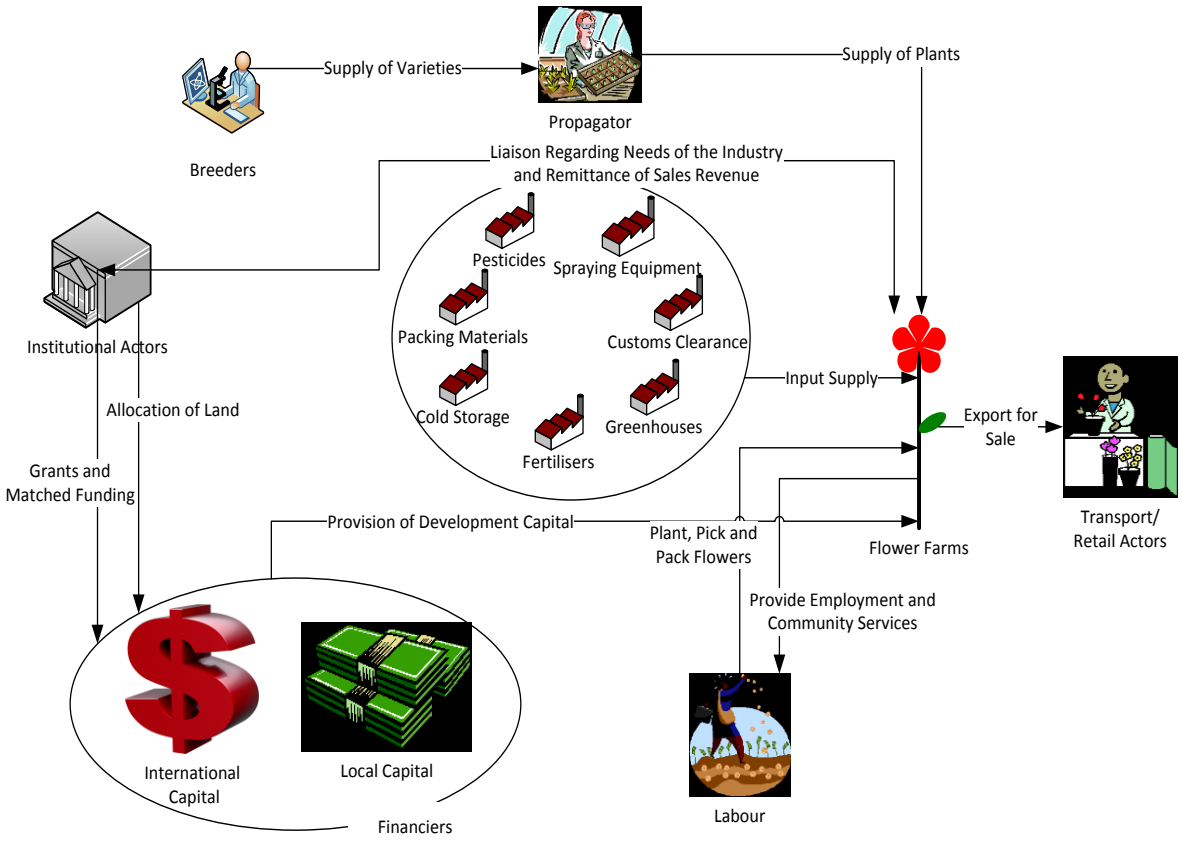


Figure 6.9 Production Actors involved in Ethiopian Floriculture

Figure 6.9 displays the most important processes involved with flower production in Ethiopia. The key actors in the diagram are the financiers, without which there would be no need for any of the other actors. Financiers receive grants, loans and land from the institutional actors described in Figure 6.7. These resources are then used to set up the flower farm, including building greenhouses and purchasing inputs. The inputs node of the diagram has been necessarily simplified, with a single farm potentially using 114 pesticides and 104 different products to control for disease (Emana et al., 2010). Flower farms also purchase planting material which is selected from breeders and then multiplied by propagators. In both the initial set-up of the farm and its continued operation, flower farms require labour – skilled, semi-skilled and unskilled - and, in turn, provide waged employment and a range of community facilities as is described more fully

in Chapter 9. As described above, flower farms liaise directly with institutional actors regarding their requirements and the remittance of sales revenue. Finally, the finished products are transferred to transport/retail actors for final sale to consumers. For the purposes of this diagram, the production processes have been simplified so as to provide an initial impression of the industry from which the complexities and interactions governing the manifestations of value, power and embeddedness within the network are explained. For example, the flower farms node of the network features great variation in size, products, ownership structure and industrial history, both between farms and in a number of subcategories within a farm which are able to capture value to varying degrees due the prevalent structures of power and embeddedness.

6.4.3 Transport/Retail Actors

Figure 6.10 shows the actors involved in the Ethiopian floriculture GPN once the flowers have left the farm. The first process for the physical commodity is the transferral to handling agents, which form an important part of export floriculture. They are responsible for allocating space on flights and packing boxes onto pallets to ensure the most efficient use of space and hence keep costs to a minimum. The highly contentious role of these agents in the development of the Ethiopian floriculture industry is examined below.

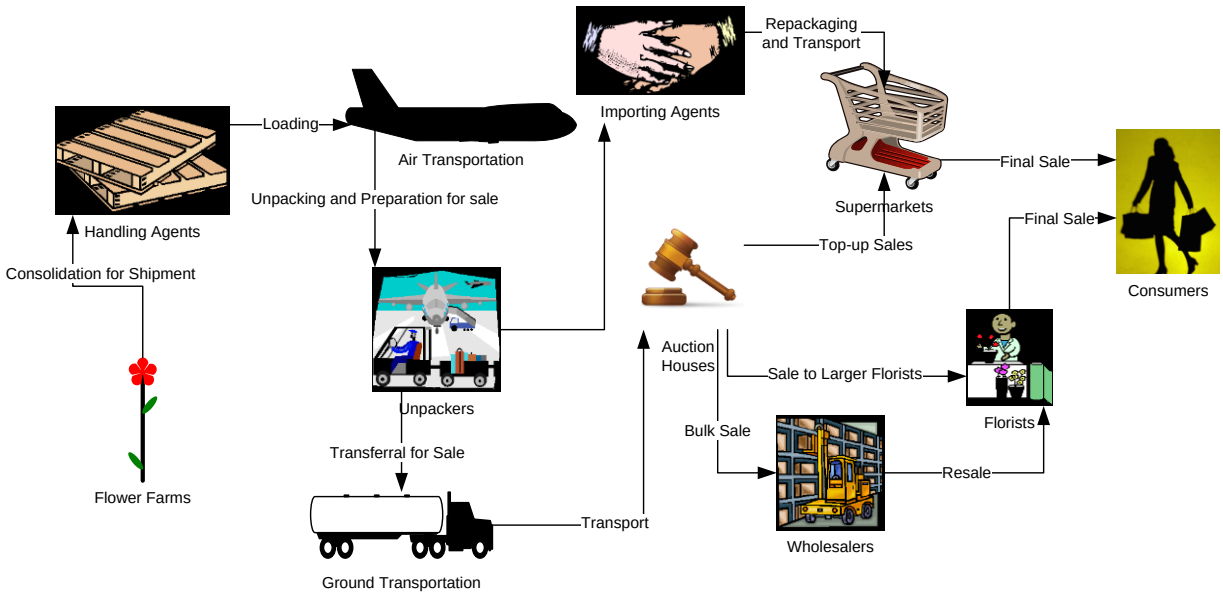


Figure 6.10 Transport/Retail Actors involved in Ethiopian Floriculture

Once packed onto pallets, the flowers are transferred either onto cargo planes or on passenger aircraft to utilise spare capacity. Prior to 2009 there were several cargo carriers operating flights out of Addis Ababa but since this time, the government has decided to limit air freight to the government-owned national carrier Ethiopian Airlines, in order to increase foreign currency reserves, a measure which has proved contentious in the industry:

> I think the government of Ethiopia...initially they were performing OK but now they are putting restrictions on exports. There has been a lot [of anger] about this Emirates flight which was forbidden basically. That's not supportive for an industry to develop you know...they needed foreign money and they thought how do we get foreign money, by Ethiopian Airways [sic]. 'What are Emirates doing? Hey let's block emirates', short term it works for sure but... (IG2).

Passenger flights are operated by a wide range of carriers.

Having landed at either Liege, where the vast majority of Ethiopian flowers headed for auction land, or in a number of other airports around the world for direct sales, unpackers perform a variable number of specialised tasks that improve the marketability of the flowers but increase costs-per-stem. At this point there is a clear divergence in the processes involved in taking flowers to market between the traditional auction route and direct sales. The marketing channels, and the factors involved in the decision to pursue each, are explored more fully in Chapter 8.

For flowers being sold through the auction system, at this point the flowers are transferred to a specialist ground transportation company that takes the flowers to the auction house either in the Netherlands or Germany. The primary customers at auctions are wholesalers/exporters, accounting for over 90% of auction sales, who then transport the flowers to the destination market for resale to florists, who finally sell the flowers on to the consumer. Some larger florists also buy directly from the auction while supermarkets will occasionally compensate for a shortfall in their supply with auction purchases. In order to compete with the growing pressure from the direct sales market, auctions continue to seek a simplification of these procedures, which has been controversial within the industry.

> We've got some businesses going straight [to customers] and that's causing a lot of friction with our buyers because they say "you are taking over our business now. So we want to deal with you but only if you respect our position". So far, we've chosen to stay out of that but the position of the exporter is changing because, where before they were more in the role of buying themselves, having stock and selling to the customers. Also through these transparent systems the customers themselves are getting smarter and smarter so they see what's happing in the markets...So instead of having nice cuts on their sales they have to have tighter margins because it's all transparent. Customers can also see what's available and so they're sort of forced to take it easy on the margins and supply a wide range basically. The buyers, their clients know what's available, so their function has changed from a buyer and seller to a logistical and organisational exports company facilitating, basically, the purchasing of their clients (IG2).

For direct sales, the route to market has been further simplified from this traditional model. Importing agents are tasked by large customers, referred to in the diagram as supermarkets but also including some major home stores and other large retailers, with providing a particular section of their floriculture range e.g. roses, mixed bouquets and carnations. Agents then either subcontract or perform every stage of the process right up to delivery to the retailer. Supermarkets then sell the flowers directly to consumers. The exact operation of these importing agents within the market as well as their impact on Ethiopian floriculture is documented in Chapter 8.

Figure 6.10 gives an indication of the number and size of key actors in nodes of the production network where multiple actors exist. This acts as a reference tool for the analysis that follows.

Node	Number of Actors
Flower Farms	80 exporting at time of primary fieldwork (currently 90)
Breeders	Approximately eight major breeders supplying to the Ethiopian market
Propagators	Five supplying to the Ethiopian industry
Handling Agents	Two major plus the Cooperative which had not yet begun operations at the time of research
Importing Agents	Approximately five major importing agents involved in tropical flowers, two of which were involved in the Ethiopian industry at time of writing. Several smaller firms operate in individual markets or varieties.
Air Freight Carriers	Only Ethiopian Airlines operate cargo planes. More than 10 other carriers offer space on passenger aircraft flying out of Bole International Airport.
Ground Transportation	One company is associated with the Dutch auction house and conducts the majority of transport to auction. Large numbers of haulage companies also offer ground transportation globally for direct sale and to auction.
Auction Houses	A single company operates the vast majority of auction houses in the Netherlands and a different company in Germany with several auction locations. There are other auction houses with far lower turnovers in several countries including Saudi Arabia and Japan.
Unpackers	Often allied with auction houses or ground transportation companies there are a large number of operators in this node.

Table 6.2 Quantification of Actors

The preceding three sections form an elementary mapping of the Ethiopian floriculture GPN which is expanded upon in the following chapters. This mapping aims to provide a visual space within which the interactions between the various nodes of the GPN can be more accurately conceptualised. This stylised GPN necessarily removes the plurality of relationships between companies, institutions, labour and consumers which is elucidated in the following chapters. The plurality in industrial histories and geographical origin which is examined in this chapter and expanded upon in the remainder of the research acts as further justification for the use of a framework which allows for a flexible conception of the nodes and actors that influence outcomes within a network.

In the following chapter some of the key processes in Ethiopian floriculture, which have contributed to the industry's growth and involve inputs from a large number of actors, are described and analysed.

7. Value and Constraints in the GPN

In this chapter the factors involved in the initial creation of value and the growth of the industry and the issues which have limited the creation of value are examined. These range from latent natural and economic characteristics of the location to regional, national and international policy issues.

7.1 Value Creation

A unique set of natural and man-made circumstances have combined to facilitate the creation of value within the Ethiopian floriculture industry. These are now evaluated through both the analysis of secondary data and through primary research conducted in Ethiopia involving interviews with key informants within the industry about their reasons for locating in Ethiopia.

7.1.1 Natural Resources

"Ethiopia has an ideal ecology for floricultural development" (Melaku, 2006). In the highlands there is an abundance of fertile land ranging from 1500m up to the nation's highest peak of 4620m in altitude, although land suitable for floriculture ranges up to 2700m. Here, the volcanic soil is fertile and the rains are reliable. The sun is powerful due to the proximity to the equator and, owing to the elevation, humidity is low, daytime temperatures are moderate and nights are cool. Fresh surface water is available from the Rift Valley lakes as well as abundant ground water throughout the region. Altitudes in Ethiopia cover 4500m above to 125m below sea level and with them comes a range of microclimates in which a huge range of crops can be grown. The intensity of the sunlight and the high altitude result in larger-headed and longer-stemmed roses which are the two primary determinants of the price attained for these flowers. The climate is commonly judged to be one of the most versatile agricultural environments available anywhere in the world and, as such, as summarised by one respondent with over 40 years of agronomic experience globally; "If you look at the climate in Ethiopia, somewhere in Ethiopia you can grow anything" (IG12). The climate cannot, however, be said to be 'ideal' for growing every variety of every crop and the extended rainy season when compared with Kenya, which occurs at a key time of year for rose production unlike the earlier rainy season in Kenya, means that, particularly in the higher altitude areas, there is increased disease prevalence which must be factored into a firm's business strategy (IG2).

The country also has advantages for floricultural development created by its geography. Addis Ababa, situated centrally within the highland region, is home to a new international air terminal which opened in 2001 and has flight times to the Netherlands of around seven hours. The areas suitable for floriculture are in close proximity to the capital (see Figure 6.1), allowing them to access the infrastructural centre of the country, further shortening the time to market. Along with other flower growing African countries, Ethiopia is able to produce flowers and get them to market at significantly lower environmental costs than the traditional flower growing areas in Europe. Williams (2007) examined the total CO_2 emissions of flowers produced in the Netherlands and compared them to those produced in Kenya and found Kenyan roses resulted in the emission of '5.8 times less carbon' than roses grown in the Netherlands. This is confirmed through primary research where one supermarket respondent stated this of the reasons for sourcing flowers from Africa:

> If we were growing stuff year round in Holland or here [the UK]...the carbon footprint is about six times bigger. So it makes perfect sense (IG5).

The shorter flight time from Ethiopia than Kenya, approximately one and a half hours less to the Netherlands, will mean the emissions resulting from flowers produced there are even lower. Furthermore, Bole Airport is situated at an altitude approximately 1000m higher than any Kenyan airport used for floriculture, resulting in far lower lift and subsequent fuel requirements for flights.

7.1.2 Socioeconomic, 'Societal and Lifestyle' Advantage

The specific costs involved in floricultural production vary significantly depending on where flowers are grown. Historically, in commercial floriculture the primary production centre was located close to the market in temperate or cool countries before a shift occurred in the 1970s towards production in tropical countries, as documented in Chapter 5. There was no transition of production through subtropical regions and so the two primary production areas carry with them two distinct sets of production costs. In the Netherlands, for example, much of the cost involved with the production of flowers is attributable to energy and labour costs as greenhouses need to be heated and wages are high. Due to the high labour costs in developed countries, producers engage in increased mechanisation which results in higher initial capital input. Conversely, in developing countries like Ethiopia, labour costs are far lower and so manual labour is favoured over the automation of processes. The climate means energy costs are comparatively insignificant and costs are instead diverted to transportation to market (Schumacher and Marsh, 2002). Amongst developing world producers, Ethiopia has the lowest labour costs. These 'perfect socioeconomic conditions' combine with the savings in energy costs through refrigeration offered by the lower night time temperatures at higher altitudes to make the cost of production in Ethiopia amongst the lowest available (Hengsdijk and Jansen, 2006).

According to a Global Development Solutions (2006) report for the World Bank, farming costs in Ethiopian floriculture were 25% lower per hectare than in Kenya with loss rates at 2% compared with 5% in Kenya, at that time. The same report found costs-per-stem to be marginally higher in Ethiopia due to lower productivity but the economies of scale that have been gained with the growth of the industry since these figures were collated and the increased use of the higher yield hydroponics means this advantage has likely been negated. The issue of labour productivity in Ethiopia is discussed in Chapter 9. The sales price achieved for Ethiopian roses was 27% higher than that of Kenyan roses at the time of the report, indicating superior quality.

The 'societal and lifestyle' advantages of Ethiopia when compared with countries offering similar ecological and economic conditions are drawn from qualitative assessments of security, lifestyle and public perceptions of the industry obtained from interviews with actors integrally involved with the industry and with experience of floriculture in other countries. These are then qualified with independent assessments of these metrics from international data sources.

The quantitative survey conducted amongst all flower producers attributed 12% of the decision to locate floricultural operations in Ethiopia to the 'peaceful environment'. Confirmation of this peaceful atmosphere in Ethiopia can be seen in the World Economic Forum's Global Competitiveness Report 2008-2009. In the report respondents were asked to name the five most problematic factors in conducting business in a country and, in Ethiopia, 'crime and theft' received only 0.4% of the votes. In Ethiopia's main competitor for flower production, Kenya, 'crime and theft' accounted for 7.5% of responses, while in Tanzania it accounted for 2.6%. This is reinforced by evidence from investors in primary research:

> ...the stability issue. I'm not talking about just because of police. It's the surviving system you know, people have different values. If you walk in the wilderness and you

> have lost your way, they won't chop your head...I say it can never happen but it cannot. It comes from our value system. [The Ethiopian people] have morality in built you know (IG9).

This feeling of personal security and political stability is reiterated by an EHPEA respondent who cites these factors as second only to incentives in the decision to locate in a country:

> ...the major part of investing in one country is security, stability. The first study done by investor is 'how is that country?' it is safe to work, it is safe to drive night and day, it is safe to live there, that is the first thing...that is the choice of foreign investors when they come to Ethiopia...I tell you even the word they say, 'Ethiopia is a place to live and work' or 'Ethiopia is a place to work and live'. That is what they say...so the incentive is part of the decision. OK, they say security is nice, what is the incentive? OK this is very nice, this is additional, but first if my life survives, I use the incentive, if my life is in danger, I have ten years tax holiday, how can I use it...And we know how many people lost their life and lose their life in some countries. So, there is no plan for the government to reduce the incentives but if that happens, it is not really reducing the security of the country...Did you face anyone to attack you while you were walking in Addis Ababa? Exactly! (IG8).

A further advantage that occurs as a result of cultural norms in Ethiopia is something that presents real economic benefits to investors. Weirsinga and de Jager (2009) refer to the "relatively low level of corruption in Ethiopia compared to other African countries" which allows businesses to budget reliably and reduces transaction costs. The World Bank's 'World Governance Indicators' Index 2009 rates the control of corruption in Ethiopia ahead of Uganda and substantially ahead of Kenya, with a percentile rank[13] of 26.7 to Kenya's 11.9 (Kaufmann et al., 2010). Furthermore, the corruption which is present in Ethiopia, is not the culturally ingrained systemic corruption seen in countries such as Kenya but rather a favouring of past and present government contacts in certain commercial areas, along the ethnic and party lines outlined in Chapter 4, which is unlikely to affect foreign investors or the floriculture industry significantly (EIU, 2009).

7.1.3 Institutional Environment

7.1.3.1 Government

The final part of Ethiopia's *package* in attracting investment to the floriculture sector is the only element over which there is direct policy control[14]; that of the institutional environment including government incentives, procedures and processes involved with setting up in the industry, and institutional support available to it.

> Strong institutions and a suitable regulatory environment are vital components in expanding horticultural exports (Greenhalgh, 2004; 16).

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[13] The methodology used by the World Bank was to rank all of the economies assessed (209 including some quasi autonomous territories) based on a range of indicators and then mapped this ranking to a percentage scale to rank the economy with the best control of corruption as 100 and the economy with the least control of corruption with a percentile rank of 0.

[14] Government policy can evidently also affect other aspects of the overall package to attract investment including security and infrastructure, but these are far longer term investments where a change in government policy will take far longer to implement and see the results of the policy change.

The government has been quick and decisive in attempting to facilitate the growth of floriculture and have taken seriously any recommendations given in the reports of external organisations. Many see this support as crucial to the development of the industry and see the subsidies they provided to 'courageous entrepreneurs', who pioneered investment in the industry as amongst the key factors in the industry reaching critical mass (Rodrik, 2008; Gebreeyesus and Iizuka, 2010)

> When compared with other major horticultural exporters, the Government support provides Ethiopia a clear advantage (Joosten, 2007; 21).

As part of the government's *Plan for Accelerated and Sustained Development to End Poverty* (PASDEP), 2006-2010, a large number of incentives were offered to investors in floriculture. The government decreased start-up costs by removing tariffs and import duty on capital goods for use in this sector, reducing the risks for investors. The majority of the farms that were previously state-owned and significantly under-producing given the quality of the land are now being leased to companies at the minimal rate of $18US/hectare/year or less (Ethiopian Investment Agency, 2008; Karuturi Networks Limited, 2011). The nominal rate of land rent has been controversial as some see it as a 'land grab' (Cotula et al., 2009; Kugelman and Levenstein, 2009). In Ethiopia however, land is the primary productive asset and the land that is being leased was not previously creating, or at least capturing, any significant value. Latent value may have been held in the form of biodiversity with potential benefits to the ecosystem and in the form of medicinal plants, but this had, by and large, not been captured for the benefit of the people. Provided the land is not degraded then it remains a productive asset and, from a government perspective, the longer investors are there, the more territorially embedded they become and the more value they create. The government has had to offer long-leases for the land in order to allay investor fears about expropriation of their land as happened during the *Derg* era. They offered a five-year corporate income tax holiday to investors in the industry (PASDEP, 2006). When income tax is introduced, although this has yet to occur for any floricultural firm, it is at 30%, the same rate as Kenya, Tanzania and Uganda (WDI, 2011). There are also less tangible elements to the facilitative role played by the government in the growth of the industry including bypassing regulations on the import of pesticides and fertilisers in order to expedite the production process (Emana et al., 2010). This potentially has a negative environmental impact as documented in Chapter 10. This incentive package does not look set to change as confirmed in this extract from an interview with a government respondent:

> ...the government is very happy to have these incentive packages because we are assuming that, because of the potential we have in this country, we have only developed one tenth of our potential. We have a lot of untapped resources (IG4).

This position is reinforced by an influential advisor to the government on policy in the floriculture sector:

> ...maybe after 5000 hectare we might start reducing incentives but it's a long way. But even then I don't see reducing the benefit because if reducing the benefits means reducing the entrance of new developers, why? (IG10).

While PASDEP was said to be 'overly ambitious' and 'will not be realised in full' (EIU, 2008; 17), its measures amounted to an attractive package for investors in Ethiopian floriculture, including several measures and targets specifically for floriculture. Measures included the development of a 'national business plan' and 'tailored packages' for cut flowers and a 'gradual transfer of state-owned farms to private investors' while targets included expanding production area to 1600Ha and increasing the employment directly generated by the industry to 70,000. As such, it has assisted in attracting investment away from competing countries including Kenya, from where the

Sher farm relocated (see section 7.1.3.4.1). In order to reverse this trend there has been a movement amongst policy actors in the Kenyan flower industry to put together a new and equivalent incentive package for the industry, including the creation of 'Special Economic Zones' but the proposals continue to stall at cabinet level (Riungu, 2010). This could be seen as an indication of the much touted 'race to the bottom' but the fact that the Kenyan government has refused to ratify the legislation may also signify that they see their comparative advantage in other areas.

Investors have also been able to take advantage of the preferential trade terms with the EU, China and other key export markets discussed in Chapter 4.

In addition to the recent political unrest in Kenya culminating in the riots of 2007/08 that has had the effect of diverting some of the foreign investment in floriculture to Ethiopia (The Independent, 2006), the differential trade terms experienced by Ethiopia and Kenya are predicted to have increased this flow (Hornberger et al., 2007). Whilst the EPA Kenya entered into with the EU in late 2007 restored tariff rates on flowers to zero, some investment had already begun to move into Ethiopia and the more liberalised trade terms that remain in Kenya still present challenges in the form of increased competition in certain sectors to firms operating in those countries.

The current manifestation of the government's involvement in the floriculture sector is the EDHA as described above. The creation of this agency was an example of the government's willingness to solve problems in order to facilitate growth within the industry. The agency was intended to simplify the bureaucratic procedures involved with conducting business in the industry, and while it has experienced significant difficulties in the early stages of its operation, the majority of respondents were optimistic about the agency's future.

> Whenever you introduce a new actor to a sector it takes a while for the new actor to build experience, to understand the sector, and to see where the needs are that match their roles and it takes a while to establish their roles and it takes a while to establish between the existing actors and the new actors who is going to do what. We are at the stage of the teething troubles (IG12).

It is important here to discuss the influence of political stability on the growth of floriculture in Ethiopia. The political situation as a whole, as described in Chapter 4, was identified by many respondents as comprising a vital part of the institutional environment and facilitative of the growth in the industry. The questionable validity of the democratic system in Ethiopia has resulted in a regime whose reign will run to at least 25 years by the time of the next general election in 2015. Respondents unanimously reported that the stable nature of this facilitative government gave them increased confidence in investing in Ethiopia and, as such, has enabled economic growth. Several interviews were conducted in the weeks surrounding the 2010 general election which led to responses such as this from one foreign flower farm owner:

> And they won the election which is very good, but from what I hear now it's been rigged. For instance I want EPRDF to win, I want the government to win; I am a businessman (IG13).

7.1.3.2 Development Bank of Ethiopia

The DBoE was established in 1970 to provide financial assistance for activities contributing to the country's development. This finance is available to local and overseas investors and the reasonable rates of interest give Ethiopia an advantage over neighbouring countries in the race to attract investment into floriculture. Rates are up to 15% lower than those offered in Uganda (Asea

and Kaija, 2000). New investors in the industry are offered a debt:equity ratio of 70:30 with loans for the expansion of existing projects being offered a 60:40 ratio with interest rates of 7.5% for investment in Priority 1 industries of which floriculture is one. Loans are available on both medium (up to 5 years) and long-term (up to 15 years) bases with different repayment regimes.

The role of the DBoE is controversial within the industry with many believing their actions have hindered rather than assisted the development of the industry, with one respondent saying of the DBoE "either they are corrupt or they are stupid!" (IG9). Initially loans were offered only to foreign investors with the theory that the knowledge of how to set-up and grow a floricultural export business did not exist in Ethiopia and so would have to be imported. This policy both discounted the potential for domestic investors to 'buy-in' knowledge from abroad in order to develop their business and also assumed that foreign investors would possess this knowledge as a motivation to start up in the industry. In fact, a large number of foreign investors who sought loans from the DBoE in the early stages of the industry were venture capitalists with no previous experience in floriculture.

Additionally, due to the highly favourable terms offered by the DBoE, finance was sought by some who had no long-term interest in the industry and saw it as an opportunity to make money quickly. Furthermore, evidence emerged during primary research of several firms that sought to criminally extract money from the industry, through the DBoE, submitting business plans where estimated costs were significantly overstated up to 400% of the actual cost. Over-invoicing in applications for grants and loans, including those for the funding provided by the Dutch government documented below, was found to be commonplace within the industry (IG6, IG14). Due to the lack of expertise in the industry within the DBoE it was difficult for them to accurately assess the credibility of proposals, and although over-invoicing was also seen in PSOM and PSI schemes where experience of the industry is greater, the DBoE's inexperience in this area resulted in far greater discrepancies between invoiced and actual cost. This meant that, even with the 70:30 debt:equity ratio and the actual costs of building the farm, the firm would still have spare capital from the DBoE loan. This was then remitted overseas and after a year or two in the industry the firm would declare bankruptcy leaving the bank to repossess the farm which they could only sell for a fraction of the amount owed on the loan (Haddush, 2010). This has restructured the industry resulting in a more streamlined pattern of ownership where only successful flower farms have been able to survive and expand:

> We've also seen some farms that have gone out of business, not a big number and not as many as people expected. I think the rescheduling of the loans has helped with that and of the farms that have gone bankrupt, a bankrupt business for one investor is a good investment for another investor. So we are seeing a certain amount of consolidation of farms where an existing investor will take on one or two more and run them together and then we are seeing one or two more new investors coming in (IG12).

Here institutional power is diminished by inability of the bank, and by extension the government, to manage repossessed farms and so their position in the negotiation over the terms of loans is greatly weakened. If the bank increases the demands on farms in terms of loan repayments or interest rates, repossession does not carry the threat that it ordinarily would as investors know that the DBoE does not have the capability to manage the farms properly – or the industry would have been larger before the introduction of foreign investors - and thus will never achieve a fair market price for the farm at auction. Once the DBoE has repossessed a farm, the longer investors leave the farm in government hands, the further it deteriorates and the price at auction for the

farm plummets. Given this, the bank is reluctant to impose overly stringent restrictions on loans and repossession is treated as a last resort:

> ...if [the government] do [increase the financial demands on growers] then the grower say we can't pay. Then the government say OK then the farm is ours now then they have to run it. That's not an option in the first place because it will never work. I don't think that will be the added value of Ethiopia. I think the added value will be that these projects will last, that the staff will have job, that there will still be some revenue for the government. And that still some of the money comes back to Ethiopia, even though a lot of it will stay in Europe. So the revenue for Ethiopia will not be maximum but at least it will be some. But once these projects keep on running...[the money will continue to increase] (IG2).

These problems caused by inexperience of the floriculture industry within the DBoE have been recognised by both government and international institutional actors and attempts are now being made to address this deficiency:

> [the Dutch government] would have liked to get involved [with the DBoE] but we have too many things...in Holland they look to the entrepreneur. Is he a good guy? Does he have the right spirit? And then they assess the business plan but they put more weight to the entrepreneur than to the business plan. In Ethiopia I don't think they do that (IG7).

Whilst such extreme examples of fraud such as those identified above are rare, with only seven farms having declared bankruptcy to date, over-invoicing to a lesser degree is considered to be common, increasing the share of risk apportioned to the DBoE. The bank has recently sought to address this shortcoming by importing experienced personnel from Kenya, with a more realistic idea of costs involved in the industry. This failing caused by the pace of industrial growth outstripping the pace of knowledge growth is something which has been replicated in a number of regulatory areas and has both led to fewer benefits being extracted from the industry by government actors and to a curtailing of growth. However, whether considered brave or foolish, this generous offer of financing for the industry largely succeeded in removing one of the major barriers to entry to the industry in the form of capital availability.

> Investment levels in Ethiopia seem to indicate...that capital is not a major limiting factor (Joosten, 2007; 21).

Foreign banks are not allowed to operate in Ethiopia and so loans must be sought from Ethiopian banks. Quantitative survey analysis showed that, during the early stages of the industry, commercial banks in Ethiopia were reluctant to give loans to firms trying to move into the sector due to a lack of understanding of it. While this has improved to some degree, it is still difficult to obtain commercial loans for the industry.

The government has used the DBoE as one of the principal instruments to encourage growth in the industry. In the first instance, this came in the offering of loans with favourable conditions but as the industry has matured, the DBoE has also been used as a mechanism to allow the industry to cope with exogenous shocks such as the price crash that affected the industry during the Global Financial Crisis. Growers faced increased difficulty in meeting their loan repayments during this period and as a result the DBoE agreed to reschedule repayments over a far longer term (Capital, 2009; IG8; IG14). Growers who benefitted from this arrangement were required to pay the interest on their loan before the rescheduling was agreed but it undoubtedly lessened the impact of the crisis on the industry. The DBoE were keen to ensure the loans were not seen as gifts having already received criticism for some investors leaving the industry with money still

outstanding. The increased repayment period exacerbated the problems caused by the initial loans in that as the loans were made in ETB, the rate of depreciation of the currency meant that the real value of the loan decreased significantly over time. The fact that the DBoE still offered the rescheduling despite the negative financial impact is indicative of the government's facilitative attitude towards the industry (IG2). The rescheduling of debt, extending the loan repayment period by another two or three years has also allowed the government to implement extra capacity-building measures before firms are expected to be producing and exporting at optimum levels in order to meet loan repayments (IG8). The government's attitude towards the industry and the impact that this has had on its development can best be summarised by this extract from an interview with one investor:

> ...the government asked us what more mechanism should we put? Not many government do this (IG9).

7.1.3.3 Transport Institutions

In the trade of high-value agricultural products, the relative importance of factors restricting growth varies by agro-ecological conditions, local institutions and market conditions (Davis, 2005; 3). Ethiopia's lack of sea access since the secession of Eritrea has proved an obstacle to international trade. However, the need to get flowers to market quickly due to the negative correlation between senescence and price means flowers must be transported by air, which gives Ethiopia an advantage in the location and quality of its state run airport and airline; "Ethiopian Airlines, which by all accounts is Africa's leading airline" (Dia, 1994; 20), winning African Cargo Airline of the Year 2011 (The Reporter, 2011). This strong performance has continued throughout the EPRDF's tenure with the Airline winning multiple international awards for quality, determined by safety record, punctuality and customer satisfaction and the company will soon become a member of the internationally respected group of airlines, the Star Alliance, being only the second African carrier to do so (Star Alliance, 2010; Sudan Tribune, 2009). Ethiopian Airlines started building a new cargo centre at Bole Airport in 2009 which will increase the quality and efficiency of air freight leading to an increased volume and ultimately a reduction in costs.

The capacity of air transportation in Ethiopia, both in terms of freight planes and spare capacity on passenger aircraft, has undoubtedly been one of the factors limiting the growth of the industry. More recently, however, significant progress has been made in this area largely due to the facilitative environment created by the state run airline and other measures taken by the government. Ethiopian airlines now runs eight Boeing 747 cargo flights per week to Liege and a large number of airlines offer spare capacity on passenger planes to the UK, Germany and the Middle East (IG6). The airline has recently employed a Belgian consultant with experience in the industry in order to solve problems with the cool-chain and to make cargo transport more efficient for growers (IG15).

One of the key institutional nodes of the transport element of Ethiopian floriculture's GPN is that referred to in Figure 6.10 as handling agents. These actors have, at different stages and to different degrees throughout the development of the industry, played both a facilitative and an obstructive role in the development and growth of the industry. Their function is the allocation of space on both cargo and passenger flights and the management/assembly of the cargo into transportable pallets. This function is essential in cost minimisation as the efficiency and care with which flowers are packed can have a significant impact on the volume of flowers that can be put onto an aircraft and also on the loss rates which combine to have a significant impact on the largest element of costs for Ethiopian flower producers. In the initial stages of the industry, the

small number of producers had difficulty in securing space on flights and packing the small quantities of flowers in a safe and cost efficient manner. The establishment of the Ethio-Horti Share Company (EHSC), by the President of the EHPEA along with other 29 other small growers, was designed to overcome this problem and, with the industry in its infancy, the introduction of collective bargaining, purchasing of inputs and consolidation of consignments had a significant influence in improving the capacity of the industry and attracting foreign investment. During these early stages of the industry, the EHSC was supported by the government but as documented in section 7.2 this relationship later became a barrier to the industry's continued progress.

7.1.3.4 Donor Community

The role of the donor community in the development and continued growth of Ethiopian floriculture has undoubtedly been significant if, at times, controversial. There is a consensus amongst respondents from all groups including domestic and international institutional actors, growers, supermarkets, and handling agents that the influence of the donor community, and particularly the Dutch government, has been significant in the growth of the industry (IG16). Overall, the donor community has been very positive about the industry and has sought to assist in strategic areas to facilitate growth. DfID has been integral in an advisory role as described above, and has contributed to the development of the CoP now used in the industry and in designing a training programme for implementation on farms through the EHPEA. Their main contribution has come in the form of the provision of consultants to assist in these areas and their contribution to the development of the industry is highly regarded by one respondent who has been integrally involved in the industry's growth:

> ...without DfID's support the association could not reach to today's level and even the exports. They have contributed a lot. They give us one land rover from DfID Addis Ababa. They were helping us a lot with consultants...these consultants contribute a lot to the Ethiopian horticulture sector...they were with us for three years (IG8).

The EHPEA is, in itself, part of the institutional environment that has facilitated the growth of the industry. In Taiwan's post-war development strategy, the government required any industrial sector with more than five firms to form an industrial association similar to the EHPEA, which was seen as a key part of industrial growth through dialogue and collective problem solving (Wade, 2009). The EHPEA began as a collective amongst the five small growers of summer flowers that existed before 2002 and it developed in tandem with, and partially as a result of, the government's and donor community's incentivisation of the industry:

> I think the association has done an enormous amount to facilitate growth. They've talked with government they've talked with donors they've talked with investors. It's been very much a tripartite arrangement. But the commitment from the government has had a big impact on it. It's very difficult to say whether it was chicken and egg. But there are very good relations between the association and the government (IG12).

The role the Dutch government has played in the development of the industry has been both crucial and controversial. As the global centre for the floriculture industry, initial interest in the industry came from the private sector, when the Dutch Ministry of Economic Affairs financed a scouting mission to Ethiopia with a view to assisting Dutch entrepreneurs in entering new markets. Since this time, through a number of financial instruments including the Programme for Cooperation with Emerging Markets (PSOM), Private Sector Investment (PSI), and Match Making Facility (MMF), floriculture has been seen as an important receptor for development funding. The

PSOM and its replacement PSI programmes provide grants of up to €1.5m for innovative projects in a selected list of developing countries. These grants provide up to 60% of the capital for the project to be taken as a partnership between a company in the developing country and an experienced foreign partner company. Initially the foreign partner company was required to be Dutch before being required under EU law to expand eligibility to other EU members and the scheme has now been opened to companies from any country. The stipulations of the programme demand that the project has significant positive impacts on the local community. Furthermore, an experienced consultant was placed within the EHPEA with funding from the Dutch government with a view to designing and implementing a training strategy and CoP for the industry. The consultant has been working on this project for three years and envisages another two years as a minimum which continues to be funded by the Dutch government.

There exist two arguments as to the reasons behind this focus of the Dutch government. Firstly, there is an apparent conflict of interest in the promotion by the Dutch government's development arm of an industry which directly benefits the country economically. The funds they have invested in Ethiopian floriculture are greatly exceeded by the additional tax revenues generated by Ethiopian producers at auction, business for other floricultural actors based in the Netherlands and remittances to the Netherlands from companies operating in Ethiopia. This is supported by the fact that the initial interest in the industry in Ethiopia came not from EVD but from the Ministry of Economic Affairs, and that financial support was originally offered only to Dutch companies investing in Ethiopia, suggesting motives were economic rather than developmental in nature. Even when the criteria for eligibility of foreign investors was broadened, according to some respondents from the Ethiopian flower industry, the rapidly signed Memorandum of Understanding has been 'reinterpreted' to relax the regulations reducing the potential benefits to Ethiopia from the scheme.

> It was the fastest memorandum of understanding signing in history. It changed from Ethiopian national to 'an Ethiopian company'. In the beginning the interpretation was that you had to have an Ethiopian shareholder but now their interpretation is that you just have to be registered in Ethiopia. The whole idea of joint venture is not there anymore. The benefit is not there anymore. There is no benefit from PSI (IG10).

The reasons given by the respondent representing the Dutch government for exclusivity in granting loans were primarily attributable to accountability, which, as documented above, the DBoE have experienced problems in the distribution and monitoring of similar loans:

> ...to be compliant they should be open to everybody. To be tight, that is the general principle Holland has agreed to. But there were practical reasons why only to do it for Holland because you have to check the bank accounts of somebody in Malawi which is more difficult than checking bank accounts in Holland...But they ran into institutional issues which is why it was redesigned (IG7).

The counter argument is simply that, as a significant actor in the floriculture sector, the Dutch government is in the best position to provide consultancy services and support to this industry, and that the industry represents an excellent pro-poor growth opportunity for Ethiopia which is in line with broader EVD objectives. Evidence from numerous interviews with institutional and corporate actors does not lend strong support to former argument of economic motivations, evidenced in part by the continued support of the Dutch government for activities which may negatively impact on their income from floriculture, including funding study visits to alternative markets such as Russia and advising the Ethiopian government not to join the UPOV convention despite possible negative consequences for Dutch breeders.

> It's ODA. The interests of Ethiopia is number one. Why we choose the horticulture sector? Because if Holland is to put something there on something it is the horticulture sector, because we have the market, we have the knowledge so that is why we came in....development is the main objective...And even if I would not do it, I mean it would fire back to us because they throw some cookies to us just to keep us in our markets. If you are trying to protect your own industries you would be very unwise not to go to other markets. They will get suspicious. We are just helping them not to help Ethiopia but to help ourselves (IG7).

This respondent, in fact, argued vociferously that the Dutch involvement in the sector is developmentally and not economically motivated and has, in some cases, had negative impacts on the Dutch economy while they conceded that the externalisation of production by Dutch companies acted as a measure to secure the position of the Netherlands as a floriculture hub:

> 1: Have you gathered any data on the benefit to the Dutch economy? The incidental benefit?
>
> 2: No it's not...it's a complete ODA instrument
>
> 1: but it has had...
>
> 2: yeah yeah but we are not interested in that because the instance is money from the ministry of foreign affairs, it's development aid...I mean things that Dutch people go abroad with are things that we are good in, in Holland. But I mean I get mails from Dutch people asking how the Dutch ministry is wrecking our industry. The rose industry in Holland is closing down and they shout at me. But I think if you look at the industry as a whole the movements that is going on, Ethiopia is a lower cost price structure. Holland is the hub for flower, we want to remain the hub so it is good for us to invest here and to help Ethiopia to grow because it will have benefit for us. That logic we fully subscribe to that's also why my ministry puts me here. Partly development but it's a multiple benefit. That's also the way Ethiopia sees it (IG7).

In support of this argument, the Dutch government point out that only one FMO loan (Dutch Development Bank Loans) has been granted to the floriculture industry in Ethiopia. These loans are given to private sector companies to enable them to enhance entrepreneurship in emerging economies. This is used as evidence that the development and economic objectives of the Dutch government is largely kept separate:

> ...if you can you might as well take a birr loan as the birr is depreciating. So [the single investor who has taken an FMO loan is] happy with the loan but he realises looking with hindsight that he would have better tried and go the extra mile with the development bank and try and get a loan there (IG7).

Further support for the facilitative nature of Dutch finance within the industry is provided by the record of their successes and failures. As the loans are provided to novel and innovative applications and functions within the industry, investments are more risky than investments in growing and established sectors. As such some of the projects that the loans and grants have been provided for by the Dutch government has failed, and one respondent involved in the allocation of this finance was certain as to the reasons why this has occurred:

> Mismanagement. Too many people involved. I mean 3, 4, 5 people put money in. And 5 people doing the management and some wrong choices. Some projects we have had where it did not match between the Ethiopian and the Dutch. The projects have not performed. But that's part of the subsidy. It's risky, because if everything went OK then the subsidy would not be justified (IG7).

The majority of respondents were of the opinion that the Dutch government programmes to increase investment in the industry were integral to the helping the industry reach critical mass. However, some also questioned the developmental intentions of the programme, pointing out that the amount given to Ethiopian actors is far less than that given to Dutch and other developed world actors. One respondent assessed the role of PSOM, PSI and MMF in the growth of the industry as "very great" and explained how the role this finance has played in the industry has changed over time:

> ...in the beginning it was essential to get it going...[three large flower farms were awarded finance], but they are the industry leaders. And later on, it was very instrumental in diversification. Both with the chain, to other links in the chain, and to other types of flowers...you have to come up with something new, if you come up with a proposal for roses you will never get one. It has to be innovative and you know, it should be not at the expense of the competition, not unfair competition...you get initial funding for a pilot project right. And then they expect to expand it...They also contribute substantially to employment creation (IG7).

