THE INTEGRATION OF THE SOUTH AFRICAN FLORICULTURE INDUSTRY INTO THE GLOBAL MARKET

M. VAN DER WALT Hons. B.Com

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Supervisor: **Prof. W. A. Naudé**
Assistant-Supervisor: **Prof. W. Viviers**

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ABSTRACT

As a result of globalisation, firms across both developed and developing countries are experiencing increased competition. Globalisation has both positive and negative consequences for firms, and the net effect may depend on the manner in which the country where a firm is located participates in the global market. Both the global commodity chain (GCC) and global value chain (GVC) approaches assess countries' integration (either successfully or unsuccessfully) into the global market.

The international floriculture industry is one that is constantly changing and has a highly competitive environment. These challenges require that its participants be successfully integrated into the market and constantly improve their competitive positions. The South African floriculture industry has become more integrated into the global market since it opened up its economy in 1994. Both revenue and employment in this industry have increased since then. However, South Africa remains fairly uncompetitive compared with its African counterparts.

The overall aim of this study was to assess the impact of the global floriculture industry on both the competitiveness of the South African floriculture industry and its integration into the global market. The GCC and GVC approaches were used in this assessment. The literature study provided background to these approaches in the context of globalisation. A detailed description was further given to the attributes and challenges of the global floriculture arena, together with a delineation of the South African floriculture industry.

The empirical study was conducted through a mail-based questionnaire, which was mailed to the members of the South African Flower Export Council. The response rate of the survey was 59 per cent and can be considered high for a mail-based questionnaire. The responses were analysed according to the elements of the GVC and GCC approaches. This enabled an analysis of the global chains that the exporters form part of. Hence, it identified the role players and variables within these chains that influence the ultimate income of the floriculture industry.

From the empirical findings it was possible to determine the South African export floriculture industry's strengths and weaknesses. The conclusion drawn was that the South African floriculture industry functions successful internationally, according to the elements of the GCC and GVC approaches. However, the industry does not participate to its full potential in the global

market and lacks competitiveness. These findings supported the assumptions in the literature study. Once the South African floriculture exporters become more export-oriented (i.e. shift their focus from the domestic to the international market), the industry's competitiveness will enhance. Becoming further integrated into the global market by increasing both the volumes and values of their exports can do this. Ultimately the exporters will be able to move into better and more competitive global chains (i.e. export more directly).

Keywords: Global Commodity Chain, Global Value Chain, globalisation, floriculture, competitiveness, South Africa.

OPSOMMING

Weens globalisering ervaar firmas in ontwikkelde sowel as ontwikkelende lande toenemende kompetisie. Globalisering raak firmas positief én negatief, en die netto effek kan afhang van die wyse waarop die land waarin 'n firma geleë is aan die globale mark deelneem. Die globale kommoditeitsketting- sowel as die globale waardeketting-benaderings evalueer lande se integrasie (suksesvol al dan nie) in die globale mark.

Die internasionale blommeteeltbedryf is voortdurend aan die verander en funksioneer in 'n hoogs mededingende omgewing. Hierdie uitdagings vereis van die deelnemers om suksesvol in die mark geïntegreer te word en voortdurend hul mededingende posisies te verbeter. Die Suid-Afrikaanse blommeteeltbedryf het meer geïntegreerd geraak in die globale mark sedert die ekonomie in 1994 meer toeganklik geword het vir die internasionale gemeenskap. Inkomste sowel as indiensneming het sedertdien toegeneem. Suid-Afrika is egter steeds minder mededingend as ander Afrikalande.

Die oorkoepelende doel van hierdie studie was om die impak van die globale blommeteeltbedryf op die mededingendheid van die Suid-Afrikaanse blommeteeltbedryf en die integrasie daarvan in die globale mark te bepaal. Met dié doel voor oë is gebruik gemaak van die GKK- en GWK-benaderings. Die literatuurstudie het, in die konteks van globalisering, agtergrond tot hierdie benaderings verskaf. Voorts is 'n gedetailleerde beskrywing gegee van die kenmerke en uitdagings van die blommeteeltbedryf-arena, tesame met 'n deliniasie van die Suid-Afrikaanse blommeteeltbedryf.

Die empiriese studie is onderneem d.m.v. 'n posgebaseerde vraelys wat na die lede van die Suid-Afrikaanse Blomuitvoerraad. Die responsiekoers van die opname was 59 persent – wat hoog is vir 'n posgebaseerde vraelys. Die responsies is volgens die elemente van die GKK- en GWK-benaderings geanaliseer. Dit het die analise van die globale ketting (waarvan die uitvoerders deel vorm) moontlik gemaak. Op dié manier kon die rolspelers en veranderlikes binne hierdie kettings geïdentifiseer word wat 'n invloed op die uiteindelike inkomste van die blommeteeltbedryf het.