As summarised by one respondent, development money is not allocated on a needs basis but on the basis of efficiency and where the donors feel it can make the biggest contribution to their development goals. The Dutch benefit derived from their investment in Ethiopia means there is more scope to invest further, but there is certainly a case to be made that the money could be used more efficiently:

> ...for me it's not an issue at all. The benefit that Ethiopia has from Dutch, from foreign investors is that they operate their business here. They employ people and now they repatriate money. How they extract money from Holland is not really an issue for Ethiopia, that's Dutch money going round the cycle and back to Holland. The Dutch, obviously, are interested in developing Ethiopia or contributing to the development of Ethiopia as a production base for material which goes to Holland for sale. And for the Dutch horticultural sector, the supply of technology, of produce is far more important than production. It's also an opportunity for Dutch investors to come and establish a business in Ethiopia and as long as that business is established legally, it's not really an issue if it has two Dutch partners, a Dutch partner and an Ethiopian partner, these are business management practices which don't necessarily impact on the benefit for Ethiopia. Because Ethiopia controls the repatriation of currency and the activity happens in Ethiopia, how the Dutch are able to screw money out of the Dutch government is a problem for the Dutch...It maybe isn't always done in the spirit in which the money was made available you could argue about whether this is the right way of managing the donor money and whether the return on the donor dollar, from Holland is...enough of it staying in country or is it being kept in Holland. There is always a concern with Dutch development money that the money comes in and it revolves and comes back. The Ethiopian term for this is it goes from the pocket to the pocket. My experience of working with the Dutch is that they've always been upfront from the beginning in saying that for development aid, technical development, we can't give you very much as things but we can make people with skills available to you to develop skills in the sector. This is, I think, relatively effective...So you could argue both ways...Holland has made its success of being a flower marketing and distributing country. It's not a flower producing country anymore. Its success comes from trading and it needs produce to trade, hence its support for Ethiopia. And we do put flowers through Dubai. We put flowers through Japan and Russia and...all these other places. And where your flowers go to is determined by your producer and if enough people want to go to Dubai, then Ethiopian [Airlines] will put more flights to Dubai. (IG12).

There are also many smaller international institutional actors involved in Ethiopian floriculture such as the Common Fund for Commodities (CFC) – discussed in later in this chapter and in Chapter 11, the EU, the Swedish government, the ILO and a large number of NGOs, each with their own operational priorities for the industry. These conflicting priorities can lead to issues within government as one donor's support is contingent on labour welfare issues while another focuses their resources on increasing exports, which are not necessarily complementary objectives. In one such example, a delegation from the UK and Norwegian governments was recently sent to review flower farms in Ethiopia to review environmental and worker welfare issues, concluding that they would 'do everything possible to help promote the industry abroad' (Walta Information Centre, 2010a). Furthermore, many of the issues that these donor agencies see as important within the industry, such as the environmental impact, require a sustained source of funding in order to succeed. The Horticultural Practical Training Centre (HPTC) discussed below is one example of donor agencies contributing to the institution of an initiative, often in the form of material goods or buildings, but not to its continued operation, such as staffing (IG8).

> Everybody is quite excited about contributing to a building. If you look at the donors they will buy you something, they will buy you a tractor but they won't pay for the maintenance, the salary of the driver and the fuel. Those are things where the donors see there is too much opportunity for the resources to disappear away from what they are intended for. If they pay for a tractor and the tractor is parked there, they can see it. The fact that is doesn't work is not their problem (IG8).

7.1.3.4.1 Significance of Dutch Enterprise

Closely linked to the influence of the donor community on the growth of Ethiopian floriculture is its symbiotic relationship with Dutch enterprise. Irrespective of the arguments over the motivation for the involvement of the Dutch government engaged with above, Dutch investors have undoubtedly played a significant role in the industry's development, as displayed in the statistics in section 6.2. There are a number of Dutch farms, breeders, importing agents, marketing companies and auction houses that are integrally involved with the Ethiopian flower industry. However, there is one Dutch actor whose involvement has played a vital and contentious role in a number of aspects of the flower industry and, in doing so, has played a key part in both allowing others to enter the market and altering labour market conditions.

Sher Ethiopia, along with a number of other subsidiaries or partners of the parent company, Agriflora, has had a huge influence in the transformation of Ethiopia into a major exporter in international floriculture. The company, under a range of different names, has been operating in various aspects of floriculture in a number of countries for over 40 years. In terms of roses, the company was the largest producer in Kenya until 2005 when they began the wholesale relocation of operations to Ethiopia. When the company began operations in Ethiopia, they maintained 300 Ha of roses in Kenya, which were sold two years later as Ethiopian operations continued to expand (Zenebe, 2008). Sher Ethiopia is now the largest exporter by volume of roses from Ethiopia and is a subsidiary of Sher B.V., the world's largest exporter of roses. Upon moving to Ethiopia, Sher signed an agreement with the government of Ethiopia, which, while the particulars of the agreement are not available, granted them access to a huge area of land, an allocation in excess of 1000 hectares, and other incentives on condition that Sher establish a 'turn-key' project in Ziway. The model used by Sher is unique within Ethiopia and facilitated the entry of inexperienced growers to the market to help it reach critical mass. Sher also initially used around half of the site for their own production (Vind and Fold, 2007; Ernst, 2002). Farms of up to 12 hectares were constructed with greenhouses, irrigation equipment and plants *in situ*. The plots were available on a 9/10-year hire-purchase arrangement, after which time the investor would

own the farm. This had a number of implications in determining the type of investor who could enter the market. Initial capital investment requirements were far lower than for an investor to set up a farm on their own. Knowledge requirements were also far lower in a number of respects. All of the necessary inputs and infrastructure in order to establish the farm were already in place, removing many of the difficult decisions for a new investor. The proximity of these firms both to each other and to Sher's own production units was intended to facilitate a degree of information sharing, reducing the transaction costs incurred by new entrants to the market. The economies of scale that could be achieved by the collective purchase of inputs and transportation would further reduce costs for new entrants. The firm has also set an example in terms of industrial upgrading, exporting products in final sales packaging for sale in European supermarkets, as documented in Chapter 8 (IG17).

Furthermore, other branches of the Sher/Agriflora operation acted as facilitative components of the package to attract new investors to the market in order to allow it to reach critical mass. Companies under this umbrella conduct breeding, propagation, input supply and transportation operations, including those of the handling agent Flowerport discussed later in this chapter, allowing new entrants to the market easy access to a range of services so that they may 'hit the ground running' (Zenebe, 2008). These incentives led to the uptake of Sher plots by entrepreneurs, both local and foreign, who were inexperienced within the industry. A small number of these firms declared bankruptcy during the Global Financial Crisis and eventually had their production taken over by Sher, which increased the proportion of the site for which they were directly responsible. Sher's own production area in Ziway continues to expand at a rate of one hectare per week.

In addition to the impact of Sher encouraging new investors into the industry, they have made a significant contribution to broader government objectives in other areas. The firm now employs over 10,000 people directly and many more indirectly through the other farms within the Sher project, as well as through positive externalities in construction and related services. As such Ziway's population has trebled since 2005 and is now home to over 100,000 people, the reasons for which are explored in Chapter 9, as are the details of Sher's comprehensive Corporate Social Responsibility (CSR) programme. Sher are now remitting at least $30m US in export earnings to Ethiopia on an annual basis, making a significant contribution to the government's objective of improving the balance of payments deficit, although, as with the majority of companies operating in the sector, the amount remitted is believed to be far below the genuine earnings of the company (as documented in section 7.2) (IG8, IG9; IG14).

Despite these positive aspects of Sher's involvement in the Ethiopian flower industry, the firm's role remains controversial amongst other actors within the industry. Several business practices engaged in by the company have drawn criticism from other farms and governments actors, on one occasion resulting in the short-term imprisonment of the Sher's owner. The hire-purchase nature of the Sher scheme means that the 'rent' component of the land which is effectively owned by Sher on a 99 year lease is eligible for taxation. The owner believed the spirit of the company's agreement with the government meant that all of the company's dealings were covered by the tax-holiday but as these were effectively transactions between two domestically registered companies and brought no benefit to the government in terms of foreign currency, no exemption was applicable (IG14). This is one example of the size of the Sher investment and the company's importance within the network affording the company far greater leverage in negotiations with institutional actors than other firms which has made them unpopular with other investors. This is also an example of how institutional power within the GPN for floriculture is

weak relative to corporate power in the initial stages of the industry's growth within a country. This power asymmetry is exacerbated by the importance of sister company Flowerport to floricultural operations in Ethiopia, which allows the production and transportation operations of the company to be organised to ensure maximum benefit for the firm.

> [The manager of Sher]...he is not a friend of many people, not even in Kenya, not even in Holland...maybe the right word is greedy...He first puts his own flowers then everybody else (IG9).

The involvement of Sher is also something that has angered other farm investors, referring to the Manager as a 'monopolist' (IG13). Sher is seen to have exploited the knowledge asymmetry between themselves and the inexperienced growers they introduce to the industry.

> He sells packing materials and chemicals to his companies. He used to be 30% above the rest. Competition and transparency has resulted in him bringing prices down (IG9).

Whilst there is evidently nothing illegal in such practices of profit maximisation, government actors view these behaviours as curtailing the success of the industry overall and the endogenisation of the industry. The high profit margins sought by Sher in inputs and transportation, as well as the relatively high repayment costs of the hire-purchase agreements, had a significant impact on the profitability of new entrants to the market; contrary to the government's intention when the agreement with Sher over this 'turn-key' project was signed. As such the government and a number of other actors are currently considering implementing a similar model of their own in different areas of the country, using the knowledge gained by actors through incidental knowledge transfer during the past five years of operation within the industry (IG4).

> If you do it on your own it can cost you €100,000/Ha. It costs him €100,000 and in 10 years he has collected 10 times. So that is why other people are looking at this business model (IG10).

Evidently, the view of other investors on the impact of Sher on the sector has the potential to be clouded by competitive influences. The company's involvement in the industry as a whole, and the significant personal influence of the company's manager, can best be summarised by this extract from an interview with a respondent from the EHPEA.

> We work on the Sher site and we have amicable agreements. [The manager of Sher is] an interesting character...There are those who say he is benevolent, he is good for the industry, look at all the good things that he's done, and there are those that say this is a hard as nails, died in the wool, hard businessman. I actually think he's both...He's done a lot for people that work in and around his farm. (IG8).

This last sentence refers to the controversial CSR projects engaged in by Sher and others discussed in Chapter 9.

7.1.3.5 Investor Assessments

The government of Ethiopia, and its instruments in the form of the DBoE and transport institutions, can be seen here to have played an active role in the development and growth of the floriculture industry. It is evident too that a weaker state would not have been able to implement many of the robust and controversial measures, such as the land allocation and infrastructural development, that have assisted in the growth of the industry. However, the reasons for growth are far more complicated than a simple policy change by a strong facilitative government (Blattman, 2009; Wijnands et al., 2007). While the Ethiopian institutions were sufficiently strong

to implement the measures outlined here, many of the successful institutions including the EHPEA and the Dutch auction cooperative, which functions as both an institutional and corporate actor, have imported foreign institutional frameworks which have governed their operations in Ethiopia. Moreover, there are a number of natural, socioeconomic, 'societal and lifestyle' and donor community contexts outlined elsewhere in the present research, without which the growth in floriculture would not have occurred. The timing of the growth is important as the correlation with changes in each of these variables gives an indication as to which variables were more influential in the industry's development. While some of the factors are relatively stable, it may be a certain period of stability which acted as a tipping point for the rapid investment and so this method too is not infallible.

Although a crude measure, investors' assessments of why they entered floriculture provide additional evidence for analysis of the reasons behind the growth of the industry. Figure 7.1 uses data from the quantitative survey conducted among flower farm owners and investors to provide a subjective perspective on the weighting they allocate to various factors involved in their decision to invest in the Ethiopian flower industry.

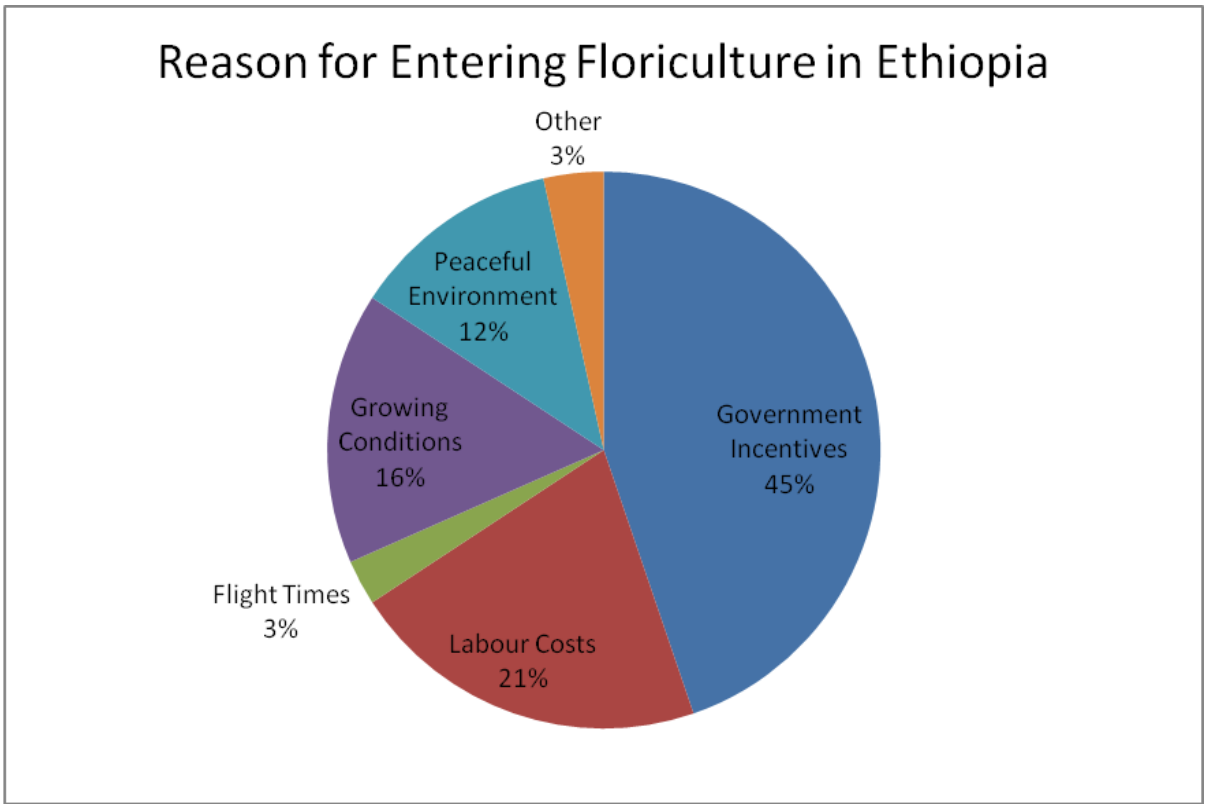


Figure 7.1 Investor Assessments of Motivations; Data: Survey

Respondents were asked to select the three most influential factors in their decision to invest in floriculture in Ethiopia. These statistics too must be treated with caution as they are self-reported motivations and, as such, are subject to political and economic influences. For example, trends suggest that investors formerly downplayed the role of economic incentives in their investment decisions but this trend has now reversed so that investors now readily admit the importance of incentives in their location considerations (Easson, 2001; 272). It is not clear whether this trend is reflected in the results obtained from floriculture investors as the veracity of their responses is unverifiable, although when viewed in combination with other evidence and given the increased likelihood of honesty induced by anonymity, the integrity of the data is improved.

For the location of a profit making business, assuming footloose capital and equal natural conditions - in this case growing conditions - then location decisions will, again, be primarily economic. As can be seen from section 7.2.3, the primary cost in exporting flowers from Ethiopia is transport. As the production location moves north from Ethiopia towards the primary market destination, in general labour costs will increase as a proportion of the total production cost while transport costs will decrease. Other factors such as government incentives can be seen as ways of further reducing the production costs of a location so as to attract investment.

However, despite the apparently logical nature of these economic decisions, the explanation of industrial location is far more complex and in asking for the top three motivations in beginning floriculture operations in Ethiopia, this question began to unpack some of the other issues involved in these production strategies. For example, since the floriculture industry began to move production to developing countries in the 1970s, Ethiopia has had the same climatic conditions, proximity to major markets and low labour costs but production did not begin in the country in any significant way until 2002; other factors evidently influenced the decision. The business environment during *the Derg* era was not conducive to international investment but in the 12 years between the change of government and the growth of the floriculture industry, international investment was positively encouraged. The significant proportion of responses that saw the peaceful environment as an influential factor in entering the industry is important. This can be seen as a contrast to both Ethiopia in the recent past with the revolution 1989/90 and the Eritrean conflicts in the 1990s and early 2000s and as a contrast to Ethiopia's major competitor for international floriculture investment, Kenya, which saw widespread violence surrounding the election in 2007. Indeed, Sher's manager, having lived in Kenya for two decades, reported the primary reason for the company's relocation as security, stating that many friends had been killed, injured or threatened and they no longer felt safe in the country (IG17). This provides further evidence to that given in section 7.1.2 regarding the influence of societal and lifestyle considerations involved in the growth of the industry. It is not the intention of this study to distil this complex mixture of natural, economic, political and social conditions which led to the creation of value in floriculture in Ethiopia into a simple formula, assigning different degrees of importance to each of the factors. However, Chapter 12 reengages with the issues documented in this section in order to determine the key variables.

7.2 Constraints on Value Creation, Capture and Enhancement

In the examples drawn from the literature on other countries and from primary and secondary research conducted here, it is apparent that many in the industry felt factors remained which were impeding both the expansion of the industry through limiting new entrants to the market and factors limiting the expansion of established operators within the industry. One of the primary factors that may impede growth is conversely that which has contributed most to the industry's success: the prevailing cost structure in the industry. If this were to worsen significantly then the incentives for production would be greatly reduced. As such, this section on factors inhibiting growth begins with an analysis of the costs and revenues involved in the export of flowers from Ethiopia.

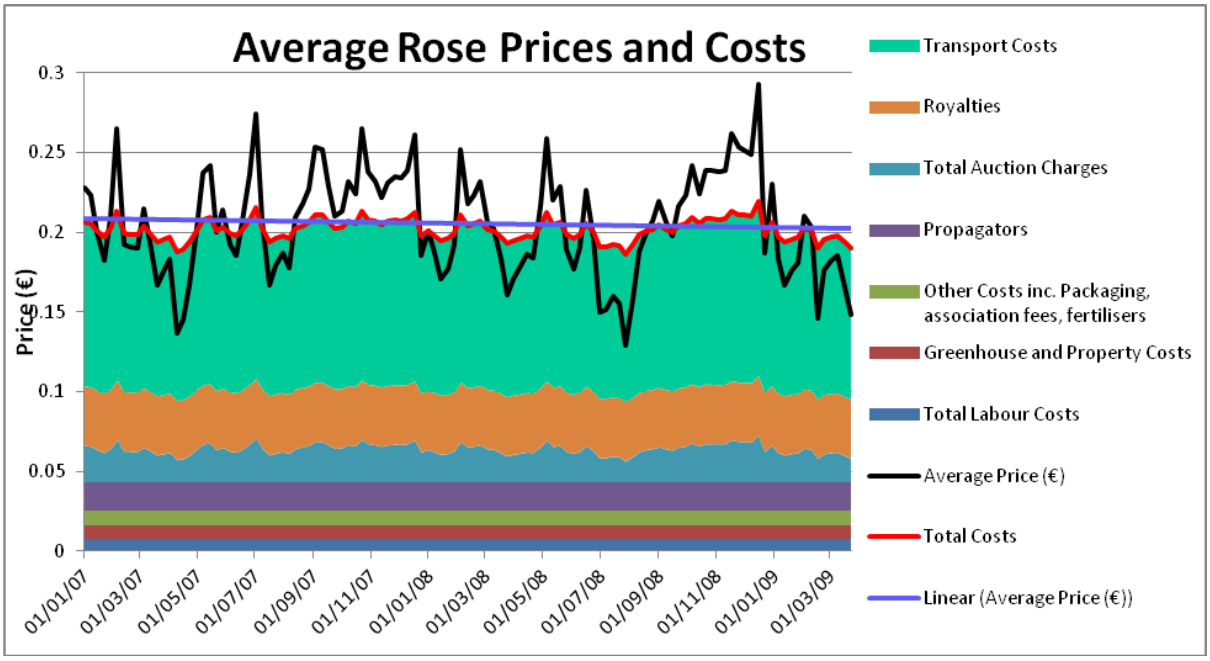


Figure 7.2: Average Rose Prices and Costs; Source: Interviews

Figure 7.2 shows the prices achieved by Ethiopian producers at the major auction house over the period January-07 to March-09 together with the major components of costs incurred. The red line represents total costs and the area below the line shows how the costs are broken down into the component parts. The black line represents the average price achieved by rose growers at auction over time. When the black line falls below the red line a firm is, according to this dataset, making a loss. When the prices (black line) exceed total costs (red line) exporters are making a profit. A number of caveats must be applied to the data before drawing inferences from it for the industry as a whole. Firstly, this data applies only to roses and while they represent the largest component of the Ethiopian floriculture industry, other varieties exhibit different price and cost characteristics. Hypericum, for example, can sell for up to four times the price per stem of the average rose but is packed less densely, increasing transport costs, and has a shorter growing season. Within the roses category, too, there are disparities in prices and costs with highland roses earning double the price of lowland roses, but with a far lower yield and higher loss rates as explained fully in Chapter 8. Furthermore, this data applies only to sales at the major auction house which accounts for over 80% of Ethiopia's auction sales, which themselves account for around 90% of Ethiopia's total floriculture revenue (see Figure 8.1). Direct sales account for a growing percentage of total sales and have different costs and price structures to auction sales. Prices are relatively stable as they are often agreed for a whole growing season or longer. Total costs are generally slightly lower as the flowers only have to be transported and unpacked once, and the overheads of the auction system are removed. However, the introduction of another profit-taking actor in the form of the intermediaries that commonly facilitate direct trade, referred to here as importing agents, means cost savings are often replaced by alternative costs. Finally, these costs are based on the auction costs for members only and are considerably higher for non-members as well as for members who declare transactions as NAT and consequently incur a penalty charge (IG2). A number of auction member firms are independently audited at random each year in order to ensure their reported NAT tallies with the figures they have reported and if not, charges are made accordingly. This does, however, rely on accurate accounting which is not always executed in Ethiopia (IG2).

> We are now in the process [in Ethiopia] that actually a few growers still haven't done their declaration. If they don't or if they do and we disagree, we get to a situation where I think we have never been to before...we'll have to sort it out. And if they don't cooperate then we'll have to terminate their membership and offer them another contract way of supplying the auction at higher rates and it will cost them because they haven't stuck to their promises and so they have to pay. That's a process you don't want to go into but in the end of the day if they don't cooperate then we'll have to go that route (IG2).

It can be seen from Figure 7.2 that the price of Ethiopian roses at auction varies considerably over time. Prices are depressed in the European summer by the increased supply of roses grown in Europe. The period shown also covers the time when the most severe effects of the Global Financial Crisis were being felt in the industry which made prices more volatile and explains the slight downward trend overall. When fixed costs are added to the cost structure, profit margins in the floriculture industry indicate that when prices are low at auction (as they were in August 2008) producers lose money on every flower they send to auction. At this point the importance of subtleties such as the variable labour force and the long-term price implications of maintaining a presence at auction - even at a loss due to reputational advantage - are introduced, discussed in greater depth later in the study.

It can be seen from this data that margins available to producers operating in Ethiopian floriculture are highly variable and, on average, fairly small. This is an average of all producers supplying the Dutch auction and the most profitable firms will be able to obtain the highest prices while reducing production costs. Even taken as an average, due to the scale of the industry, small margins can result in significant profits. Average profit margins towards the end of 2008 were around €0.08/stem. If this profit margin could be sustained over the whole year for an average 12 hectare rose farm, the firm would stand to make profits of €2.4m ($3.5m US). Conversely, when prices are at their lowest, an average firm would stand to make losses of €2.1m annually. However, the fixed costs of the firm, particularly if labour is employed on a casual basis, are very low and exports can be reduced significantly to mitigate losses. This introduces issues of market presence which are examined further in Chapter 8.

Figure 7.2 does not cover the unique period, in 2010, when the ash cloud over Europe as a result of the eruption of the Eyjafjallajökull volcano in Iceland put a temporary halt to all Ethiopian flower exports to Europe. During this time African producers lost millions of dollars in stock which had to be destroyed and whilst such exogenous shocks are likely to be rare, producers bore the cost and had to be able to absorb it in order to continue in the industry (BBC News, 2010a). The perishable nature of the commodity and the absence of a domestic market means that the potential for these, albeit rare, exogenous shocks, represents a threat to the growth of the industry.

7.2.1 Barriers to Entry of New Firms

In terms of agricultural products, the cut-flower market has high barriers to entry, which limit the creation of value. Each type of flower has different optimal conditions varying by light intensity, light exposure, soil acidity, water needs and temperature amongst other factors. The knowledge of what grows where and how to test for it prevents the majority of Ethiopian entrepreneurs from entering the market without significant external assistance at great financial cost (Maharaj and Dorren, 1995).

Joosten (2007) documents how the effective costs were, at the time of the report, much higher for Ethiopian growers than for their foreign counterparts. Firstly, the experience of growing

flowers results in lower loss rates as growers know how to manage processes to minimise wastage and the majority of Ethiopian entrepreneurs that enter the industry "...are not growers by trade, they are businessmen...and then you've got the Dutch guys who've gone over and invested and taken all of their knowledge with them" (IG2). This is a very expensive element of cost inequalities to address as it requires constant subtle adjustment and management in order to achieve optimum production. This gap can only be bridged, for Ethiopian growers, with the employment of a permanent and experienced farm/production manager. Even experienced production managers reported taking two years of production before optimum quality, consistency, and volume are achieved.

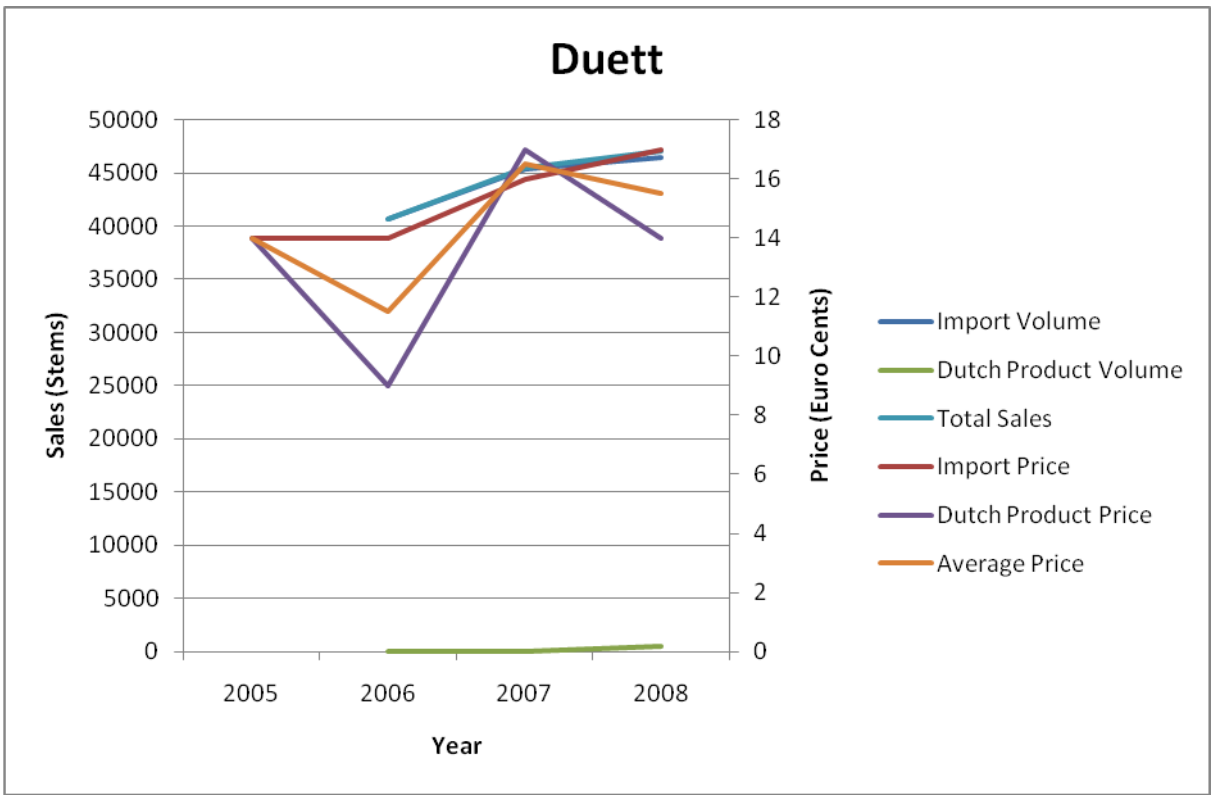
Secondly, knowledge of market and consumer preferences allows growers to react to changes more quickly, maximising sales and minimising losses through inappropriate production. This knowledge deficit can be addressed through the occasional employment of a consultant on a minimum of a biannual basis and regular networking with auction actors. Finally, specific scientific knowledge of which varieties are most likely to grow best in which soil and climatic conditions increases costs for domestic producers. This can again be addressed through the employment of consultants but these can be costly and unresponsive to production problems. This first barrier to the entry of new growers is attributable to the different levels of network embeddedness amongst Ethiopian and foreign growers, while the ability to overcome these barriers is attributable primarily to the prevailing power structures in the industry and how they influence knowledge sharing. Morris (2006) separates flower producers in Ethiopia into two groups; those owned by foreigners with experience in the industry and those which are owned by Ethiopians who are new to the industry. He states that information flow between the two groups is insufficient and that:

> It would be naive to think that, in a competitive market, growers would simply give information and 'trade secrets' away (22).

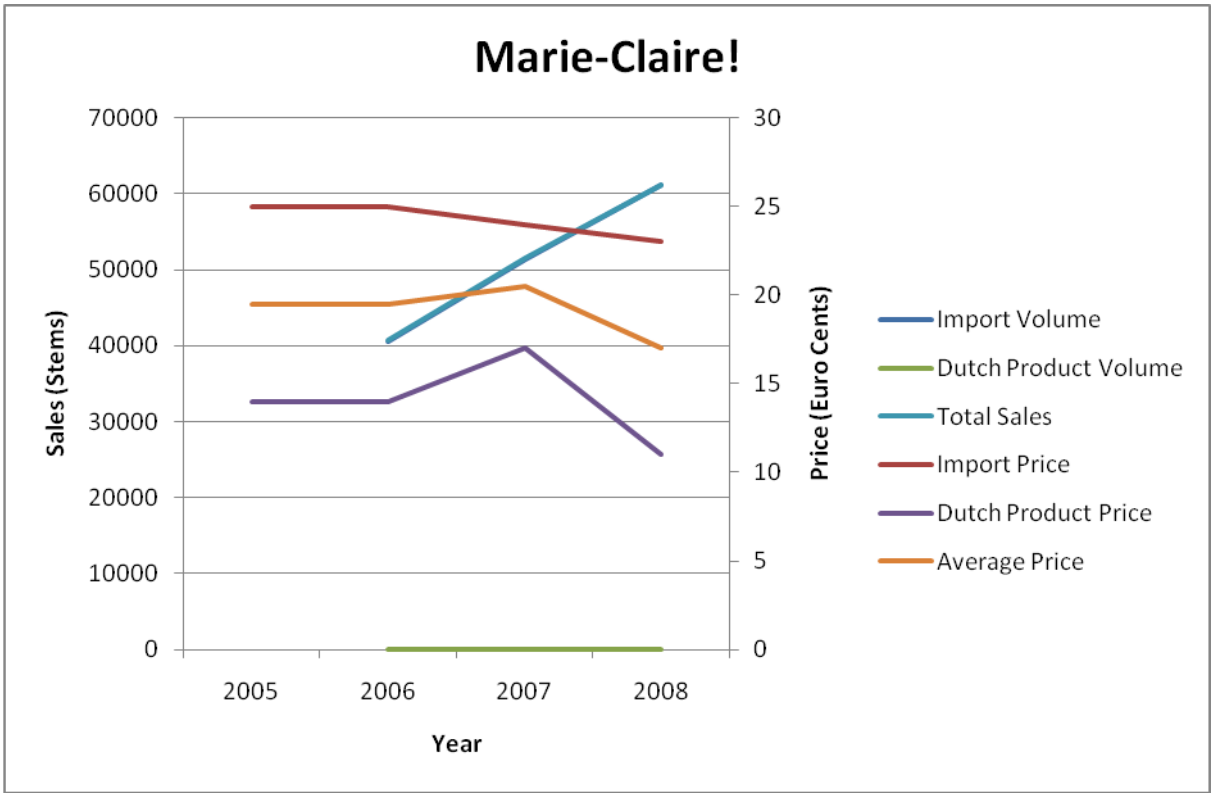
The longer the industry exists in Ethiopia the greater the exposure to best practice by all level of employees will be. Assisted by the movement of employees between firms this will increase the levels of incidental knowledge transfer and begin to address the knowledge deficit.

One of the key decisions to be made in establishing a new flower farm is the selection of varieties based on both market opportunities and growing conditions; a further knowledge asymmetry that negatively affects new entrants to the market. Direct customers may look to a particular grower to provide a certain product mix and, by concentrating on too few varieties, a producer may not be able to fulfil a customer's needs. Conversely, by diversifying a product mix too widely, a producer may not be able to satisfy the volume requirements of larger orders. Breeders are able to licence varieties and larger customers may demand that the supply of certain varieties is limited to protect the price. The largest farms may negotiate total exclusivity agreements with breeders due to their buying power (IG16). In varieties where supply has not been limited, or has not been controlled carefully, producers can begin to decrease the auction price of their varieties by oversupplying to the auction (IG2). Below, figures displaying the relative Dutch and imported sales volumes and prices achieved at auction for some common varieties are displayed as they fluctuate over time. As can be seen from this data, for some rose varieties while there is both Dutch and foreign production the sales volumes differ greatly. For all three of the varieties shown there are great disparities in the prices of Dutch and imported roses. For 'Marie-Claire!', imported roses earn almost double the price of Dutch products at auction while for Akito, Dutch products have sold for up to three times the price of imported products. The reasons for the disparity in price are attributable to a number of factors. These include objective quality characteristics

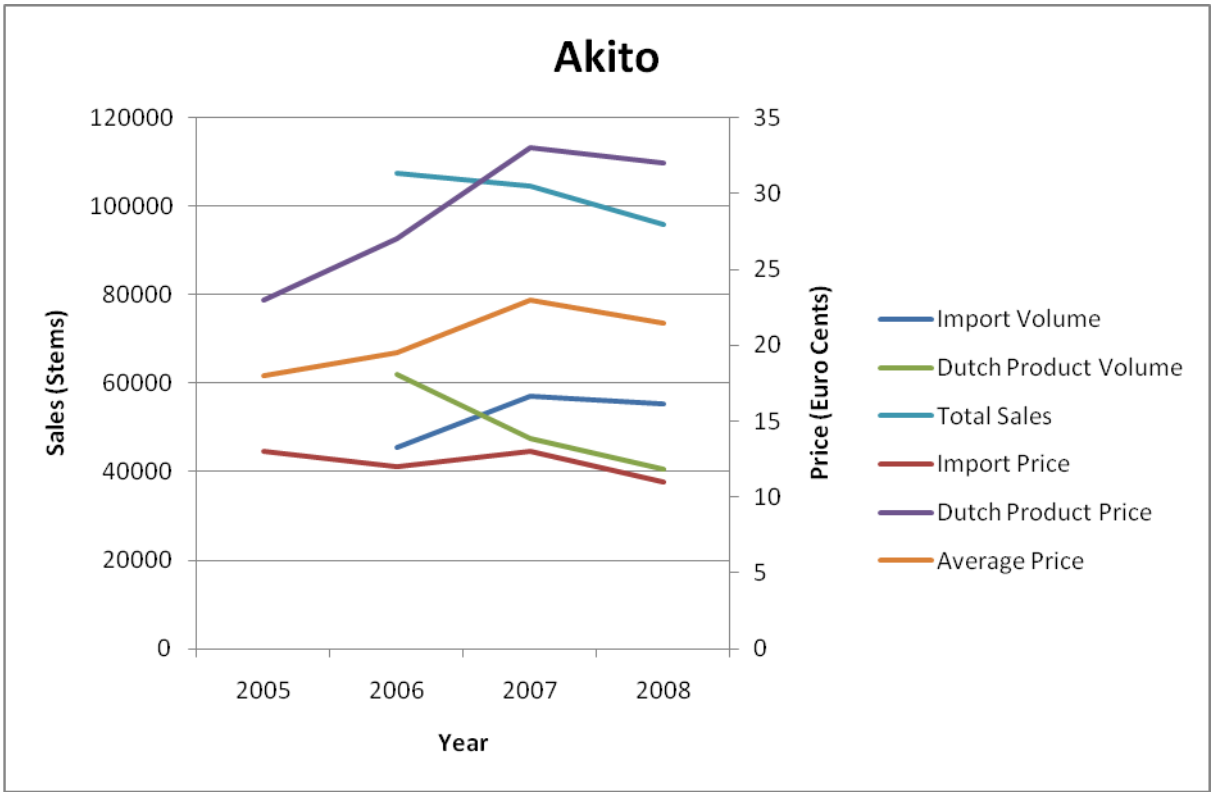
derived from the suitability of the variety to the local growing conditions and effective farm management; brand rents created by growers as discussed in Chapter 8; and brand rents for a national industry as a whole based on factors such as disease prevalence and post-harvest handling facilities influencing senescence. Additionally, there is a cachet which can be attained with developing country origin (Cramer, 1999; 1251). In some cases the inputs required in order to make a Dutch-grown rose of a particular variety competitive with their Ethiopian counterpart are such that it would make it unprofitable for Dutch growers to enter this market. However, they may wish to enter the market with a lower-input, inferior quality version of a variety, knowing that they may achieve a lower price but that may allow for a profit to be made due to the lower inputs. This emphasises the importance of varietal choice for Ethiopian growers. They must choose a varietal mix for which they have a competitive advantage and for which supply is controlled by the breeder to maintain prices.



7.3: Duett Prices at Auction; Source: Floraholland



7.4: Marie Claire Prices at Auction; Source: Floraholland



7.5: Akito Prices at Auction; Source: Floraholland

The industry also requires high initial capital investment in order to buy refrigeration, transportation and storage facilities in addition to requiring measures aimed at bridging the knowledge gaps described above and inhibiting organic growth from within the country. All rose growers in Ethiopia now have cooled packing and storage facilities both on site and at Bole Airport as flowers not produced under these conditions would be of lower quality and would

senesce more quickly. The loans available from the DBoE have been useful in facilitating the purchase of such capital goods but the speed of disbursement has been identified as a factor which continues to limit growth with 12 months of bureaucratic processes commonplace (Joosten, 2007). As described above, the DBoE's loan policy restricted access for local entrepreneurs in the initial stages of the industry's growth and acted as a significant barrier to entry. While this policy has since been changed to give equal access to foreign and local investors, commercial banks in Ethiopia are still reluctant to grant loans to businesses in the industry, ensuring that capital availability remains a significant barrier to entry.

For foreign firms looking to set up a flower farm in a country, domestic skilled labour is a distinct advantage as imported skilled labour is significantly more expensive. Dearden et al. (2002) identified an acute shortage in this area and the competition amongst both domestic and foreign firms for the labour which was available meant that wages were driven up significantly. Since this time, access to trained labour has been improved in two ways. Firstly, while the government would logically prefer to employ trained labour from within the country, this was not available and so the government removed income tax for expatriate workers in the industry in an attempt to eliminate the skills deficiency. Secondly, following numerous studies, WUR designed a programme of training including a BSc and an MSc in horticulture to be conducted at Jimma University, and an HPTC at Melkassa, examined further in Chapter 9.

In a competitive global market, it is imperative that products acquire a reputation for quality and reliability that will only arise through investment in marketing including membership of a CoP. This fact was recognised by the EHPEA and donor agencies and so the EHPEA designed a CoP in conjunction with WUR to run in parallel with the internationally recognised standards such as MPS and GLOBALGAP. The Code is still in development with the Bronze stage having been rolled out to 80% of the production area. This is aimed at setting minimum standards for health and safety and environmental practices to enable producers to obtain the international standards more easily (as documented in Chapter 9). By international standards, the requirements for the Bronze stage of the EHPEA's CoP are not especially stringent and the training and assessment for the Code is free of charge. Nevertheless, they do present a barrier to entry for new firms as the measures necessitated to become accredited can be expensive – due to expenditure on equipment necessary to meet the CoP's standards - and they may require the input of significant employee time for training etc.

The government has, as of 2010, made this basic Bronze CoP a legal minimum to obtain an export permit as a further measure, added to those documented throughout this study, aimed at manufacturing and protecting the reputation of the industry as a whole (Tamene, 2010). Furthermore, the government is considering linking the advanced stages of the CoP with financial incentives such as tax breaks or access to land, although at the time of writing no concrete measures had been implemented. International standards are the gateway to the highest level of benefits available to producers in floriculture, as documented in Chapter 8, and the EHPEA CoP, audited by the same assessors as some of the most prestigious international codes such as MPS SQ, goes some way toward assisting producers in accessing these benefits.

One of the most unavoidable barriers to setting up in the industry is the balance of payments deficit the country is running; currently $6bn US/year. This means foreign currency is in short supply which makes the acquisition of key inputs to the industry difficult. As documented in Chapter 10, one of the government's primary targets in its support of the industry was to increase foreign currency earnings; an objective which has proven highly problematic to achieve. Obtaining

inputs, particularly for Ethiopian entrepreneurs, has been difficult due to this shortage of foreign currency and the depreciation of assets held in ETB against the US Dollar.

It is these high barriers to entry that Maharaj & Dorren (1995) believe put floriculture in the developing world 'beyond peasants' scope' with no possibility of smallholders being able to enter the market and grow their business (Ezedinma and Chukuezi, 1999). This is confirmed by primary research which found no evidence of the integration of smallholders into the floriculture GPN, as the knowledge and capital requirements are simply too high. There is some precedent for smallholders being incorporated into the floriculture GPN in Kenya, with several farms growing low input, open field summer flowers grown from bulbs, creating relational rents. Even if successful, this represents a small section of the total flower market and the lower sales value of these flowers means the profit margin after the deduction of the higher transport costs is far smaller than with greenhouse flowers or mass-produced summer flowers. An area where there is far greater potential for smallholders to be integrated into the GPN is in the export of tropical fruits and vegetables. As described in Chapter 11, this related industry owes its growth in large part to the infrastructure and policies created for the floriculture industry. Following the model established in a number of other NTAE growing countries, the EHPEA has, with assistance from the CFC, designed a project to integrate smallholders into the network by assisting them in growing vegetables to contribute to the total supply of a large exporter. This is possible because of the lower barriers to entry including a far more developed existing knowledge base involved in growing fruits and vegetables.

7.2.2 Barriers to Growth of Existing Firms

In addition to the barriers that make it difficult for new firms to enter the industry, there are several issues which inhibit the growth of existing firms, limiting the capture and enhancement of value. These exist both in the form of factors limiting farm expansion directly and those which limit the profitability of farms, diminishing opportunities for capital accumulation (Coe et al., 2004; Henderson et al., 2002). Dearden et al. (2002) identified several problems with the industry which increase costs and reduce demand for the flowers produced. Firstly, agronomic practices and post-harvest handling, including a lack of cool-chain facilities, were identified as areas where Ethiopian farmers were at a disadvantage compared with the international standard. Since the report was produced, and partly as a consequence of it, several consultants have been employed in an attempt to improve the agronomic practices of farmers in Ethiopia, thus enabling value enhancement through improved quality(Henderson et al., 2002). Additionally, a new cooled sorting and grading facility has been built at Bole Airport for both flowers and vegetables and several firms operating in the country now offer cooled transportation facilities. Furthermore, a taskforce has been set up on cool-chain management including representatives from a number of farms, auction houses, the EHDA, EHPEA and transportation companies, aimed at overcoming difficulties experienced by actors in this area of the industry (IG15). Such bottlenecks were inevitable given the rapid and unprecedented growth of the industry:

> I think if we are honest, the rapid growth rate in the first instance did create some problems. It's very difficult to develop your infrastructure and all these sorts of things at such a rapid pace in order to keep up with that. For the time being it worked and there is a positive side to that too because you are big enough to be a presence and fill your aircraft and have five or six or seven flights per week so they've reached, for flowers, critical mass quite quickly so that is a good thing (IG8).

This is one constraint where capacity-building measures have been implemented in order to facilitate the continued growth of the industry. Such capacity-building programmes have been important in overcoming impediments to the industry's growth and in order to do so,

programmes have been required to increase the level of foreign involvement in the industry, as displayed in this extract from an interview with an EHPEA respondent:

> This is not discriminating. A British company wanted to do a packaging factory here, it's allowed...we will not wait for Ethiopians who have no interest or capacity to do that. It must be open market. Where there is a [need for] protection the government already make a protection. The foreigners can not involve in local trade for example...Also telecommunication, bank, the government has strategy on that. But for the rest, where the government didn't put protection... (IG8).

One key aspect of infrastructure which has acted as a decreasingly influential barrier to the growth of existing firms, partially due to the involvement in foreign companies, is that referred to in Figure 6.10 as handling agents. In the early stages of the industry it was the lack of handling agents due to the small size of the industry that acted as a barrier to growth, inhibiting the creation of value. The consolidation of shipments so that they could form pallets and eventually charter cargo aircraft was a key function preventing the industry from reaching critical mass, as capital expenditure was too high for each firm, given their export volumes, meaning that costs could not be lowered to make the industry internationally cost competitive. The EHSC was formed by 30 small growers in 2004 with government support in order to overcome this barrier as documented in section 7.1.3. However, as the industry grew, this effective monopoly of EHSC began to have the effect of keeping costs artificially high and imposing restrictive conditions on shipments, making the industry less competitive internationally. In 2006, the government sought to address this bottleneck by breaking the monopoly of EHSC and allowing Flowerport, a company in which Sher is the majority shareholder, to compete. This had a positive effect on both prices and efficiency within the handling agents' node of the industry (IG6). Flowerport are a Dutch-based logistics company with international experience of floricultural transport systems and are one of the largest companies involved in handling floriculture freight in Kenya. This experience meant they were able to introduce cost savings and increase efficiency for their customers in several ways. Pallets are packed more efficiently in terms of space meaning Flowerport can transport 90 tonnes of cargo on the same Ethiopian Airlines cargo plane that EHSC pack with only 75 tonnes of cargo (IG17). This is all the more surprising given the onerous three week advanced booking requirement for space on EHSC flights has been reduced to just a few days with Flowerport. This is detrimental to growers as, in order to conduct optimum market strategy, price fluctuations and cut stage (the stage of growth of flower at which they are harvested), determine the optimum number of flowers to include in a shipment. Cut stage is affected by micro-variations in climate which can be significant over three weeks. Therefore the Flowerport's requirement of shorter notice for booking space on cargo planes was a key development in allowing producers to be more responsive to consumer demand and market conditions (IG6). EHSC can provide better facilities for growers new to the industry as they have more flexible payment terms than Flowerport's two week invoice settlement requirement, accommodating variations in cash flow common when entering the industry (IG9).

The close relationship between Flowerport and Sher has acted as both an aid and an impediment to the growth and efficiency of this node of the GPN. When the node was opened to competition by the government, the fact that Sher had significant production of their own meant that they were able to fill cargo flights with the addition of a small number of other farms. Sher's production could then be exported flexibly to utilise flights where demand from other producers was lower. However, as demand outstrips supply, particularly during times of year where demand is at its peak, Flowerport are seen by many growers to be prioritising Sher's products over those of other growers. As production growth has continued to outstrip growth in freight capacity in the

industry, competition between the two handling agents has reduced. Allegations were made by several respondents of price fixing between EHSC and Flowerport with both charging €2.25/kilo exported. This acted as a restriction on the capture of value both for Ethiopian growers, as they had to pay a proportion of the final sales price to this node which was not reflective of market rates, and to the Ethiopian government, as value was captured by an actor with lower levels of territorial embeddedness (Hess, 2004). The difference in loading capacities between the two firms together with this fixed price should have resulted in a large-scale shift toward Flowerport. However, while this did occur to some degree, it was mitigated by the allocation of space to EHSC on flights, limiting the capacity available to Flowerport, together with the political and loyalty issues outlined below. As transport represents the most significant element of costs for Ethiopian producers, this represented a threat to the profitability of firms, particularly during a time when prices at auction were depressed. This led to the third and most controversial development in the handling agents sector of Ethiopian floriculture.

The ethnically and politically aligned corruption that occurs in Ethiopia manifests itself strongly in the handling agents' node and for a significant period of the history of Ethiopian floriculture, corruption determined the prevailing power structures of this key node of the GPN. One of the most influential individuals in the growth of the floriculture industry in Ethiopia was Ato Tsegaye Abeba, who, as one of the first flower exporters from Ethiopia, was a founder member of the EHPEA and remains President of the Association. He was also responsible for the establishment of the EHSC and remains an influential shareholder and board member. Ato Tsegaye, a Tigrayan, was reported by a large number of respondents to be "well connected", with more than 10 farm owners using the exact phrase without solicitation. As such it was felt that challenging the status quo with regard to handling agents would endanger the existing floricultural operations of the individuals involved by angering such an influential individual. In May 2010 a small producer, who himself had family connections within the government, began to enquire as to the possibility of adding an additional option to the handling agents' market as a way of bringing his costs down. The producer wished to do this in the form of a cooperative amongst all growers who wished to use the service, unlike EHSC which is effectively a partnership between the board members, and under the cooperative no profit would be taken and the price charged would simply reflect the costs incurred in getting the flowers to market. In establishing the cooperative the grower perceived that he was threatened both personally and professionally and had great difficulty in attracting formal support from interested parties for fear that they may suffer the same. Eventually, due to his family connections within the government, the producer was able to gain an audience with the Prime Minister's representative where he raised the issue of the prohibitive costs associated with handling agents and the constraining effect they were having on the industry's growth. Backed by the Prime Minister's Office the producer was then able to attract the support of a number of other growers, some of whom offered to assist with the running of the new cooperative. Once it transpired that the cooperative would succeed in entering the industry, both Flowerport and the EHSC lowered their prices to €1.75/kilo, a reduction of 22%. By the time the cooperative was officially established (although export operations have yet to begin) 38 growers had agreed to become members of the cooperative with five being elected as board members, one of whom will act as the inaugural president. The members will contribute their own capital to allow the cooperative to purchase equipment and begin operations.

The handling agents' node of the GPN is one where relational rents have been created and have thus enhanced value within the GPN. The cooperative represents a mechanism by which supernormal profits have been created by the firms involved which would not have been available to any of the actors individually.

The advent of this cooperative has also brought to the fore the disparity between the business cultures of Ethiopian and foreign growers as the cooperative is being driven by Ethiopians with foreign growers sceptical of its potential for success. Foreign growers are amongst those that have formed the cooperative but along with a number of international institutional actors, they fear the Ethiopian-led cooperative lacks the organisation to succeed:

> I also want some commitment and that is something that Ethiopians are not very good in. They want to have things and they never want to give things (IG2).

Whilst the institutional environment was a key factor in the initial development of Ethiopian floriculture, this asset has failed to improve, in certain respects, to accommodate the growth of the industry and, as such, the business environment can be considered a constraint to the industry's continued growth. Business processes are still widely regarded as very slow and there is a conflict between 'business cultures' of the European and Ethiopian actors within the industry.

> They never reply to emails though especially these government guys. And that's also the annoying thing and that breaks me up. And nothing happens you know, always good meetings and they promise you many things...but nothing happens. And then you have to do something else, maybe it's also through the government but maybe it's a different angle and different people (IG2).

Whilst the problems in the institutional environment exist amongst government, the banks, transport institutions and the donor community, respondents saw the problems in their interactions with the government as the most restrictive. This is strongly related to the data contained in section 4.1 regarding the post-communist nature of the state, in the period after the *Derg*, and consequent autocratic governance. The rollback of state involvement in many industries has continued but the desire for floriculture to succeed, as a target industry for export growth, has resulted in heavy involvement in several aspects of the industry. This interview extract reflects a view typical of many in the industry, that the government's involvement in all aspects of the industry has proved an impediment to growth:

Respondent: ...the farms, they have to fill in all kinds of forms to do with their shipments so they have an idea what is going on...the trucks, so they do like a check, an annual check and then half of the truck was put on the red list and if they were not fixed within three weeks or something they would be taken off the street or something. But they order it kind of thing. They wrote a directive which is stupid you know. And we are fighting against it within the taskforce and all the Dutch growers are saying to go against it and it worked more or less but in the end nothing has been done on the airport and that's the main problem, if you want to achieve things which is also beneficial for the good growers then do something over there because that is something they don't have in their own hands.

Interviewer: But surely the government shouldn't need to step in when it's a firm's own benefit.

Respondent: Well that's the strange thing, you know, and that's a very weird discussion when you are discussing this directive. You know, our interest is bigger than yours but they think their interest is bigger in term of this product comes from Ethiopia, and they think the only way they can change it is to put these regulations in place but they don't realise that the whole investment climate will go down because of this stupid cool chain, I really cannot understand it.

Interviewer: Do you see this as a product of the country and the government's political history?

Respondent: Of course. It's slowly changing but not quick enough. You know at the agency there are quite some good ones and some nice one but a few they come from the old state farms and I used to have very severe discussions with them and if they can ignore you they will. They cannot handle discussion, you know they say they do but when it comes to it they listen and they say OK we do it my way. You know, you have something in mind, you have a discussion and at the end they say OK we're going to do it like this.

(IG2)

The desire of government for the industry to succeed coupled with the micromanagement style of governance employed has led to state interference in increasingly small nodes of the industry, favouring intervention over the market as the solution to the industry's issues. This interventionist autocracy together with the lack of 'agencies of restraint' has led some to take the view with regard to the industry in Ethiopia that 'a train wreck is in the offing' (Blattman, 2009). One example of such top-down governance comes in the area of packaging. In the initial stages of the industry high quality packaging for the export of flowers had to be imported, increasing costs for producers and reducing the benefits available to local actors within the industry. The government's solution to this was to create their own packaging firm, which continues to operate and supply many firms in the industry. This had the effect of increasing pressure on local packaging producers, removing the turnover they required to develop their packaging to meet the industry standard. Since this time a number of packaging firms have begun operating in Ethiopia and farms now use a range of government, privately made and imported packaging for flower export. Several growers highlighted the value of this government intervention as the increase in the price of packaging caused by the increased quality has been nullified, as the loss rates during transit have been significantly reduced. Auction and other institutional actors, however, said that the market would have produced the same outcome and those who do not have varieties which are easily damaged would prefer lower cost options (IG11, IG2, IG7).

The rapid growth of the industry has resulted in a process whereby a single problem becomes the focus of firms and policy makers within the industry and once this problem has been addressed, focus shifts to the next priority. This is in contrast to industries that have developed more gradually where problems arise over time caused by changes in external conditions and changes in the market overall, such as a gradual shift to direct market supply. As such, when the problem

of the quality and availability of packaging had been solved to a large extent, the issue of efficiency among handling agents came to the fore. As is documented below, transport costs account for a significant proportion of total costs and so the more efficiently an aircraft can be packed, the lower these costs will be. In an attempt to achieve this efficiency, the government instituted a directive meaning all flower producers must use boxes of standardised size and quality, which were to be supplied by the government-owned packaging firm. This directive encountered heavy opposition from the industry. Whilst it would be helpful in the stacking of pallets if boxes were standardised, roses produced in Ziway have very different packaging requirements from the taller roses produced in Holeta and those required for the hardier hypericum do not need to be of equal quality to those for the delicate gypsophelia. The government was consequently forced to alter the directive so that it applies only to Ethiopia's primary export variety, roses, although the directive remains controversial, with one respondent reporting that the events surrounding this directive were symptomatic of the government's attitude and that "things cannot continue like this!" (IG15, IG6, IG4).

Another part of the same directive had initially stipulated that flowers, which are only exported, and fertilisers and pesticides, which are only imported, could not use the same truck for transportation. The idea was that growers were becoming careless or intentionally cutting corners by not cleaning the truck in between journeys and the phytosanitary and health and safety implications were having a negative impact on the reputation of the industry as a whole. A market-orientated solution would have been to allow those growers who do not ensure proper handling of materials to see their prices fall at auction and their own reputation damaged by failing checks on their health and safety standards. This part of the directive was met with fierce opposition by growers who considered themselves as conducting all the necessary precautions and saw this as a high and unnecessary cost, increasing the total costs of every shipment for no benefit. This part of the directive was eventually removed due to heavy opposition as is displayed in the following exchange between a flower farm manager and an international institutional actor:

> 1:...the taskforce is so screwed up. This is what they say, if a cold truck is dropping the flowers from Debre Zeit, on the way back it cannot take any fertilisers or chemicals – What the fuck!
>
> 2: That's changed now.
>
> 1: I don't know why, maybe they thought flower is some kind of delicate or something.
>
> 2: They don't think that the growers will clean their cold trucks.
>
> 1: this is a Mummy state. This is my farm, my truck; I'm the one who paid for it, who the fuck is he to tell me put this in that!
>
> 2: He is the government of Ethiopia. They have to protect their name.
>
> 1: All they have to do is put a policy and tax.
>
> 2: I agree with you completely.
>
> (Round table meeting – IG2, IG13)

The government's desire for the industry to succeed has also had a negative impact on the benefits extracted by different actors from the industry. Despite initially appearing to favour foreign growers in the policies of the DBoE, several initiatives have since emerged offering financial incentives, the provision of expertise or capital equipment to growers for actions which they believe will enhance the industry, such as diversification or expansion in certain areas. These

policies have in some cases been restricted to Ethiopian growers to the annoyance of both foreign growers and international institutional actors who see the policy as restrictive of growth, referring to the policies and the agency that introduced them, the EHDA, as 'stupid' (IG2).

Conversely, in the operation of Ethiopian Airlines, the government has implemented policies which have had a negative impact on the benefits extracted by local actors. Whilst the reliability, consistency and service offered by the state-run airline have in some respects facilitated the industry's growth, the government has sought to mitigate the high contribution of transport costs to total costs by effectively subsidising exports on Ethiopian Airlines. It is a well established fact within the floriculture industry that the cost advantages of flowers exported from developing countries over flowers produced under manufactured conditions in Europe are largely eroded if the airline cannot, at least partially, utilise the cargo capacity of the aeroplane on the return journey, known in the industry as 'southbound'. Ethiopia exported $192m of goods to the Netherlands in 2010, compared with $79m of goods which flowed in the opposite direction, the vast majority of which is shipped via sea (International Trade Centre, 2011). In order to be economical when compared with shipping, southbound air freight needs to be both high-value and perishable, as well as having a sufficient demand within Ethiopia. Indeed major supermarkets are examining the possibility of consolidating freight including flowers and other fresh produce as they have begun to develop retail outlets globally. They have been able to use air freight capacity in both directions, which, due to the proportion of production cost that transport accounts for, has begun to influence their source locations (Wrigley and Lowe, 2007; Wrigley, 2002). Whilst it has not, as yet, proven a major factor in any reported location decision, it is likely to become an increasingly influential variable as supermarkets continue to spread their influence internationally. For Ethiopian floriculture, the demand does not exist for imports from Europe and, in any case, purchasing imports from Europe would negate the primary government objective of the industry: to increase foreign currency reserves. Furthermore, due to the elevation of Bole Airport (2334m) the fuel required for uplift is lower than it would be at a lower altitude and growers lobby for lower transport prices as a result. With little or no southbound, however, airlines must account for the price of the uplift from both Bole Airport and for the return leg from Europe. As a result of this, Ethiopian airlines charge a price which is not only unprofitable but is in fact a loss-making enterprise as a result of partially subsidising southbound.

The airline has also operated using fixed prices, insulating exporters from fluctuations in fuel costs which is another cost that must be absorbed by the airline. In Kenya, by comparison, freight prices are altered weekly to account for fluctuations in fuel prices. The ability of the state-owned airline to operate a loss-making enterprise gives the country a competitive advantage over other developing countries which either have no state-owned airline or have an airline without sufficient capacity to conduct such operations. In the long-term, however, this has to be seen as an unsustainable part of the industry. Furthermore, there is an absence of multinational retail outlets in Ethiopia due to the government's policy on foreign investment in this area and so, if this does become a more influential factor in production location due to the possibilities of multidirectional freight, then Ethiopia's position can be considered relatively weak (IG5).

As is the case with the 'tax holiday', it is clear here that the policy choices of the government are made as a result of the power inequalities that exist between institutional and international corporate actors in the early stages of the industry, while at the same time reflecting the political strength of the state in being able to execute these policies. In pursuing such policies, the institutional actors intent on ensuring the sustainability of the industry are effectively investing in the embeddedness of corporate actors and international capital in both the country and the

industry which, by the time taxes are introduced and freight prices are increased to reflect either their cost or even market price, will be sufficient to ensure farms continue to operate in the country (IG2). As reported by one investor, profitable operators should not be deterred by the eventual introduction of tax as the tax holiday is extended for firms which made losses in the firms two years of operation; “The only reason you should worry not to pay tax is if you are not making money so if you are making loss you can get an extension” (IG9). The tax holiday is effectively an exemption from tax on profits for the first five profit making years, used by the government as a mechanism to support firms new to the industry and manufacture embeddedness amongst them.

Other parts of the institutional environment have also hampered the continued growth of the industry. The inexperience of the industry within the DBoE has acted as a constraint on the operation of existing firms within the industry, with the conditions imposed by the bank aimed at preventing firms abusing the favourable terms offered to the industry acting as a barrier to the profitability of firms. To ensure the prompt remittance of revenues firms are given 30 days to return the sales revenues to their Ethiopian bank accounts after which time they may transfer 90% of the money abroad. If they fail to do this they do not receive an export permit for the following month. This allows very little scope for late payment or other delays such as public holidays and has in some cases resulted in the delayed export of shipments, which means, as a perishable good, that the sales price can be affected and on some occasions the shipment has been lost (IG6). From a government perspective however, without such tight controls on repatriation of foreign currency the primary objective of the promotion of the industry in addressing the foreign currency deficit will not be satisfied. One auction respondent reported that they cancelled a planned development of the auction system which would have allowed people to view the prices being achieved at auction via webcam. It was feared that the Ethiopian government would have used the webcam to determine the prices their growers were obtaining and then demanded that this amount was remitted to the country, ignoring the costs which were to be deducted because of a lack of understanding of the industry (IG2). This would have been the latest in a number of attempts made by the government to maximise their foreign currency earnings which have resulted in bureaucratic and obstructive practices for growers. Whilst the search continues for a better, more efficient system, with EHDA study visits having taken place in Israel and Colombia, the current system results in a far higher level of foreign currency remittance than when the system was based on trust alone. A respondent from the EHDA reported that the industry was “a mess, a serious mess” when the association began operations and they are still in the process of improving (IG4). The most recent incarnation of the system to ensure maximum repatriation of revenues involves higher levels of communication between the Customs Agency, which issues the export permits, and the National Bank, which monitors the revenues received. A permit will be issued for a certain number of stems per month, which given the average/minimum revenue per stem expected for the variety being exported, allows the National Bank to know how much should be remitted. Previously, this figure was absolute, regardless of whether a firm failed to export its entire quota of permitted stems. The system does, however, remain primitive in terms of international floriculture as it is based on a number of approximations which are applied rigidly and it can prove arduous for growers even if they are fully compliant with regulations (IG6, IG4). This fact is conceded by a respondent from the EHDA:

> ...currently we prefer to establish a flower price, a minimum flower price and be it for direct or auction market, to use that as a blanket of flower price system for everything because we don’t have a proper system today...The most problem is people know the weakness of our system...we feel that we are not earning the hard

currency earnings that we should from the sector because of the weakness of the controlling system (IG4).

This is a clear case of where the information asymmetries between established floricultural actors, particularly producers that have been operating in export floriculture for many years, and institutional and commercial actors new to the industry, have led to differences in the ability to capture value (Shin et al., 2009).

Furthermore, no matter how efficient the system, many respondents believe there are 'rogues in any industry' and as such there will always be a degree of leakage (IG12). Many growers in the industry admitted, confidentially, that they do not even report one third of the true sales value of their flowers, while it is commonly accepted within the industry that "Everybody cheats, everybody!", with repatriation evasion techniques including the virtual sale and resale of flowers to fictional offshore companies (IG14). Indeed Ethiopian flower farm owners believe that the only solution to this problem is Ethiopianisation, as "most Ethiopians don't keep money outside" (IG14).

As identified earlier, the price achieved for flowers is largely influenced by the variety and in order to keep pace with changing trends, access to genetic material is vital in order to achieve the highest price. Numerous supermarket respondents reported altering their range on a daily basis in response to trends and growers must be as flexible as possible within the context of a long-term contract in order to ensure success (IG5). Dearden et al. (2002) identified access to planting material as a significant problem in the early stages of the industry but, since this time, access has improved and one breeder now produces varieties for licensing within the country while seven others licence foreign varieties for production within the country.

During primary research it initially appeared that this issue may still present a significant barrier to the growth of the industry with several breeders boycotting the Hortiflora 2009. However, it later became apparent that this was a temporary problem and the profit motive of breeders means that, whatever the conditions, breeders will be willing to provide their varieties at a price. The breeders node of the GPN exhibits high levels of territorial and network embeddedness. While royalties for plants appear high, as documented in the following section, the development costs for new varieties are also high and the royalties from successful varieties pays for the many failures that were created in the development process. Capital costs are high and the relative factor endowments of the countries in which the breeding node is territorially embedded and the developing countries in which flowers are now primarily produced, means that the locations of these nodes is unlikely to change in the foreseeable future. Even in Colombia, which has been producing flowers for export for over four decades, breeding is still not conducted in any significant way.

Further issues which can affect price, as identified by Dearden et al. (*ibid.*), are logistical and infrastructural constraints. Poor roads in rural areas and poor telecommunications were increasing the time from farm to market and increasing transaction costs for growers. This has been tackled by the government with a huge road building programme which has seen the roads between major cities and particularly roads around the capital improved significantly. Despite an overburdened and bureaucratic mobile network and slow internet connections this is one area where the government seem unlikely to bow to investor and international pressure over privatisation (IG4). However, during the last year significant improvements have been made and options are now available to business users to give them sufficient internet speeds:

> ...we have the telecommunications. Maybe it is not as efficient as we may expect but compared to what we had, the growth rate. 3/4 years ago maybe we had 20/30,000 mobile, now there are over 300,000 maybe coming to a million ah? We cannot claim that we are masters but we have people who can be (IG9).

In recent months bankruptcy has befallen a number of farms in the industry and was a threat to many more. Of the six farms to have gone out of business, two were Dutch-owned, three were Israeli-owned and one was American-owned. The central question is, then, when the market takes a significant downturn, what do companies lose by declaring themselves bankrupt? What would normally be the principal asset of an agricultural firm - land - was leased to investors at a rate which would have at best only paid the interest of a mortgage and so no effective equity has been lost. No collateral is required for the loan from the DBoE and only their 30% capital investment has been eroded. When this is considered alongside the evidence of fraud through over-invoicing discussed above, the financial risk to foreign investors could be minimal. Finance received from the DBoE has most likely been spent on saleable assets such as greenhouses and irrigation equipment which may have been completed before bankruptcy was declared. Personally, the individuals may have been drawing a wage from the business with no income tax and could have repatriated any profit made, tax-free. Whilst it may be difficult to suggest that anyone would want to spend three years of their life and invest 30% of the capital in a farm, only to extract short-term benefits, it can be seen from the above example that the risk undertaken by foreign investors is potentially very low and certain government policies lead to low levels of embeddedness amongst foreign entrants to the market. In this case it can be seen that Ethiopian investors, who may be experiencing similar circumstances to these foreign growers given the state of the market, have higher levels of both territorial and network embeddedness and so, in times when the market is depressed, are more likely to remain in the industry. It may not be through inferior farm management or inferior quality produce that these foreign growers have gone bankrupt but rather, a lower level of embeddedness and hence commitment to the industry and the country. This extract from an interview with one farm manager illustrates this point:

> Not many flower farms are going bankrupt, if they are it is for their own reason, maybe mismanagement or maybe they are criminal! Most will make it with this climate and the labour costs and the land costs unless something unexpected happens. In [X Flower Farm] in the last 5 years they have made nearly $4m profit, not in the books but in the real one (IG11).

7.2.3 Costs Analysis

The preceding sections contribute to an overall impression of the costs and benefits for producers operating in the Ethiopian flower industry. What follows is an approximation of the total costs involved in producing flowers in Ethiopia based on data from a large number of sources including a range of farm managers/owners and horticulture/management consultants. As outlined in research to this point, financial data is heavily guarded within the Ethiopian flower industry and, as such, the data has been approximated from that which could be obtained. One interview respondent who had previously conducted research on the industry stated that:

> [I]t was very difficult to get anything beyond the sort of basic stuff such as number of plants or the size but as soon as you get to more detailed figures you won't get them from the producers. So that was very difficult (IG1).

There are several start-up costs, mitigated by government and donor incentives to the industry, which must be factored into the overall cost calculation of a farm. The plants - for roses as the primary export from the Ethiopian floriculture industry - require renewal approximately every seven years which is also the average depreciation period for the greenhouses required to grow

the plants. These costs are, then, nominally divided equally over the seven-year period in an attempt to calculate an average annual cost.

Annual Costs/Ha/Year	**Euros**	**Percentage**
Royalties	93750	23.0
Propagators	43750	10.7
Fertilisers	12000	2.9
Air Transportation	110000	27.0
Ground Transportation in Ethiopia	1700	0.4
Ground Transportation in Netherlands/Marketing	66000	16.2
Packaging	12000	2.9
Auction Charges	29000	7.1
Greenhouse inc. packing area, office space and irrigation equip.	21429	5.3
Unskilled Labour	6570	1.6
Supervisors/Management/Agronomists	2400	0.6
Consultants	9372	2.3
Association Fees	100	0.0
Total Costs	408071	100

Table 7.1: Costs Analysis; Sources: Interviews (IG3; IG6; IG9; IG12; IG13)

Table 7.1 displays an approximation of the costs involved in establishing and exporting from one hectare of flowers for one year, weighted in favour of roses exported to the flower auctions in the Netherlands to reflect the primary revenue streams of the industry. Figures are based on growers achieving an average production of 17-19 stems/plant/year. Based on these projections a grower would need to achieve a price of €0.18/stem at auction in order to break even. This is around the average price that has been achieved by Ethiopian growers at the auction although there are large seasonal and varietal variations. Highland 'Tee-hybrid' roses from the Holeta growing cluster, which are longer stemmed and larger headed, are slow growing but can fetch up to four or five times the price at auction of the 'Sweetheart' roses grown in Ziway. These highland roses are exported in lower volume and so incur lower annual transport costs and have higher profit margins but conversely have lower turnover and are more susceptible to disease due to higher rainfall. As such fewer labourers-per-hectare are required in highland areas as flowers are harvested less frequently. In Ziway 26-28 workers-per-hectare are required compared with approximately 17 workers in the intermediate altitude region of Debre Zeit. Growers that are part of large multinational firms whose operations encompass breeding operations are able to significantly reduce the considerable expenditure component of royalties, and may also draw on expertise from the company's other operations to reduce the need for consultants. Larger growers are also able to decrease costs by conducting their own propagation, while auction charges decrease proportionally with increased sales. In fact, many of the functions identified

here as part of the cost structure of flower firms can be decreased through economies of scale, vertical integration of functions or efficiency savings. Good growers should be able to achieve 20 or more stems/plant/year and proper management may decrease the rate of depreciation of greenhouses to extend their life beyond the 7 years factored into this equation, both of which will lower the price required to break even. Vertical integration, in some cases, but also the development of alternative methods of organisation within firms including the outsourcing of certain functions where appropriate, such as that of importing agents, have led to the creation of organisational rents and thus has enhanced value within the GPN (Coe et al., 2004; Henderson et al., 2002; Franz and Hassler).

This cost analysis makes it clear that floriculture in Ethiopia is far from a cash cow for new investors. However, if investors are able to optimise their business so that all of these elements of costs are minimised while sales revenues are maximised, then substantial profits are available for investors, having borne comparatively little risk in the pursuit of this goal. Whilst this might appear to be an obvious statement, in many commodities exported from developing countries, even the most efficient producers stand to make only modest profits. One successful company reported, in confidence, to having made 'off-the-books' profits of $4m US in 5 years from only 10 hectares of land. For companies such as Sher, with significant production areas, long-term direct supply agreements, broad product ranges, vertically integrated functions, preferential trade terms, and annual turnover (even before false reporting of remittances is accounted for) exceeding $30m US, profits available from Ethiopian floriculture are significantly larger.

This chapter has documented and analysed the reasons for rapid growth in the Ethiopian floriculture industry and how the relationships between the firms, institutions and the natural and social characteristics of Ethiopia itself have combined to create value. It has also displayed how personal relationships between certain actors and nodes of the industry serve to limit value creation and capture. The chapter has highlighted issues of power relations between institutional and firm-level actors and how they influence value dynamics. The following chapter documents one of the few ways in which value can be enhanced and how value might be captured by different actors together with how these value dynamics are influenced by network embeddedness over time.

8. Value Enhancement and Capture through Marketing

The ability of a firm to capture and enhance value within a GPN is one most influential factors in the profitability of firms operating in Ethiopian floriculture. Key to ensuring both of these goals are achieved is the mixture of marketing channels pursued by the firm which affects and is affected by the entire business strategy of the firm from the production location through to the product range. As described throughout the previous chapter, there are many important decisions to be made for a new firm entering floriculture. In the initial stages of establishing a firm, an investor must concurrently identify: where they see potential in the market; the expertise available to enable them to fill this gap; the resources available to them in terms of land, labour, and capital to fill the gap; and the barriers that might prevent the firm entering this market segment. Invariably, firms are not able to achieve their optimum outcomes in all of these areas from the time they enter the industry and so are constantly required to re-evaluate their objectives. This chapter outlines the different marketing channels available to flower producers in Ethiopia and different barriers that exist in following either strategy, each resulting in the capture and enhancement of value to varying degrees. Woven throughout the decisions on marketing streams, the influence of power in relation to the ability of each node to dictate the terms of trade and also embeddedness can be seen to influence the ability of particular producers or groups of producers to pursue their desired marketing strategy.

8.1 Marketing Channels

In the modern market, there are two distinct ways flower producers can take their produce to market: the auction system and through direct sales. The auction system is described first as this is the traditional method of selling flowers and has been the primary marketing channel for more than 100 years. Historically, retail was conducted through a large number of small, specialist florists, some of which were part of multiple-outlet chains, but with the vast majority of these chains having 10 outlets or fewer. All of these florists purchased their flowers from regional wholesalers which meant that no single retailer or wholesaler was large enough to influence the production varieties or volumes, and growers attempted to satisfy broader trends in the market as a whole. Wholesalers and some of the larger florist chains would travel to auction sites in the Netherlands and Germany, view the flowers paraded in front of them at the auction house, and then buy the quantity they desired at the price they were willing to pay using the auction clock.

The clock is central to the auction system. It gives information on quality, which can be visually verified by the buyer at the auction; minimum purchase volume; name and country of origin of the growers; and measurements. A dial then counts down in Euro cents from an amount designated by the auctioneer as above the maximum price anyone would pay per stem and the first buyer to stop the clock pays that price per stem and buys that consignment. The consignments for each variety from each grower begin with a large minimum number of boxes so that larger buyers get a chance to buy at a bulk discount (as smaller buyers do not want large consignments even if the price per stem is lower). The nature of auction sales changed slightly with the advent of electronic auctions as documented in section 5.2. Further changes are planned within the auction system including simplifying logistics so that flowers are no longer paraded and, eventually, are sold whilst still on the farm with a view to reducing the costs to growers. However, the major change in the retail of flowers that has occurred in the last 20 years has been the shift towards direct sales.

As part of a wider trend in retail, particularly in the UK and Germany but also across the rest of Europe and the USA to varying degrees, during the 1990s there was a significant centralisation of

sales, with the market share of specialist retailers including greengrocers, butchers, bakers, and florists falling as a proportion of total sales, as supermarkets grew in both turnover and product range (Kacker, 1993). This switch combined with the aggregate growth of the floriculture market identified above so that a small number of buyers became large enough to enter partnerships with growers who would grow exclusively for that buyer, with the buyer dictating the volume and nature of production. The UK's floriculture market is the largest in Europe and was worth €2.61Bn in 2009, 81% of which is cut flowers (IG25). The market continues to grow and UK industry respondents envisage a bright future for the sector as it is "still, relatively, a small number of shoppers who buy [flowers] regularly so, huge opportunities" (IG5). Supermarket sales now account for 40% of overall floriculture sales in the UK, with 30% through florists, 4% through internet sales and the remainder through a mixture of DIY stores, garden centres and garages. The proportion of total sales attributable to supermarkets has been increasing every year since the mid-1990s. The majority of sales not conducted through supermarkets, florists or online are not flowers but sales of plants and sundries in which Ethiopia is not a major supplier (IG25). Statistics such as these lead some in the industry to believe that "the auction system is outdated" while others see the slowing in the growth rate of direct sales in recent years as indicative of a more mixed future for marketing channels in the industry (IG7, IG9, IG25).

The growth of the direct sales marketing channel led to the creation of a new node within the global floriculture GPN: that of importing agents identified in section 6.4.3. This new node acted as a facilitator, linking customers (i.e. supermarkets and wholesalers) with producers via an arm's length agreement whereby they would manage the growers, handling agents, transport actors and other actors at the site of production, shifting a large portion of the risk from the buyer. If a grower cannot supply a variety then the importing agent will suffer as they are under obligation to source the variety from somewhere to supply to the buyer and so may pay more for the variety at auction or from another grower. Ultimately the grower will suffer from a loss of reputation or a lack of repeat custom but the importing agent too will suffer the immediate financial loss incurred if they source the flowers from elsewhere or the longer term loss if they fail to fulfil their obligation to the buyer.

In this marketing channel, margins for all actors are smaller than in the auction marketing stream. In both marketing streams, however, profit is skewed towards the retail sector. Roses sold at auction for €0.50 can sell for up to ten times that in a florist, with only importers and wholesalers as profit-taking actors in the intervening stages. A supermarket that pays an importing agent €0.25-35/stem for roses, which are bought from a grower at €0.15-20/stem, will retail them at a mark-up of around 50%. The key difference in these relationships is the burden of risk, which in the short-term is borne by the importing agent where they are involved in the buying agreement but, in the longer term, is always externalised to the grower as it is they that plant the varieties and have to sell them where contracts for guaranteed purchase are unenforceable (IG2, IG13, IG16).

Despite the growth of direct sales, both auction and direct marketing streams retain unique characteristics, giving them a niche within the overall market which maintains the profitability of each stream. The two primary auction companies, one based in the Netherlands and the other in Germany, continue to see growth with turnover of over €4bn and €1bn respectively. The different characteristics of the marketing streams and the challenges that face Ethiopian growers in their integration into each are now discussed.

8.2 Integration to Marketing Streams

The challenges facing Ethiopian growers in their integration into international floriculture markets differ according to the degree to which they wish to pursue direct or auction marketing streams. This is a decision which has to be made very early in the process of setting up a farm as the location of the farm has a significant impact on what is both possible and profitable to grow and thus the degree to which each marketing stream is plausible.

> [F]rom East Africa it's interesting or tempting for growers to go into summer flowers because you do not need to have a large input...It's easy to start but then you are also very dependent on weather circumstances and market prices because they fluctuate so much more. I've had several clients who have moved into summer flowers and then moved out of it a year later...being drained basically...Rose takes a lot of investment but it's a relatively stable market you could say (IG2).

As a result of this instability, the vast majority of flowers grown in Ethiopia are roses and within the market for roses there are key pre-production decisions on location and varietal choice which can influence decisions on marketing streams. Ideally, these decisions are made as part of the business plan before a firm begins operations, as the market opportunities vary according to the type of flowers produced, which, in turn, depend on the location of the farm and so firms should consider all of these factors in their initial business plan. The warmer, lower altitudes in Ethiopia (approx. 1600m), in the area of Ziway, are well suited to sweetheart and intermediate roses which compose the majority of the range available in major supermarkets. This is the largest growing area in Ethiopia and has taken the vast majority of its market share from other East African rose-growing countries.

> [I]f you are in a lower segment [in terms of price per stem], higher production, smaller head size, you know, a more supermarket orientated product, you should consider also direct sales...the clock system itself is a relatively expensive method of selling your flowers (IG2).

The cooler, medium altitudes (approx. 1900m), in areas such as Debre Zeit have a climate which lends itself to larger, intermediate roses and some Tee-hybrid roses. These roses can fetch a higher price at auction but are lower yielding and the higher incidence of rain associated with the high altitude is likely to impact negatively on consistency and disease prevalence, making roses from this altitude less suitable for supermarket buyers. Competition in this sector comes, in part, from both East Africa and South America and the roses grown in this medium altitude area are equatable with the largest roses grown in Kenya.

Finally, the highest, coolest altitudes (2300m and above), in areas such as Holeta are capable of producing some of the largest-budded, longest-stemmed roses available anywhere in the world. These roses are best suited to specialist retailers and achieve a high price at auction, where the majority are sold. Growers who chose to enter this sector face competition from the established industries in Ecuador and Colombia over which they have cost advantages in labour and freight but experience higher rainfall and therefore higher disease prevalence, as documented below. Again however, with the change in climate, production is reduced by both longer flush times and loss rates. As documented in Chapters 5-7, the path to market for developing country growers has been eased considerably in recent years which has, in part, facilitated the growth of the industry, and the considerations involved in the integration to each marketing stream are now considered.

8.2.1 Integration to the Direct Market

For the direct market, integration for new developing country growers can be difficult, although the rewards are potentially greater than the auction stream. The prevailing system of governance within floriculture is undoubtedly trust. Written contracts are very rare in any node of the industry, but verbal agreements exist in direct sales, either between the grower and a buyer or a supermarket and an importing agent, to supply a given quantity of flowers at a given price for a period of up to two years, regardless of price fluctuations in the auction system:

> ...we're very loyal to people that we buy...we tend to have agreements and then, assuming everything goes fine, then we review again for the following year...once we say we're going to do that, we do that...we need loads of flowers and we need them at consistent quality and consistent availability. And we need to know what we're going to be paying for them so we need to fix prices over a longer term...So the idea of a sort of free market which is what the auction is doesn't really lend itself to what we need. If I ask one of our suppliers to go and buy all of our roses from the auction next week because of how big we are the auction prices would go through...sky high so we don't buy very much that way at all (IG5).

Another supermarket respondent reported how the relationship between growers and supermarkets, via importing agents as the intermediaries, operates largely outside of the market:

> ...we all have to guess a bit what's going to happen in the market place but so long as we can offer our customers the right value and we got it at a price we're happy with, and the grower's happy with the price he's getting, then the market is completely irrelevant (IG5).

This is a successful strategy for supermarkets as consumers do not have perfect information. The convenience offered by supermarkets through the centralisation of consumption means that consumers who buy flowers from a supermarket, usually as part of a multi-purpose shopping trip, are unlikely to be aware of the prices of flowers in florists and their fluctuations, nor is it certain that a low auction price will be passed on to consumers in the form of a low retail price. Consumers are far more likely to be aware of fluctuations in prices or in quality in the same product at the same outlet over time. Therefore, from a supermarket perspective, if a grower can supply a consistent quality of product which sells at both the volume and price which allows the supermarket to make their desired margin, there is no need to alter the buying agreement with the grower (IG5).

Evidently, if the market price falls significantly below the agreed price it is possible for the buyer to cancel the arrangement and buy on the open market or renegotiate the 'contract'. However, if the market price rises significantly above the agreed price, growers can withhold the flowers until they receive a price more reflective of the market price. Both growers and buyers understand that either of these situations can occur, and the trust built up over time between suppliers and buyers means that agreements are, in general, upheld and growers work together with buyers and importing agents (IG2, IG5, IG9, IG11, IG13, IG16).

The direct market can be difficult for new growers to enter due to their focus on optimising production. Direct sales requires the establishment of a sales office, which "if you want to do it properly it's a very expensive venture", and so, for this and a number of other reasons documented here, the majority of new entrants to the market focus on auction sales until the farm is established (IG2):

> ...when you sell direct you have to be performing at all times otherwise you lose customers...so at the auction it's still relatively easy even when you fluctuate in production because you do, especially for your first year for sure...and quality as well. Yeah the auction is of course an easy market to supply (IG2).

Direct buyers understand that the security provided by the long-term agreements they offer is a highly desirable commodity for growers. As such they are able to demand high standards in quality, consistency, and social and environmental responsibility, as described by this respondent from a major UK retailer:

> ...our biggest supplier [importing agent] is a Dutch company...they understand what we want and they might develop the bouquet the design and so on and then help a grower get to the quality levels and the social and ethical and environmental levels that we want (IG5).

To emphasise the importance of regular, predictable quality for large direct buyers, one such buyer that has, as yet, chosen not to source flowers from Ethiopia despite numerous study visits explains why:

> ...there's a good product being grown [in Ethiopia] in terms of roses and so on and it's another possible opportunity in the longer term but I know there are issues about quality being consistent and logistics and so on (IG5).

Despite the five years of continued growth and improvement leading to Ethiopia emerging as the fourth largest exporter of flowers globally, described in Chapter 6, large supermarket buyers require further evidence of consistency and quality, displaying how high requirements are. These are all difficult attributes to manufacture in the early stages of an industry. As described in section 7.2.1, it can take two years of production before a crop achieves optimal stability and yield. Rose plants will begin to lose productivity and should be replaced between five and seven years after planting. In selecting a new variety from one of their established growers, a direct buyer will begin by testing the robustness during transit, senescence and post-harvest opening of the flower before beginning consumer-focused trials to test for popularity (IG5). Achieving the quality and consistency standards demanded by direct buyers under these conditions can be very difficult for new firms. One respondent integrally involved in the marketing strategies of the industry believes that this problem is the major reason behind the failure of Ethiopian growers to enter the direct market, as yet, in any significant way:

> ...because Ethiopia has no constant quality you cannot buy from Ethiopia yet...[direct buyers] are not interested in that because they are interested in bulk. At the top end you have to, everybody brings the top end to the auction because the auction has the best prices (IG7).

Internationally recognised standards of worker welfare and environmental care such as MPS SQ or GLOBALGAP (discussed in detail in Chapter 9) are, in the majority of cases, minimum requirements for direct buyers. Although their exact criteria vary, all of these international standards require time and investment to achieve. Furthermore, many direct sales agreements require flowers to be delivered in 'ready-for-sale' condition, including final sales packaging and labelling, for which many of the inputs are not yet available to the required standard in Ethiopia.

The majority of direct sale agreements are negotiated through intermediaries, referred to here as importing agents, but are referred to elsewhere variously as packers, agents and importing wholesalers (some of these terms may also refer to other nodes of the network). Large buyers, including supermarkets, will approach importing agents with their list of finished product

requirements including single varieties and bouquets in final sales packaging. Some may even employ the services of the importing agent in the design of the bouquets. Importing agents source the flowers from many different farms which, in some cases, they own. These companies have seen the cost savings and produce quality available from Ethiopia and, in order to achieve the consistency and standards desired by buyers, have begun working with some growers that they feel have the right product mix and farm management to allow them to contribute to their buyer's needs and so are assisting these growers in achieving the required standards (IG3, IG6, IG9, IG11, IG13, IG16). Importing agents can also act as a consolidator so that inputs can be sourced from a number of farms that are, individually, unable to fill diversity or packaging requirements and then assemble the bouquets and bunches required for sale. Indeed many importing agents will import flowers to the UK for assembly and distribution, despite the huge increase in labour costs incurred as a result, because all of the necessary inputs cannot be sourced in any one production location. In order to minimise costs through economies of scale, the majority of large direct buyers seek to deal with only a small number of importing agents. Indeed UK supermarkets source an average of 70% of their produce from just two importing agents (from a total of five major suppliers to UK supermarkets), obtaining the remainder of their produce from an average of three other smaller importing agents. Supermarkets are, however, unlikely to let the share of any of these importing agents grow further in order to maintain internal competition. As such, importing agents themselves are able to exercise immense buying power over growers because of the stability and volume of custom they offer (IG5).

The requirements for producers involved in direct purchasing agreements, such as those documented above, have become more stringent as supermarkets have increased their market share within the industry and competition amongst producers has increased:

> Previously [the supermarkets] didn't know anything about flowers, they just did it. Now they understand, they get some information, they start asking. They guarantee one week, they ask this, they ask that, they ask that [upwards motion]. They want to increase the amount [they are asking of growers] and not their price (IG7).