Teen die agtergrond van die empiriese bevindinge was dit moontlik om die sterk- en swakpunte van die Suid-Afrikaanse uitvoer-blommeteeltbedryf te identifiseer. Daar is tot die gevolgtrekking

gekom dat die Suid-Afrikaanse blommeteeltbedryf internasionaal suksesvol funksioneer (te oordeel aan die elemente van die GKK- en GWK-benaderings). Die bedryf neem egter nie tot sy volle potensiaal deel aan die globale mark nie en is nie mededingend genoeg nie. Hierdie bevindinge het die aannames in die literatuurstudie ondersteun. As die Suid-Afrikaanse blommeteeltbedryf meer uitvoergerig raak (m.a.w. hul fokus vanaf die plaaslike na die internasionale mark verskuif), sal die bedryf se mededingendheid dadelik toeneem. Dit kan bereik word deur meer geïntegreerd te raak in die globale mark – deur die volumes sowel as die waarde van uitvoere te verhoog. Uiteindelik sal dit vir die uitvoerders moontlik wees om aan te beweeg na beter en meer mededingende globale kettings (hulle sal m.a.w. meer direk kan uitvoer).

Sleutelwoorde: Globale Kommoditeitsketting, Globale Waardeketting, globalisering, blommeteelt, mededingendheid, Suid-Afrika.

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CHAPTER 1
INTRODUCTION

The purpose of this study is to determine the South African floriculture industry's position in the international market. It assesses the challenges posed by the international floriculture industry in order to ascertain the impact thereof on both the competitiveness and integration of the South African floriculture industry in the global market. Through a survey of floriculture firms in South Africa, it is found that the industry participates successfully in the international market. However, it does not participate to its full potential, as the floriculture producers lack commitment to exporting. The industry's competitiveness will increase once its producers become more involved in the international market by being reliable suppliers of consistent quality products. This chapter describes the wider context of the study and delineates the problem and research question. The methodology and outline of the study is described.

1.1 PROBLEM STATEMENT

1.1.1 Globalisation

According to the World Bank (2000: 1), globalisation can be defined as the global circulation of goods, services and capital, but also information, ideas and people. Globalisation opens up world markets and increases competition. Therefore, it affects every country and person. It has altered the competitive dynamics of nations, firms and industries (Gereffi, 1999a: 37).

Globalisation has become a much-discussed topic, with various arguments for and against it. Kaplinsky and Morris (2001: 16-17) discuss both arguments. They point out that many have gained from globalisation, e.g. more than 80 million people were pulled out of poverty in China as a result of the country's high economic growth rate during the 1980s. However, there is still a high level of poverty in the world (1,2bn between 1897 and 1998), thus not everyone has gained from globalisation. The gap between the rich and the poor countries is continually widening, leaving the poor countries even poorer and unable to compete in the global markets.

1.1.2 Role of global chains in globalisation

It is clear that it is necessary for developing countries such as South Africa to participate and compete in global markets. Both the global commodity chain (GCC) and global value chain (GVC) approaches assess the manner in which a country is integrated into the global market. Hence, it determines a country's international competitiveness. Buckley, Pass and Prescott (1988: 17) define national competitiveness as a country's ability to create, produce, distribute and/or service products in international trade while earning rising returns on its resources. These two approaches are closely related and some of their elements overlap.

1.1.3 The GCC approach

Gereffi and others (1994) developed the GCC concept to analyse the effect of globalisation through the activities of global industries, which has an influence on both firms and workers (Bair & Gereffi, 2001: 1888). A global commodity chain refers to the whole range of activities involved in the design, production and marketing of the product in both a national and international environment (Gereffi, 1999a: 38).

Gereffi (1994 & 1999b), Raikes, Jensen and Ponte (2000), Ponte (2001) and Porras (2003) identify the four core elements of the GCC approach:

- The input-output structure, which identifies the types of products, processes and actors involved in the production activities.
- Geographical coverage (i.e. the territory covered), which describes the dispersion or concentration of the specific industry, the sizes of the producers and the distribution networks.
- The governance structures identify the authority and power relationships that determine how financial, material and human resources are dispersed and distributed in a chain.
- The institutional framework comprises the conditions under which control market access and information are exercised on a global level. In other words, how small producers, via their buyers, gain indirect access at a lower cost to markets, knowledge and technologies.

Two governance structures are identified in a GCC, i.e. a chain can be either producer-driven or buyer-driven. However, these two governance structures described by the GCC framework are

inadequate for certain industries (e.g. the electronics industry). Therefore Gereffi, Humphrey and Sturgeon (2003) developed five basic types of chain governance (see section 1.1.2.2).

Another important aspect of the GCC approach is upgrading, in other words how a firm improves its position in the global industry to improve its competitiveness (Sverrisson, 2004). Upgrading can be conducted on various levels, namely on product level, process level, intra-chain level and inter-chain level (Gereffi, 1999b).

1.1.4 The GVC approach

Value chain analysis has been developed to explain the dynamics of inter-linkages within the productive sector, especially the way in which firms and countries are globally integrated (Kaplinsky & Morris, 2001: 2). The value chain describes the full range of activities that are required to develop a product or service from conception, through the different phases of production, delivery to final consumers, and final disposal after use (Kaplinsky & Morris, 2001: 4).