Furthermore, as this extract from an interview with a major direct buyer shows, the atmosphere of competitive cooperation and conviviality is expected not just between buyers and importing agents but between competing growers in order to facilitate knowledge sharing. This was identified as an issue in Ethiopia in Chapter 7 by auction and industrial actors regarding the reluctance of Ethiopian growers to share information with their competitors due to the different business cultures of the entrepreneurs:

> [W]e like to build up a relationship not only with the [importing agents] that we use which we've used for many years but also with the growers that we use so we have grower group meetings every six months where we talk about what's happening in [this supermarket], look at what their issues are and they learn best practice from each other and they talk about technology, we have different technology people in and so it's really working together to help them do a good job but also to give us a better product (IG5).

While supermarkets' buying agreements with growers operate through third party importing agents, in order to ensure the standards of CSR they demand are being met, as documented in Chapter 9, they conduct regular farm visits and organise meetings with growers to ensure maximum transparency.

Many in the industry believe the involvement of direct buyers in the Ethiopian floriculture industry has been limited by the dominance of Kenya in this sector. The reasons for this

dominance are more complex than might first appear. In the mid-1990s when international growers were effectively excluded from the Dutch flower auctions as documented in Chapter 10, exporters from Kenya, whose industry had already reached critical mass, were forced to find alternative routes to market. One such route was through the establishment of the Tele-Flower Auction (TFA), a competing electronically-based auction system, but the other was through direct buyer relationships. The foundation of direct buying arrangements was facilitated by the historical involvement of the UK in Kenyan agriculture. The UK is the primary direct buyer from Kenya due to the power and size of its supermarkets and while there are indications that the share of supermarkets in the European floriculture market is set to grow, the fact that Kenya has already established networks of direct supply with major supermarket chains gives them a competitive advantage over countries new to the industry (IG4, IG5):

> ...that's also historical part uh? Because one time Holland is a cooperative, at one stage in the development Holland stopped buying flowers from abroad, which has changed the path of Kenya dramatically and they were forced to find alternative markets. So that is a historical thing...if that would not happen, it would have been different maybe today. Other thing is that there are much more English connected people in the Kenyan market and in England the main market generally is supermarkets. These things together could also partly give an explanation for why Kenya is like that...It is not purely the economics of the market, it is also what they call in Holland padafhankelijkheid, historical paths (IG7).

In fact, one of the largest importing agents in world floriculture responsible for a significant proportion of flowers bought by UK supermarkets is owned by one of the largest Kenyan rose farms. The firm began as a flower farm and gradually expanded to form a subsidiary concentrating on marketing flowers in the Netherlands and the UK. The subsidiary status allows the company to use a separate brand from the flower farm and buy flowers from a total of 50 other farms in order to serve their customer's needs (IG16). The parent company also has a joint venture in propagation which allows total vertical integration from planting material until sale into retail outlets, leading to the creation of significant organisational rents. This integrated model is unique to the Kenyan industry within floriculture and has arisen as a result of the historical ties discussed above in combination with the coincidence of the development of the Kenyan industry with an increase in the market share of supermarkets. However, a number of companies operating in other countries, including Sher in Ethiopia, continue to vertically integrate functions and their embeddedness within the industry has recently resulted in them overcoming this path-dependency to operate similar models in parts of their business. Indeed Sher now produce single variety bunches at their farm in Ziway, labelled in final sales packaging complete with flower food packets for delivery to direct buyers in Europe (IG17). This integrated model does, however, restrict the flexibility of importing agents in responding to market demands, necessitating a 'push strategy' whereby they have to sell their own products and allow competitors using a more flexible sourcing strategy to find their niche (IG16).

Despite the disadvantages resulting from path dependencies of Kenyan producers, new direct markets are being explored by Ethiopian exporters which have the potential to be highly profitable. Some growers have seen great success in exporting directly to Japan where, despite the extra distance, freight costs are just 10-15% higher and the prices flowers command can be up to 50% higher. However, knowledge of the local market is less common within the Ethiopian industry and it can be vital to attaining these higher revenues. Local production is available during Japanese summer and, during this time, prices for the majority of varieties fall below cost price for African exporters. In addition to the timing of targeting export markets, varietal selection can be crucial in profit maximisation; "it's only the experts who find out what to grow in each place"

(IG9). In contrast to the European market, in Japan bi-colour roses attract very low prices with the premium varieties being high quality, soft pink varieties (IG2). The auction marketing channel allows flexibility in this regard not afforded to producers with long-term direct supply contracts.

For example, in the summer of 2009 a typhoon in Japan's flower growing regions destroyed the crop of gypsophelia and so prices for imports at the auction increased rapidly. Growers were then able to divert some of their crop destined for the Dutch auctions to the Japanese market to take advantage of these higher prices, provided they maintained a presence at the Dutch auction and could obtain the necessary freight capacity.

This is one example of the important role played by network embeddedness in the success of flower farms. As discussed elsewhere in the present research, information sharing amongst established actors in the industry is far more common than amongst those new to it. Information about the higher potential profits available on the Japanese auction came from a range of sources. Transnational corporations with producers in South America that more regularly sell into the Japanese market were able to relay the information to these other satellite companies in order to maximise the profits of the group. Other actors with high levels of network embeddedness were able to rely on global contacts to keep them abreast of potentially profitable developments in overseas markets. On this occasion, the auction too acted as a facilitator as the fees that they would receive for growers using their payment system at these inflated prices meant it was profitable for them for good growers to divert their produce away from the auction itself. Ethiopian producers, and particularly new entrants, experience a significant barrier to growth in situations such as this and institutional actors have recognised the need to manufacture network embeddedness amongst them. The study visits discussed below conducted by the EHPEA and the activities of other interested parties such as the Royal Netherlands Embassy, together with the employment of actors who are themselves embedded within the network, have contributed to the bridging of the knowledge asymmetry that the differing levels of network embeddedness amongst producers creates.

The EHPEA, donor agencies and the EHDA have recognised the possible benefits of diversifying the customer base of the industry and have funded study visits to, and negotiated trade terms in, new potential markets including Hong Kong, Japan, Australia and the vast potential market of Russia, to where one grower has subsequently established a direct supply. By targeting new or growing markets Ethiopian growers can both negate the advantages of historical connections that other African growers have in direct supply to the European market and also play a role in expanding the industry, establishing Ethiopian growers as the dominant supplier and manufacturing a reputation before their competitors do (IG7). This of one of the key ways in which brand rents might be created by firms in Ethiopian floriculture which can lead to the enhancement of value.

Figure 8.1 displays the countries to which Ethiopia has exported more than $100,000 US in any individual year in the period 2005-2010.

Destination	Exports (thousand $US)				
	2006	2007	2008	2009	2010
Netherlands	16,529	56,853	92,372	118,238	143,328
Germany	3,324	4,066	3,946	5,598	4,233
Saudi Arabia	623	591	827	1,328	2,319
Norway	266	223	412	430	2,096
UAE	988	816	1,283	1,224	1,742
Japan	154	865	1,317	1,598	1,720
USA	1,285	2,766	3,423	2,197	1,398
UK	1,264	2,637	1,537	815	960
France	34	63	161	655	802
South Africa	20	11	268	81	342
Israel	753	1,309	609	306	248
Italy	378	65	176	248	245
Russia	35	223	676	443	213
Oman	0	13	89	157	129
Yemen	37	5	16	51	104
Belgium	281	159	6	36	83
Australia	0	16	107	20	30
Sweden	122	58	70	31	24
Cyprus	16	95	122	57	3
Hungary	35	100	49	1	0
Ireland	0	229	455	0	0

Figure 8.1 Ethiopian Floriculture Export Destinations; Source (International Trade Centre, 2011)

In total Ethiopia has exported $100,000 US or more of floricultural products to 21 countries in any one of the five years displayed. There are a large and increasing number of additional countries to which flowers are exported but which have not reached this level. The figures for the Netherlands, when assessed together with figures obtained from the Dutch auctions indicates that the proportion of the total Ethiopian exports to the Netherlands sold through auction decreased from 96% to 77% to 71% in the last three reported years. This is likely to be the highest proportion of any of the export destinations. Other interesting trends which can be seen in the data are the fall, or slowing in the growth, in revenues seen in 2008 caused by the Global Financial Crisis and also the possibility for sales to particular areas to fall as well as rise. Growers may decide, on the expiry of a supply agreement, that they can achieve better prices for their produce either at auction or in an alternative direct market. Buyers too may choose to source their produce through an alternative channel and so, as has been the case with the countries at the lower end of this table, direct supply can fluctuate significantly.

8.2.2 Integration to the Auction Market

The challenges involved with auction selling are very different from those faced in opting for the direct marketing channels. Direct buyers primarily buy sweetheart (short-stemmed) and intermediate (medium-stemmed) roses from developing countries. The highest quality intermediates and the vast majority of Tee-hybrid roses are still primarily sold at auction for resale at specialist florists and premium retailers. This retail pattern is due to a combination of the increased cost of producing these roses as a result of slower growth and greater loss rates and the higher demand for the product resulting in a final sales price which put the flowers beyond the product range of supermarkets:

> Some of the very, very premium ones are probably more for florists than they would be for [supermarkets] because they would be very, very expensive. They can quite easily charge 50 quid for bouquets. It's a bit more tricky for us. Twenty maybe (IG5).

Sweetheart roses and intermediates are still sold in higher volume at auction than through direct sale (as in a number of countries the direct marketing stream has yet to develop) but quality, and therefore prices, are far more variable. For Ethiopian growers, access to auction markets is far easier than access to direct markets. Whilst quality and standards are presented to buyers at auction in the form of logos, visual display of flowers and gradings displayed on screen, poor quality, a lack of international standards such as MPS, or even the presence of disease within a farm doesn't preclude entry to the market.

As discussed in Chapter 6, growers can either choose to become members of the auction and qualify for discounted rates, or sell on an occasional basis through the auction and pay higher rates. One of the conditions of auction membership is that a grower sells 100% of their produce through the auction system. They are allowed to sell a small amount through other channels but must declare this as NAT and pay penalty rates on this revenue. Ethiopian growers and, more significantly, the auction houses themselves have encountered significant problems in this regard due to the poor statistical capacity/fraudulent bookkeeping of businesses in Ethiopia. The auction houses are unable to determine whether Ethiopian growers that are members of the auction are indeed selling all of their produce through the auction or are underreporting their NAT as indicated in this interview with an auction actor:

> Just through talking to other growers, and indeed some are more nice or more stupid to tell these things, and then you know. If you talk to them quite often then they cannot hide it. Or you are in their cold store and you all of a sudden see, 'where are these going?' Even I just got, even I just feel screwed as well because I just got a list of [the primary rival auction] and people were selling over there and there were not more growers but growers who did much more turnover than I expected. If they don't announce it, and I know that some of them didn't, then they are going to get a visit from me. And it won't be nice (IG2).

Like the direct route to market, auction sale has become increasingly governed by trust in buyer/grower relationships while the exchange relationship retains its fundamental market governance. Each consignment of flowers is marked with the logo of the grower on the auction clock. This enables the creation of brand loyalty and allows growers to build a reputation through the auction system:

> ...it is important, of course, extremely important as a supplier when you supply the auction floors to realise it's buyers there who will appreciate you depending on how you perform...If you if you are stable, if you are reliable, if you're good quality, if you're consistent, if you supply information, those are all extremely relevant issues to build up a proper reputation. If you don't manage, you know, it will cost you your reputation and it's easy to lose and it's very hard to build (IG2).

Historically, the auction would check every batch of flowers for quality and disease and grade them accordingly. As a cost-cutting measure and in order to reduce the huge logistical burden of the auction system, growers now grade their own roses although spot checks are still occasionally conducted. If a buyer finds flowers have been misgraded, that grower will attract a negative reputation and will be subject to more frequent spot checks. Alternatively, if a buyer receives a particularly good batch from a grower with a good vase life, they are likely to want to buy from that grower again. Buyers are also obliged to pay for the sale within two weeks of the auction.

This can be very helpful for new entrants to the market as cash flow can present a problem in the early stages of an industry.

The most common disease afflicting roses, botrytis, is caused by moist conditions which are common in places where there is a significant difference between day and night time temperatures causing airborne moisture to condense on the plants and it can have a significant impact on the trust related governance of the industry. The highland areas where these conditions are common are the areas which grow the high-value long-stemmed roses which are primarily sold through the auction marketing stream. In the majority of cases a rose will not present symptoms of botrytis until long after it has been harvested and sold but the disease has a significant impact on senescence. Growers and buyers must trust that they are not intentionally selling affected products and can build a reputation by conducting regular stress testing and honesty in their relationships with their buyers (IG2):

> I really noticed that if a grower is taking an effort to give really good information to a buyer it will work for long term. It may well be that sometimes he will get worse prices because they say my product is not as good as usual, be careful the price will not be as good as usual but if he's really consistent in that, the price will be up on a high in general...then buyers trust it and even other growers they say yeah it's good. But for a grower to do this is quite hard because they look by the day at their prices and they say actually it's A2 quality, well they can say that if they want but it's tempting to say A1 (IG2).

Similarly, a grower knows the earliest stage at which they can harvest their crop and still have it open to saleable condition. While this may not visually appear significantly different to flowers which have been harvested too early, it is widely accepted within the industry that growers are aware of this and their buyers know that they are aware of this. Therefore, if a buyer receives a shipment from a grower that fails to open, this is likely to have a significant impact on the trust which governs the relationship between the two, as displayed in this extract from an interview with a grower:

> ...the opening is fixed. Everyone knows that. If you don't wait for it to open you're cheating the buyers. See if it's too tight it may never open at all. No one wants that I mean they might buy it the first time but they will not come back and buy your product (IG13).

If the trust-based system between buyers and growers breaks down due to a series of breaches, a buyer will return to the market system of the auction and any brand rents created by the grower will be dissipated.

Whilst these facets of the trust-based governance of the industry are manufactured on an individual firm basis, there is a barrier to integration into the auction market presented by the reputation of the industry as a whole, which could be considered to have limited the creation of individual brand rents. Growers from firms with production locations in several countries reported having packers mix bunches from Ethiopia with flowers from another, more established production location for auction and presenting them as having come solely from the more established location. These flowers then achieve a higher price than if the flowers were sold as 'Ethiopian'. Some growers see this as 'racism' but it could also be attributed to rumours that periodically spread through the auction system about invisible quality aspects such as disease prevalence among flowers from a particular country (IG2, IG6, IG9, IG13).

The effect of an industry-wide reputation on sellers at auction has distinct similarities with that of the direct sales marketing channel. At auction, it is the buyers - including wholesalers, importers,

and some large, multiple-site retailers - who consider the reputation of both a grower and their country of origin in purchasing the flowers according to information displayed on the auction clock. In direct buyer relationships the reputation of the country of origin is considered by the importing agent in establishing supply from a farm. Under both types of marketing channel, it is rare for the country of origin to be visible to the consumer at the final point of sale, although this is not the case at some of the more upmarket UK supermarket chains. With foodstuffs, it is a legal requirement that the country of origin is displayed on the final sales packaging which, in addition to improving the traceability of the product, has allowed for countries to manufacture a reputation in certain products such as Colombian Coffee and New Zealand lamb. The reasons behind the lack of labelling are not clear. One possible reason which has emerged from supermarket focus groups, which regularly convene to discuss the issue, is the misperception among consumers that flowers from Africa have a higher carbon footprint than those produced in Europe when, in fact, as discussed above, it is a fraction of that produced by flowers grown under artificial heat sources. Other possible explanations to emerge from focus groups include an indifference to the origin of flowers as they are not a food item and that no geographically bound reputations currently exist and so there is little incentive to label products. Customers' perspectives on the issue also vary according to the socioeconomic profile of customers, with consumers of higher-priced market sectors more likely to regard labelling the country of origin as desirable:

> ...there is a potential risk of putting [a country of origin label] on there if people associate some of these countries with negativity around ethical or environmental...We always just go and ask people 'what do you think?' So if people start saying we want to know where every flower comes from then we, we'll put it on the label (IG5).

While entry to the auction system is relatively simple in the first instance, significant barriers to success still exist within the auction system. As detailed above, prices at auction for each variety can be influenced by a number of farm-level variables. These include quality, which is a product of varietal selection for the specific growing conditions of the farm; agro-ecological practices, cut-stage and post-harvest handling; the certification the farm has achieved; the farm's reputation within the industry; and marketing, which is a combination of the size of the batches that are sold, packaging and pre-sale treatment such as head equalisation. Sale price is also, of course, affected by demand. Aggregate demand has by and large been growing, with the exception of the brief decline as a result of the Global Financial Crisis. However demand is not equal across all seasons and across all markets.

Celebrations and public holidays result in a result in a spike in demand and producers must time their flush (cutting back all stems so that they bloom at the appropriate time to be harvested on a desired day) so that the highest number of premium quality stems can be delivered to auction to coincide with peak demand. Weather variations, even in the fairly stable climate present in the flower-growing areas of Ethiopia, can affect the number of days between flushing and ideal harvest by up to 20%. In Debre Zeit for example, under ideal growing conditions a flush could be conducted every 46-47 days. However, the longer than average rainy season in 2010 meant the duration between flushes increased to 60-65 days, resulting in the loss of one flush over the course of the year (IG13). These climatic variations can lead to prematurely harvested roses being taken to auction for a major demand spike, such as St. Valentine's Day, resulting in significantly depressed prices, for example. Conversely when Kenya experienced a prolonged rainy season in 2010, prices of Ethiopian roses increased at auction by around 30%, displaying the

interdependence of the global floriculture system and the instability of prices at auction (Taye, 2010).

The German auction at Landgard caters primarily to the German market and so exporters to that auction must time their auction deliveries to coincide with German holidays and festivals. The Dutch auctions however have a far broader buyer base and so holidays and festivals from all nations must be catered for and timed so that they can be bought at auction and distributed to the customer market in time for resale before the festival. The decision of whether to send all produce to auction, to sell to different markets and pay the NAT premium, or to attempt to cheat the system by underreporting NAT together with timing exports to market, as many in the industry have, are skills that must be perfected in order to successfully use the auction marketing channel. The reliability of demand and revenue streams through the direct marketing channel removes the majority of these concerns (IG2).

The auction system, then, allows a far easier route to market than direct sales for new entrants to export floriculture. It can assist new growers in finding their particular market niche and allows mistakes to be made at a relatively low cost when compared with planting hectares of a single variety for direct sales and then discovering quality issues. However, direct sales can represent a more stable income for growers and can insulate them against events such as the price crash following the Global Financial Crisis. This protection is not infallible, however, as direct contracts that were negotiated when prices were depressed can negatively affect growers, as displayed in this extract from an interview with a grower:

> I'm selling 30% to a direct buyer but I'm not happy, I have to negotiate, you know we negotiated when the price was down. So he was paying us F.O.B. €0.10/stem, for 40cm. And he was paying 14 for 60cm. Now I hear that he should be paying at least 12 for the 10 and 16 for the 60cm...it's a year round [contract]...If the price dips then they can get away with it, exactly. That's exactly what happened...but it works both ways. I can say no I'm not gonna send you anything and I can tell him to fuck off but one guarantee he has is he pays me every two weeks and he pays me and then I say no that's it I'm not gonna send you anything (IG13).

Any new entrant to the floriculture industry is almost certain to enter via the auction marketing stream. Once the firm is established and experienced within the industry and they have paid their 'learning money', they may then decide to move into direct sales. However, this is by no means a logical progression. Different firms have been successful in different sectors of the market and their success has been attributable to a huge number of elements of good farm management, of which the selection of marketing channel is one aspect. This extract from an interview with a Dutch institutional actor who has been crucial in the development of the Ethiopian industry forecasts a mixed and diverse future for the industry:

> There are so many options where you can be successful. You can be very successful at the auctions right. You have to be there every day...[an established Ethiopian grower] they grow hypericum right. They make their own varieties. They don't give their varieties to anybody else. They have a farm in Kenya, they have a farm here. So the only variety which comes on the Dutch market is their variety of hypericum there are many other varieties but of that one they are the only one. They put them on all the auctions in Holland. And you know they are there every day, with the same quality, so the man who comes there he says people in the auction are lazy. They like to come half an hour late, so they know [the grower in question] is there always, they just have to push the button. Stable supplier, reliable supplier, their name is good in the auction, if you have the top quality there is nothing better than that. Then if you want to be big and bulky then you have to have long term contracts.

You have to analyse the different systems in the market and no one knows how the future will be...There are the different players. This major share of the market is the most primitive share of the market. Supermarkets everyday lower prices. You just have to look what has happened in Holland, in Germany, in England, they are fighting with the dairy farmers every day...So you claim that supermarkets is a better chain to sell to than the small florists? (IG7).

8.3 Marketing Stream Outcomes in Ethiopian Floriculture

Although accurate data on market destinations is not available given the secrecy surrounding financial information in the industry, sufficiently sound conclusions can be drawn from the following proxy analysis. With the Netherlands and Germany housing the only two major international flower auctions, two variables - the number of destination countries and the percentage of total exports destined for alternative markets - can be used to assess any possible trend towards direct marketing, whilst it is acknowledged that the proportion of direct markets within these two countries may also have changed.

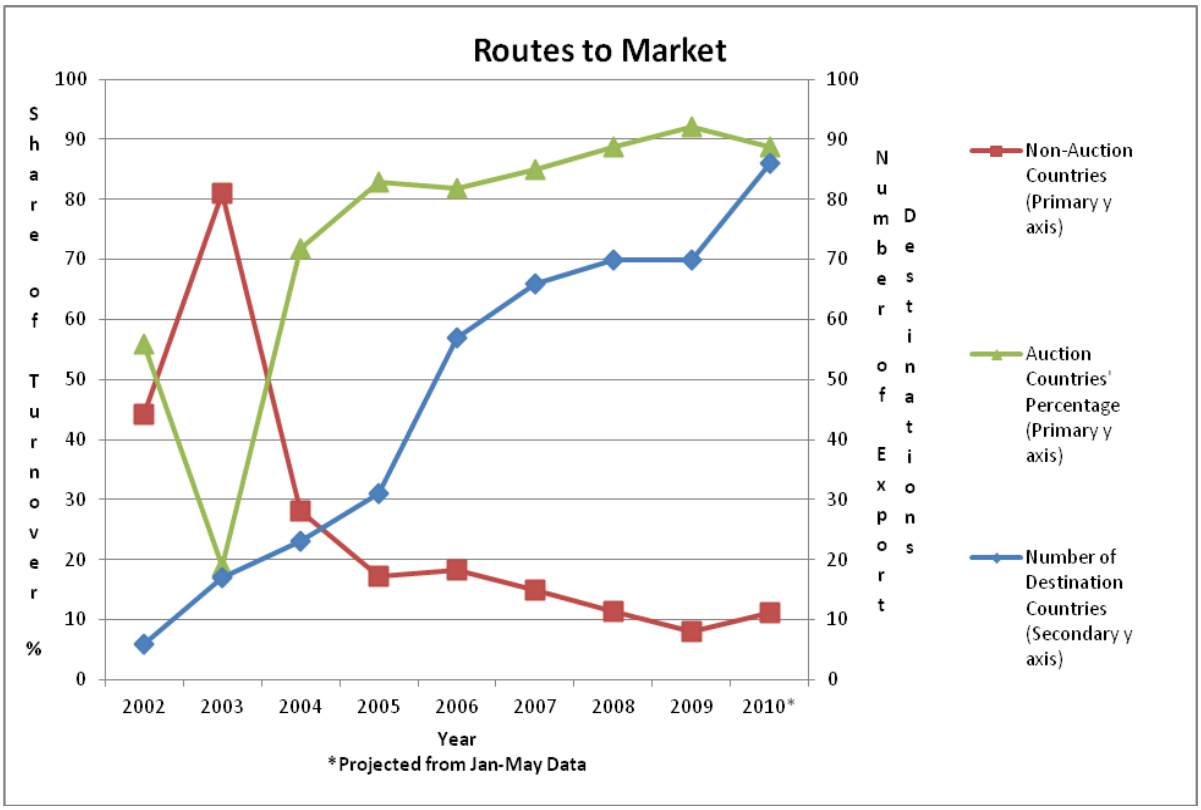


Figure 8.1: Routes to Market for Ethiopian Flowers; Data: Customs and Excise Authority

Figure 8.1 indicates how the Ethiopian floriculture industry has developed over time. It gives a crude measure of the proportion of the exports from Ethiopia that are direct sales and the proportion that are sold through auction. The flower auctions in the Netherlands account for the vast majority of imports to that country while imports to the other flower auction site in Germany accounts for a large proportion of imports to that country. The percentage of total exports to the Netherlands/Germany as against exports elsewhere gives an approximate indication of composition of the industry in terms of direct and auction sales. This does not show the volume or value of sales to different destinations - at this early stage of the industry the absolute values are too low - but by displaying the number of countries to which Ethiopia exports it displays how the export profile of Ethiopian floriculture and the options for producers to sell directly are rapidly increasing.

As the industry has grown, a far higher proportion of exports have been sold at auction. This is attributable to a number of factors. Firstly, in the early stages of an industry it is difficult for both the firm and the country as a whole to establish a reputation at auction as the industry is not of sufficient size to obtain notoriety. This lack of reputation can significantly affect price, especially following the removal of the physical procession of the flowers through the auction house. Secondly, before an industry reaches critical mass to benefit from economies of scale, such as chartering cargo planes, it can be more profitable to look for niche markets. Thirdly, the onerous conditions imposed on developing country growers until the merger of VBA and Floraholland meant that it was more expensive for African growers to sell at auction three years ago than it is now and, consequently, the rate at which established growers may have moved towards direct sales in order to benefit from increased revenue stability has slowed. Finally, and possibly most influentially, the total number of farms has increased rapidly in recent years and with the conditions above having changed - i.e. the Ethiopian flower industry is now of sufficient size to charter aircraft, has a reputation at auction, and the conditions for African growers at auction are now favourable - it is far easier for new entrants to the market to establish themselves at auction before potentially moving on to direct sales. As discussed elsewhere in this analysis, it can take two years or more for growers with decades of experience to optimise the production yields, quality and consistency of a new farm.

The auctions provide a platform for growers to optimise their production and try out new varieties. It also gives an opportunity for new farms to receive payment within a week of sale. This can be important for new farms where capital availability is limited and differs from direct sales where payments can take two months or more to receive, meaning that the payment system is “a big reason actually for people to stick with the auction” (IG2). Because of this, Floraholland offer a facility whereby growers who are members of the auction can sell directly to buyers who are registered with the auction and use the auction system for the payment process for the transaction, although sales conducted in this way are still classified as direct sales. Currently, a large proportion of the flowers grown in Ziway and sold directly in this way with growers seeing the auction fees payable for the service as acceptable for the security that the auction system of payment offers. Some of the sales conducted by Ethiopian growers through the Japanese auction system are also conducted through the Floraholland payment system in order to minimise the financial risk to growers. Direct sales through Floraholland account for a small but growing percentage of the company’s total sales and will, in future, decrease the proportion of Ethiopia’s exports sent to the Netherlands (IG2).

As the industry has matured, Figure 8.1 shows that the number of export destinations has grown and flowers are now sent from Ethiopia directly to over 80 countries around the world in addition to the countries which purchase Ethiopian flowers from the auctions in the Netherlands and Germany. The rate of increase in the number of export destinations slowed markedly with the Global Financial Crisis. This is potentially owing to the necessity for a more regular cash flow and less willingness to engage in risky behaviour in exploring new markets during this period.

Projections based on data for the first five months of 2010 in comparison to the same period in the previous year see a sharp increase in the number of export destinations for 2010. The flower industry has emerged from the Global Financial Crisis to a period of strong growth during this time. Qualitative interviews have shown that some of the more well-established firms in the industry have begun to meet the criteria for quality and consistency and are now moving increasing proportions of their business towards direct sales. The number of destination countries for Ethiopian exports is likely to remain relatively stable as it has now reached a similar level to

that of the majority of mature production locations. Ethiopia has been among the first to move into new growth markets and it is likely that, due to the investment of the institutional actors in exploring new market opportunities described in Chapter 7, they will keep pace with the expansion of all major producers into any new markets. The broad investment base of the industry has facilitated the inflow of knowledge of local markets and business practices in these target markets. For example, flower producers have historically experienced difficulties remitting revenue from exports to Russia due to bureaucratic processes but the introduction of a Russian producer to the Ethiopian market has allowed exports to be sold F.O.B. in Addis Ababa and then resold through contacts in Russia (IG8).

It is likely that the rate of increase in both the number of new firms entering the market and the number of firms relocating from other production locations will slow as both significantly exceed the growth in aggregate demand within the industry. As growth within the industry becomes increasingly attributable to the expansion of existing firms - having already optimised their production and established a reputation - rather than the entrance of new firms, the proportion of exports attributable to direct sales is likely to increase. This trend will be exacerbated by the general switch in the market from auction to direct sales. However, the findings of this research indicate that several firms will remain successful in the auction marketing channels and will continue to take their products to market in this way.

This chapter has, then, focused on the challenges that face producers in entering the global floriculture market and initially creating value, identifying the many different ways in which firms have been successful. Auction markets provide an opportunity for producers to obtain the highest prices for their products while direct markets provide greater stability. For producers of shorter-stemmed, smaller-headed roses, and other varieties commonly sold in supermarkets, opportunities exist for the enhancement of value which are uncommon in floriculture. Final sales packaging and bouquets can be manufactured at the site of production and delivered to the customer in ready-for-sale condition. However, in order to access the benefits of stability and value enhancement opportunities, growers are commonly expected to achieve standards of quality and consistency which can take several years to attain. Within the auction marketing stream, value can be enhanced through the creation of brand rents; maintaining high quality and consistency, together with building long-term, trust-based relationships with buyers allows for the creation of a reputation at auction.

The capture of value by a firm is determined to a large extent by the optimisation of industrial strategy, including the negotiation over terms of trade within each marketing stream. However, the ability to pursue a firm's optimal mix of marketing streams and to obtain the best possible value for their product within a marketing stream is influenced to a large extent by the manifestations of power and network embeddedness within the GPN. The network embeddedness of certain actors within broader floriculture networks has allowed direct marketing streams to be opened to areas that would not have otherwise been possible, as with the example of Russia. This displays an interesting conceptual link in that actors who are territorially embedded in target markets are able to mobilise personal networks in pursuing their marketing strategy. Similarly, territorial embeddedness amongst other nodes such as the importing agents, who act as gatekeepers to many direct markets in alternative production locations such as Kenya, has had the effect of limiting the availability of certain markets to Ethiopian producers. The temporal dimension of the link between network and territorial embeddedness is exhibited here as network embedded actors have become more territorially

embedded in these alternative production locations with time in the industry and have their mobility to more economically attractive locations has decreased.

The ability of producers new to global floriculture to enter direct marketing streams highlights both the advantages held by experienced producers embedded in the network and the prevailing power structures that allow major buyers to dictate the terms of trade to growers who bear the majority of the burden of cost in trading relationships. Collective power too is shown to have an influence in the form of consumers demanding particular standards of their flower retailer, both through formal collective action via NGOs and individual consumer choice, which is then passed on to the grower; issues that are expanded upon in the following chapter. Also in the following chapter, another important factor in determining the developmental outcomes of the floriculture industry in Ethiopia - namely labour issues - is examined. This is closely related to a firm's strategy on marketing streams as ability to alter and maintain production levels and the standards of environmental care and worker welfare required can be influential in a firm's ability to pursue each of the marketing streams.

9. Labour Issues

Previous research on floriculture has, by and large, focussed on the welfare of workers and/or environmental concerns. These issues were not among the primary aims of this research in order to avoid re-covering existing ground and because of the temporal and financial constraints of the research. However, some aspects of labour welfare are integral to addressing the central research questions of the economic sustainability of the industry and the benefits accruing to local actors over time. Further, in conducting qualitative interviews several novel and interesting findings emerged which can contribute to existing literature on these aspects of floriculture. This chapter examines the issues surrounding labour in Ethiopian floriculture that relate directly to the research questions. Firstly, the considerations for firms in the initial construction or transformation of a workforce are documented as a firm's ability to attract appropriately skilled staff can have a significant impact on the profitability of the firm. The next section looks at industry standards including standards of worker welfare and environmental standards, which are becoming more influential in the success of exporting firms as they are increasingly demanded by consumers. This is followed by a section documenting the impact on migration that the industry has had as this is a dynamic with the potential to influence the growth of the industry, both through its impact on labour availability and the impact on resource availability and pressure on services.

9.1 Labour Categorisation

Here, labour within the floriculture industry has been divided into three categories: managerial, technical, and manual. The processes involved in the creation or transformation of a workforce in the technical and managerial categories are similar to each other and distinct from those involved for manual labour and so these two groups are addressed separately.

9.1.1. Manual Labour

The manual element of the labour force requires a set of basic agricultural skills which, in a country that is 85% rurally-based, were available in abundance in Ethiopia. This follows a pattern present with many NTAEs in developing countries whereby the majority of labour is provided by the local workforce and capital intensive or highly skilled parts of the network are filled by imported labour (Bridge, 2008).

Nadvi's (2004) argument regarding the potential for poverty gains from export horticulture through job creation for the landless, rural poor is to some extent true in Ethiopian floriculture with the exception that, constitutionally, everyone in Ethiopia is landless. Land law in Ethiopia is complex, as documented in Chapter 4, and the government has circumvented some of its own policies in this area in order to facilitate the growth of the industry. All land belongs to the state and is allocated to individuals, with every individual entitled to land provided they utilise it to the satisfaction of the government (World Bank, 2002). This is one of many factors that have led to a perpetuation of subsistence farming.

The flower sector in Ethiopia is divided into several clusters located within 200Km of Addis Ababa, all but three of which are in the Oromia region. The Debre Zeit cluster is the only cluster located in close proximity to an urban area although, as documented in section 9.3, the growth of the industry and subsequent migration to Ziway has had an urbanising effect. Consequently, in all of the other clusters there are not large numbers of people in rural areas that are 'unemployed'. Manual labour in floriculture firms in developing countries is primarily conducted by females, who also conduct a significant proportion of agricultural labour in food production, although the

dynamics of this are highly culturally and geographically influenced (Aredo, 1995) . In Ethiopia, the proportion of females in the floriculture workforce is the highest of any major exporting country (IG8; Meier, 1999).

Investors entering the industry had to transform subsistence farmers into manual labourers in order to source their workforce. The industrial recommended minimum wage is 9 ETB (~$0.75 US) per day for a shift of up to 12 hours dependant on workload, with most firms paying between 9-12 ETB (~$0.75-1 US)(IG3, IG4, IG8, IG10, IG13, IG14). Apart from the notable exceptions detailed below where employees in certain firms have been able to move between the unskilled and skilled labour categories, the characteristics of manual labourers who perform different tasks in the industry such as packing, cutting, and spraying, in terms of recruitment processes, unionisation, skill sets etc. are similar. Whilst the wage for manual labour is evidently low, this represents a significant increase in household income for many rural families. The problem for flower farms lay not in offering incentives to workers - although many have, including transportation, subsidised food and healthcare - but rather in changing the mindset of the individuals to allow them to take up formal employment. This is not to suggest that mindset was the only barrier. As explained in Chapter 4, usufruct rights of subsistence farmers determine that failure to utilise land allocated by the government, the chances of which would be substantially increased by engaging in full-time employment at the expense of subsistence agricultural labour, may result in the repossession of that land. Furthermore, for those with smaller households and thus fewer dependents, incomes available from unskilled floricultural labour may be lower than those available from smallholder agriculture and, as such, they may prefer to continue to devote their time to their own farm. However, in the majority of cases women are able to engage in floricultural labour instead of or in addition to work on their own smallholding or that of their extended family and increase their household income as a result (IG3; IG6; IG9).

The negotiations involved in the creation and retention of a workforce are one example of how the situational specificity and geographical context emphasised in the GPN framework are vital to explaining the outcomes of a particular network. As found by Smith et al.:

> Labour process dynamics strongly influence wealth creation and work conditions within any one node (2002; 47).

Different firms that entered the Ethiopian floriculture network dealt with this need to create a workforce in different ways and with varying degrees of success. A small number of firms, where Ethiopians were involved in the business strategy, engaged in an incremental process of introducing subsistence farmers to the workforce by graduating their entry through working for a small number of hours on a few days per week. Help was given in arranging childcare so that eventually workers were both available and comfortable engaging in full-time employment. The nature of the export flower industry means that much of the employment in this category is seasonal, as demand for African flowers reduces in the European summer. Seasonal work is often seen as a negative aspect of employment in export industries, however in this case it was used as a method by which to encourage smallholders into the workforce as the time they spend unemployed could be used to attend to their own crops. All firms relied on word of mouth to attract workers in this category but those that introduced the workforce gradually had a far lower staff turnover rate (IG6, IG9). Formal contracts remain rare and manual labour is easily transferable to a neighbouring farm in the cluster which is one reason why some of the benefits described here are offered with a view to minimising staff turnover (Morris, 2006).

Maintaining a manual workforce in areas where the growing cluster has expanded rapidly has become very challenging, resulting in benefits being offered to minimise the labour turnover between farms. The formalisation of labour through contracts has been met with resistance both from farm managers keen to maintain flexibility in the workforce, and also from the workers themselves. Having never been formally employed, the idea of a contract is difficult to adapt to, as shown in this interview with a domestic institutional respondent who plays a facilitative role in formalising labour relations:

> When you consider, for a number of people working on the farms, this is their first formal employment, the first time that they've signed an employment contract and the resistance we get to employment contracts from the workers is bigger than we do from the farm managers. Because it's unfamiliar (IG8).

An interesting paradox is that there is also considerable inter-sectoral labour mobility between flower farms and government and other infrastructural contractors, whose aim is to improve facilities for the industry, consequently depriving the flower farms of the labour they require. Furthermore as a consequence of Ethiopia's overall growth, other industries such as leather and oilseed processing and factory industries have begun to locate in the areas around Addis Ababa where flower farming occurs and have begun to compete for manual labour (IG2, IG4, IG7, IG8, IG9, IG10, IG13, IG14).

Manual labour is further stratified with the introduction of supervisors. No specific skills are required for workers in this category beyond that of manual labour but it is important that these workers command a level of respect from other manual labourers in order to achieve high levels of productivity. To this end, a number of different tactics were employed by businesses to differentiate between labourers and supervisors. The majority of firms, particularly in the rural clusters, employed local elites in these roles. These are primarily older people who command a great deal of respect in Ethiopian society. In less rural areas, such as the Debre Zeit cluster where the traditional hierarchical societal organisation is less strong, many firms employed a different method. Employees were contracted at an equal level of responsibility and then during the training prior to export, those who showed the most aptitude were given responsibility for a certain growing area. These areas then compete in terms of yield, absenteeism and many other performance-related metrics and the supervisors are awarded bonuses. The supervisors are taught all but the most advanced agronomic techniques over time, which decreases the number of specialists required. Manual labourers in this system are motivated by the possibility of internal promotion, which is not present in other types of labour organisation in different flower growing areas of Ethiopia. However, in both of these systems of labour organisation, it is important to recognise the micro-regional context as respondents reported that the meritocracy method would not work in rural areas and the differentiation of labour according to a social hierarchy would not be possible in more urban areas (IG6, IG9, IG13).

It can be seen in the preceding analysis that firms have had to engage in a number of different strategies in order to develop and maintain a workforce. However, given the costs analysis contained in Chapter 7 which identifies labour as a small component of total costs, one might question the necessity of labour efficiency in order to maintain profit. Figure 7.2 displays that while labour costs constitute a small proportion of total expenditure, they account for a significantly higher proportion (approximately 36%) of costs which vary by production location hence the cost-basis on which countries compete for international investment. The low average profit margins within floriculture mean that labour efficiency and management can have a significant impact on the profitability of a firm.

Consequently firms that can maximise productivity and manage labour effectively are more likely to be able to capture value for the benefit of the firm. Low productivity is a chronic problem in Ethiopia and one which prevents natural resources being exploited to their full potential. The World Bank's second Investment Climate Assessment for Ethiopia, identifies the relatively low productivity of workers in the broader Ethiopian economy - when compared with Kenya and Vietnam as alternative production locations, as being a product of the country's socialist past but sees signs of improvement in this area as the market system matures, with production shifting from inefficient to efficient firms (World Bank, 2009b). Indeed, as documented elsewhere in the present research, this process has already begun in floriculture - induced by the Global Financial Crisis - and the fact that labour is transferable between farms has led to more efficient firms increasing their production area and total employment.

One example of how different techniques of labour management affect productivity is in the handling agents node of the network. As discussed in Chapter 6, the two main firms involved in packing flowers for export (EHSC and Flowerport) exhibit different capabilities in reaching the total freight capacity of the same aircraft; briefly, Flowerport commonly pack 90 tonnes of flowers onto the same cargo aircraft that EHSC pack 75, effectively decreasing costs by 20%. One might expect that an agent with years of experience of packing operations in several countries may be able to conduct operations more efficiently due to more skilled management of the workforce and more advanced packing techniques. However, security concerns, partially vindicated by the recent foiled bomb plot involving cargo leaving Yemen, combined with Ethiopia's strategic position in anti-terrorism negotiations, mean that Ethiopian Airlines maintain control over the construction of pallets (Economist, 2007; Rayment, 2010). All companies use the same equipment and the same workforce and therefore the only differences between the companies are the management of the workforce and the methods they use to assemble the pallets. In respect of methodology, as one respondent reported, "it's easier to build a wall if you've got the same size bricks" and so, in an attempt to make domestic handlers more competitive, the government attempted to standardise boxes as detailed below. However, as reflected in this typical response from a domestic institutional actor, methodology is not the primary difference between the different handling agents:

> I think there is nothing technical to why one company can do it and the other can't because they are all using Ethiopian labour. This is to do with man management skills, nothing else. So if we can get the supervision right and the controls right then there is no problem (IG12).

In the longer term the potential exists for knowledge transfer between firms through the transfer of employees between firms and subsequent knowledge leakage. However, several factors including the ability of the transferred employees to feed into management practices might influence the degree to which this transfer occurs.

From a management perspective, one might expect local knowledge and language skills to give local agents an advantage in the organisation of manual labour but in fact, respondents documented that experience in human resources management was more effective as foreign actors were able to organise labour more efficiently (IG12).

Despite these measures to manufacture a stable and committed workforce, localised industrial action has become commonplace demonstrating a clear influence of collective power on the configuration of the Ethiopian floriculture GPN and, as found by Smith et al.:

> Organised labour can have an important influence both within and between countries (2002; 47).

A labour union for the industry has recently been inaugurated but attracting membership and coordinating any cohesive policies has proven problematic due to the dispersed and isolated nature of the workforce. In addition to the issues regarding signing formal contracts discussed elsewhere, this failure of the union to attract membership is possibly attributable in part to the sociological phenomenon discussed in Chapter 4, whereby in post-socialist Ethiopia people are unlikely to engage in behaviour which makes them more conspicuous (Young, 1998). This is compounded by the autocratic government which has been keen to minimise the existence of any civil society organisation which it perceives as having any political association, however innocuous (Abbink, 2010). The union has the nominal support of the EHDA but it is in the early stages of its operations and the practical application of this support has yet to be seen. Indeed the relationship between the EPRDF and civil society, which manifests itself in the Charities and Societies Proclamation, 2009, has been strained and the nominal support for the union may simply be a means of satisfying international institutional actors. There is no doubt, from an analysis of primary data gathered from government actors, that the lack of labour unionisation is regarded as an asset in the attraction and retention of FDI, and as such government actors have been cautious to implement labour regulations which may be seen as onerous for investors:

> ...as a government office we have interest to protect our labourers' rights but we also like to build the capacity on our labourers to clearly tell them what their right is. If we do that we are afraid we will have a problem like you had in British [Airways]...So that is going to be an uncontrollable problem. We support [the formation of a union] and we are very keen to see our labourers supported but we want to make this in a friendly way, you know, whereby the owner of the farm is convinced that, without these labourers, he cannot do this business and also the labourers have acquired a skill so that we have a room for bargaining you know. But if there is mistakes, he will send you off today and bring Mr Y. At the same time, in such a situation, it's difficult to bargain. So that's why we want to build the knowledge of our labourers, the way of thinking and other things (IG4).

This displays how, in the early stages of an industry, institutional power is able to manipulate collective power because of the relative strength of corporate power in the initial configuration of the GPN. However the EHPEA - for which labour relations fall outside the remit of working in the interests of farm owners - sees the unionisation as a positive development for the industry:

> ...we don't get involved in negotiations of wages and interestingly enough, running parallel with the code, we've seen a big increase in the number of farms that are running with a farm union. It's gone from 5 or 6 farms to almost 50 farms and in one or two farms now, the Sher farms and one or two of the other bigger farms, these unions are established enough now to have collective bargaining and have proper collective bargaining agreements and it's registered and approved and implemented...So, in that way, I think the association has done quite a lot to contribute to better conditions. We have friendly relations, mostly, with the union and if there are problems with the farm then very often the association will be involved in the resolution (IG8).

Far more common are informal labour unions for individual farms where communication is easier and collective action can be more readily organised. These localised unions, however, have far less power than if an industry-wide labour union - possibly linked to other low paid worker unions which operate more successfully in Ethiopia - were to be operationalised. Firms have, in several cases, attempted to organise labour unions within their own farms in the interest of obtaining certain marketing labels. However, uptake of union membership has been poor due to the

nominal 0.5 ETB/month (~$0.03US) contribution necessitated for administration. The industrial action that has occurred has been limited to individual farms and is usually short-lived. Furthermore:

> ...we have a number of farms that have very good staff relations and, equally, problems in staff relations are spread between Ethiopian farms and expatriate investors. You can't say it's a problem that's particular to expatriate managed farms because people don't understand, it doesn't work like that (IG8).

One farm, however, has maintained significantly better labour relations than all others operating in the sector. Despite the incentives being offered to investors in the industry in terms of cheap land rents, this firm paid up to 30 times the government-offered rate and effectively sublet land from farmers. Whilst the foreign investors thought this an unnecessary cost, their Ethiopian partners recognised that this was insignificant as a proportion of total costs. Additionally, the government initially disapproved of this investor's approach, feeling it undermined efforts to incentivise the industry with discounted land prices, as a further example of the government's attempts to micro-manage the industry described in Chapter 7. As well as the above methods, all of which this farm employed, renting land from farmers gave the surrounding community a vested interest in the success of the business. A Dutch manager was employed by the owners but, unlike many other farms, this manager had no floricultural background. He had lived in Ethiopia for 17 years, was married to an Ethiopian and had children in school in Ethiopia, which, according to a number of respondents, "all helps to build understanding and tolerance" (IG8, IG9, IG12).

9.1.2 Managerial and Technical Labour

The second category of labour necessary for the floriculture industry is managerial labour. Given equivalent skill levels, it is preferable for the Ethiopian government, foreign investors and the industry as a whole to employ Ethiopian nationals in managerial positions. For the investors, local managers command lower wages, involve fewer administrative issues and are more sensitive to local requirements and conditions. For the government, the income earned by these actors is likely to be remitted to and subsequently be spent in the country; they are more territorially embedded, as documented elsewhere in the research, and represent a more stable future for the industry (IG14). This category concerns only the business management of the farm as the floricultural management is part of the technical category. Once the DBoE altered its loan conditions to include local investors, Ethiopian businessmen successful in another and often totally unrelated industry began to enter floriculture. Employees skilled in accountancy, business negotiation and people management, as well as experienced in the administrative aspects of running a business, were and remain available, to some extent, in Ethiopia. However, foreign investors still report shortages in these skill sets, particularly in the clusters where the labour market is more competitive, and Ethiopian managers on the business side of flower farms represent little over 50% of the total managers in this industry segment. Ethiopian managers are far more common in Ethiopian-owned farms and, owing to the ownership structure of the industry with a greater proportion of Ethiopian ownership amongst smaller farms, there is a skew of Ethiopian managers towards smaller firms (Survey; IG3).

Shortages in terms of technical labour and of floriculture management are far more acute. These actors are responsible for a great number of duties within firms including the selection of varieties, the choice of route to market (in conjunction with the business manager) and the selection of input materials. The decisions made by actors in this category determine yield, damage, and loss rates, and have a large impact on profitability (IG6, IG9, IG13). In Ethiopia there

was an almost total absence of qualified and experienced farm managers and other technical labour when the industry began to expand:

> The bottom line is that Ethiopia requires qualified personnel to guide its floriculture industry so that it can maintain the momentum of growth (Africa Research Bulletin, 2006; 17161).

Overcoming the labour shortages in both the technical and managerial labour categories presented a huge challenge to the sustainability of the sector. Unlike with manual labour, there was no latent labour force that could be coerced into the sector. The solution the industry employed was threefold, and each element entailed a different timescale. The first element of this solution was to employ foreign managers and technical staff. The majority of indigenous and foreign-owned firms had to engage in the same competitive processes in order to acquire specialised labour (Oliver et al., 2008). These employees were drawn from the flower industries in Kenya, Israel and the Netherlands where, as a result the expansion of the Ethiopian industry, there had been a slowing of the growth rates or decline in their flower export industries and surplus labour was available. The value of ornamental flower exports from the Netherlands has reduced by more than a quarter since 2004 and Israel's exports are down by over 10%, with Kenya's growth also slowing (UN Comtrade, 2010). However, the labour surplus caused by the decline of industries in other countries, did not match the demand for technical and to a lesser extent managerial labour in Ethiopia and so competition was high.

Many of the Dutch companies and some of the Indian and Israeli companies that established themselves in Ethiopia were part of multinational organisations with flower farms in other countries and so they could draw expertise from these other production sites. The infrastructure in terms of training and work experience in these more established production locations, together with the stable or falling demand for such employees, meant they could easily replace employees and because the other farms were already operational, they were easier to maintain. Companies that were new to the industry had more of a pressing need to employ expertise in this area and without the resources of multinational floriculture companies, had to pay high salaries in order to do so. As part of the government incentive package, these employees were exempt from paying income tax which further assisted in the recruitment process (IG4, IG7, IG8, IG14).

As described above, it is neither sustainable, given the temporary nature of income tax relief and the higher wages involved, nor desirable for a company to continue to employ foreign managerial and technical labour and the second aspect of the industry's solution to this problem came in the form of foreign consultants. Whilst the need for a business manager is almost constant, the requirement for technical labour is periodical. In the initial stages of setting up a farm, a high level of technical knowledge is required in order to choose the correct varieties, materials, fertilisers, irrigation systems etc. Subsequently, advice will be needed on pest and disease control, yield maximisation, harvest techniques and packing, amongst other things. It cannot be expected that any individual farm will have expertise to cover all eventualities in any of these areas. It is therefore part of the business model of the majority of floricultural firms to employ specialist consultants on regular basis, the need for which decreases with experience in the industry. For multinational floriculture firms, where other firms would employ consultants, permanent experts are employed by the parent company and then used across all their farms (IG11). Other farms will buy-in this expertise, either from Europe or at a slightly reduced rate from non-European nations with experience in floriculture such as Israel or some South American nations. The frequency and duration of employment of consultants varies amongst Ethiopian and foreign investors due to experience in the industry and the relative costs and visible benefits:

> ...it's very costly to have consultants at your farm it can easily cost you 1000 US a day. And you don't actually see what you get. It's important but that is the first thing people see if they want to save some money. If you don't have the knowledge you have to buy it and if you don't it'll cost you (IG2).

The final and most long-term element of the strategy to solve the labour shortage lies in training. Here, too, international actors are heavily involved. The Royal Netherlands Embassy has employed the services of WUR to design training programmes at Jimma University. BA and MSc programmes have been implemented which include practical training at their purpose built greenhouse facilities and internships within floricultural firms. The first graduates have yet to emerge from the programmes and an *ex-post* evaluation is likely to reveal areas for improvement but several key actors within the industry see the programmes as having potential to create competent farm managers within five years of graduation, giving graduates the opportunity to progress far more quickly than they would in a mature industry (IG4, IG9, IG13):

> It is a formal education. The problem is, people from the University cannot help much. It is on a theoretical basis you know. There are practitioners who have theoretical knowledge, conceptual understanding and at the same time the practical [people] trained by skill...you see, those new graduates coming from the University, we are not allowing them to simply jump on a flower farm. That's not going to be worthwhile. Because there is a lot of opportunity cost that the investor is going to lose because this person is going to learn by trial and error (IG4).

Some of the graduates from the Jimma University programmes have, in fact, been employed by the EHPEA to assist in the design and execution of the training programmes the association conducts. The academic nature of degree programmes has led to supplementary training being required in order to make graduates 'industry ready':

> There's been a significant amount of input put into training for [Jimma University's] instructors to help them to be a little bit more practical and to be a little bit more participatory...In relation to the graduates who come out of Jimma, I think it's fair to say that there is a proportion who are not suited to practical work in the sector...If you look at your traditional Dutch manager or a manager in the UK, he's got masses of experience. A whole team of people to work with and an established system. That's not here. Anyone who's a good manager here, you've got one good manager and a farm, whereas in Europe you've got 5 good managers and a farm and a system that's established so they can grow their own staff (IG12).

The HPTC has been set up by the EHDA with international support at Melkassa to complement the academic programmes with practical training in lower altitude flowers, fruits and vegetables. This will eventually be accompanied by an equivalent HPTC for highland flowers:

> Our target group is the graduates now. When someone is graduating in Horticulture we are taking him to the HPTC for six months or three months training. Then he will be capable to be employed by the sector (IG4).

In time, and with experience, there exists the potential for consultants too to be drawn from the growing pool of expertise within the country, although this is a very long-term strategy (IG4, IG8). These training programmes could prove influential in the benefits extracted from the sector by local actors in the future. It is important to recognise that this donor-supported initiative is not primarily intended as a mechanism for upgrading but rather as a way ensuring a continued supply of labour in appropriate positions to guarantee the industry's continued growth. However, one of the key factors influencing the benefits accruing to local actors at present is the implementation of internationally recognised codes of conduct.

9.2 Standards, CSR and Worker Welfare

There are three main aspects to the overall influence of the industry on the lives of workers. The first and potentially most significant of these aspects, is income. As described in the preceding chapters, the industry has created a large number of new jobs, the vast majority of which are for manual labourers. The second element of the impact of the industry on labour, is worker welfare through peripheral benefits. Whilst, as documented below, these are not universally seen as positive, close to one million people now have improved access to a range of services including medical care, education, and social and sporting activities (IG4; IG8; IG17). The final way in which the industry has, or has the potential to have, an impact on workers' lives is physically, through the chemicals and pesticides used in the industry. This last element potentially has far longer-term and more wide-ranging consequences than the previous two. The internationally and nationally recognised standards, including the EHPEA's CoP, and broader CSR initiatives that have been implemented throughout the industry, are intended to ensure that, to different degrees, minimum standards have to be met in each of the three areas outlined here, namely wages, worker welfare, and environmental standards.

In Ethiopia, market forces such as labour shortages in certain sectors caused by the rapid expansion of the industry have had a far greater effect on increasing wages and other fringe benefits available to workers, than by international standards. However, despite these exogenous factors involved in improving conditions for workers, the industry standards implemented have undoubtedly had an impact and, unlike the temporary spike in wages which could be altered by increases in the supply of labour, the improvements that occur as a result of these standards are protected and policed so long as companies wish to continue to receive the benefits that these standards bring.

The CoP implemented by the EHPEA has had a significant impact on welfare and conditions for workers in the industry, evidenced by both the ILO (Woel, 2010) and by DfID in their support for the Code through their funding of Marks and Spencer's through the *Food Retail Industry Challenge Fund* (DfID, 2011). This is how one informant who acts as a consultant to the EHPEA summarised the effect the association, which is run for the benefit of its members (the farm owners) has on labourers within the industry:

> ...the biggest impact [on labour in the industry] is the Code of Practice and it's fair to say that, with the Code, we have seen a huge improvement in training, use and provision of PPE for spraying on the farm. Provision of washing facilities, eating facilities, contracts of employment, grievance and disciplinary procedures, transparency of employment practices...People on the farm will say, 'thank you for getting us to do the Code, because it's been good for us'. The people who've done it actually see that the Code benefits them on the farm maybe much more than it benefits the investor. They get the indirect benefits (IG8).

The EHPEA's CoP has been introduced gradually since 2007 in order to increase the uptake of the Code by growers, ensuring that the initial stages of the Code were not too onerous for producers new to the industry. This has allowed the Code's reputation, both within the industry and amongst the institutional actors that continue to support it, to increase to a point where it is now a trusted symbol of good practice in several respects. This gradual implementation of new legislation to maximise floriculture's reputation and maintain trust between institutional and commercial actors is rare in Ethiopia (Araia, 1995). However, the international drivers of this Code through the ENHP and interventions through DfID documented elsewhere in this research mean that the implementation of the Code has been governed by the institutional norms of these countries rather than the Ethiopian actors directly responsible for their implementation.

The Horticulture Development Regulation, designed by the Environmental Protection Agency, enshrines the CoP in law and was approved by the Council of Ministers in February of 2011. The new Regulation is designed to prevent any negative environmental and social impacts of the floriculture industry, create a competitive market and improve the quality of produce from Ethiopia. The Code now has three stages; Bronze, Silver and Gold, which are audited by some of the same auditors of the international Codes. The Bronze stage has 13 requirements, which are more heavily biased towards environmental considerations, and include: no use of banned/unregistered chemicals; the provision of medical care for employees; and environmentally friendly waste disposal. This stage of the Code is now a minimum requirement in order to obtain an export permit. The Silver stage of the code is more ambitious and requires firms to have a social and environmental auditing mechanism, develop efficient ways of using water sources, conduct best practice in stock storage and pesticide use, and implement feedback procedures for employees and customers so that they are aware of the areas where they may improve. Finally, the gold stage of the code necessitates community development programmes and environmental conservation schemes (Ethiopian Flower Export, 2011). The CoP has attracted praise from institutional actors due to the constant presence of the EHPEA in the country and regular visits to farms allowing constant appraisal of farm's adherence to the standards, giving the Code an advantage over many of the internationally recognised codes which are only audited at predetermined intervals (IG7, IG8, IG12).

Outside of the CoP, and one of the primary reasons for its creation, there are a large number of international standards governing environmental practice and worker welfare. Some of these are market labels, aimed at giving consumers information on these aspects of the production of a commodity, while others are business-to-business labels, aimed at assuring direct buyers that certain standards are being met in the production of the flowers and will not be displayed on the final product. The codes have slightly different emphases, with some concentrating more on environmental aspects of production, while others focus on issues of worker welfare.

Perhaps one of the most well-known market labels is Fair Trade. To meet this standard, producers must comply with a range of initiatives aimed mainly at ensuring the welfare of workers but also covering broader sustainable development issues. Fair Trade flowers are sold in all major British flower retailers but, in general, constitute a small part (approx. 5%) of total turnover on flowers.

> At the moment it's a small part of our range because it's a small part of the demand but we're always, always looking at this again and again and again because things change (IG5).

The proportion of a retailer's turnover accounted for by Fair Trade flowers is broadly reflective of the market segment in which they operate. In higher-end retailers, Fair Trade flowers make up a greater proportion of the total turnover on flowers than in budget retailers. The proportion of flowers sold in this way does increase, however, when the number of different quality standards, with largely similar criteria, are included. These alternative standards can be cheaper to audit and allow retailers to include bespoke metrics which they want their producers to be assessed by. This has the effect of complicating purchases for consumers and adherence to the standards' stipulations for producers. This can greatly increase the costs for producers in complying with these regulations and can decrease the mobility of producers between direct customers, further increasing the power of major direct buyers. Other international standards which aim to guarantee labour welfare include the Ethical Trading Initiative (ETI), favoured by one of the major importing agents, Fair Flowers Fair Plants (FFFP), and bespoke supermarket foundations which conform to similar standards (IG16).

One high-end UK flower retailer – whose entire imported rose range adheres to a standard similar to Fair Trade - when asked whether the company had tested the market for cheaper flowers that did not adhere to such stringent conditions, indicated that it was CSR and not consumer demand which governed their policy in this area:

> ...intrinsically what we want to do as a company is put money back into you know where we grow stuff. If Africa, which definitely needs it, and you go out there and you see what the money has helped them achieve in terms of extra school facilities, bursaries for kids, and run a football team, computers all sorts of stuff. You've got to do it and that's how, that's where [the supermarket] comes from. Everybody else tinkers with it but what we've been able to give back is massive. I mean last year we gave them £178,000. It might not sound a lot here but in Kenyan shillings that is massive. It does a lot and when you go back each year and you see what else they've done with it. We don't charge our customers any more. We do it because we want to do it...it's a massive part of their economy, it's really important to them and we're giving stuff back (IG5).

At the time of writing only one Ethiopian farm had obtained Fair Trade accreditation. This farm is one of the longest-established within Ethiopian floriculture and was one of the first to adopt many new developments in the industry, including the vertical integration of functions and exploration of new markets, leading to this firm having created significant relational, organisational and brand rents, hence enhancing value significantly. The requirements for this label are viewed within the industry as being difficult and expensive to obtain but the early investment by this farm has proven profitable. One of the world's largest importing agents, a major supplier to the UK market, now sources much of their Fair Trade range from this supplier. This firm has its own production of Fair Trade flowers in Kenya but stated that "Ethiopian Fair Trade suppliers are more cost-competitive" and as "supermarkets always want lower prices...price is king" (IG12, IG16).

There are also several other standards which focus on environmental rather than worker welfare aspects of floriculture. These include BOPP, LEAF accreditation, GLOBALGAP and, most influentially for Ethiopia, MPS, which integrates two different types of standard through its MPS-SQ certificate which includes several measures of worker welfare. The environmental standards variously determine the chemical inputs that can be used, proper usage and care of chemicals, discharge into groundwater, soil and water courses, phytosanitary services and training given to staff to minimise the environmental impact of the farm's operations. There is no doubt that, if managed incorrectly, floriculture can have significant negative impacts on the environment and on the health of those who work in the industry due to the chemical inputs involved in the production process. These international standards are intended as a measure to mitigate these potential problems. The question is whether these measures are monitored strictly enough. Sher engages in a number of measures in order to prevent or minimise any possible negative effects on the environment. These include spraying of chemicals being conducted after 4pm when only spraying personnel remain onsite, so that harmful chemicals dissipate within 3 hours; screening random blood samples from employees on a monthly basis; and taking samples of lake water on a monthly basis to check for chemical pollution. If any of these testing procedures reveal unexpected results then production ceases until the result can be explained and corrected. Although international standards are generally audited only once annually, supermarkets and importing agents commissioned on their behalf conduct far more frequent visits to their suppliers to ensure compliance with environmental standards. If firms are found to have fallen below the required standards then, due to the absence of written contracts, supply can easily be switched to an alternative supplier and so it is in a farm's economic interest to remain compliant with these

standards at all times. Indeed Sher's owner sees his personal involvement in the industry as evidence for its safety:

> There is no reason to be scared. Flower is an old industry, not for Ethiopia, for Ethiopia it is quite new, people don't know what it is...When there is a risk I was dying already, I was working 40 years in this industry, I was spraying 20 years by myself, still I am alive and still I have a lot of energy (IG17).

However, control procedures have not been totally infallible and Emana et al. (2010) document the admission of 20 people to hospital with poisoning; an incident which the company attributes to employees not following procedures (IG17).

In addition to the environmental and worker welfare standards, MPS-SQ, which is seen from a producers' perspective as the foundation for obtaining both ETI and FFFP, contains a series of environmental and labour protection measures on areas including: collective bargaining; discrimination in the work place; forced labour; working age; written contracts; wages; working hours; paid leave; maternity leave; housing; medical care; and occupational health and safety. At the time of writing, nine firms had obtained MPS-SQ certification.

In addition to the standards which govern both inter-firm trade in flowers and consumer labels, CSR plays a significant role in the outcomes experienced by labourers in the floriculture industry. CSR measures have far exceeded those demanded by these standards. These range from the widespread practice of providing transport to take rural employees to and from the farm and the provision of highly subsidised or free meals whilst at work (although these could be seen as measures necessary to attract a workforce) to education and healthcare benefits. Two of the largest producers have established hospitals, schools and recreational facilities. Treatment at the hospital is free to workers on the farms and, to a certain extent, their families, and is available for paid use by the local community. This has significantly improved the standard and proximity of medical facilities available to the communities that surround the flower farms. At smaller farms, medical care is often paid for by the firm at a local clinic.

At Sher, wages began at 7 ETB/worker/day (~$0.8US) when the firm began operations in 2005 and are now at over 22 ETB/day (~$1.3US), significantly above the average for the industry and the country, having increased by 20% annually in recent years compared to only 8% in the public sector. The firm also engages in one of the most comprehensive CSR programmes of any floriculture firm in the country. On the Ziway site, Sher have paid for a school with an advanced computing facility, available to all children in the town with over 2500 currently enrolled; a high-specification hospital, with free treatment available to workers and their families and at a substantially discounted rate to all other Ziway residents; a football stadium in which the Sher team compete in a national league; and a club house with a number of social facilities available to the town's residents. The construction for all of these non-farm activities is tendered to local building companies, further adding to the positive externalities of the firm documented in Chapter 11 (IG8; IG17; Zenebe, 2008).

This approach to CSR has been criticised for many years as 'Bad Capitalism' (Blowfield and Frynas, 2005; Husted, 2003; Levitt, 1958). While it is difficult to argue that building a hospital supplying medical care to people for whom there was previously none is anything other than a positive thing, critics see the role of business replacing the state as a way of firms increasing the role of corporate power within the industry at the expense of collective and institutional power by making large firms essential to the functioning of society. The fact that a single firm controls healthcare, education and leisure activities in a community decreases labour mobility and

leverage in wage negotiations. The firm is, then, also able to negotiate a position of increased power in their relationships with the state as the fear of capital flight is made more acute by the potential negative impact on the affected communities. This is in addition to criticism levelled at CSR based on its ultimate profit motive through its positive effect on public relations, effectively taking the perspective that firms are acting from a position of enlightened self-interest. As in situations such as this, the state lacks the ability to implement these social measures itself; an ideal alternative to this CSR strategy would be to transfer to money invested in these social measures either directly to employees in the form of higher wages or to the government in the form of taxes so that they may provide the services themselves. Both of these practices would act as disincentives to the original investment and may worsen the competitive position of the country in attracting foreign investment. Furthermore, the capital outlay for the company in building hospitals, schools and football stadia, in addition to the outlay on the farm itself, is in the short-term higher than the gradual outlay in taxes or wages and allows the facilities to be used instantly.

This investment also contributes to the territorial embeddedness of the firm as the investments they make are not mobile. From a capital mobility perspective, territorial embeddedness is always detrimental to a firm as it diminishes the influence of corporate power relative to institutional and collective power. However, the nature of this territorial embeddedness mitigates any potentially negative impacts for corporate actors. A firm replacing government in the provision of social services, as has been the case in many of the CSR strategies outlined here, has the effect of reducing institutional power in negotiations with corporate actors. Consequently, CSR strategies, while they undoubtedly have altruistic, marketing and employee relations motives, are also preferable for corporate actors than investment in immobile infrastructural improvements, for example roads or power generation. The key difference is a manufactured dependence built into the CSR strategies engaged in by companies like Sher, whereby if they were to leave the country the value of their investments would depreciate rapidly.

Interesting parallels can be drawn here between the strategies of donors, documented in Chapter 7, and the strategies of corporate actors. While donors are keen to fund short-term or one-off purchases which can easily be factored into budgets and are viewed positively from a public relations perspective, corporate actors seek to only make flexible investments, which are more easily withdrawn if profitability drops.

Much has been written about worker welfare in floriculture but not, as yet, in an Ethiopian context (Dolan, 2007; Hale and Opondo, 2005). There exists a great deal of literature on the negative aspects of the standards of worker welfare in the flower industry although much of this does little by way of assessment of alternatives. For example many NGOs, including War on Want (Morser and McRae, 2007), have presented evidence on the negative health consequences of working in the flower industry, criticising some of the standards set by international bodies detailed here and, by extension, the supermarkets that demand them. They draw attention to the low pay by international standards, lack of job security and low levels of unionisation in flower production for the UK market. However, this report, and much of the academic literature on the subject, fails to assess the alternatives. As displayed in the primary research for this study, the 'low wages' referred to in the study are considerably above the minimum wage in the production locations and greatly exceed wages available in alternative forms of employment requiring similar qualifications and skills. While the low level of wages is one of the factors that have drawn foreign investors to the industry in Ethiopia, when compared to alternative production locations, wages are low enough that there is scope to pay employees above average wages. In the above example,

Sher - with the growth in profitability of the firm, the increase in competition for workers, and due to the owner's desire to pay a 'living wage' amid high inflation - has seen rapid rises in wages to a point where they are one of the highest paying employers of low-skilled labour in the country, despite the challenges that faced the industry during recent times (IG17).

Furthermore, alternative employment opportunities available are few. Many of the alternative employment opportunities that are available are not subject to international standards governing worker welfare, regardless of how ineffectively those in floriculture are enforced, and working conditions are inferior, such as the conditions seen in textile factories (Abebe and Fantahun, 2000; Woldeyohannes et al., 1991). Specific criticisms, such as the prevalence of repetitive strain injury and harmful exposure to chemicals, are genuine concerns but the international standards adhered to by producers in order to compete for direct sales mitigate these problems whereas other industries which compete for the same labour do not. Furthermore, the focus on the supermarket marketing channel is misguided, as highlighted in Chapter 8, as the standards of worker welfare and environmental accountability are far more stringent in this marketing stream than for auction sales.

The action called for in the War on Want report (and others like it) includes giving overseas workers the right of redress in the UK over negative consequences of UK companies' involvement overseas, contacting UK supermarkets to voice their concerns about the negative impacts of sourcing cut flowers from developing countries and switching to Fair Trade flowers. This, however, fails to account for the potential negative impact on welfare and poverty for workers in developing countries which could be caused by an increase in costs associated with this action. Floriculture has created a large number of jobs in Ethiopia, paying significantly above the average wage and has the potential to create many more as documented in Chapter 11. One of the primary reasons this has occurred is the prevailing cost structure in Ethiopia relative to alternative production locations. To impose further costly conditions on companies operating in the country may alter the cost structure sufficiently to significantly impact on the number of jobs available and, as a result, negatively impact on the ability of the industry to assist in broad-based poverty reduction.

Hughes discusses the nature of auditing of codes of practice and CSR initiatives in Kenyan floriculture. The author finds that "there is a continual need for evaluating the success of the audit process in guaranteeing responsible business" (2001; 400). Hughes et al. (2008) document how media campaigns have been required to highlight 'abuses undiscovered by third-party audits' in the cut flower sector in Kenya, casting further doubt on the integrity of external independent auditing of environmental and social conditions. However, a number of conditions exist in the present Ethiopian industry that differ from those experienced at other times in other countries meaning the degree to which international standards, codes of conduct and CSR programmes are being practically enforced has improved. Firstly, the codes themselves have developed in response to previous criticism to make them more accountable, including the ETI as referred to by Hughes et al. (*ibid*). Secondly, as advocated by Hughes (2001) and Hale and Opondo (2005), participation of local NGOs and civil society organisations in auditing has been carried out in Ethiopia through the involvement of Confederation of Ethiopian Trade Unions (CETU) in dialogue regarding training and auditing procedures (Amera and Aklilu, 2008). Finally, the autocratic, interventionist nature of the state in its relations with the industry means that their desire to protect the reputation of the industry - both within the industry itself and amongst developed world consumers - has allowed them to impose measures on particular producers to ensure they comply with the stipulations of the codes. While this does not improve the efficacy of auditing

procedures *per se*, the potential financial implications for producers found in contravention of the terms of the codes means that these conditions are more likely to be adhered to. Indeed, shortly before the Code was formally ratified, 20 flower farms received notice that they would not be granted export permits once the new law enforcing the Code was brought into force if they failed to improve environmental and labour standards to comply with the Bronze stage of the Code's requirements (Tamene, 2010).

9.3 Migration Impact

The creation of such a large number of new jobs cannot be expected to occur without having an impact on migration patterns. The growth of the floriculture industry in Kenya has been criticised for the impact it has had on local migration patterns. The centralised nature of the Kenyan industry around Lake Naivasha, Lake Nakuru and Mount Kenya means that labour resources in these areas quickly became stretched and significant migration occurred from the surrounding areas, putting further pressure resources (Hughes, 2000). In Ethiopia, however, the impact on migration patterns has in general been far lower, but varies by both the geographical area and the labour category.

It can be seen from the above labour categorisation that migrants with two distinct sets of pull factors have been attracted to the Ethiopian floriculture industry, namely domestic and international, and these migrants face two very different sets of issues in being absorbed into the industry and its geographical and cultural context. Unlike in Kenya for a number of reasons, in the majority of the flower growing clusters there has not been significant permanent migration of domestic workers. Firstly, population densities in the flower growing areas of Ethiopia are very low. Even in the most urban of the flower growing clusters, Debre Zeit, manual labourers have to commute distances of up to 20km on a daily basis without any private transport. The majority of farms have provided free transport from workers' homes to the farm and back again in the evening. This limits permanent migration as the commutable distance of the farm is increased. Farms that have assessed the facility have also found that this improves absentee rates and increases employee loyalty at a relatively low cost (Survey; IG6, IG9, IG11, IG13). This is closely related to the second reason that migration has not occurred in Ethiopia to the extent that it has in Kenya: the land policy in Ethiopia. This is the primary reason for the low population density in rural areas relative to urban areas with a relatively even distribution of population over space. Rural-urban migration is low in Ethiopia due to the allocation of plots of land for subsistence and exchange farming, which provides a large proportion of income for the rural population and, consequently, Ethiopia has the lowest rate of urbanisation in sub-Saharan Africa (de Brauwa and Mueller, 2011). However, the nature of population growth and inheritance in Ethiopia may mean that this situation is temporally limited. Land is being divided into increasingly small plots and in certain areas these plots have become insufficient for subsistence. This has the initial impact of forcing some household members to find alternative waged employment, utilising the additional labour capacity created by plot shrinkage, but could eventually lead to large scale migration of entire households in order to sustain livelihoods (Kebede, 2002).

The current production area of the industry, in all areas except Ziway which is addressed below, meant commuter-migrants could be drawn from the local unemployed and underemployed population and there was no mass migration of workers. However, if the industry continues to expand significantly and the other elements of the horticulture and associated industries grow at the projected rates, as discussed on Chapter 11, then these areas are unlikely to be able to continue to provide labour in this way. During the peak production period - European winter and particularly around Valentine's Day - farms have begun to experience more severe labour

shortages in this category which, if the growth of the industry continues, will not be addressed by this local migration:

> ...one year and two years back, if they want one labourer they were getting ten. Now if they want two or four labourers they are getting one. Because we have a lot of employments also in the road construction and so many things that we are facing a shortage of labourers now (IG4).

Labour shortages may force wages up far beyond their current levels and could be sufficient to encourage regional and inter-regional migration. In order to do this, incentives would need to be such that either families would be split so that labourers (most likely women as discussed above) could take up residence close to the flower farm while their subsistence plot is maintained by the rest of the family or that the entire family may migrate close to the flower farm and relinquish their subsistence plot. Currently, wage differences between Ethiopia and competitor countries are such that there is scope for them to increase significantly without jeopardising the country's competitive position. Further research is needed to determine the point at which economic incentives are sufficient to induce migration, both individual and familial, and the point at which wage increases will cause labour costs in Ethiopia to exceed those of Kenya.

Almost all of the commuter-migrants are less well-educated, unskilled women and the wage they receive provides their family with a supplementary income to farming activity. However, their position is particularly vulnerable to changes in the production process or in demand levels. Although it is unlikely that any of the manual labour positions in Ethiopian floriculture would ever be mechanised as they have been in more developed countries (due to the relative cost and efficiency of labour and capital goods in Ethiopia) it is these workers whose hours will be reduced or who may be temporarily laid-off due to seasonal and aggregate demand changes (Nadvi, 2004).

The situation for domestic migrants in Ziway is different to other areas of the country. Permanent migration in this area has been significant. At the time of the last census in 2005, when the industry was in its infancy in Ziway before Sher relocated operations to the area, the population of the town was approximately 35,000. While this remains the last official estimate of population, which is, as discussed earlier in the study, questionable in itself, government and industry sources estimate the current population of Ziway at 125,000-150,000 (IG4, IG17). This represents a huge and rapid increase in the population of the town which coincides exactly with the growth in the floriculture industry. There are several factors that have contributed to the migration which differentiate the Ziway cluster from other flower growing areas that have seen little immigration. Chief among these reasons is the labour requirements for this cluster. As discussed in Chapter 8, the fast-maturing nature of the flowers grown in the relatively low altitude Ziway cluster means that the labourers/Ha needed in this area are more than double those required in Holeta. This, combined with the overall size of the growing cluster – the largest production area of any cluster in Ethiopia - means that the total labour requirements of the Ziway cluster are greater than any of the other growing areas.

Furthermore, due to the relocation and subsequent establishment of production area by Sher, the expansion of productive capacity in the area was far more rapid than in other clusters. Sher had vast experience in the industry and was able to establish both its own production and those available on a hire-purchase arrangement far more quickly than new entrants to the industry. This speed of development meant that there was no time to introduce commuter-migrants and investors were not fully aware of the labour availability and wage levels when entering the industry. An additional consideration was the impediment to commuting posed by Lake Ziway itself. The lake is by far the largest lake in any of the flower growing clusters in Ethiopia. The town

of Ziway is located on the Western shore of the lake, eliminating the potential pool of commuters from the west for 15km, and to the north and south for 10km, for all of the lake's 20km width. A commute from Ogolcho on the Eastern shore to the Sher site would take in excess of an hour. The scope of this research did not extend to investigating the origins of migrants to the Ziway area but this could prove an interesting avenue for further research and has the potential to impact on the benefits extracted by labourers in this cluster.

As identified throughout this study, international migrants were essential in the industry reaching critical mass. As such they are welcomed by both the government and the farms themselves with an attractive package of salary and benefits. The government waives income tax for foreign employees in the flower sector. Farms are allowed to import a number of vehicles tax-free (otherwise typically subject to 150-200% tax) dependent on the size of the farm. These will commonly be used by foreign employees. This attractive incentives package has led to investors and employees migrating from all over the world. This indicates a low level of territorial embeddedness amongst the investors and employees but also a low level of network embeddedness amongst some investors as they come to floriculture from fields as diverse as telecommunications, investment banking, and engineering. Data gathered from the EIA lists investors from 42 different countries involved in the industry, although it is likely that only a minority of investors have actually moved to the country. Other investors are seen to have resisted the temporal link between territorial and network embeddedness as despite decades in the industry in a particular location, some network embedded actors have been able to relocate to seek out the best opportunities within the GPN in which they are embedded.

International migrants are sourced from many different locations for different reasons. The nationality of investors in a firm has a significant impact on the origin of international migrants. Foreign investors from a huge number of countries will, by and large, relocate to Ethiopia and bring with them their families and frequently a number of management staff from their country of origin; often family members act as management staff. Consultants are almost exclusively drawn from the traditional high-tech floriculture sectors of the Netherlands and Israel although in terms of a migratory impact, they will have often been more recently based in Kenya or in South American production locations. Despite its proximity, there has been very little migration of semi-skilled labour from Kenya due to the higher wages on offer to this category of labour in Kenya. Firms that have relocated operations from Kenya to Ethiopia have, in some cases, brought Kenyan staff to fill skills gaps in Ethiopia.

9.4 Concluding Remarks

This chapter has documented the processes involved with creating and transforming the labour force to fill the requirements of Ethiopia's rapidly expanding floriculture industry. It has looked at the transformation and creation of a labour force and impact of these processes on regional and international migration.

It can be seen from the analysis here that the industry has had a significant impact in improving the incomes of the rural poor, by providing those in subsistence farming with an additional income. Young people looking to enter the labour force have benefitted from the creation of bespoke training programmes with good post-qualification job prospects while those who already had some level of qualification or experience in the industry have benefitted from the temporary shortage of such workers and have been able to command high salaries.

The express intentions of the government in promoting the growth of the industry were employment creation, knowledge transfer, and foreign currency earnings to address the massive

balance of payments deficit. There has undoubtedly been progress in achieving the first of these stated goals. There are now an estimated 100,000 employees dependent on the industry and there is an increasing level of Ethiopian involvement in the more knowledge-intensive parts of the industry such as breeding and farm management (Walta Information Centre, 2010b). The question remains, however, how are the benefits extracted by local actors to be secured and perhaps increased for the long-term? As can be seen above, the benefits accruing to local actors have increased with time since the industry began its expansion. It is argued throughout this research that the sustainability and continued transfer of these benefits lies, as determined by the GPN framework, in the degree of territorial and network embeddedness of companies within the network. For Ethiopia, as can be seen from the transferral of focus to the fruit and vegetable export sector documented in Chapter 11 and the efforts at endogenisation to increase the proportion of actors with high levels of territorial embeddedness, it is this, rather than network embeddedness, that is far more influential as growth opportunities spread into related industries. If a government can 'anchor' firms in the country or region by manufacturing territorial embeddedness, then policies can be used to steer investment toward strategically important sectors. Manufacturing territorial embeddedness amongst foreign and local investors, then, should be seen as a key policy objective of developing country governments in attempting to maximise the benefits local actors extract from NTAEs. While network embeddedness can lead to greater enhancement and capture of value by actors within the network, benefits available to local actors are limited by the parameters of this industry and are susceptible to its fluctuations. Territorial embeddedness, then, leads to diversification of the export base to other commodities, and to more sustainable benefits for local actors.

The evidence presented here to some extent contradicts that of Smith et al., who state that:

> Chains of commodity production and selling thus become mechanisms to enable increases in productivity, reductions in the value of labour power and reductions of the turnover time of capital to enhance the extraction of surplus value (2002; 47).

With a production network, the reorganisation of production location has indeed served to reduce the value of labour relative to other nodes of the production process. However, the value of labour is spatially embedded and the evidence presented here displays how the integration of Ethiopian labour into the global economy through the floriculture industry has resulted in the value of labour in this context having increased. The value of labour must be conceptualised beyond the simple understanding of the proportion of value allocated to work done in the production of a commodity. The ability of workers to influence their own pay and conditions must also be considered in determining the value of labour within a network and, as has been displayed here, the value of labour power in Ethiopia has increased as a result of the floriculture industry's growth. This has occurred partially as a result of demand having outstripped supply for labour, and has resulted in the creation of a labour union and an increase in the peripheral benefits offered to employees.

For manual labour, when low wages are offset against the relinquishing of subsistence and trading income that would occur as a result of foregoing land rights, permanent economic migration is precluded in the majority of clusters; the workforce in each growing cluster is finite, which has likely increased the value of labour power in these regions. Caveats must be applied in that the land law which effectively limits the supply of labour changes - unlikely given the constitutionally entrenched nature of the law - or, perhaps more probably, current population growth means that subsistence plots can no longer sustain the livelihoods of the increasing number who depend on them, then permanent migration will increase in search of the high wages on offer in floriculture.

If this is the case then the effect that constrained labour supply currently has in increasing wages will be removed. As a reflection on the *status quo*, however, productivity gains and increases in the extraction of surplus value do not necessarily, as implied by Smith et al. (*ibid*), have negative connotations for the power of and value capture by labour. This is dependent upon institutional power and how it manifests itself within the industry.

This chapter has displayed the importance of situational specificity in an assessment of power dynamics in a GPN. Unique economic characteristics of Ethiopia have influenced the ability of firms to create and maintain a workforce which has had implications for the capture of value by different nodes of the network. In the following chapter the capture of benefits by different actors is assessed in greater detail.

10. Developmental Impacts

This chapter addresses two distinct but related aspects of the floriculture industry and the overall benefits to Ethiopia in the long-term. The first issues considered are those which may impact on the continued growth of the Ethiopian floriculture industry as a whole. From a developmental perspective, this set of issues assumes that benefits are accruing to Ethiopian actors without an attempt to quantify these benefits or identify the actors to whom they accrue. The second element considered in an assessment of the developmental impacts of the industry is to whom the benefits generated by floriculture accrue, which can be separated into two key enquiries. The first of these enquiries is the degree to which endogenisation[15] or Ethiopianisation is occurring within the industry as a mechanism to increase the proportion of benefits accruing to local actors. The second line of enquiry relates to the progressive nature of the industry and the effect it has on the poorest people in society.

10.1 Factors Affecting the Overall Growth of Ethiopian Floriculture

This section addresses issues which affect the profitability of firms in the Ethiopian flower industry and its continued potential for growth. One such issue, marketing channels, was examined in detail in Chapter 8 and so is not discussed fully here.

Many of the factors which have contributed to the growth of the industry are long-term competitive advantages which ensure the industry will continue to attract investment both domestically and from abroad. These factors, documented in Chapter 7, include 1) *natural resources*, 2) *socioeconomic, 'social and lifestyle' advantages,* and the 3) *institutional environment.*

The natural resources that give Ethiopia an advantage in terms of floriculture are largely stable, although the scope of this study does not allow for a full environmental impact analysis. An exception to this positive portrayal of environmental impact into which research has already been conducted, may be water resources. While currently plentiful in Ethiopia, water resources have historically been depleted in countries including Kenya through the export of virtual water. Pollution of water courses through run-off of improperly managed irrigation systems has the potential to damage the water resources for both floriculture and other agricultural uses. Hengsdijk and Jansen (2006) have conducted the only study to date, which, while the authors admit the study is not sufficient, finds that although water consumption and pollution-per-hectare is greater from greenhouse floriculture than from open-field vegetable production, the relative scales of the industries mean floriculture has a lower environmental impact than the majority of agricultural production. Furthermore, the concentrated nature of floricultural production offers greater potential for the management of emissions through, for example, the creation of artificial wetlands for filtration. The potential negative impacts of run-off from flower farms are exacerbated by regulations on the inputs used for the industry having been waived (Emana et al., 2010). Hengsdijk and Jansen (2006) find that environmental impact varies greatly by farm; reinforced by this research with one farm operating a highly-advanced low-input system with the run-off from a hydroponic greenhouse being used to irrigate a drip-fed greenhouse,

[15] "Endogenisation" is used in this research to refer to the process of increasing local ownership of the industry as a whole or a particular node of the GPN, as it was in this way that the term was used by a number of respondents within the industry.

while other farms were largely complying with the EHPEA CoP minimum standards documented in Chapter 9. In time these considerations may impact on other agricultural activities and force the government to regulate the environmental impacts of the sector more carefully with options including the withdrawal of the current incentive of free access to water resources for investors in floriculture.

The second factor which initially drew investors to the industry includes low cost labour and a peaceful environment and is likely to remain an advantage for the foreseeable future. Despite rapid economic growth in recent years and subsequent increases in average wages, labour costs in Ethiopia remain significantly below those in competitor countries and so, even if the trend continues, Ethiopia is likely to maintain a competitive advantage in this area. The political stability aspect of this asset also looks likely to remain with the EPRDF obtaining a mandate until 2015 at the earliest and consistently low crime rates contributing to the perception of a peaceful environment amongst investors.

The final factor which assisted Ethiopia in attracting international investment was the institutional environment which is considerably more fluid than the previous two factors. Many of the provisions encompassed by the institutional environment were enacted to facilitate the establishment of the industry to allow it to compete in the international floriculture market. As such, components including donor backing and, to some extent, government support in the form of tax exemptions and infrastructural investment, may be moved to another sector once the industry is deemed to be self-sustaining in order to broaden the economic base. The government will also seek to recoup some of its investment in the industry in the form of taxes. Whilst revenue was not one of the government's core objectives in its promotion of the industry – explicitly given as employment, knowledge transfer and foreign exchange earnings – once the industry becomes self-sustaining it will become an important source of tax revenues (IG4).

These changes in conditions have the potential to affect Ethiopia's competitiveness which could act as a barrier to the growth of the industry overall. As documented in section 6.2, the investment in Ethiopian floriculture came both in response to a growth in aggregate demand within the industry and as a result of capital relocating from other flower growing countries. While, after the brief reversal in the trend of growing aggregate demand caused by the Global Financial Crisis, demand continues to increase in floriculture, particularly in Europe, Ethiopia looks set to attract a growing proportion of total floriculture investment. This trend is something that both individual producers and the EHPEA have sought to perpetuate by attempting to enter and augment new markets such as Russia and the Middle East. However, the growth in aggregate demand will inevitably stagnate as markets become saturated, meaning that countries must compete for international investment from floricultural producers and offer significant incentives to ensure domestic producers remain in the country. It is this competition, combined with the changes in the factors which contributed to the initial growth of the industry, which acts as a threat to the overall growth of the industry.

Institutional power within global floriculture is weakened by the international mobility of capital as documented in Chapter 5. Accordingly, the Ethiopian government's ability to attract investment is significantly diminished by the fact that there are other developing countries seeking to increase FDI by offering similar incentives. Although Ethiopia has a number of competitive advantages in attracting foreign investment, they are by no means unique and there are any number of additional developing countries in tropical areas which may soon see the potential of the industry and may instigate a bidding war, trading off fiscal revenue and workers'

rights as bargaining chips, as frequently argued from a neo-populist perspective (Thompson and Scoones, 1994; Thrupp et al., 1995):

In Maharaj and Dorren's (1995) critique of the floriculture boom they focus on the inequitable conditions that exist for flower growers in developing countries that will never allow them to compete in the international market. Due to a lack of domestic demand, developing countries are largely dependent upon the consumption patterns of the countries to which they export. As such, until 2000 the EU increased the tariff on imported flowers from June-October so that, when coupled with the freight costs, developing countries could not compete with European-grown flowers. Until 2008, a similar policy could be seen at the Dutch auction houses, still responsible for a large percentage of global flower distribution, where foreign growers had to pay 8% of revenue in fees as opposed to the 5% that auction house members paid. The merger of Floraholland and the Aalsmeer Auction House resulted in a change of membership conditions so that now all members receive a discounted rate. Crucially, growers from developing countries are now treated equally at the auctions. Ethiopian members are invited to be on the board of the auction, can attend meetings and pay the same fees as Dutch members. Floraholland now have representatives permanently based in Ethiopia to improve relations and expedite processing (Joosten, 2007; IG2).

The problems associated with the price drop following the Global Financial Crisis also uncovered an issue of unequal power relations between corporate actors. The single firm currently breeding varieties within Ethiopia is also a medium-sized producer of flowers for export. When the price of varieties falls significantly at the auctions over a sustained period this breeder then controls the supply of those varieties in order to ensure a minimum price. Breeders will always guarantee certain limits on the supply of varieties at the time of sale as - to the buyer - the value of a variety is affected greatly by supply. However, in this instance, supply is further reduced in order to protect the breeder's own export interests (IG6). As all breeders that licence varieties in Ethiopia are foreign-owned, this is one example of the spatial power asymmetries which persist in the production network. Government actors are keen to increase the presence of breeders in the country in order to diversify the profile of varieties grown and minimise the power existing breeders have over growers. The presence of breeders in a country is likely to result in the development of bespoke varieties suited to the climatic needs of the country and the government has therefore begun to offer the same incentives for breeders to enter the industry as they do to growers (IG4).

Another way in which Ethiopian producers could add value to their exports is either by exporting in final sales packaging, often preferred by direct buyers, or by producing a mixed bouquet ready for sale. Supermarket respondents stated that, presuming that the requisite quality is available, it is preferable for flowers sourced from Africa to be packed on the farm due to the cost advantages, as opposed to flowers sourced from Europe where exchange rates can affect relative costs (IG5). The obstacles to both of these options, and hence to the growth of the industry through these avenues, are the same: a lack of available inputs. While roses, carnations, hypericum, gypsophelia and a range of other 'filler' flowers are available in Ethiopia, the range of decorative grasses, twigs and leaves needed to complete bouquets for sale are not, as yet, produced in Ethiopia:

> ...if you want to do arrangements and nice things for hotels and weddings and all these sort of things, there is an opportunity for fillers and foliages and grasses and all these sort of things. There are plenty roses, we tend to have more roses that we compost than anywhere else in the world (IG12).

Similarly, packaging and printed label production of a saleable quality is not yet conducted in Ethiopia and importing these materials would, in both cases, remove the majority of the value added by performing this task in Ethiopia. By contrast, as the flower industries in Columbia and subsequently Ecuador have developed, their focus on the direct market in North America has resulted in a single farm manufacturing all necessary inputs for bouquets and in some cases manufacturing the final sales packaging so that a ready-for-sale product leaves the farm. Due to the low labour costs in Ethiopia and the high labour requirements in bouquet production, this represents a potential avenue for future expansion of the industry once the key inputs can be sourced (IG12). In order to do this Ethiopian producers would need to adapt quickly to market trends, in addition to sourcing a wide range of input material (IG5). The lead time of around 60 days on roses, excluding the far longer time required to establish new plants, is longer than the time required to react to trends in the broader market and so for producers to engage in this market, they must maintain a wide enough range so that they can alter the mix of products within a bouquet.

In addition to changes in the incentives, both natural and manufactured, for continued floricultural production, other factors which may inhibit the continued development of the industry include the illegal practices identified above. One such practice is the underreporting of sales revenues and subsequent failure to remit turnover to Ethiopia. This has a number of adverse effects on Ethiopian actors. Firstly, the government's objective of earning foreign currency will not be fully realised. Government respondents saw no reason for withholding sales revenues as farms are permitted to repatriate 90% of their turnover tax-free once it has reached Ethiopia. One of the motivations for flower farms in failing to do so - in addition to concerns about the security of their finances should government policy on the industry change as it did with the sugar industry under the *Derg* - is that when income tax is introduced after the farm has been exporting profitably for five years, tax will be taken from the turnover and if the full amount were to be remitted now, and then suddenly drop when they became eligible for tax, suspicion would be raised.

In addition to the impact on foreign currency reserves owing to the schemes offered by international institutional actors identified above, many firms which act as subsidiaries of foreign floriculture firms and firms from other sectors have Ethiopian shareholders. One of the consequences of underreporting turnover is that these subsidiaries commonly sell their produce to their parent company at greatly reduced rates and the commodity is then sold by the parent company at auction or to a direct buyer at the market rate. The Ethiopian subsidiary companies, therefore, commonly make no profit and some even make a loss. This is evidently an unacceptable situation for the Ethiopian shareholders, or indeed partners in joint ventures, leading many respondents in this category to be dissatisfied with the situation:

> They [the Ethiopian subsidiary of a Dutch floriculture firm] are always in theory making losses here. Shareholders here do not get any dividends. Now I am asking for my fair deal or I will become a whistleblower (IG11).

10.2 Factors Affecting the Distribution of Benefits

This section serves as a summary of the distribution of benefits explored in the preceding chapters before looking more specifically at two important issues which affect the benefits available to Ethiopian actors in the long-term. Firstly, endogenisation is an important issue in the territorial embeddedness of the industry and the long-term benefits available to Ethiopian actors. Secondly, as a developing country the impacts of the industry on the poorest people in society has to be central to any assessment of the outcomes for the country.

As discussed throughout this research, data of a financial nature is very difficult to obtain from the industry, and so it is difficult to assess where rents accrue. While there is an assessment of the costs involved in set-up and production for auction, it is difficult to know the costs and profitability of each stage of the operation. Even in the retail sector where research revealed large mark-ups of 50-80% on the importing agent or wholesaler price, overhead and wastage costs are unknown and so, while profitability of retailers is likely to be significant, the exact scales of profits are unclear. Competition is significant in every node of the GPN, with the possible exception of labour, as described in the previous chapter, which has led to wage inflation. Again, until recently, competition was limited in the handling agents sector but the introduction of more actors in this node has resulted in lower prices paid by growers for export services.

10.2.1 Endogenisation

Endogenisation of the floriculture industry is desirable for the Ethiopian government as it will have positive developmental impacts in increasing the proportion of benefits accruing to local actors. The GPN framework sees two aspects of endogenisation as key determinants of the distribution of benefits throughout the production network i) entrepreneurship at the site of production, for the enhancement of value, and ii) firm ownership structures, for the capture of value. Another of the conceptual categories within the GPN framework is embeddedness which plays a crucial role in determining the capture and enhancement of value for local actors within a network and thus is a key factor in endogenisation. As discussed elsewhere in the present research, power structures, and changes therein, are highly influential in determining the levels of embeddedness amongst different actors within the network, showing how the interaction of these conceptual categories determines the configuration, and thus developmental outcomes, of a given GPN. Territorial embeddedness is far higher amongst local actors as the social, political, cultural and economic ties that influence territorial embeddedness grow stronger with time in the country. However, measurement of the exact degrees of territorial embeddedness amongst different actors within a network has proven empirically problematic to quantify (Hardy and Hollinshead, 2011; Sunley, 2008), as has the proportion of revenues that remain in the country in the form of reinvestment, savings and consumer spending. In this section, the issues that affect foreign and local actors in the industry asymmetrically, and other issues which impact on the endogenous growth of the industry, are examined.

For both Ethiopian and foreign-owned farms as well as for the government, there is a desire to fill as many of the positions as possible within the farm with Ethiopians, not simply as a cost-cutting measure but for an array of other reasons which makes the demand for such personnel high:

> When you look at the need in country for Ethiopian management, your need starts at supervisor level and finishes with investor. There is need for people to feed in at appropriate levels and for people to feed from one level to the next level. For any business, and for Ethiopia, it is desirable to fill as much of the profile as possible with Ethiopian staff. If you employ an expatriate manager, you employ him on a 2 year contract it will take him six months to learn the farm, one year to work and six months to find the next job. This is neither constructive nor sustainable (IG12).

It is also important to recognise that a successful foreign-owned farm is far more desirable from a government perspective than an unsuccessful Ethiopian-owned farm, provided the opportunity cost of the resources afforded to them is not greater than the benefits they bring. This quote from an influential institutional actor illustrates the reasons why Ethiopian managers are desirable and introduces the issue of trust, which is expanded upon in this section:

> It's the quality of the managers [that determines success] not the nationality of the manager and a good quality Ethiopian manager will achieve more than a foreign manager because he understands the culture and the people. For the expatriate who comes in, crops are a piece of cake but 90% of the success of the farm depends on people being able to get people to do the things that you want them to do, to the standards you want, on time. People management and understanding is enormously important and very complicated in Ethiopia. When you look at who a farm will employ by choice, whether a farm will employ an Ethiopian manager or a foreign manager, this depends on the philosophy of the investor. Some people of both Ethiopian and foreign origin find it difficult to believe that they can trust an Ethiopian manager. Similarly, some people will say why do I need a foreign manager when I can find a good Ethiopian manager who will make this work? So there is an element of personal choice in this. So there are always going to be some foreign managers but the percentage of Ethiopians will increase (IG12).

Foreign firms experience several benefits not afforded to local entrepreneurs attempting to enter the industry. Foreign investors who have worked in the floriculture industry in other countries come with pre-existing relationships with buyers, suppliers and intermediaries which significantly reduce transaction costs. Established supplier relationships can result in more flexible payment terms and improved after-sales support. Established buyer relationships mean more guaranteed orders and brand loyalty with easier routes to market. New entrants to the industry in Ethiopia have had problems obtaining the inputs they need in the quantities they require, often having to pay in advance for purchases (Morris, 2006). The longer the industry exists in Ethiopia and the more the market grows, the broader and deeper the network of contacts local actors will be able to build and consequently, it will become easier for new entrants to become established in the market.

In Phyne and Mansilla's (2003) study of the salmon export industry in Chile - another high income-YED product with consumption centred in the developed world where similar governmental incentives are offered to those available to floriculture investors in Ethiopia - they found the industry to have had a significant impact on overall GDP. However, they did find that the majority of benefits were centralised within the country, a problem likely to be repeated in Ethiopia given the location of the floriculture industry, and they found the influence of domestic capital to be a major factor in growth. Whilst the World Investment Report is not able to provide data on domestic investment in Ethiopia, the level of domestic capital available is likely to be far lower than that of Chile, reducing the potential for entrance to the market of local entrepreneurs in all nodes of the floriculture industry.

The major criticism in existing literature on floriculture is that the majority of profits from foreign entrepreneurs investing in a developing country with policies of tax exemptions, will simply flow back in remittances leading them to the conclusion that the only thing a developing country has to gain is poorly waged labour (Hale and Opondo, 2005; Korovkin and Sanmiguel-Valderrama, 2007; Maharaj and Dorren, 1995). In Ethiopia, the five-year exemption from corporate income tax with two years loss transferral has not been officially extended, though no flower exporter has paid any corporate tax to date. As identified above, the Ethiopian government did not see tax revenue as one of their primary goals for the industry. They did, however, target employment as one of their three objectives, although they do envisage greater Ethiopian involvement in employment categories which allow a greater proportion of value to be captured, through increased wages and resultant taxes, over time. The critiques of floriculture based on the absence of tax revenue clearly set out corporate power as important in determining benefit distribution due to its lack of territorial or network embeddedness. An inverse correlation exists between

embeddedness and power for corporate actors within a GPN; the more mobile their capital, the greater the influence they can exert over other actors within the network. In the initial stages of the industry, Ethiopian actors exhibit a far higher degree of territorial embeddedness as displayed by the firms that have filed for bankruptcy. The longer a foreign firm is involved in the industry, consistently investing capital and developing local networks, the more they will be embedded in both the network and the location, and the balance of power will shift towards institutional actors, increasing their ability to influence the distribution of benefits within the network.

Another issue that specifically affects endogenous growth is the lack of domestic inputs for floriculture, increasing costs to growers and decreasing the benefits accruing to local actors (Hengsdijk and Jansen, 2006; Joosten, 2007). Whilst in the interim, provisions have been made by the government to facilitate easier import of floricultural inputs, their eventual intention is to create domestic industries for all floricultural inputs. Success in this objective will result in a greater proportion of the value within the GPN being captured by local actors. The multiplier effects that have occurred as part of the endogenisation of the industry are discussed in Chapter 11.

This chapter summarises the problems involved with using floriculture as a means of development in what Maharaj & Dorren call a 'very dubious development strategy' (1995; 51). They believe the key to making floriculture work as a development strategy is using the initial model of power skew towards corporate actors as a mechanism by which information and knowledge produced in the North can be accessed, reproduced, and developed by those in the South for their own gain. Kugler (2006) argues that:

> MNC's deployment of subsidiaries via FDI is designed to minimize the risk of propagation of specific technical knowledge to potential competitors (445).

It is then argued that any dissipation of knowledge that does occur serves only to improve efficiency and productivity in non-competing and complementary sectors as the foreign investor will organise production to maximise imitation lag. If this were the case in the Ethiopian floriculture industry, then the potential for endogenous growth would be greatly reduced and corporate power would remain stronger than both institutional and collective power. Although protection of knowledge inhibiting endogenisation was evident to a degree from primary research, several factors contributed to the flow of knowledge between actors within the network facilitating Ethiopian involvement in many nodes. Firstly, as explained above, because of the unique microclimatic, and other, conditions involved with achieving the optimum production from each farm, consultants are commonly required and as such are accessible to both Ethiopian and foreign entrepreneurs:

> ...most of the flower farms are requiring consultant. Even if you are experienced grower you still require consultant. Ethiopian Agricultural research centre can also move into this (IG9).

The second factor which accelerated knowledge flow and allowed Ethiopian actors to enter different market sectors is related to the necessity of the employment of consultants and the limited supply of local skilled personnel. The small number of skilled personnel including biologists, agronomists and botanists that were available in Ethiopia when investment began to flow into floriculture were in high demand amongst both Ethiopian and foreign entrepreneurs as they were cheaper and more knowledgeable of local conditions than their foreign equivalents. As such, these workers were in demand and were able to enter the industry at a higher level than they may have been able to in a mature industry with an adequate supply of skilled personnel.

This promotion of Ethiopian personnel above the level they would achieve in an established floriculture industry is evident throughout the industry and has enabled a faster transfer of information to local actors. This has been accelerated by the high turnover of staff and transferral between farms caused by the overall shortage of skilled personnel. This finding reinforces theoretical work of Katz and Ziderman (1990) who argued that, contrary to the previous orthodoxy of Becker (1964), firms would continue to finance on-the-job training due to the information asymmetries between training and recruiting firms. Under Becker's theory, recruiting firms could allocate part of the cost of training to inflating wages in order to recruit trained personnel and thus the cost of training would be passed on to the trainee. Katz and Ziderman contend that the significant transaction costs and information asymmetries between firms would result in the firms continuing to finance training. In Ethiopian floriculture, transferral rates are high where training costs are low, in jobs such as packing and harvesting. However, as argued by Katz and Ziderman, in more skilled jobs where training costs and transaction costs are higher, the situational specificity of the training for the flower variety, area, and farm, including the soil type, irrigation system, and equipment used as discussed elsewhere in this study, means that the trained personnel are more valuable to the training firm than the recruiting firm, and so firms will continue to pay for training. There is also a degree of knowledge transfer across professional fields. Ethiopia had sufficient skills in certain areas including accountancy, elements of logistics, and air freight to accommodate the growth of the industry. Professionals in these industries have been able to develop the specific skills required to adapt to the floriculture industry and some have acquired sufficient knowledge of other aspects of the industry to set up their own farms or become more involved in the management of existing farms:

> Of course, we should not close our doors you know. There is always advantage in this cross knowledge you know...freedom does not limit your creativeness – it gives you a lot of confidence. If you are to be a successful entrepreneur you always have to think free and Ethiopian entrepreneurs they come from this background. Now, it has been 40 years in Kenya, what percentage of the flower growers are Kenyan, I can tell you, 5%... But we still need always foreign players, you can learn from them (IG10).

The extent to which these knowledge flows have occurred in sectors in which foreign actors are directly involved has been limited by the personal relationships between Ethiopian and foreign actors in these sectors. Knowledge sharing has proven to be significant in industrial growth in many exporting countries. Growers share information on pest control techniques, post-harvest care and other technical and marketing techniques which allow the industry to grow. However, research revealed an almost universal disregard for the benefits of grower interaction in Ethiopia. Foreign actors, including those from auctions, growers, breeders, and institutional actors frequently reported complacency among Ethiopian growers and an unwillingness to learn (IG2, IG5, IG7, IG20):

> They think they know it all...they go to one meeting and then never turn up again (IG2).

Conversely, Ethiopian respondents regularly reported that they did not see the benefits of information sharing with their foreign counterparts as they felt it would affect their competitive position, stating that the Dutch were "difficult people" who were "a little bit mean" (IG9). This is one of the few areas where there is an observable difference in the perceptions of these two groups, which is partly attributable to the different business cultures of the locations. Whilst many in all sectors of the industry reported differences between 'Ethiopian growers' and 'foreign growers' in productivity, behaviour and export practices, in reality the differences that do exist are equally spread amongst these groups.

Growers' meetings are held regularly, arranged by auction house representatives, supermarket buyers and industry associations for the purpose of information sharing. While it might appear that collaboration would harm competition among flower firms, such arrangements have proven mutually beneficial in the growth of flower industries globally. Local entrants to the market can assist foreign entrants in local business practices and assimilation into society, while experienced floriculture actors can assist local entrants to the market with advice on agronomic practices. Growers will also discuss common problems such as diseases or the cost of air freight and potential solutions and it was through one such growers' meeting that the freight cooperative, discussed above, was conceived. However Ethiopian growers have been, or at least are perceived to have been, reluctant to attend such meetings, a perception accurately characterised by this excerpt from an interview conducted with an auction actor:

> ...our opinion being Dutch, looking in a Dutch way at the world we think that they [Ethiopians], they're proud people but they're all very stubborn as well. And whereas we might say we like to keep on learning, the Dutch have been well in organising themselves in working collectively, sharing information, we think you never know it you always have to keep on discovering and learning and working together whereas in Ethiopia we feel that if we organise a growers meeting in Ethiopia, it's very hard to get them coming because they've been twice. So they think they know 'hey what's new, I've got other business to do'. The Dutch would never ever take that approach and [the Ethiopians are] a bit stubborn and I think that makes them adapt slower (IG2).

This limitation to knowledge transfer is broadly reflective of Kugler's (2006) findings that knowledge flows more easily between than within industries. For example, it is not uncommon for experienced growers to assist packaging suppliers in the manufacture of more robust or appropriate packaging that will allow higher export volumes and lower loss rates. This is an example of relational rent being created resulting in the enhancing of value within the Ethiopian floriculture GPN. However, unlike in Kugler's study, the international floriculture industry is an industry where knowledge sharing would usually be common and its limitation is due to the personal relationships that exist within this specific network in this specific location.

Primary research has found that, in this industry and in this locality, the limitations to knowledge sharing have not proven to be significant in preventing the vast majority of Ethiopian involvement in the industry. While in certain nodes such as breeding, the floriculture industry is knowledge-intensive, these are not areas in which Ethiopia has a comparative advantage and are not likely to be endogenised in the foreseeable future. The technical aspects of what are otherwise not knowledge-intensive nodes, such as growing or packaging production, are commonly outsourced to consultants by foreign and domestic investors alike and so a lack of knowledge sharing does not put domestic actors at a disadvantage in this regard. The fact that growers do not share information on common issues undoubtedly means the industry is not creating the maximum possible value, but the successful engagement of domestic actors new to the industry in a wide variety of different nodes within the industry in which the country is well placed to compete means the industry has not suffered significantly from the low rate of knowledge transferral.

In defence of the prospects for endogenisation within the industry, this respondent drew comparison with what he viewed as the more knowledge-intensive sugar industry:

> [T]here are lots of other industry which require much more skill, knowhow, for example sugar industry...it's more complex...we have our own research centre. They assist in the selection of varieties and they follow any disease of pest even we have haematologist...and then you have to maintain, irrigate them properly for the sugar

> yield...[The industry] is even growing. And when the Dutch started it, 10 15 years it was the private sector...and then it was nationalised but then it continued and the Ethiopians are managing it very well. And now they have grown it even two three times more...So there used to be one agricultural college in Alemaya now we have so many universities now...So, I think when it comes to the Ethiopianisation aspect, the knowhow transfer is not such a big problem. We have a stubborn Ethiopian mentality but it is good because we now have the confidence to do things for ourselves (IG9).

Given the above findings about the relative benefits extracted by local and foreign actors, an important distinction was drawn here by a number of respondents in this area between who benefits and to what degree. While benefits are available to a range of Ethiopian and foreign actors, questions have been raised by Ethiopians as to whether the continued involvement of foreign actors is beneficial, given the difficulties experienced in knowledge transfer and tax exemptions. These views are best summarised in this excerpt from an interview with an Ethiopian flower farm investor who has been involved in horticulture in Ethiopia for over 30 years:

> You come to a developing country, you say you want to help, how do you help?! When you are only helping and enriching yourself, you know. OK, some margin I can understand, some margin is understandable...The whole idea, you know, motives for the incentives given was employment, knowledge transfer and foreign exchange. None of it is coming. Infrastructure is not...it's insignificant, because once you go the boreholes will not be of use for anybody else. And the road in Debre Zeit is an isolated case, all other roads are built by the government. So there is not much coming to the people from the foreign involvement in the flowers. And consider also the environmental impact, it may be difficult to quantify but it is there. It harms people who do not benefit. The 20 30% of the industry that is Ethiopian owned is good for the country but it did not require the foreign investors to come in. The incentives here are much better than in Kenya, Tanzania and Uganda. So we give and what do we get, like in the bible, what does the bible say; for those who give bread you return by stones? But the sector will grow, with or without foreign investment (IG10).

Endogenisation is desirable from a developmental perspective. In the short-term it seems unlikely that Ethiopian ownership of farms will increase without a significant change in government policy, which is by no means unimaginable. However, knowledge transfer both between and within nodes will allow higher levels of Ethiopian participation in all nodes of the network in which Ethiopia has a competitive advantage. This will be facilitated in part by the education programmes implemented at Jimma and Melkassa.

10.2.2 Poverty Impacts

Despite the recent economic growth in Ethiopia, the country remains one of the poorest in the world. Although the issues surrounding unemployment and poverty are highly complex in Ethiopia due to the nature of land entitlement and the proliferation of subsistence farming, the government sees increasing incomes amongst the poorest members of society as one of its primary objectives. With 85% of the population rurally-based and the majority of the rural inhabitants among the poorest in society, the government is continually searching for ways of improving livelihoods specifically in rural areas. The flower industry was targeted by the government for promotion, with the employment it would provide to rural inhabitants being one of the three primary motivations for doing so. Prior to the take-off of the flower industry, subsistence farming was the primary occupation in the rural areas surrounding Addis Ababa, while other workers reported employment on state farms or enrolment in education as their occupation. Only 8% of rural households in Ethiopia have a non-farm activity as their main source of income, giving an indication as to the skill set available for new enterprises in rural areas

(Loening and Imru, 2009). Whilst subsistence and exchange agriculture was able to supply the basic needs of the majority of the population the majority of the time, it provided limited scope for capital accumulation and the provision of healthcare and left households susceptible to agro-climatic variations. Floriculture takes advantage of relatively small plots of land when compared with commercial food production, and so allows subsistence farming to continue, although a small number of households have been displaced. Smallholders have been able to gain supplementary income, in addition to income from their subsistence and exchange agricultural income, from employment on flower farms. However, further research is needed to investigate empirically the net impact on food security for households that participate in manual labour in floriculture; the effect of the transferral of human resources when food prices are rising rapidly needs to be assessed in order for this to be factored into any policy analysis.

As discussed in Chapter 1, current accounts of the impact of participation as a labourer in NTAE production in addition to subsistence production are inadequate and, where available, flawed. Furthermore, as advocated by the GPN framework, the particular circumstances of Ethiopia make the impact of floriculture on food security a different consideration than those in Colombia as examined by Patel-Campillo (2010). In Colombia, the government has traded off workers' rights, and consequently their food security, as a means to improve the attractiveness of the country to international investors in the industry, in the face of competition both locally from Ecuador and from lower-cost producers such as Ethiopia. Although the evidence presented by Patel-Campillo (*ibid.*) is not robust, evidence presented elsewhere (Farne, 1998; Meier, 1999; Korovkin and Sanmiguel-Valderrama, 2007) shows workers capturing decreasing proportions of the value created in the GPN, with increased job flexibility decreasing income security. High rural unemployment levels mean positions will remain filled if conditions worsen. A government's failure to manufacture territorial embeddedness amongst investors can effectively necessitate subsidising industries in which they do not have a comparative advantage using the food security of the workers as their subsidy.

In Ethiopia, however, the situation regarding land rights, the attempts by the government to manufacture territorial embeddedness and the competitive advantage of the country in terms of international floriculture have allowed the government to pursue a more redistributive agenda. As discussed elsewhere in the present research, subsistence agriculture has occurred in addition to, rather than at the expense of, productive engagement in floriculture, due largely to Ethiopia's land policy. Labour shortages and CSR initiatives have resulted in improving rather than worsening conditions for workers in the industry. Ethiopia is also unlikely to have to compete on a cost basis with other production locations in the near future. This combines with measures aimed at increasing territorial embeddedness including endogenisation, infrastructural investment and encouraging investors to diversify their investment profile, to decrease the mobility of capital and thus increase the power of labour to dictate the terms of its engagement in the global floriculture GPN. As explored in the following chapter, this territorial embeddedness which has led to significant increases in food production forms the other part of the argument as to the positive impact of the floriculture industry on food security, summarised in Chapter 11.

Although wages are low by international standards, the many jobs that have been created by the floriculture industry now pay more than double the national recommended minimum wage on average. Wages have been inflated by the rapid rise in demand for labour both in floriculture and in related industries, meaning farms must pay higher wages in order to retain workers or to attract workers from nearby settlements. Furthermore, employment in the industry has been skewed significantly towards women, who make up 70-80% of the workforce. This is an additional

progressive impact of the industry as employment opportunities for rural women were previously very limited (Loening and Imru, 2009).

In addition to the positive developmental impact of the industry through the provision of employment in rural areas, non-monetary benefits have had a significant impact on the lives of many of the rural poor involved in floriculture. As well as the increased wages as a result of competition for labour, employers have begun to offer a range of other benefits and services in a wide range of areas in order to improve employee retention. As documented in Chapter 9, these non-monetary benefits are not universally seen as having a positive impact on poverty reduction, and have been brought about by the implementation of international standards and CSR initiatives.

Some firms have made less controversial investments which have had positive developmental impacts on the wider community in which they are located. Firms have contributed to building roads and other infrastructural projects in the areas surrounding their farms, which have assisted poverty alleviation by allowing rural populations easier access to markets and connections to urban areas where they may sell surplus produce and acquire goods. Primary evidence suggests, however, that contributions from growers in this area are over emphasised and the government is keen to increase growers' input to broader infrastructural projects:

> They are only investing in greenhouses and other things with loans from the bank. No capital. Not for infrastructure. Not Ethiopians let alone for foreigners. They don't like to spend on infrastructure. If there is five or two kilometre road they don't like to invest on it...we have to have all the time contribution for maintenance. And we are also identifying focus companies for coordination, for collection of maintenance and other things (IG4).

This links back to the initial and most important impact that industry has had on poverty: employment creation. Road building by the government and private firms has, along with another range of sectors that have grown from the industry as a result of multiplier effects, competed for the same unskilled labour, further contributing to the upward pressure on wages. Construction, like floriculture, is primarily a female occupation in Ethiopia meaning that these unskilled, previously marginalised labourers have found a range of new and relatively highly paid employment opportunities. Agricultural labour is more male orientated and, as such, no negative effects have yet been seen on small farmers as a result of increased wages. Significant underemployment still exists within floricultural areas. This pressure is further reduced by the fact that on flower farms, outside the peak employment period leading up to St. Valentine's Day, the majority of the tasks are conducted during the morning allowing labourers time to assist with harvesting tasks during the remainder of the day. It is possible that the biggest impact of floriculture on job creation in the coming years will occur through multiplier effects, as is documented in Chapter 11.

Through its impacts on job creation, household incomes, improvement of inputs and marketing opportunities for smallholders, food security, and non-monetary benefits such as healthcare, significant poverty gains are available from the floriculture industry in Ethiopia. Furthermore, the effect of greater availability of foreign exchange and, in future, fiscal revenues for the Ethiopian government, provides the possibility of additional progressive outcomes through spending on infrastructure and job creation in rural areas. However, it is important both in the conclusions drawn from this chapter and that of the subsequent chapter on multiplier effects, not to overstate the poverty impacts of the floriculture industry. Poverty is a chronic problem in Ethiopia and the areas that have benefitted directly from floriculture are not among the most food

insecure. The only way in which these areas could benefit is through the greater availability of food, the potential for which is described in the next chapter, leading to lower prices and through progressive government spending.

This chapter has displayed a more dispersed capture of value than is often found in developing country's engagement in GPNs. Domestic firms, labourers, foreign investors and institutional actors have all seen their objectives met to some degree. As territorial embeddedness of investors has grown with time in the country, the capture of value by local actors has increased, a process that looks set to continue. The following chapter examines one way in which the government has successfully manufactured territorial embeddedness and how value created at the site of production, prospects for the enhancement of value and the capture of value by local actors all look set to increase as a result.

11. Multiplier Effects

Industrial multiplier effects can be divided into three individual effects that occur as the result of the growth of one industry on the economy as a whole, assessed through a number of metrics including employment, output, income and gross value-added. Firstly, direct effects are simply the effects on the industry concerned, in this case flower farms. Secondly, indirect effects are impacts on related industries, most commonly suppliers, otherwise defined as the inter-firm transactions conducted to satisfy the direct effects. Finally, induced effects are effects attributable to products of direct and indirect effects. Induced effects include the spending by employees involved in both floriculture and the industries that support it, and profit reinvested by shareholders of firms in these industries in other areas which create further employment, output, income, or gross value-added. It is difficult to ascertain the degree to which induced effects, and to a lesser extent indirect effects, are attributable to direct effects. In this chapter attempts are made to determine the nature of multipliers that have occurred as a result of floriculture and assess the potential significance they may hold for the Ethiopian economy.

As outlined in Chapter 7, the primary objective of the government in the promotion of the flower industry is foreign exchange earnings. However, spillovers from the industry satisfy one of the secondary objectives of providing employment while simultaneously diversifying exports, making the economy less susceptible to fluctuations in individual commodity prices. This has the additional effect of increasing territorial embeddedness amongst foreign investors. Two concurrent multiplier effects have occurred as a result of the growth of the flower industry in Ethiopia. Firstly there is the indirect effect that as the industry has grown the demand for supplies to the industry has become sufficient for local investors to engage in import substitution in inputs. Further, as some producers begin to move towards direct marketing having attained the requisite levels of quality and consistency, the demand for locally-produced high-quality packaging has increased. These direct and indirect effects have proven to be of significant benefit to the broader economy emerging from the floriculture industry in Uganda (Asea and Kaija, 2000). Secondly, there is the induced effect of growth having occurred as a result of the flower industry in the related sector of high-value fruit and vegetable exports. This sector shares some of the same infrastructural requirements as the flower industry and the success of floriculture led many investors to diversify their interests into this sector. Both of these growth areas have led to an increase in demand in the services and construction sectors in the areas in which they are based.

Without further primary research it is difficult to accurately predict the multipliers that occur as a result of floriculture in Ethiopia. However, using two existing sets of research on multipliers, namely those that occur as a result of floriculture in other countries and statistics on cash increases for the rural poor in developing countries, particularly those from agricultural exports, some approximations can be made. The first of these data sets allows some inferences to be drawn about the multiplier impacts of the floriculture industry as a whole, while the second comparison allows inferences to be drawn about the multiplier impacts that occur as a result of the creation of value by a single input, unskilled labour, at multiple nodes.

The USDA recently produced a model predicting the multipliers, in terms of both jobs and output, of the floriculture export industry on the US economy. While this model cannot be used to predict multipliers from floriculture in Ethiopia, some useful inferences can be drawn with the following caveats. In terms of employment, the number of jobs created by floriculture in Ethiopia will be far greater than the number created by the industry in the US for two main reasons. Firstly, the issue of low productivity in Ethiopia raised in Chapter 9 means that, in all sectors, more jobs will be

created for every dollar generated in export revenue. Secondly, the nature of floriculture exports from the US is less labour intensive than those from Ethiopia meaning more jobs are created directly in the industry in Ethiopia. These jobs are primarily in the manual labour category identified in Chapter 9 and are taken by members of low-income households. As such, the jobs are likely to be far more transformative in Ethiopia than a similar job in the US, resulting in a higher proportion of workers' incomes being spent rather than saved, leading to the creation of further jobs. The figure for jobs created by floriculture in the US is approximately 12,000 per $1Bn US exported, which is likely to be far lower than the equivalent figure for Ethiopia.

In terms of output, the USDA model predicts $2.36 in total output/dollar in exported value from floriculture. This is likely to be closer to the equivalent figure for Ethiopia than the figure for jobs, as the inputs to the industry in the two countries are more similar. However, the US floriculture industry is likely to exhibit a far lower degree of import leakage with a greater proportion of the inputs being manufactured in the country. In the advanced economy of the US, the producer-output multiplier is likely to be primarily comprised of the externalities covered by section 11.1: associated support industries. The externalities addressed in section 11.2 - new industrial opportunities - if indeed a causal relationship can be established here, represents somewhat of a special case that would be unlikely to occur in an advanced economy. The likely result is that, in terms of output as well as in terms of jobs, if sufficient data were available to produce a similar model for Ethiopian floriculture, the multipliers from the industry would be higher than they are for the US (Edmondson, 2011).

It is useful to examine the multipliers for export floriculture from a different country, as floriculture possesses very different characteristics to both other agricultural exports and manufacturing exports in terms of its cost and revenue structure. However, for the reasons outlined above, the multipliers that occur as a result of export floriculture in a developing country such as Ethiopia will differ significantly from those in a developed nation such as the US. As such it is useful to briefly examine research on multipliers that occur as a result of sudden increases in income for the rural poor in developing countries.

The first example of such a case comes in the form of cash transfers. Cash transfers have become an increasingly popular means of targeting aid toward the poorest members of society in developing countries, intended to bypass inefficiencies including corruption. The impact of cash transfer programmes can be seen as similar to the impact of the floriculture industry in that they represent a sudden increase in income for people with either no income or very low incomes in rural areas. The majority of studies have found significant multipliers, as high as 2.6, as a result of cash transfer programmes (Sadoulet and Janvry Benjamin, 2001; Kakwani et al., 2005; Davies and Davey, 2008). However, two issues exist that prevent robust inferences being drawn from research on cash transfers. Firstly, if distributed efficiently, cash transfers reach the poorest people in rural areas and while those involved in unskilled or semi-skilled labour in Ethiopian floriculture are poor, their incomes will commonly exceed those of cash transfer recipients and, as such, the multipliers that result from an increase in income will differ. A second and related way in which multipliers from cash transfers differ is the situational specificity in which the transfers occur. As described elsewhere in this research, land policy in Ethiopia means that subsistence farming is widespread and so while cash incomes may appear to be similar, income from cash transfers and income from floriculture (assuming subsistence output can be maintained) will have very different impacts.

There is a body of evidence which suggests that, in developing countries, growth in the agricultural sector can have a substantial complementary impact in increasing broader economic

growth as the balance of payments improves and resources are freed for the import of strategic capital goods. There is a growth in demand in many sectors amongst the rural poor which provides sufficient markets for the manufacturing sector to expand (Timmer and Block, 1994; Thirtle et al., 2001; Delgado et al., 1994). Multipliers as a result of exported agricultural commodities are lower (Arndt et al., 2000). Bautista and Thomas (1999) investigate the multipliers that occur as a result of different agricultural sectors including food crops, traditional exports and NTAEs in Zimbabwe, and find that while all were significant (1.55-1.95), NTAEs result in lower multipliers as they are dominated by large-scale commercial (LSC) farms.

These examples from similar geographical, socio-economic and sectoral contexts indicate that significant multiplier effects will be seen from Ethiopian floriculture. The way in which multiplier effects are realised in both associated support industries and in new industries related to floriculture are now documented and the degree to which they affect the overall outcomes of the flower industry for local actors is analysed using the GPN framework.

11.1 Associated Support Industries

With the growth of Ethiopia's flower industry there has also been a huge growth in demand in all of its support industries. The industries that have benefitted from the growth of the floriculture industry include the supply of packing, chemicals and fertilisers, greenhouse materials, irrigation systems, building materials, transportation, and cool-chain facilities to complete what is by no means an exhaustive list. However, lack of capacity in many of these areas has meant that some inputs have had to be imported in order to satisfy demand and quality requirements. Endogenisation of associated support industries has been targeted by the government as a strategic priority for the industry as it serves to decrease the reliance on imports improving the balance of payments, has the potential to provide significant levels of employment, increase the levels of embeddedness amongst floriculture actors by establishing local supply networks, and incentivise investment in complementary industries. As such the government has extended the incentives offered to investors in floriculture to investors in many other areas including breeding and have begun construction of a substantial fertiliser factory to supply the industry.

Many jobs have also been created in the construction and assembly of infrastructure for the industry, including building greenhouses, roads, schools, hospitals, housing etc., and further jobs have arisen in service sectors which are needed both directly for the industry in areas such as accountancy and - for the foreign and local employees involved in the industry who are either new to the country or have increased levels of disposable income respectively - restaurants and shops.

The industries that have benefitted as a result of floriculture require different degrees of skill and capital input and, as a result, have been endogenised to varying degrees. In the initial stages of the industry, packaging materials were adapted from other industries and, as a result, did not meet the quality requirements of the industry. Several packaging firms, including one run by the government itself, imported specialist machinery and are now able to produce packaging to a standard whereby the vast majority of producers now use domestically produced packaging. This progress will soon be negated as the government is set to standardise packaging, initially only for roses, in order to increase export volumes and reduce loss rates, meaning the government packaging supplier is likely to be the sole provider (see Chapter 7) (IG2, IG4). The vast majority of other manufactured goods associated with the industry are imported but jobs have been created in sourcing and importing products. Figure 11.1 is a basic diagram of the positive externalities of one firm in which research was conducted.

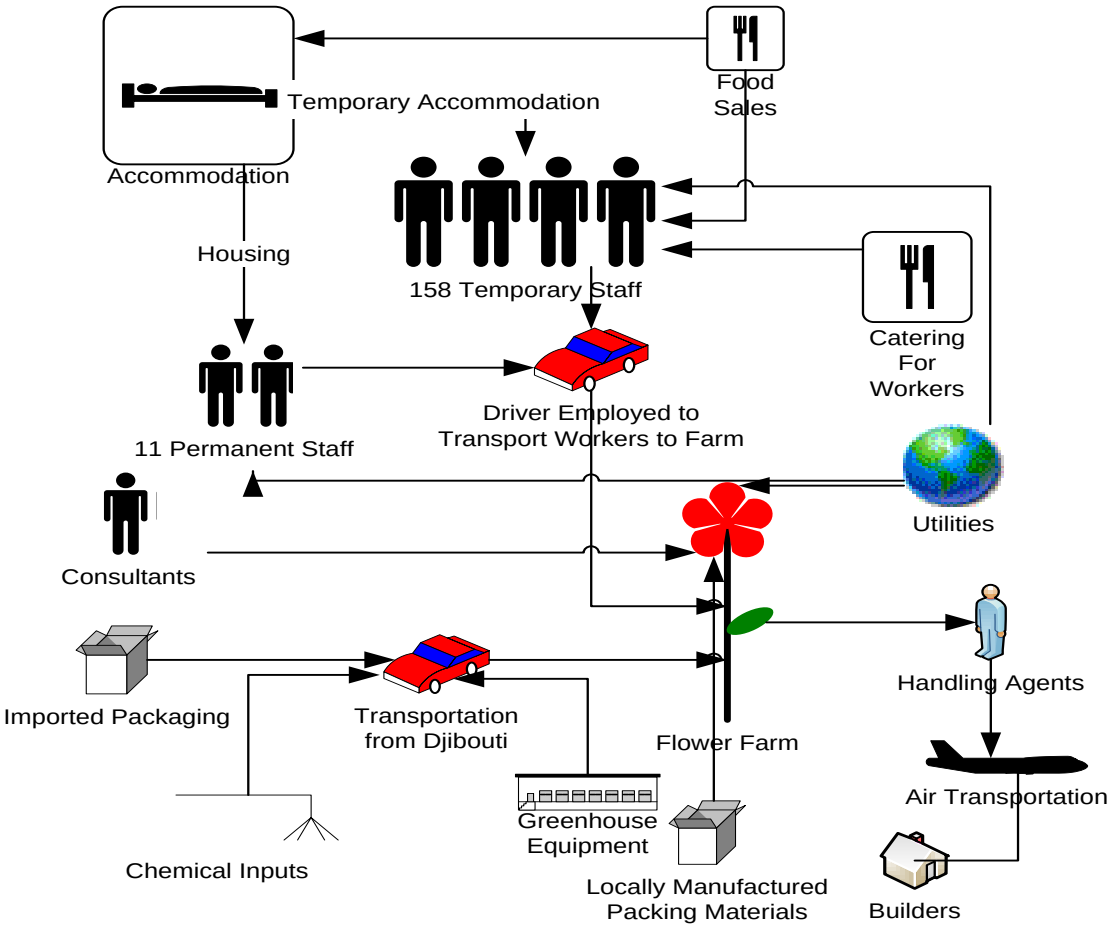


Figure 11.1: Positive Externalities of 13.6Ha Floriculture Farm

The studied firm employs a total of 169 temporary and permanent staff in their farm on which they have 12.3Ha under production (an additional 1.3Ha were under construction at time of writing). Workers require food and transport and some temporary workers also require accommodation and additional utilities. The firm imports from several companies which, regulations dictate, must use Ethiopian shipping agents, customs clearance and transportation firms. They also use some locally produced inputs where the quality and volume are available and competitively priced. The firm itself requires utilities including a private satellite connection for more reliable internet. They employ the services of export agents and air freight companies for the export of their goods, which have in turn had to employ builders to construct a new cargo terminal at Bole Airport. Although for practical reasons they could not be included on this diagram, positive externalities can be drawn down further by looking at the extra jobs created by, for example, the growth caused by the demand from this firm in a local packaging company and in turn the positive impact of those jobs for local service providers etc. The number of people employed directly in floriculture is smaller than the total number whose job is directly reliant on the industry.

From this example it can be seen that in terms of associated support industries, some potential exists for the indirect effects component of multipliers to occur as a result of Ethiopian floriculture. However, without further endogenisation of the peripheral nodes of the GPN, these multipliers are likely to be very small. Outside of the direct employment of manual, technical and managerial labour, and of consultants employed on farms, floriculture creates employment in a

number of low-waged sectors, from manufacturing supplies to logistics. However, the cost analysis in Chapter 7 documents how little of a firm's costs can be attributed to these functions. It is important for Ethiopia, then, that functions for which the requisite knowledge and capital resources exist, such as the manufacture of inputs, transportation and administrative functions, are endogenised in order to maximise the indirect multipliers from floriculture. Furthermore, endogenisation of flower farms themselves, through increasing the proportion equity attributable to local actors, results in greater indirect multipliers as more of the money earned is spent within the country (IG12). Therefore, provided the industry's aggregate growth does not suffer, endogenisation must remain a target of the government in the long-term.

While the government has been keen to encourage foreign investment in the floriculture industry and has designed the investment code to facilitate this, many areas of the Ethiopian economy remain protected from foreign investment. As outlined earlier in this research, the government feels sufficiently strongly about the protection of certain sectors from foreign involvement that it is one of the factors jeopardising accession to the WTO. Some of these sectors are among support industries that have benefitted from the growth of the floriculture industry, including the service sector which is largely protected for domestic investors. This means that while embeddedness of flower farms is limited by the level of foreign ownership, the sectors which have grown to support the industry exhibit a far greater degree of territorial embeddedness and, as a result, more of the value is captured by local actors. Despite these measures aimed at maximising the indirect effects of floriculture and the ability of local actors to capture the benefits of them, far greater potential exists for Ethiopia to benefit from multipliers through induced effects.

11.2 New Industrial Opportunities

The induced effect from floriculture that has the greatest potential for long-term growth is the burgeoning fruit and vegetable sector. Unlike with flowers, which many see as having found their 'natural home' in Ethiopia for the reasons outlined in Chapter 7, there are numerous possible production locations offering equivalent if not superior factors of production for the NTAEs which have experienced rapid growth in Ethiopia in recent times. Countries with superior ground transportation infrastructure and better sea access and shipping infrastructure, with similar surpluses of fertile land and low-cost labour and institutional environments conducive to FDI represent a far more attractive prospect to agricultural investors. So why have NTAEs expanded so rapidly?

As with all multiplier effects, robust causality can be difficult to establish. In this section an attempt is made at triangulation using evidence from primary research including analysis of trade data, analysis of secondary documents on changes in government policy and, finally interviews with flower farm owners who have diversified into food export and foreign investors that have entered other NTAEs directly. Using this triangulation of evidence it is argued that the pace and extent of the growth in NTAEs is directly related to the growth of floriculture. The possibility of the growth having occurred as a geographical spillover from the growth of NTAEs in Kenya is not engaged with fully due to a lack of primary evidence from Kenya. However, the length of time between the growth of the industry in Kenya and that of Ethiopia, together with the number of differences in key variables affecting investment such as policy climate and factors of production, mean that this cannot reasonably be considered a regional spillover.

While the global market for cut flowers has existed for hundreds of years and continues to grow annually, flowers are fundamentally a non-essential commodity and, as such, are susceptible to fashions and trends; indeed the effect of the Global Financial Crisis on flower prices at auction displayed the potential pitfalls of an overreliance on this single commodity. Additionally, while roses produced in Ethiopia and sold in Europe result in significantly lower carbon emissions than those grown in Europe, the impending and unknown realities of fuel price volatility and climate change may result in a shift in public opinion making the purchase of flowers, regardless of their origin, socially unacceptable. Conversely, food is fundamental to human existence. Food prices continue to rise owing to a number of factors documented extensively elsewhere (Headey and Fan, 2008; Mitchell, 2008; Trostle, 2008) including an increase in demand caused by a growing population and rising incomes in populous nations. Whilst there is a movement towards lowering 'food miles' in order to mitigate the carbon emissions from food transportation, the limited production area and necessity for year round supply and diversity of produce means the demand for production from the developing world is only going to increase. Furthermore, unlike with flowers, there exists the potential to create a significant domestic market for food commodities produced for export. Indeed, a significant amount of the investment that has flowed into the production of food commodities in recent years is intended primarily to satisfy domestic demand.

Here, the trade data for cut flowers is analysed alongside data for other NTAEs from Ethiopia in order to both display the growth of NTAEs and to display the chronological patterns of growth in various commodities.

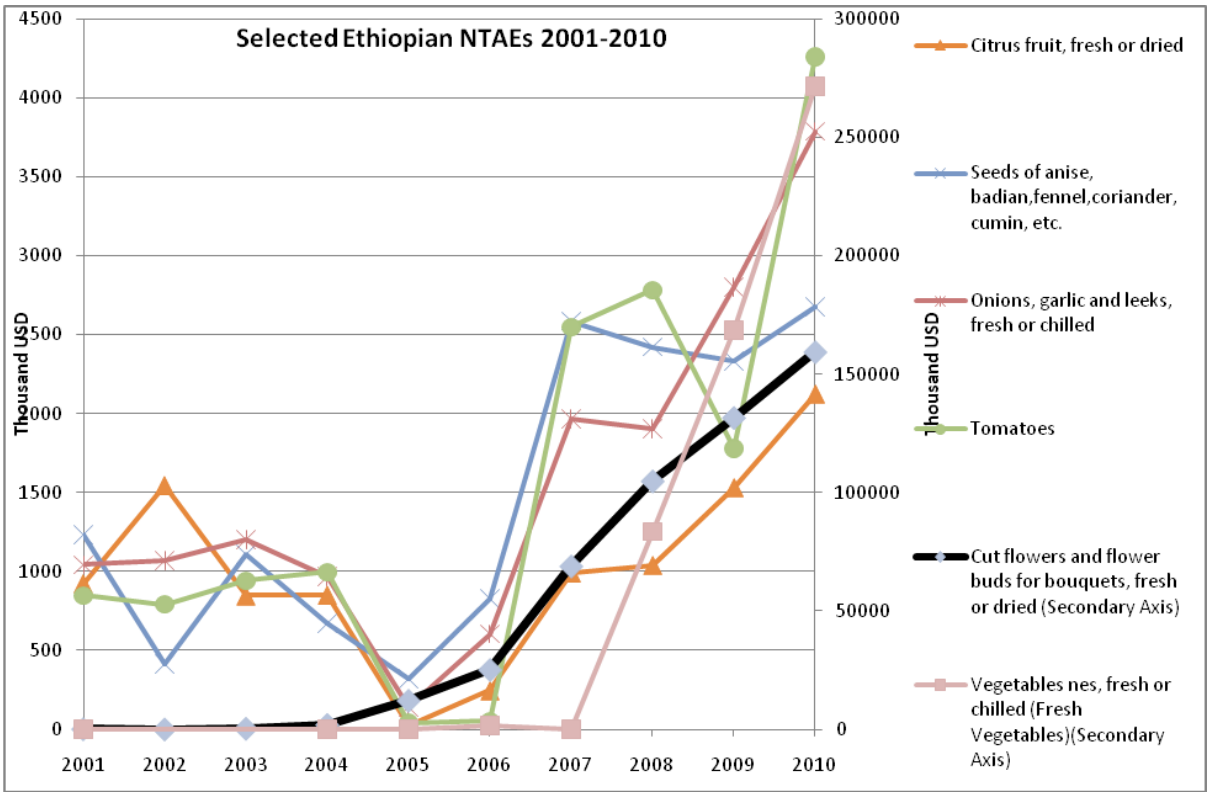


Figure 11.2 Ethiopian Exports of NTAEs; Source: (International Trade Centre, 2011)

Figure 11.2 displays the export receipts for a number of NTAEs over the past decade. In order to display trends, the figures for cut flowers and vegetables are displayed on the secondary *y* axis as the receipts from these two commodities exceed those of the other NTAEs by up to 20 times. The

commodities displayed were selected according to a number of criteria: i) total receipts for the second half of the decade exceeded those for the first half of the decade, making it plausible that floriculture had influenced the growth of the industry; ii) a figure of at least $1000 US must have been recorded for at least five of the ten reporting years, making it possible to assess trends; iii) receipts greater than or equal to $50,000 US must have been recorded for 2010, meaning the commodity must have grown sufficiently to comprise notable part of the country's current export profile. Floriculture is likely to have influenced export industries where receipts do not yet total $50,000 US as they are still in the very early stages of growth but these industries cannot yet be analysed quantitatively.

The first point to address from Figure 11.2 is the relationship between exports of flowers and vegetables. The export of cut flowers remained fairly low in absolute terms until 2004 when growth rose rapidly to a high and sustained level until 2010. Exports of vegetables, however, remained low until three years later when they began to grow at an even faster rate than floriculture, overtaking the total export receipts for floriculture by 2009; this growth continued in 2010. This reinforces the qualitative accounts of several floriculture farms which had entered the industry in 2002/3 and begun to export by 2004/2005 diversifying their exports and looking for alternative investment opportunities in food markets, having established themselves as floriculture exporters. Further, it fits with the narrative that external investors saw the success of floriculture exporters utilising similar production conditions before investing in the industry. Additionally, suggestions that the growth of new industrial opportunities occurred not as a result of an induced effect from floriculture but rather as a result of a change in government policy are chronologically dispelled by these statistics. The government's decision, as part of the GTP, to allocate three million hectares of land for investment in agriculture, occurred in late 2009, two years after the rapid growth of vegetable exports began. This policy decision merely represents an extension of the policies contained in PASDEP and was designed to capitalise on and accelerate the successes of this growth sector rather than induce them.

The second point of analysis from Figure 11.2 relates to what are currently the lower-earning commodities displayed on the primary *y* axis. Until 2004, all of the displayed commodities exhibited low and erratic export levels, up to $1.5m US. All commodities, with the exception of fresh fruits, experienced a rapid fall in exports during 2005 and 2006, at a time when floriculture exports were growing rapidly. Evidence contained elsewhere in this study confirms that this did not occur as a result of a production switch as no floriculture firms were previously engaged in food production in Ethiopia. Since 2007, exports of these commodities have universally experienced rapid growth and all have reached their peak at the end of the recorded period in 2010. The growth of all of these commodities suffered to some extent as a result of the Global Financial Crisis, which, as with floriculture, affected exports most severely in 2008. While the precise patterns and rates of growth of this selection of NTAEs vary, all serve to reinforce the narrative that the rapid growth in these commodities was correlated with growth in floriculture approximately three years earlier.

Year	Exported Volume (Metric Tonnes)	Exported Value (Thousand USD)	Average Value (USD)/Tonne Exported
2002/03	25300	9600	397.4
2003/04	28452	6870	241.5
2004/05	37645	15971	424.2
2005/06	35294	14071	398.7
2006/07	41028	16373	399.1
2007/08	41117	18526	450.5
2008/09	44300	20000	451.5
2009/10	63140	30000	475.1

Table 11.1 Fruit and Vegetable Export Performance; Adapted from (Joosten et al., 2011)

Table 11.1 displays that in addition to the above analysis which shows the scale of growth in food exports from Ethiopia, the nature of exports has altered in terms of value. There has been a significant growth in average value/tonne of exported fruit and vegetables in recent years. This could be reflective of either a switch to the production of higher value commodities, supply-side drivers, an increase in the quality of exports, or of changes in global food prices and is likely to be partially attributable to a combination of these phenomena.

The second element of the triangulation of evidence to prove causality between the growth of the floriculture industry and the new industrial opportunities that have arisen subsequently is the analysis of government policy on the industry. Ethiopia's Poverty Reduction Strategy Paper (PRSP), 'Sustainable Development and Poverty Reduction Programme' (SDPRP), delivered to the IMF and World Bank in 2002, was the first official indicator of the government's pro-floriculture policies as displayed in this extract from the document:

> The enhancement of exports plays an important role in availing foreign exchange for the procurement of new technology and to achieve competitiveness in the international market. The availability of more foreign currency enables increased processing of agricultural raw materials for export enabling a higher number of people to live on off farm activities. This will in turn lead to freeing land for fewer and more efficient users who can increase the rate of production. Furthermore, the introduction of high value agricultural products for export will bring about diversification in the peasant private sector, increase household income, expand the market for both excess agricultural production and local manufactures and create more urban rural integration and commercialization of the agricultural sector in the longer term.
> In recognition of the above, profitable opportunities will be created for private sector driven exports arising from:
> • The production of high value agricultural products such as horticulture including cut flower and organic coffee (MOFED, 2002)

Subsequently, PASDEP (2006) noted the 'real success stories in new businesses such as the flower industry' and identified further measures to be implemented in support of the industry as detailed here:

With regard to the production of flowers, it is targeted to intensify the initiated flower production in areas with altitude of 1,600 2,600 meters above sea level. Accordingly:

- Out of a total of 2,031 hectares of land leased to investors, the land covered by green houses is expected to reach 1,600 hectares;
- To put an additional 400 hectares of land under green house shelter;
- By the end of the plan period, a total of 2,000 hectares of land will be utilized for flower production; of which 519 hectares of land will be cultivated in 2005/06;
- Gradual transfer of state owned farms; of which 3,000 hectares of land will be cultivated to produce vegetables and fruits for export purposes;
- By the end of February 2004/05, the 322 hectares of land covered with flower production generated employment opportunities for 21,356 people; of which 64.4% are women. From those employed for related construction works, 71.4% are male; and,
- By the end of the plan period, the industry is expected to create employment opportunities for more than 70,000 people.

...The largest success story in the recent past has been the expansion of the cut flower industry. The Government has been instrumental in supporting the industry through refining the ongoing duty drawback scheme, voucher, and bonded manufacturing warehouse schemes, ensuring access to land and finance. As a result, the activities undertaken during the past three years contributed to better performance of the export sector. The objective is to expand this kind of experience to other sectors. Accordingly, the Government is undertaking sector and product specific studies to help identify market opportunities and constraints, and to provide fuller information to potential exporters. Among the most promising export items are: oilseeds and pulses, and in the near future the export of selected specialized crops that can be grown in Ethiopia's high altitude environment and/or at times of the year when they cannot be produced elsewhere (examples include cardamom and other spices, selected legumes, vegetables and fruits), increased export of meat, of hides and leather goods, and of garments and textiles, and development of tourism.

(PASDEP, 2006)

This clearly outlines that, from a government perspective, it was the success of the floriculture industry that led to refocusing policies towards other complementary industries. The measures outlined in the SDPRP were aimed at export promotion in general and were by no means specifically targeted at floriculture. However, in the period between the design of the SDPRP and PASDEP, it was floriculture which experienced the greatest success as a result of these measures, which then led to further incentivisation of investment in this industry to build on that growth. It is, then, at this stage that 'winners' are 'picked', carefully observing the response of target industries to various incentives and then focusing on these industries. No mention is made of attracting foreign investment to or developing fruit and vegetable production in the SDPRP. In PASDEP fruits and vegetables are identified along with cereals, oilseeds, pulses, fibre crops, coffee, tea and spices, as 'agricultural crops that will receive special focus' during the five-year period the plan covers. However, the main policy motivation in this regard is to increase production through technical assistance and varietal selection with the primary focus being on the domestic market. Despite this, export-orientated infrastructural measures are included in the document including the construction of 11 cold storage facilities.

The plan targets annual earnings rising to $120.03m US from fruit and vegetable exports by 2009/2010. In reality, fruit and vegetable exports amounted to in excess of $300m US in 2009/2010, greatly exceeding the target set by what was an 'overly ambitious' plan (EIU, 2008; 17). This makes the argument for policy change being the driving force behind the massive growth in NTAEs weak. With the GTP, again policy seemed to be reflective and supportive of recent

growth trends in the economy rather than selecting strategic sectors with the greatest potential for achieving the country's economic objectives, stating in September 2010 for the period 2010/11-2014/15:

> In the highlands and areas close to major cities, the private investment activities will be centered on high value horticulture products that can be produced on limited land, using abundant labor, thus generating large employment as well as supply for export (25).

This policy came after large numbers of farms had not only set up operations but had been experiencing remarkable growth rates, with exports of fresh vegetables outstripping those of cut flowers. Indeed in the period 2004-early 2009, 157 investment projects were allocated to foreign investors on land totalling over 600,000 Ha (Cotula et al., 2009). It is not the task of this research to ascertain definitively the events or motivations that led in 2009 to the government deciding to accelerate the pace of growth in agricultural exports with the allocation of huge swathes of additional land for agricultural development. However, the evidence contained here serves to invalidate the claim that it was the change in policy that led to the recent growth of agricultural exports.

It is highly likely that some growth in these new industrial opportunities would have occurred without the growth of the floriculture industry, as has occurred in a number of other African nations with similar factor endowments. However, this research argues that through both the expansion of floricultural firms and through the pioneering and successful example set by floricultural firms to potential investors in complementary sectors, the pace and extent of growth in these new industrial opportunities were greatly increased. The statistical and policy analyses to this point have highlighted the extent of the growth in NTAEs and how it chronologically followed the explosion of investment in floriculture as well as the fact that policy built upon rather than created the growth in these exports. What follows, then, is an analysis of primary research displaying the extent to which floriculture was involved in the entry of firms, both floricultural and non-floricultural, into the production of other NTAEs. Further, it is shown that the territorial embeddedness, which this research sees as vital to the capture and further creation of value, has been an important factor in the expansion of firms into other NTAEs.

Following successful entrance into export floriculture many flower farms started to expand their plots and use many of the same growing, transport and export capabilities used in the flower industry to produce food commodities. Some farms, with limited growing space, have begun to remove less productive flower varieties and grow fruit and vegetables under greenhouses. This has occurred partially in response to demand side-drivers with a large increase in year-round demand for exotic fruits and vegetables, particularly in the Middle East, from where a great deal of new investment has arrived in the sector (Victor, 2007). Many of the larger investors in floriculture have, using their experience in agri-business in Ethiopia, either expanded their floriculture site(s) or sought new production sites in different climatic regions for the production of export food crops. One notable example is the 139,000Ha of a proposed 500,000Ha currently being developed by Ethio-Saudi Sheikh Mohammad Al-Amoudi's Saudi Star Agricultural Developments company (Zenebe, 2010). Indeed, Al-Amoudi initially entered the horticulture industry in Ethiopia with the purchase of a flower firm, in which he subsequently employed the former owner as the general manager. Within two years the firm had switched production away

from flowers to exotic fruits and vegetables for export to the Middle East which now constitutes the vast majority of the firm's production (IG3; IG26).

Similarly, Karuturi, the world's largest producer of roses, entered Ethiopia in 2004 to begin production of Tee-hybrid roses in Holeta. The firm leased an initial 50Ha of land gradually increasing the area under production. They now have one of the largest areas of roses under production in Ethiopia at 75 Ha, but in 2007 began to diversify their production into food products, in which they have since invested heavily. The company now sees Ethiopia as its primary food production location and will have 300,000Ha of mainly palm oil and cereal crops under production by 2013. This provides a further interesting opportunity as some of these products are not initially intended for export but rather as import substitutes. Ethiopia currently imports 90,000 tons of palm oil annually and the Karuturi project plans to add 100,000 tons to domestic production (Vidal, 2011; IG3; Karuturi Networks Limited, 2011; Indo-Asian News Service, 2011; The Economic Times, 2011).

Overall, from the primary survey data collected from 64 of the 68 exporting firms in 2008, 14 farms had begun some production of food items. Of these firms, six had sought alternative production sites solely for the production of food. At this time the majority of the firms that had begun production of foodstuffs had done so in order to test the production conditions and the markets for their produce:

> I have been looking for ways to spread my investment. You tell me how to make money! I'm trying some vegetables and fruit on the farm and I'm looking at a really cheap site in the south where we can grow cotton or tobacco or something, the land and conditions there are really cheap (IG13).

Since this time, the rapid upsurge in food exports has not occurred as a result of a switch of flower producers into food production, although the exports of Saudi Star Agricultural Developments, Sher and Karuturi have made a significant contribution. The majority of exports have come from the introduction of new foreign investors including 20,000 hectares developed by the National Bank of Egypt, (Afrik-News, 2010; Galal, 2010) and 100,000 hectares of land developed by Punjabi farmers in Gambella and Tigray (Global Sikh News, 2010). Several large fruit and vegetable producers which have export operations in other developing countries, including Kenya, have begun the process of setting up farms for export to various stages of completion. Many respondents not involved in floriculture directly alluded to the fact that the entire horticulture sector is connected through their related GPNs which had an influence over investment in growing food products in Ethiopia (IG12, IG26):

> Everyone was aware that something big was happening in Ethiopia. We all talk, you know. And big, big players were investing and having success there. We use a lot of the same stuff you know, fertilisers and these things and also people. So we began to look more seriously and now we have moved [to Ethiopia] (IG26).

A small number of farms have also now begun processing fruit and vegetables to produce, amongst other commodities, fruit juices, in final sales packaging (Maritz, 2011; IG8; MIGA, 2011). This is conceptually interesting as it introduces prospects of upgrading from the GVC literature. In floriculture, this study has found opportunities for industrial upgrading to be few. While some have progressed in their production processes so that they can export a product in 'ready-for-sale' condition and others have begun production of bouquet materials for local assembly, there

is limited opportunity for movement into the higher-value added sectors such as breeding, because of its knowledge or capital intensive nature. In fruit and vegetable production, however, there are a number of different ways in which upgrading is possible for Ethiopian producers, exemplified by the production of fruit juice. Unlike with flowers which are essentially sold in a similar state to that which they are harvested, fruit can be pulped for juice, dried as a snack, canned and processed into other products such as baby foods or fruit purees amongst a wide range of other ways in which value can be added to the product. Such processes would enable local actors to capture more of the final sales value of the products, creating more new jobs by continuing to exploit the advantages of low-cost labour.

Overall the government plans to lease three million hectares of land in the five years to the end of 2015, costing around $10/Ha/year, with conditions including the satisfaction of domestic demand for a commodity before it can be exported, which will potentially have a positive impact on domestic food supply and, by extension, poverty (Butler, 2010). There are a huge number of issues raised by this land policy. Opinions range from those who view it as a 'land grab', with investors acting as the new colonisers causing internal displacement and greater rural poverty, to the government perspective of this being effective resource utilisation based on factor endowment leading to a path out of poverty (Kugelman and Levenstein, 2009; Cotula et al., 2009). It is, however, beyond the scope of this research to engage with this debate, seeking instead to begin to examine the links between floriculture and the broader expansion of agricultural exports. This extract from an interview with a major floriculture investor who has now diversified his investment portfolio into a range of other agricultural commodities shows the enthusiasm for these new investment opportunities throughout this sector:

> Everyone is investing in China for manufacturing, everyone is investing in India for services, everyone needs to invest in Africa for food (IG3).

Now that both the floriculture industry and other NTAEs have become established, new investors continue to be attracted to each sector individually but also, as infrastructures for the supply and transportation required for the industries have been established and institutions developed, investors who have interests in both flowers and fruit and vegetable production now see the fact that the country has producers established in both sectors as a distinct advantage of Ethiopia over alternative production locations (Fresh Plaza, 2011).

The final element of the evidence for the early reliance of the horticulture industry on the development of floriculture, and later the symbiosis of the two, is their shared infrastructure. Firstly, the on-farm cooled storage facilities allowed the flower farms which did expand into horticultural produce to do so at relatively low cost. The cooled grading, sorting and storage facility built for floricultural produce at Bole Airport was also adapted in the early stages of export horticulture to accommodate food produce. Later a more specialised facility was built to accommodate the growth of both industries. Roads have been improved in the areas leading to major floricultural developments but this is part of a far more extensive road building programme and it would be difficult to prove any causal link in this area (IG4).

11.3 Developmental Implications

The government has seen the development of the new industrial opportunities as a chance both to diversify the risk involved with reliance on a single crop and to geographically spread the benefits of the industry. It must be recognised, however, that the growth of export horticulture

has not occurred in any way at the expense of export floriculture and the two sectors are, in fact, complementary (IG8, IG12).

As such the EHDA has improved the already attractive investment code for investors in more remote regions where airports in Bahar Dar, Mekele, and Dire Dawa, are being upgraded to international status with cool-chain and phytosanitary facilities (IG4, IG15):

> ...the horticulture sector, we are looking today at only around Addis. This is because of the infrastructure, facilities and other things...There is a direct international flight from Bahar Dar to Netherlands, we have arranged that. We are also doing the same thing from Mekele...And by doing this we are expecting that we have to attract a lot of investors...we want to keep this package...we are struggling to make improvements for those who will go to Bahar Dar, Mekele. Instead of 70 30 we are planning to make it even 90 10 (IG4).

However, the problems with the cool-chain that still exist at Bole Airport, despite the high level of investment in recent years, are likely to be far more severe at these airports where facilities are beginning at a lower standard (IG15). The EHPEA has set a target from the combined floriculture and fruit and vegetables sectors of $1.9Bn US/year in sales by the end of 2014. This is a perfect example of what Coe et al. (2008a) see as the potential of a flexible labour market to create economies of scope through the 'untraded interdependencies' of the industries. As Coe et al. (*ibid)* postulate, the role of the local institutions, in this case Oromia state and the national government, has been instrumental in the upskilling of labour in the region and, in particular, in transferable skills, manifested in part through the education programmes at Jimma and the training programmes implemented by the EHPEA.

This broader horticulture industry is potentially of far greater direct benefit to smallholders and the rural poor than the floriculture industry. In the late 1990s the population of Ethiopia was estimated at around the same size as that of the UK with a land area approximately five times as big. However, the rapid population growth rate (regardless of contestation of its exact degree), has led to population having increased by anything up to 50% little more than a decade later, which has increased pressure on the food supply significantly. When this fact is combined with the pattern of land ownership in Ethiopia, the potential importance of a sector which could simultaneously increase domestic food production, decrease the reliance on imported food and earn foreign currency becomes evident:

> Ethiopia is quite a big country but the population of Ethiopia is growing enormously. And all these people need feeding and if Ethiopia's going to feed these people the subsistence farmers who now feed themselves, have to feed themselves and somebody else. There are two ways of contributing to food security, one is to increase people's ability to earn money either by farming or in a job and the other is to produce more food (IG12).

As part of the GTP, the government has, for the first time, begun to focus policy on integrating smallholders into high-value export markets, such as fruit, vegetables, herbs and spices. However, the nexus of developmental potential and investor profitability available through such integration had been recognised and successfully implemented in Ethiopia in the years leading up to the formulation of the GTP and the government is, again, trying to reinforce and extend the gains already made. The EHPEA has established a project funded by the CFC in Ziway whereby farmers are trained in pest management and good agricultural practices so that they can be integrated

into the network for food exports. A pack house has been built for communal use in post-harvest management. Initially the project was used to allow farmers to sell their produce to the large foreign exporter who operates a farm in the area. The project was established after an international vegetable exporter sought to increase production but, due to the subsistence farming which bordered the farm site, could not increase production area. As such he sought to incorporate smallholders into the production of export crops through his firm. The project has now been developed so that a cooperative of farmers also have the option to export products for themselves with a view to obtaining a fairer price for their produce (IG7, IG8). One respondent summarised the broader benefits of this project:

> ...a project like this contributes in two ways. It gives [farmers] better market access and therefore helps with money but it also gives them better technical agronomy skills which don't just apply to the crop they're growing for export but they can apply to their whole farm (IG12).

Therefore, in terms of output, in a country where subsistence farming remains the primary source of calories for the majority of people, the improvement in agronomy skills that can occur as a result of such a project could be positive in terms of overall production, although this will evidently vary depending on the type of crops being grown and transferability of the skills learned. The real impact of both the improved market access and the diffusion of agronomy skills is likely to be slight given the size of the project in relation to the scale of smallholder agriculture in Ethiopia.

The farmers involved in this cooperative have been organised so that chemical inputs are allocated on a 'prescription' basis. One farmer, on a rotational basis, receives supplementary income and training to allow them to dispense chemicals and advice on their proper use on a daily or weekly basis. This minimises the risk to both the health of the farmers and the quality of the produce (IG8). There are also a number of changes in the attitudes of the farmers and the practices engaged in on the farm, which are required in order for the farmers to be successful in the industry. In the implementation of the project the EHPEA have experienced difficulty in getting farmers to comply with sanitary requirements in separating the human excretory fertilisation practices which are both common and beneficial in areas where inputs are scarce (Baumgartner and Belevi, 2001), from the requirements for the export of foodstuffs. Toilets are now being provided on farm sites and their use is increasingly becoming standard practice. In terms of attitudes, it has been difficult to convince smallholders to upgrade the percentage of their profit spent on packaging for transport. Smallholders have traditionally been prepared to accept losses of 30% of their produce in transport to market locally as a result of poor packaging instead of investing more heavily in packaging to mitigate losses. When goods are transported to Europe, the relative costs of losses are increased exponentially due to transport costs and so it is important to minimise these losses, which the EHPEA are attempting to do with the construction of a centralised pack house for all of the farms involved in the scheme (IG8).

This scheme is already being emulated by private actors in the industry, who see it as satisfying the dual objectives of profitability and compliance with the broader CSR objectives discussed in Chapter 9. Indeed Sher, as one of the biggest rose growers in the world, began trialling tomatoes and capsicum on their Ziway site soon after relocating to Ethiopia. The success of this trial led to the building of a 10 hectare site in Awassa at a cost of €75m. Plans are now in place to extend this with the implementation of an outgrowers scheme in Meki where the company will construct a

packhouse and management facilities (Zenebe, 2008; IG17). Indeed the Meki-Batu Farmer's Cooperative Scheme now supplies crops to a number of different fruit and vegetable exporters (Joosten et al., 2011; ACDI-VOCA, 2011). Outgrowers are also now involved in the GPN for commodities being processed in Ethiopia such as fruit juice, where they are benefitting from better access to irrigation, fertilisers, and pesticides which assist in subsistence production as well as supplementary income (MIGA, 2011). The benefits realised by employees in floriculture, such as better wages and conditions than in other unskilled employment opportunities, are likely to be repeated to some degree in export horticulture as suppliers are subject to the similar international standards demanded by buyers (IG4).

There is a possibility that the example set by the fruit and vegetable sector will have an exoteric effect in facilitating the inclusion of smallholders in the export floriculture market through their inclusion into a cooperative, as has occurred in Kenya. While the barriers to entry into the market for greenhouse grown flowers put the industry beyond the reach of smallholders, some open-field summer flowers possess the natural attributes to allow the integration of farmers with any land area. In Kenya, *Onetha Harlem* has been grown by small farmers on plots from a single square metre up to 50 square metres. Bulbs are harvested for replanting, allowing farmers to minimise the cost of inputs, and the flowers - a variety which is relatively robust in transit allowing for poor post-harvest handling - are collected by a central packing and export unit. Farmers receive payment as soon as the flowers are delivered to their local collection point (IG8). While this has been successful on a small scale and is encouraged by international institutions such as CFC, it is unlikely to form a major contribution to the export floriculture industry and is unlikely to provide additional income for the majority of the rural poor in Ethiopia.

This integration of smallholders into the food export markets is one aspect of the broader argument of how floriculture has, in the case of Ethiopia and in contrast to arguments of Patel-Campillo (2010), contributed to increased food security. This is a controversial and multifaceted debate but the main arguments for a positive contribution to food security being made by floriculture are summarised here. Firstly, incomes of labourers are increased. Wages are significantly above the market rate and have increased in line with or in excess of inflation. Whether this is spent directly on food or invested in other assets in order to generate further buying power, this has increased the purchasing power of households to feed themselves.

Secondly, total food production will increase through the induced multiplier effects outlined in this chapter. The effects on domestic food security are increased by the government's requirement to satisfy domestic demand before engaging in export. Although the conditions of this government policy, and the concrete measures the government intends to employ to ensure its execution, are unclear, if successful this would likely reduce the price of food in the domestic market and increase stability of supply. This will be of particular benefit to those in urban areas without access to subsistence production. However, empirical observations are not possible at this time due to the early stage of export production of the majority of commodities and the fact that the government has artificially capped prices for a number of key commodities to 'address the prevailing unhealthy market competition'. This means that the upward pressure on prices of increased wages and the downwards pressure on prices from increased production are obscured by food price caps at below market rates (Davison, 2011). It remains to be seen how long these caps will remain in place, which represents an interesting avenue for further research.

Thirdly, the improved supply of inputs and dissemination of improved agricultural techniques will have the effect of further increasing yields, hence increasing total food production. While there will be increased demand for some of the inputs used by smallholders, the efficiencies that arise from the establishment of supply lines and, in certain areas such as fertiliser, the increased market size leading to import substitution, will lead to lower cost inputs, potentially resulting in greater utilisation and therefore yields amongst smallholders.

A final impact of floriculture on food security comes through its impact on infrastructure. Smallholders in the area of flower farms are allowed free access to the boreholes, improving their ability to irrigate and therefore improving yields. Furthermore, the infrastructural improvements including road construction which, whether financed directly by the farms or by government in order to facilitate exports from the industry, have facilitated the marketing of surplus produce by smallholders, further contributing to food security.

There are, however, potentially some negative impacts on food security as a result of the flower industry, which can be summarised as follows. Firstly, as stated elsewhere in the present research, there exists the potential, if floriculture continues to grow, that labour resources will begin to be drawn from other sources including the seasonal labour pool required during harvest periods. This could increase the price of agricultural labour with the two possible effects both leading to rising food prices. Firstly a reduction in available agricultural labour could reduce total food production and therefore increase prices. Secondly, the increased cost of labour will mean that in order to cover costs, food prices will increase. While the primary labour source for floriculture is underemployed female labour which does not have a direct impact on agriculture, female labour is used in other aspects of agricultural production such as marketing and processing and so their integration into employment in floriculture will have an impact. A mitigating factor in this calculation is the provision of healthcare through CSR to workers and their families, which will have a noticeable impact on the availability of labour to smallholders, who commonly rely on a small, healthy family workforce. An additional consideration is the potential for imported food to meet domestic needs and therefore limit prices. However, the gap between key agricultural products for food security in terms of domestic and imported prices – once tariffs have been applied and excluding the impact of food aid – is large enough that the impact of imported food on limiting prices rises is unlikely to be a factor.

Secondly, the main way in which floriculture - and the industries that have grown as a consequence - could impact negatively on food security in Ethiopia is if there is a change in several of the policy conditions which have enabled the current situation to emerge. If smallholders were to be dispossessed of their land - whether through a general change in land policy or through the expansion of commercial agriculture - then their ability to produce their own food would be reduced, while their reliance on wages from other agricultural labour would increase. As identified above, if labour demand does continue to increase, particularly if there is a change in land policy, then migration and therefore labour supply will also increase and the conditions for labourers are likely to worsen. The food security of households would consequently decrease. Finally, if food producers were not obliged to satisfy domestic demand before engaging in export then it is likely that commodity prices would increase and food security would decrease.

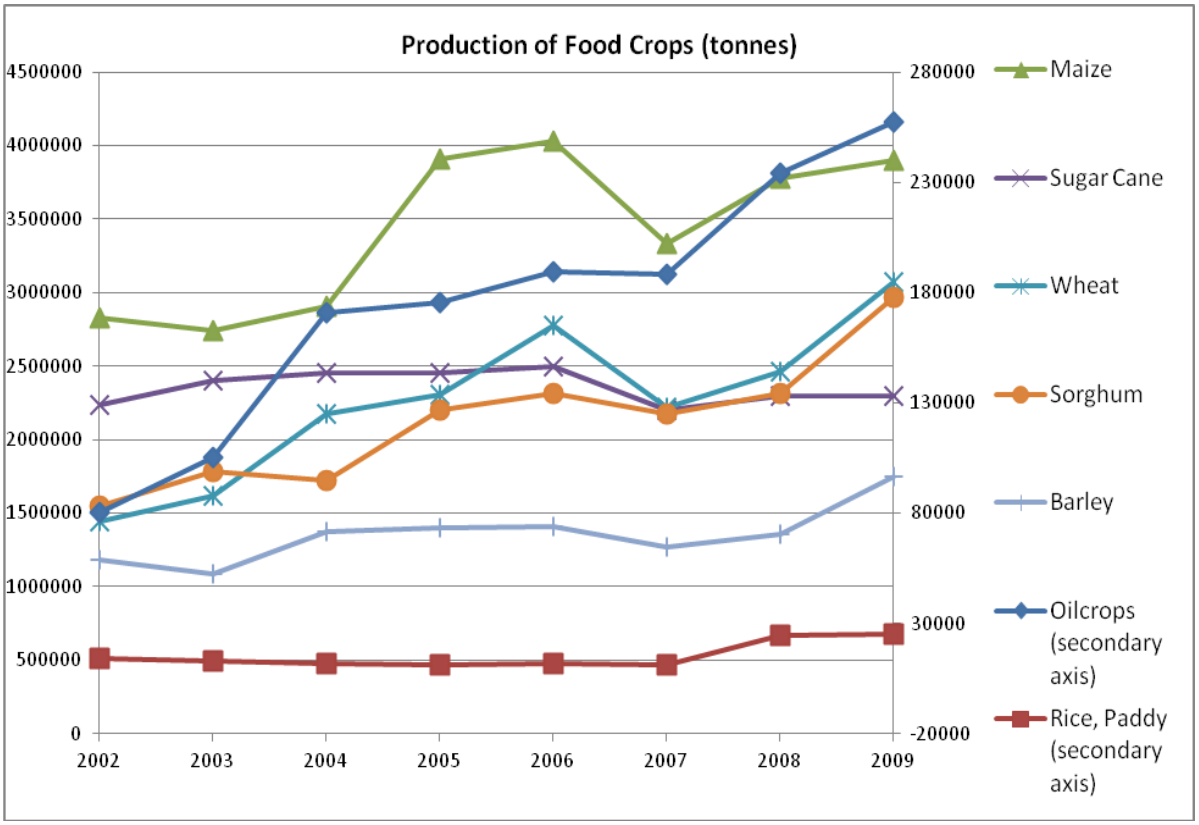


Figure 11.3 Production of Major Food Crops; Source FAO

Figure 11.3 shows recent production of five major and two lower-volume food crops. In all of these crops production has increased since 2007, when the major expansion of new industrial opportunities from floriculture began, with the exception of sugar cane production, which has been stable. Although relatively early to identify trends, particularly as some short-term variation in production is likely to be partially attributable to weather variations, these early indications show that total food production is set to increase.

In summary, floriculture and the industries that have grown as a result of the industry, have, to some degree, had positive developmental outcomes including increased food security in Ethiopia. However, these gains could be reversed if changes occur in the policies and labour market conditions that have allowed these gains to occur. Furthermore, the areas in which these new production industries have arisen are not those areas which experience the greatest food insecurity and so, on a macroeconomic level, the impact should not be overstated.

12. Discussion and Conclusions

In this chapter the research questions from Chapter 1 and the more conceptual analytical schema in Chapter 2 are returned to, so that the key findings of the thesis may be extrapolated and reflections can be made on possible directions for future research.

Firstly, evidence from the research which contributes to addressing the research questions is evaluated as an attempt to consolidate the findings. Following this, focus is expanded to address the broader analytical schema so that policy implications can be addressed and the ways in which this research can inform further academic enquiry in a number of areas including GPN analysis and NTAEs can be examined.

As discussed in Chapter 2, criticism of the GPN framework has centred on its lack of analytical focus. The chapter justified the selection of the framework based on lack of previous work examining the particular GPN, meaning a flexible analytical focus was desirable, in addition to other discernable advantages over alternative frameworks including flexible method set and inclusivity of institutional dimensions. During the research, the conceptual categories which were important in determining the configuration of the dimensions of firms, institutions, networks, and sectors for the production of this commodity in this location, began to emerge. It was at this point that the flexibility of the framework began to present an issue in its failure to guide the analysis. Having used the framework to identify the principal factors involved in determining outcomes in the GPN, alternative frameworks were utilised, such as political economy work which examined the concept of embeddedness in greater detail and management literature examining labour dynamics, in order to guide analysis in particular areas. The GPN framework, then, can be best utilised as an umbrella under which research into new patterns of production and trade can be conducted. In the majority of cases, owing to the flexibility of the framework certain conceptual categories and dimensions will become more prominent and insight can be sought from other frameworks in order to guide analysis in these areas.

More rigid frameworks of commodity analysis purposefully exclude potential explanatory dimensions including geographical scale - both micro- and macro-level dynamics - and the influence of particular groups of actors including formal and informal institutional actors, firms, and civil society organisations. In doing this, such frameworks dictate the questions that should be asked and, to a lesser extent, the methodology that should be used in asking them. Conversely, the GPN framework relies on a researcher's ability to uncover the most influential processes and actors within an individual network.

12.1 Research Questions

12.1.1 Why did the cut flower export industry in Ethiopia grow as rapidly and to the size that it did and why did this growth occur when it did?

Chapter 6 established the pace and extent of growth in Ethiopian floriculture upon which this research question was based. The key to addressing this question lay in evaluating the local context, global context and specific industrial circumstances in which the growth occurred; accomplished in Chapters 4, 5, and 7 respectively.

Chapter 4 explores how the political and economic circumstances in Ethiopia until the last decade prevented the industry from attracting significant investment, and how the changes within the

last decade which facilitated investment, contributed to the growth of the floriculture industry. Ethiopia was previously characterised by political instability and economic policies, including land policy, which discouraged FDI. A stable and relatively outward-looking government and changes in land and investment policy to facilitate FDI and commercialisation in agriculture were partially responsible for the timing and extent of growth in floriculture. Furthermore, through economic growth and an influx of overseas aid, infrastructure around the capital was now developed sufficiently to accommodate such an industry.

Chapter 5 documents both the growth of the global floriculture market and relocation of production that has occurred over the past 40 years. The reasons for the patterns of production that currently exist in floriculture and how they have changed in recent years are explored in order to examine the motivations of investors that have relocated production. Push factors, such as the rising wages in developed countries or expiry of tax exemptions and violence in alternative locations like Kenya, which drove investment to Ethiopia from both traditional and new production locations alike are examined. First mention is also made here of the influence of direct buyer relationships that have begun to influence the production and consumption of flowers and how this has affected the growth of Ethiopian floriculture.

Chapters 6 and 7 then form the major contribution in terms of addressing this research question. They firstly identify the latent assets of Ethiopia as a production location for floricultural products, such as the climate, and land and labour availability which set it apart in the minds of investors as a place with enormous potential. The chapters examine investor profiles and their various motivations for entering the industry. They look at the changes that occurred in the institutional environment, both domestically and internationally, aimed at facilitating investment in the industry.

There was no single trigger for the rapid growth of Ethiopian floriculture but rather a combination of latent attributes, policy changes reinforced by international institutional support, push factors for producers in other countries and imitation of successes by early entrants. The key factor appears to have been reaching critical mass, defined by the ability to charter aircraft, secure the necessary inputs and form an association to lobby government in the industry's interest. Natural conditions and a low cost structure already existed and government incentives acted as an accelerant to growth after the industry had reached critical mass. The factor which did change prior to the growth period was the peaceful environment. Whilst not a binary aspect of a society, in the minds of investors it can become so; if investors perceive a country to be safe to live and work in then they will relocate and if not, they will not. Once the country was perceived to be stable after the threat from war with Eritrea had passed, investors began to consider the other factors as accessible. Once certain investors had become successful in the industry it began to attract domestic and foreign institutional support and growth accelerated rapidly.

12.1.2 What is the structure of the industry in terms of the actors involved and the relationships between them including the geographical origin and industrial histories of firms involved?

Chapter 6 accomplished the goal of identifying the nodes and actors involved in the Ethiopian floriculture GPN. It uncovered a network which is truly global in nature with a sphere of influence which is expanding along with the industry. The key functions of the industry are identified along with the processes involved with getting flowers to market from the idea to invest in the industry

through obtaining the required inputs, growing, transportation and finding a market for the produce.

Through Figures 6.8, 6.9 and 6.10, the multidirectional interconnectedness of these nodes is displayed visually, while the plurality in the relationships between nodes is explored in the remainder of the research. What is revealed is a range of different relationship patterns between nodes of the GPN ranging from entirely vertically integrated firms to nodes with no prior connection to others within the network. This finding adds to the justification of adopting a framework which allows for an exploration of different patterns of inter-firm and intra-firm relationships within a network.

Chapter 6 provides several different views of the equity stakes held within floriculture by nationality. These equity structures reveal a strong influence from actors with high levels of network embeddedness originating in the Netherlands and Israel, but also significant equity held by investors from a wide range of countries with no significant floricultural background. Furthermore, Chapters 6-9 include case studies displaying the industrial histories of firms ranging from those with four decades of floriculture experience to those whose background is in telecommunications or investment banking, showing a diverse mix of territorially and network embedded actors who have become involved in the industry.

12.1.3 Who have been the primary beneficiaries of this growth to this point and how might the distribution of benefits change in future?

Chapters 6-10 contribute evidence toward the current distribution of benefits from floriculture. It would not be an overstatement to say that everyone involved in Ethiopian floriculture at this point has benefitted in some way. Exceptions to this statement might be those whose land has been repossessed for lease to floricultural farms and those that have been affected negatively by the environmental impact of the industry, but evidence of either of these phenomena - if indeed they exist - is not as yet available. Land repossessed for floriculture has been small due to the small scale of the industry when compared with, for example, the broader agricultural expansion documented in Chapter 11, and land which was repossessed was deemed to have been underutilised. The environmental impact of the industry is not fully engaged with here but due to its relatively dispersed nature, high levels of groundwater availability, and presence of international environmental standards from the early stages of the industry's development, the environmental impact of the industry is unlikely to be as severe as in Kenya.

The question is, then, who has benefitted the most from the growth of the floriculture industry? The answer is not easily quantifiable, but there are two ways in which an indication of the accrual of benefits can be gained. Firstly, one could engage in a financial assessment of the profitability of firms in each node of the GPN, or the proportion of final sales value accruing to each node. Unfortunately, this is hindered by the difficulty in obtaining financial data documented throughout this research and further complicated by having to offset the different risks involved with each stage of the process against the profits. The second way to assess the relative benefits of the industry for different actors is to look qualitatively at what they have gained from the industry in relation to the potential benefits if the industry had not developed in Ethiopia. This method, too, is problematic as a result of poor access to information, and so a combination of a qualitative assessment of the benefits accruing to different actors and any available financial data is used here to assess the distribution of benefits.

Firstly, labourers have taken their cash income from effectively zero to up to $2 per day, with little opportunity cost as this has occurred through a utilisation of surplus labour, which represents a huge percentage increase in their incomes and a probable increase in the food security of their households. Working conditions, too, are superior to comparable positions in other industries. If floriculture had not developed in the way that it did, alternative means for improving incomes and lifestyle would have been few. Investors that have managed their firms successfully, choosing the correct variety for the correct location, identifying the most profitable target market and managing labour successfully to ensure maximum productivity, have realised significant returns on their investment, which they have been able to repatriate if they desire. For those who have not managed their farm successfully, risks undertaken in entering the industry were not particularly arduous and many have left the industry having lost, primarily, only time. Successful foreign investors have been able to use the natural, socio-economic and policy conditions in Ethiopia to allow them to extract greater profits than would be available in alternative production locations, explaining their decision to locate there. However, investors with high levels of network embeddedness would still have been able to make substantial profits in other production locations and so their marginal benefit from the industry is lower than labourers'. The same could be said of other actors embedded in the network that have entered the Ethiopian industry such as importing agents, breeders, and retailers. Such actors have been able to decrease their costs through their involvement in the industry but involvement has served to increase the profitability of their operations from alternative production locations by a relatively small amount, although they are now able to conduct their business in what they perceive to be a more desirable location.

Local investors, in the majority of cases, have entered an industry in which they previously had little or no experience. They have acquired knowledge from experienced actors in the industry to allow some of them to be successful. Without the introduction of foreign actors, both commercial and institutional, the industry would be unlikely to have reached critical mass, learning processes would have been slower and integration into global markets would have been more difficult. They may also have found it more difficult to acquire the necessary capital as it was the success of early foreign investors who took DBoE loans that persuaded the DBoE to expand their finance scheme to domestic entrepreneurs.

As described throughout the research, the benefits created by Ethiopian involvement in floriculture are many and range from improvements in the quality of life for foreign investors to improvements in the availability of education and healthcare in the communities where flower farms are located. In absolute financial terms, however, the additional rents that have been created by firms that have relocated to Ethiopia are attributable to a range of natural and socioeconomic characteristics. For example, Sher, having operated profitably in Kenya for over 20 years, relocated to Ziway where they perceive the primary advantages over alternative production locations to be a secure environment, but the lower labour costs – at up to 25% lower than those in Kenya – have created differential rents. Conversely, for producers in Holeta, when compared with alternative production locations, differential rents have been created by the superior ecological conditions available in Ethiopia when compared with Kenya, or lower labour and transport costs when compared with Ecuador. Domestic entrepreneurs have invested in floriculture as they are potentially able to make greater returns than in alternative investment opportunities and at a significantly lower financial risk.

Amongst corporate actors financial data is scant. The costs analysis in Chapter 7 is unable to provide any suggestion as to where value is captured as, for example, evidence given on air transportation proves that despite that fact that it accounts for a significant proportion of costs, the only operator in the sector is, in fact, subsidising the industry. Royalties, too, constitute a significant proportion of total costs but research revealed high development costs and competition amongst breeders meaning it is unlikely that breeders are able to appropriate a large proportion of the value created. Retail actors have benefitted by being able to obtain quality produce at a lower price while simultaneously externalising the burden of risk to growers either directly or via importing agents. Importing agents have been able to supply these retail actors with similar or higher quality produce at a lower cost. However, they must bear the additional cost of auditing and the risks involved with breaking from established supply agreements, and so while they have been able to appropriate a greater proportion of the value created, this has been tempered by additional risks.

As examined throughout the research, the additional rents created by both domestic and foreign investors in all of the growing clusters - whether they are network embedded investors creating additional rents over alternative production locations or territorially embedded investors creating additional rents over alternative investment opportunities - are to some degree dissipated by lower productivity, infrastructural investment, and investment in meeting environmental and welfare standards. However, these investments do not completely eliminate additional rents, particularly for successful investors; for these investors the current policy structure means that it is they who, in the short-term, capture the additional value that has been created. If the government is successful in manufacturing territorial embeddedness amongst investors, who through diversification can create further organisational and relational rents, the government can begin to appropriate a greater proportion of the additional rents through the introduction of taxation. The maintenance of low land rent is unlikely to change, with 99-year leases as a mechanism for manufacturing embeddedness.

From a government perspective, benefits to this point have come primarily in the form of foreign exchange, a highly desirable feature of a new industry in a country with a severe balance of payments deficit. Secondarily, the government has seen employment created in rural areas and will, in future, receive significant tax income from the industry if it remains profitable and if they can minimise capital flight. The government has been able to achieve these benefits at relatively little opportunity cost, making use of underutilised resources in achieving these benefits. Furthermore, the next research question concerning multiplier effects could ensure that, in future, the benefits accruing to the government of Ethiopia as a result of floriculture could increase significantly. If this is the case, however, the opportunity cost is likely to be far greater.

While economic rent accruing to labour is likely to be the lowest of any node in the network, this analysis has shown that relative to an alternative situation in which the floriculture industry had not developed, it is labourers who have achieved the greatest relative benefit. When taken with local investors and state actors, local actors have undoubtedly received the greatest marginal benefit from the growth of the floriculture industry in Ethiopia.

12.1.4 What, if any, are the multiplier impacts of the industry on the broader economy?

Chapter 11 addresses the dual multiplier impacts of floriculture on the broader Ethiopian economy. Evidence suggests that in the short-term direct multiplier effects are small, as they are

limited to the small proportion of exported value attributable to wages. In the longer term however, as import substitution continues - as it has with fertiliser and packaging production - and the industry is further endogenised these indirect multiplier effects are set to increase significantly.

Despite the potential of these indirect multipliers, the most significant multiplier impact of the floriculture industry is the induced multiplier of the growth of new industrial opportunities. Chapter 11 shows that the rapid and continuing growth of export food production in Ethiopia, particularly of exotic fruits and vegetables, can be attributed, to some extent, to the growth of the floriculture industry. The potential benefits in terms of foreign exchange earnings, tax revenue and employment from these industries have the potential to dwarf those of floriculture, with the possible additional benefits of improved domestic food security. However, the negative aspects of floriculture would also be exacerbated by the spread of export agriculture. Floriculture commands a far higher value-per-hectare than other agricultural commodities and so the land required to satisfy demand is far smaller. Commercial agriculture will likely result in higher levels of displacement and the environmental impacts will be far greater owing to the industrial scale.

12.1.5 What are the developmental impacts of the industry, both now and in the longer term?

This research question is strongly related to the third research question but focuses more concretely on development and poverty alleviation outcomes and how they might change over time. The floriculture industry has created employment leading to higher incomes for people - primarily women - in rural areas where employment opportunities were previously few. Furthermore, as examined in section 11.3, floriculture has made a contribution to improved food security for some people, although not those in the most food insecure areas. This has been achieved through a combination of increased incomes and increased total food production partly facilitated by improved agronomic practices and availability of agricultural inputs. These benefits have been secured by government policy on food prices and satisfaction of domestic demand prior to export. Ethiopian entrepreneurs have also been given the opportunity, by the combination of circumstances outlined above, to invest in a profitable industry and in the majority of cases profits are reinvested in expansion or other business opportunities within the Ethiopian economy. These additional investments then create further employment and contribute to poverty alleviation.

In the longer term, then, an improvement in the developmental impacts of floriculture on Ethiopia depends on four key factors. Firstly, employment: can employment be secured, the number of jobs increased and geographically dispersed in order to ensure the transformational effects of even relatively low-waged jobs are felt by as many as possible? Secondly, endogenisation: can the various nodes of the industry be endogenised sufficiently to create higher levels of Ethiopian involvement in higher value-added sectors of the industry and ensure profits and wages are retained and reinvested in the domestic economy? Thirdly, macro-economically: can the government begin to obtain income through taxation of the industry, and can the industry grow sufficiently so that, with continued endogenisation, balance of payments is improved so that more public money is freed for progressive spending on infrastructural projects continuing with ADLI? Finally, food security: can the floriculture industry, both directly and through its multipliers with respect to food production, continue to improve food security for the rural poor so as to remove them from the spectre of continued food shortages?

12.2 Analytical Schema

This section is used to revisit the analytical schema identified in Chapter 2 using the GPN framework in order to evaluate how the research has addressed it and what the research has added to debate in these areas.

12.2.1 An exploration of how Ethiopian floriculture created, enhanced and captured value through the relationship between regional and national government, local employees and entrepreneurs, and the potential for each of these value transformations to change over time.

There is no doubt from the evidence presented here that floriculture has created value in Ethiopia. Land obtained from several sources including unproductive government farms, subsistence plots, and unutilised land, has been transformed from 1550Ha which had been able to sustain a small number of households and a handful of jobs into an industry with an annual turnover of around $200m in little over half a decade. The value, by any measure including the conversion of previous subsistence output and current floriculture revenue to calories, created by the same resources, has increased significantly. Questions might be raised about the depletion of assets as a result of the industry, and while further research needs to be done on the environmental impact of floricultural operations in Ethiopia, control procedures conducted by firms outlined in Chapter 9 and the relatively small geographical scale of the industry (0.05% of the total three million hectares that the government has allocated for agricultural development), mean that the depletion of assets for future use is likely to be minimal. Indeed, access to resources may have been improved through newly dug boreholes, provided it is sustainably extracted.

The situation regarding enhancement of value is less clear cut. Henderson et al. (2002) identify four issues involved in the enhancement of value, the first of which is the nature and extent of technology transfer. While floriculture - especially in nodes such as breeding - is a knowledge-intensive industry, the technology required to be successful is relatively basic and the companies selling infrastructural supplies such as greenhouse materials, irrigation equipment and grading machinery will seek expansion into new markets. Some of these nodes have subsequently been endogenised, with Ethiopian companies now manufacturing high quality packaging materials and other inputs.

The second issue involved in value enhancement is how major firms in the GPN engage with suppliers and subcontractors to improve the quality and technological sophistication of their products. This has occurred in many nodes of the Ethiopian floriculture GPN during the industry's growth. Chapter 8 in particular displays how lead firms and importing agents have worked with suppliers in order to improve the standard of packaging available for the industry and the technological sophistication of the product to the extent that bouquets can now be exported in final sales packaging for the direct market. This element of the GPN framework draws substantially from more traditional commodity literature using the GVC and commodity chains frameworks on upgrading. However, these alternative frameworks see upgrading as a necessary process for developing countries to enhance value in their engagement in production networks (Porter, 1990; Kaplinsky, 2000; Humphrey and Schmitz, 2002). Conversely, the present research has displayed the necessity of engagement with individual production networks, using the GPN framework to show that for some developing country actors in certain networks, upgrading is not influential in the distribution of benefits.

In floriculture, the degree to which functional upgrading is possible is highly constrained by both the nature of the commodity, in that the final retail product differs little from the primary commodity, and the geographical patterns of consumption, in that the transformations or further processing of the commodity is constrained by the necessity of rapid long-distance transportation. Product upgrading too is constrained as, for the reasons discussed in Chapter 8, farms are suited to grow a certain type of flower based primarily on natural conditions and while good varietal selection will enable a producer to maximise profit, this is within a very limited sphere of what can be grown on that site. Furthermore, process upgrading is neither likely nor feasible given the cost structure of Ethiopia. The majority of farms have automated grading procedures and use labour intensive processes where it is economical to do so. The natural conditions mean that, unlike with flower production in the Netherlands, further capital investment in equipment is unlikely to improve returns. Finally, inter-chain upgrading is occurring to some degree as discussed in Chapter 11 but this is by no means a logical progression and will only occur for a minority of flower producers. This, combined with the high value-per-hectare available from floriculture, means that floriculture possesses different characteristics to many of the commodities analysed using GVC or commodity chain frameworks. The key to enhancing value for developing countries in floriculture lies in performing well against the specific metrics in an identified target market as documented in Chapter 8.

Thirdly, as a result of the above increase in quality and technological sophistication, the demand for skill in a given labour process can increase and this can enhance value. The learning process for floriculturalists in Ethiopia for all entrants but particularly those new to the industry - was rapid. As such, methods used at each stage of the production process in the network have developed, including in the production of input materials, and there has been a rapid up-skilling of labour throughout the industry. However, this has occurred largely because of the position of the Ethiopian industry in global floriculture five years ago relative to now and thus does not necessarily reflect a trend which will continue. As more companies mature in the industry and obtain the necessary reputation for quality and consistency, the option of direct supply - together with the opportunities this marketing channel provides for upgrading into producing 'ready-for-sale' flowers - and the demand for skill within the labour process will increase, which provides a more likely avenue for value enhancement in this regard.

Finally, enhancement of value can be influenced by whether local firms can begin to create organisational, relational and brand rents of their own. As another product of the rapid pace of the development of the industry, value has been enhanced as organisational rents have been created through the removal of internal inefficiencies within firms. New entrants to the market have been able to vertically integrate certain functions and outsource others which has contributed to enhancing value. Relational rents have also been important in the enhancement of value. The nodes of the GPN and the relationships between the nodes have been consistently restructured with the objective of improving efficiency within the industry. From the institutional nodes, relations between nodes of the network have been altered during the industry's development to enhance value. Many actors have become one - from an investor's perspective - in the form of the EHDA to the expansion of the handling agents sector from a single operator to three main operators. Finally, brand rents, which do not manifest themselves in floriculture as clearly as they do in manufacturing and service sectors, have been created through the auction system, where certain farms have been able to enhance value through a consistent, quality supply to the auction, encouraging repeat custom. In other nodes of the GPN too, brand rents have been

created. Packaging manufacturers have been able to develop a reputation for quality and value which has resulted in their promotion through farm interactions.

The final element of value to be addressed in this question is capture of value for the benefit of the location in which the value is created and enhanced. Here, Henderson et al. highlight government policy, firm ownership and the nature of corporate governance as the pertinent issues. As discussed throughout this research, and particularly in Chapter 7, government policy has had a significant influence on how value is created and enhanced but also captured, with evidence suggesting the latter has been traded off at the expense of the other two aspects of value in the short- to medium-term.

Government policy on the floriculture industry is not as clear an example of 'picking winners' as it might first appear. As described in Chapter 4, government policy in Ethiopia tends to channel scarce resources towards a few priority sectors (World Bank, 2009b). This policy is defended by Rodrik (2008) who argues that, in a developing country, entrepreneurship consists of discovering the underlying cost structure and finding out what can be produced profitably. Initial investors in any sector face great risks and their cost discovery becomes public knowledge so that the social value they generate exceeds the private costs. Rodrik (2008) therefore commends the government for subsidising the 'courageous entrepreneurs', as latecomers to the market are now the beneficiaries of the 'tinkering' of early investors, in an industry where local soil conditions contribute greatly to the profitability of a farm. However, the evidence presented here contends that government policy has followed rather than led development in both the floriculture industry and subsequently in other NTAEs. The policies presented here, which have undoubtedly had an impact on the industry's growth, came after the initial growth of the industry occurred. This research seeks to re-package the concept of 'picking winners' as picking saplings rather than picking seeds (Wade, 2009). The government is now pursuing similar policies in other priority sectors including the agricultural export commodities documented above together with textiles.

Firm ownership is explored throughout Chapter 7 and one of the principal findings of this research is how value capture is influenced by the ownership profile of firms. While only a third of the industry is owned by local actors, this represents a higher proportion than in many other developing country floriculture industries. How this profile develops over time will be a key factor in determining the overall impact of the industry on Ethiopia. The nature of corporate governance in the industry is found to be pluralistic and varies greatly by the origin of the investor, the degree to which they pursue each marketing channel, and the size of the company. However, the nature of corporate governance was found to be less influential in the capture of value than the other factors. The larger firms and those that pursue the direct marketing stream tend to employ more people through the implementation of CSR initiatives and greater positive externalities.

An important issue which is not included in the above evaluation is the influence of the overall governance of the GPN in the creation, enhancement and capture of value. This study has found, in Chapters 7 and 8, that the overriding governance system of the industry and Ethiopian society (although not formal government) is based on trust and, as such, it is those actors who are able to foster trust between themselves and other actors in the network that are the most successful in the creation, enhancement and capture of value. Both the nature of the industry (see Claro et al., 2006, for evidence of trust-based governance in floriculture) and the nature of the country, with its long-term financing arrangements and inefficient legal systems lead to a prevailing system of

trust and reputation-based governance (Fafchamps, 1999; Fafchamps, 2004). Conventional economic logic sees the by-products of this system of governance as being inefficiency and the stifling of innovation, which has negative connotations for the creation of value (World Bank, 2009b). While markets where there is an absence of regulatory enforcement and where different forms of network governance prevail are common in sub-Saharan Africa, the research has shown that the governance of exchange in an industry can be determined by a combination of specific local, network and market circumstances (Fafchamps, 2004). The lack of regulatory enforcement in sub-Saharan Africa has little to do with the trust and reputation-based governance system of the floriculture industry. Floriculture has been governed in this way since before the entrance of developing countries into the production sphere and it is largely determined by the nature of the product than capabilities of any regulatory bodies. Industry leaders in auction marketing have grown within a system largely based on trust and reputation but even these actors have retained the need for a key element of regulatory protection through the auction payment system. Direct marketing systems are governed more formally with longer term buying agreements but with written contracts rare, trust remains the key factor governing the exchange.

Embeddedness has also been found to assist in the capture of value through the formation of trust between actors in other networks and the effect of embeddedness on Ethiopian floriculture is evaluated below (Vieira and Traill, 2008; Oliver et al., 2008; Coase, 1937).

12.2.2 An analysis of how territorial and network embeddedness affected the level and distribution of benefits accruing to different nodes of the Ethiopian floriculture GPN and how might levels of embeddedness change over time.

Table 12.1, drawn from information throughout the thesis, gives an indication as to the views of different actors within the GPN regarding the different types of embeddedness among farm owners/investors.

Actors	Type of Embeddedness	Impact	Reasons
Unskilled Workers[16]	Territorial	Positive	Jobs have been created and high levels of territorial embeddedness increases job security
	Network	Neutral	Sectoral labour mobility is high amongst these workers and if investment moved from floriculture to another industry, in the same region, with equal employment opportunities then there would be little impact
Skilled Local Workers	Territorial	Positive	Geographical mobility is relatively low amongst these workers and they are unlikely to be able to relocate in search of work
	Network	Positive	These workers would not be able to command equal wages in other sectors.
Farm Owners/ Investors	Territorial	Negative	High levels of territorial embeddedness decreases investors' power relative to institutional actors as the threat of capital flight can incentivise government to provide better investment conditions.
	Network	Neutral	Experience in a sector may lead to higher profits but capitalising on growth opportunities in other sectors may also provide profits.
Ethiopian Government	Territorial	Positive	This is the key to harnessing the benefits of investment code liberalisation - making capital stick
	Network	Positive	If the sector remains profitable then the government can begin to capture a greater proportion of value from the sector through taxation. If, however, territorial embeddedness means new growth opportunities are underutilised then network embeddedness may have a negative influence on growth

Table 12.1 Actors' Perspectives of Embeddedness in Farm Owners

This research found a complex relationship between territorial and network forms of embeddedness based on the industrial and geographical origins of the investor. When asked to speculate on the likely strategy in a given range of scenarios of changes in investment conditions, farms whose industrial history lay in floriculture were less likely to look for alternative investments elsewhere in Ethiopia and would be more likely to relocate investment to an alternative production location, exhibiting a lower degree of territorial embeddedness. Conversely, firms new to the industry, given the same scenarios, would be more likely to look for alternative investment opportunities in Ethiopia. However, outside of these hypothetical scenarios, firms from a range of investment and geographical backgrounds have diversified their investment profiles in Ethiopia, exhibiting greater territorial and lower network embeddedness. In either case, local investors, as characterised by this research, exhibit far higher territorial

[16] All unskilled workers are local as wages offered are not sufficient to result in migration for this category of labour.

embeddedness than their foreign counterparts. This is the case for a range of reasons, which include issues of personal preference attributable to social, cultural and language ties and difficulties in investing abroad owing to the weak position of the Birr and visa problems, while quantification of embeddedness is empirically problematic (Hardy and Hollinshead, 2011; Sunley, 2008).

Embeddedness has the potential to increase and cement the capture of value for local actors in the long-term. Put simply, from a government perspective if people are going to produce flowers in a developing country, they want it to be Ethiopia. To this end it is partially the job of the government to manufacture network embeddedness by absorbing some of the learning costs of the industry as a public good, ensuring the industry reaches critical mass. The government must adapt to the challenges that face the industry using a mixture of regulation and investment to ensure continued capacity building. If, however, external conditions limit the growth of the industry, or if firms seek to diversify their investment portfolio, the government would rather this investment occur in Ethiopia, than elsewhere. Fostering territorial embeddedness amongst investors, then, has to be the government's key priority in securing the benefits of the industry in the long-term. This has been attempted by steering capital towards strategic industries using the same incentives offered to floriculture. In fact, while floriculture is desirable for the reasons identified above including the high-value added nature of production, employees/Ha and growing foreign market, it could be argued that network embeddedness is actually a negative attribute for investors in Ethiopian floriculture to exhibit from a government perspective. Having investors with high levels of territorial embeddedness whose capital is not mobile between industries will limit efficient use of this capital. Furthermore, some of the negative aspects of floriculture, such as the lack of a domestic market or a contribution to food security together with the overreliance on a single industry, are not addressed if capital is unwilling to flow into alternative investment opportunities.

Chapter 11 displays one clear area where the government has been successful in fostering territorial embeddedness. As the floriculture industry faced challenges caused by the coincidence of the Global Financial Crisis and the need to repay loans to the DBoE, investors sought opportunities in alternative sectors, which have continued to expand in the post-crisis period. The high level of territorial embeddedness has occurred as a result of the combination of natural and physical circumstances, and a set of government policies which have had a significant impact on the power structures within the industry as discussed in the following section.

From a temporal perspective then, both territorial and network forms of embeddedness among foreign investors increase over time. For local investors too, network embeddedness increases over time while territorial embeddedness is, in general higher. On a personal basis, investors who had been involved in the industry for a number of years and established it in their own mind as a long-term employment opportunity, spoke of how they bought houses, moved their family to Ethiopia, enrolled children in school and begun learning Amharic, all of which contribute to territorial embeddedness. From a business perspective too, the example of Sher and other established actors within the industry engaging in comprehensive long-term CSR programmes which have increased as the industry has matured, all contribute to furthering territorial embeddedness.

With time in the industry, actors in the GPN also become more embedded in the network. Firms manufacture a reputation at auction which cannot be transferred or replaced, workers gain non-transferable skills, institutional actors learn the inner workings of the industry and settle upon their role within it, and suppliers invest capital in specialist machinery which cannot be transferred to other sectors. Moreover, for all actors in the network, in an industry governed by reputation and trust, time in the industry means an increased number of increasingly deep connections and relationships to other actors within the GPN, which are increasingly difficult to transfer or recreate if capital is switched to alternative investment opportunities. Perhaps, then, in order to extract maximum benefits from the floriculture industry, the government has decided to encourage diversification of investments and inter-industrial linkages at this relatively early stage in the industry's development, before network embeddedness becomes such that capital becomes immobile.

12.2.3 An examination of the current structures of corporate, institutional and collective power in floriculture and the potential for the interaction between value and embeddedness to impact on power structures over time.

Within a GPN, corporate, collective and institutional power flows between actors and nodes over time. Corporate power is viewed by Henderson et al. (2002) as the ability of a lead firm to influence the distribution of resources and other actors' decisions within the network. Institutional power is seen as power held by local and national state actors and international agencies. This research has shown an unequal and dynamic distribution of power within the network. In the initial stages of the industry, international production actors were able to negotiate a position whereby the distribution of risk and resources was skewed in their favour. As there was little effective competition for land and significant competition for investment from more well-established production locations, government actors were forced to reduce the benefits they extracted from the sector. This situation continued as the industry underwent difficulties caused by the Global Financial Crisis and repayment terms of government loans through the DBoE were relaxed. However, as the territorial embeddedness of production actors has grown, with their economic and social integration having increased since they entered the industry, and as competition for land from alternative sources has increased, power relations have altered such that loans are beginning to be repaid, regulations are being enforced and tax revenues have begun to be collected. This shift of power from corporate production actors to institutional actors is also reflected in the ability of government to impose increasingly stringent regulations on the industry with a view to protecting the industry's overall reputation, the success of which remains debateable as documented in Chapter 7. Furthermore, as documented in Chapter 9, the transferral of power from corporate to institutional actors has been tempered by the CSR programmes engaged in by large firms effectively replacing the role of the state in several key functions, making the firm essential to the functioning of local society.

Collective power is conceptualised as power held by trade unions, employer associations, NGOs and informal organisations, used to pressure other bearers of power including corporate and state actors. In this area too, this research has found that there is a flow of power from corporate to collective nodes. As suggested by Korovkin and Sanmiguel-Valderrama (2007), in the initial stages of the industry, a lack of labour organisation and low levels of labour rights act as some of the many factors that draw investors to an industry. However, this research has found that through the dual drivers of production and consumption side collective actors, power has shifted from corporate to collective actors. Firstly, international organisations such as the ILO and, more

influentially, the domestic employer association of the EHPEA acting in collaboration with international donors, have been able to enforce increasingly high levels of environmental and workers' rights protection. Evidently, in order to do this, collective actors have been able to draw on increasing levels of support from institutional actors so that the regulations they have lobbied for, such as the EHPEA's CoP, are enforceable. Secondly, consumer demand for higher worker welfare and environmental standards has driven corporate retail actors to demand these standards of their suppliers, which are met due to the desirable volume and length of contract offered by major direct buyers. Corporate power amongst retail actors will be addressed below as a special case due to the recent and rapid change in its structure.

Territorial embeddedness has been the key factor in determining flows of power in each of the above relationships. If corporate power amongst producers is viewed as a seed blowing around a large plot of potential growing locations then a metaphor can be applied to explain how embeddedness influences power within the network. When attempting to attract a seed of investment, the government prepare their plot with the fertilisers of an attractive investment code, cheap labour, low levels of unionisation etc., to encourage the seed to grow there rather than on an alternative plot. Once the seed has settled in the location, growth is delicate in the early stages and factors which allow it to grow must be constantly adjusted to give the plant the best possible chance of taking root. To begin to remove fertilisers or take cuttings from the plant at this stage would greatly increase the chance of it failing. However, once the roots of the plant had been established, which in this metaphor are greenhouses, water supply, supplier relationships etc., fertilisers can begin to be removed and cuttings, or taxes, can be taken and the plant will continue to survive. The plant may have become entwined in the ecosystem with several symbiotic relationships and networks of supply being established in the local area. To uproot the plant at this time and replant it elsewhere would potentially jeopardise the future growth of the plant with no guarantees of the stability of the new environment. The only way in which this could be beneficial for the plant is if continued growth on the existing plot becomes too difficult with a high number of plants competing for the same resources and fertilisers becoming to sparse for the plant to continue to succeed.

Corporate power in the retail sector is one node to which power has continued to flow in the floriculture industry as a whole. As the proportion of total floriculture sales conducted through direct sales contracts – primarily supermarkets – has increased, the power of retailers to dictate the terms of trade with suppliers has increased accordingly. This research has shown how the development of importing agents as a mechanism for risk minimisation has allowed major direct buyers to use the threat of mobility as another means to control numerous elements of the power relations between themselves and the rest of the network. In some cases this power has had a positive impact on the benefits accruing to local actors, as is the case with the improvement in environmental and labour standards. Furthermore, supply agreements are made between growers and retailers for periods of up to two years at a guaranteed price, offering developing country growers the security to plan for the long-term, which is not possible with the uncertainty of the auction. However, retailers are the largest profit taking actor within the network which continually squeezes the profits available to growers as pressure is passed on through importing agents. While the margin of mark-up between supermarkets and importing agents is large the mark-up between wholesalers and florists is greater. However, due to the low prices in supermarkets and the lower number of profit taking actors involved in the process, squeezes on profit margins are quickly passed down to growers in a direct marketing stream. Corporate power

within this node is such that retail actors are able to maintain their profit margin while externalising pressure to other actors in the network:

> I know the retailer gets far too much profit and the rest of the chain is left with virtually nothing (IG16).

Non-market solutions have been employed in several areas throughout the GPN, including the auction cooperatives and air transportation, which decreases the financial burden and risk on other nodes of the network. This is supported by evidence from a respondent within the importing agent node of the GPN:

> ...more or less we know the profit margin of the retailers because they have a specific retail price of course and you know of course your own selling price so of course that difference between that and the selling price is the profit of the retailer. Erm, well our margin is at the moment not very high...You need to stay competitive and the market is really hard. And I suppose the same goes for all growers, they are having a really hard time also but their margins I don't know...But the highest margins will be at the retail end, I'm positive. That's sure (IG16).

Corporate power amongst retail actors is strong within the floriculture GPN and this research sees a lack of territorial embeddedness created through the arms length relationships with growers as being a critical explanatory factor in this power structure. However, in contrast to the views of Thrupp et al. (1995), for the reasons outlined in Chapter 8, the accumulation of power in this node is not seen to have been entirely at the expense of labour power.

12.3 Configuration/Coordination

The GPN framework sees configuration/coordination - the result of the interplay between the dimensions of networks, firms, institutions and sectors - as being the principal determinant of the developmental impact of the GPN. Previous studies of the floriculture industry in developing countries have reached largely negative conclusions about its developmental potential. However, this study has, with the use of the GPN framework, examined the importance of the local context in understanding why benefits are accruing to individual nodes within the network and which factors have the potential to change this distribution. The far more mixed picture portrayed by this research is that the floriculture industry in Ethiopia has the potential to have a positive developmental impact, which will increase over time if managed properly; a position shared by the government:

> We are considering the past three, four years as a transition period whereby we also learn about the sector and how to make it happen, what type of system we have to put in place and other things. So, in that time of transition, we are expecting that we have an employment opportunity and a little bit contribution of hard currency as well. But we have the feeling that we can make a better benefit from the sector than today if we are managing this sector in a proper way (IG4).

Employment, foreign currency earnings, and the emergence of increasingly locally-owned nodes of the industry through a process of knowledge transfer and technological upgrading, are all realistic and achievable goals in the short-term, and to some extent are already providing real benefits to the economy. In the longer term, tax revenues appear to be a realistic possibility in the near future and the facilitative role played by floriculture in the establishment of the export sector in other NTAEs could also have positive developmental impacts. Conversely, questions must be raised as to the environmental sustainability of the industry if it continues to grow at its

current rate in parallel with the growth of new export industries, devaluing the natural capital of the country. Furthermore, while lead firms competing for direct contracts engage in comprehensive CSR programmes and pay relatively high wages, no price can be put on the potential for exploitation of workers in other parts of the industry, among smaller firms. The government must ensure that their policies reflect the potential for exploitation of workers and the environment and sufficient monitoring procedures are implemented to prevent this. This extract from an interview with an EHPEA respondent summarises the mixed prospects for Ethiopian floriculture supported by this research:

> I would always try to present a balanced view of the sector. There is still work to be done but in three years I can see where we started and where we are now. It is a factor which will contribute to the development of Ethiopia how much of a contribution it is depends on how well the farms develop and what happens in the next five years. You don't see the benefit of this type of investment in the first five years and that's because of...how long it takes to develop a farm, for a farm to become sustainable. And it's one of many factors in the development of Ethiopia. There are all sorts of things. Your production costs, your freight costs, what the market wants, which is changing, what the market is prepared to pay what sort of other things that market wants in terms of quality and social standards and environment protection, all of these are factors and also how the buyers are going to respond to the global warming issues as a whole (IG8).

One area in which this research has highlighted a deficiency in the emphasis of the GPN framework is in changes in the importance of - and relationship between - the conceptual categories of value, power and embeddedness over time, which has the potential to alter the configuration of the GPN significantly. Indeed, in Henderson et al.'s (2002) seminal article a temporal element is only explicitly included in one of the five suggested key foci for study, namely 'the distribution of corporate power within these networks, and changes therein'. In the study of economic globalisation, the examination of the outcomes being realised now can best be understood through an examination of the interplay between the conceptual categories of value, power and embeddedness within the network not simply as it exists now but also how this has developed over time. A recent debate has emerged surrounding the incorporation of more traditional path dependency literature (Nelson and Winter, 1982) and evolutionary economic geography (Boschma and Frenken, 2006; Boschma and Martin, 2007) with a view to addressing this deficiency in the GPN framework. MacKinnon (2012) outlines a framework for the introduction of path dependency dynamics to the GPN framework. Furthermore, MacKinnon (*ibid.*) highlights the need for another insight from evolutionary economics to be explicitly incorporated into GPN research, as identified in this thesis. The concepts of conversion and recombination are established mechanisms by which embeddedness can be manufacturer and perhaps resisted and the inclusion of this into GPN research would allow for additional insight into the agency of different nodes of the network in altering outcomes in their favour. This study has shown that the distribution of power between institutional, collective and corporate actors in the early stages of the industry, for the early entrants to it, was very different to the power relations which currently exist between i) the institutional actors and those early entrants, which are now established firms, and ii) between the institutional actors and new entrants to the market.

12.4 Further Research

While this research has achieved the objectives identified at the outset, several further questions have arisen as a result of the research that would benefit from further academic attention and

were beyond the scope of this research. The first area in which the achievements of this study could be extended is in the temporal scope of the research. The timing of this study was important to look at the rapid early growth stages of the industry and the reasons for it. However, a study which returned to examine the same phenomena in another five years would allow an appraisal of how the dynamics of power, value and embeddedness have changed and whether the current trends continue. It would also be interesting to evaluate trends in global floriculture; whether any new countries have emerged as poles for investment and the influential factors that allowed this to occur.

In terms of research that is currently possible, one avenue for further academic enquiry would be to evaluate the growth of the fruit and vegetable sector in Ethiopia by conducting research into the reasons for investment in the industry and its potential for manufacturing territorial embeddedness. Further research could also be conducted into the impact of local-level spillovers from both floriculture and the associated industries documented in Chapter 11 on rural livelihoods to give a more complete picture of the impact of the industry on the rural poor.

There are two further areas of research which were beyond the scope of this research but would build further on its findings in the area of migration. Firstly, analysis could be conducted to determine the level at which economic incentives become sufficient to induce migration from Kenya to fill the knowledge gaps in the Ethiopian floriculture industry and, potentially, the value added by such experienced labour when compared with less experienced Ethiopian personnel. This would give further information about the level of labour shortage that may be sufficient to encourage capital to relocate. Secondly, as the industry continues to grow, a more comprehensive study displaying how labour is sourced would be welcome. Given the structure of the industry and the reasons mass migration has not yet occurred, an analysis of where workers in Ziway have come from and whether migration occurs as the industry continues to grow in other areas of the country would give a more complete picture of the impacts of the industry on local labour markets and the sustainability of benefits. This too may have implications for the economic sustainability of the industry as a move away from subsistence agriculture and the increased pressure on infrastructure caused by migration would have an impact on many of the factors which have mitigated any negative aspects of the industry in Ethiopia to this point. Investigation is also warranted into the broader impacts of migration and labour patterns on productivity within households and on smallholdings, as farms may begin to experience labour shortages during economically important periods such as harvests.

Indeed from a more conceptual perspective, having established within this research the various relationships between actors and how they are affected by changes in levels of embeddedness, further research is needed to establish exactly how embeddedness can be manufactured and perhaps resisted. This could have significant policy implications in terms of developing countries securing benefits from NTAEs. From a firm's perspective too, cognisance of embeddedness could have implications for their profitability and so investigation is required to discover whether this is considered a transaction cost of investment in developing countries or whether firms engage in strategies to ensure their capital remains mobile.

In order to test the findings of this research it would be useful to conduct a comparative study of the floriculture industries in Ethiopia and Ecuador. As documented elsewhere in this study, the switch from Kenyan production to Ethiopian production broadly mirrored the switch some years

earlier from Colombian to Ecuadorian production, with many similar conditions apparently influential in the relocation decisions. It could, therefore, provide an interesting indication for the future of the Ethiopian industry to examine the current situation in Ecuadorian floriculture and the changes that have taken place since the early, rapid growth of the industry.

One area which, in the initial stages of this research, appeared to be integral to both profitability and possibilities for upgrading within Ethiopian floriculture was that of intellectual property. It quickly became apparent that upgrading in this area was unlikely given Ethiopia's factor endowment. During pilot research, limited access to breeding material indicated that membership of an international system of intellectual property protection would be required for the country to progress in the industry. However, it later became apparent that, while this impediment to growth was preventing some operators in certain market segments from operating at maximum profitability, the profit motive of breeders and lack of control procedures meant that the impact on the overall sustainability on the floriculture industry was not significant. Research that was conducted on IPR issues to that point uncovered a number of interesting points which could be more pertinent for the export of other NTAEs. The dual objectives of export growth and domestic food security and biodiversity are seemingly conflicted in the membership of international IPR protection regimes and so the impact of membership of such regimes for developing countries could represent an important area for future research.

Further, as stipulated in Chapter 10, there is a need for further research to identify the impact of participation in the floriculture industry on poverty and food security at the household level. While evidence is contained here of increased incomes for labourers in rural areas as a result of floriculture, the impact this will have in the medium to long-term on total food production and consequently food prices is an important aspect of the developmental impact of the industry. Household survey data could be employed in order to present a more complete picture of the impact of engagement in the floriculture industry on the lives of labourers, including the price changes for agricultural inputs, changes in food prices, and where appropriate, changes in the price of agricultural labour for smallholders.

The conclusions of this study are cautiously and marginally positive about the impact of floriculture on development in Ethiopia, and certainly more positive than the majority of previous work on floriculture in alternative production locations, having taken a greater number of factors into consideration. In doing so the study was not able to focus as intently as previous studies of floriculture in developing countries on areas such as the environmental impacts of the industry and issues of worker welfare. As such it would now be useful to collect primary data on both of these issues to allow some more concrete conclusions to be drawn about the overall effect of the industry.

This study then has acted as an initial examination of an under-researched industry which has experienced rapid growth in recent times. It has set the foundation for further research which looks at floriculture in developing countries and NTAEs in general by examining the nature and extent of the growth which has occurred and the developmental implications of it.

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Interview Coding (Numbers of Interviews)

A small number of individuals were interviewed in more than one capacity but are not identified here in order to protect anonymity.

- IG1: Dutch Academics who have conducted research in Ethiopia (2)
- IG2: Auction Respondents (5)
- IG3: Foreign Farm Owners (18)
- IG4: Ethiopian Government Respondents (5)
- IG5: Supermarket Respondents (7)
- IG6: Ethiopian Nationals in Senior Positions in Foreign Farm (5)
- IG7: Dutch Institutional Actors (3)
- IG8: EHPEA Respondents (7)
- IG9: Experienced Ethiopian Farm Owners (8)
- IG10: Government Advisors on Floriculture (3)
- IG11: Ethiopian Partners with Foreign Investors in Flower Farm (7)
- IG12: Horticulture Consultants (3)
- IG13: Ethiopian Flower Farm Owners New to the Industry (9)
- IG14: Ethiopian Financial Sector Respondents (3)
- IG15: Members of Cool-Chain Task Force (2)
- IG16: Importing Agent Respondents (5)
- IG17: Sher Ethiopia Founder (1)
- IG18: Breeders (4)

- IG19: UPOV Respondents (2)
- IG20: International Logistics Company Respondents (3)
- IG21: International Packaging Producers (2)
- IG22: Ethiopian Airlines Respondents (2)
- IG23: Ethiopian Packaging Producers (3)
- IG24: Management Consultants to Flower Farms (3)
- IG25: UK Flower and Plants Association Respondents (1)
- IG26: Foreign Investor in Ethiopian Agriculture (3)

Appendix 1

Flower Farm Key Informant Interview Schedule

Name of respondent.....

Name of firm.....

Year of Incorporation.....

- Explain purpose of research
- Distribute and explain anonymity form and discuss written reference to interview.
- Tour farm and clarify product range, functions performed, production area etc.

Firm History, Composition, and Strategy

1. Could you begin by telling me about the history of the firm and how and why you entered the Ethiopian floriculture industry?

2. Can you explain your role within the firm and your personal background of how you got into the floriculture industry?

3. Do you now live in Ethiopia? Do you maintain a property abroad? Do you have any family members who now live in Ethiopia with you/children in school etc?

4. What were the primary motivations for the firm's investment in Ethiopia? Talk around security, corruption, incentives, government attitude etc. as they arise.

5. What was the origin of the capital used to establish the firm?

6. What is the equity composition of the firm?

7. Can you give me an idea of the cost breakdown involved with the establishment and running of the farm?

8. Can you give me an indication of the turnover and profitability of the firm and how this has changed over the firm's time in the industry?

9. Where do you obtain your supplies from and how did you establish these buying agreements?

10. Which of your supply functions are located in Ethiopia and which are negotiated elsewhere?

11. Do you employ consultants on the farm? How often? What functions do they perform? How much do they cost? Where do you source the consultants from?

12. Which international labour/environmental/quality standards do you have? Were they difficult to achieve? Do you have plans to obtain any further standards? What were the major obstacles achieving the standards? What do you feel are the benefits of having these standards to the firm?

Network Relationships

13. How do you feel about your company's relationships with government institutions and actors?

14. How has this changed since the creation of the EHDA?

15. How would you react to a change in the government in the upcoming election?

16. How would you assess your relationship with other growers in terms of cooperation, knowledge sharing etc.? Does this differ between Ethiopian and foreign growers?

17. How would you assess the handling agents available to growers in Ethiopian floriculture and your relationships with them?

18. How would you assess your relationships with breeders? Have you ever had any issues with regards to royalties?

19. How would you assess the role of the DBoE in the industry?

20. How would you assess the role of the EHPEA in the industry?

Market Strategy

21. Can you explain the market strategy, in terms of final destinations, of the firm as it has progressed over time?

22. How many varieties do you grow on the farm and how has this changed over time?

23. What are your a long-term goals in terms of market strategy?

24. What steps have you taken to maximise profit through you market strategy? Diversifying market base? Contacting importing agents? Supermarkets?

25. At what stage in the process of setting up the farm did you decide on where you would target your products? Did market strategy influence the location of the farm? What other factors influenced the location of the farm?

26. What have been your main challenges in pursuing the auction/direct marketing stream?

Labour Issues

27. Can you tell me about you staffing levels in terms of how many permanent and temporary staff you employ and how these requirements change over time?

28. Can you tell me about the processes involved in obtaining your staff for all of the levels of the business?

29. What training do you conduct with employees on your farm?

30. How is labour organised on your farm in terms of supervision, incentives etc?

31. Have you employed any skilled labour from within Ethiopia? Have you had any contact with graduates from the Jimma programmes? What is your opinion of the EHPEA training programmes?

Multiplier Effects

32. Have you examined the possibility of performing other functions within floriculture i.e. packaging production, bouquet production, propagation etc? What steps have you taken towards these developments?

33. Does the firm have any other investments/interests in Ethiopia? When did these investments occur? Were they affected/influenced in any way by your investment in the flower industry?

34. Have you considered producing into fruits and vegetables? What steps have you taken in this regard? Has this production been in addition to or at the expense of flower production?

Overarching Issues

35. What would you describe as the major constraints to your continued growth in the industry?

36. Do you regularly assess alternative production locations outside of Ethiopia?

37. What would be the key factors in causing you to move your investment out of Ethiopia?