Kaplinsky (2000a & 2000b) and Kaplinsky and Morris (2001) describe the three fundamental constructs of the GVC approach:

- Barriers to entry and rent. Barriers to entry determine the distribution of rents. A decrease in barriers to entry leads to an increase in the number of global producers, which causes competition to increase and results in lower profits. Consequently, economic rent is lower. Global producers must continually seek new ways (i.e. find competitive advantages) in which they can gain economic rent.
- Governance. Governance implies that one party is responsible for coordinating and regulating the various activities performed from a product's conception to its consumption. Value chains are governed when parameters are set regarding products, processes and logistics. The five types of value chain governance are: market governance, modular governance, relational governance, captive governance and hierarchy governance (Gereffi *et al.*, 2003).
- Systematic efficiency, which implies that the governing party in a chain ensures that close cooperation and trust between the parties in the chain exist. The governing party is

involved in assisting the participants in their chain, which are located in developing countries, to upgrade.

Upgrading and innovation are also important aspects of the GVC analysis. Producers need to continuously innovate (i.e. add value to their products and operations) in order to remain competitive. However, a producer needs to innovate at a faster rate than his competitors do, otherwise it would mean very little (Kaplinsy & Morris, 2001: 37). By increasing value-added activities, countries become more successfully integrated into the global arena, which leads to an increase in the country's economic activities, higher levels of exports and the attraction of foreign direct investment. Ultimately, the country's competitive position increases, as the only source of value creation in a country are its enterprises (Garelli, 2003: 702).

1.1.5 Floriculture industry

The floriculture industry involves the cultivation and distribution of bulbs, cut flowers, foliage and plants to both local and international markets. According to the Harmonised Code System, floricultural products are classified under the code 06 (live trees and other plants). The products' codes range from 0601 to 0604 (Foreign Trade On-Line, 2004).

1.1.5.1 International floriculture industry

The global floriculture industry has many active participants in all of the continents. The number of participants, in both developed and developing countries is increasing continuously. World exports and imports of floricultural products both exceed US$9 billion, where Europe is both the largest importer and exporter of floricultural products (Pathfast Publishing, 2004; Van Liemt 1999: 7; ITC Calculations based on COMTRADE statistics). International trade in this industry is complex, as there are many factors that influence exports (CBI, 2003a). These factors include the demands of different types of markets (The Kaiser Study, 2000: 20), requirements (e.g. quality standards) set by governments and international buyers (CBI, 2003a & 2003b), shorter life cycles of the leading varieties of floricultural products (Thoen, Jaffee, Dolan & Ba, 2000), changes in consumer demands (Flower Council of Holland, 2004) and trends in fashion and consumption (CBI, 2003a; Flower Council of Holland, 2004). In essence, the international floriculture industry can be described as an industry that is continuously changing. Therefore it is

necessary that the exporters be successfully integrated into the global floriculture market, as it determines the degree of their competitiveness.

1.1.5.2 South African floriculture industry

The South African floriculture industry has become more competitive in the global market since it opened up its economy in 1994. Floriculture exports, for example, increased from R77 million in 1995 (Anon., 2003) to R269m in 2002 (Lourens, 2004). Of the world exporters of floricultural products, South Africa ranks 21st (Pathfast Publishing, 2004). The industry currently employs 17 500 people and provides more specific opportunities for rural employment than any other sector. In essence, the South African floriculture industry has the ability to increase its export participation, which will enhance foreign exchange earnings (The Kaiser Study, 2000: 5).

1.1.6 Relevance of global chains in the floriculture industry

According to Thoen *et al.* (2000: 2), it is interesting to observe the production and distribution of cut flowers from a global supply chain perspective, due to both the technical properties and certain aspects of international trade in this type of commodity. For example:

- Floricultural products, especially cut flowers, are highly perishable. They have a limited marketing and vase life (several weeks at the most). Due to the high perishability of these products, the distribution of the cold chain needs to be uninterrupted, transportation needs to be efficient and sales have to be conducted quickly. If the distribution system experiences a breakdown, large product and financial losses might occur.
- The quality of cut flowers also varies considerably. It is difficult to undertake large transactions based on descriptions. Hence, physical inspection of the products is repeated along the distribution channel. The reputations of the suppliers are usually also an indicator of their products' quality and value.
- Due to the rapid turnover and differences in quality of floricultural products, market and transaction information play a vital role in the supply chain of these products. Accurate information ensures that the correct products and quality are supplied on a timely basis.

Boehlje, Schrader and Akridge (cited in Thoen *et al.*, 2000: 40-41) point out that floriculture growers and exporters can maintain their positions in their supply chain by possessing resources

and capabilities that are difficult to substitute. In the short term, they are able to receive protection from the expertise (e.g. knowledge on the production and harvesting systems) and relationships (e.g. relationships with overseas buyers that are based on trust) they have built up over time. Their expertise and relationships make them less vulnerable to substitution within the supply chain.

In the long-term, security within the chain depends on innovation, consistent quality, reliability and strategic positioning within the chain. It can be said that the best response for the increasing competition in the ever-changing floriculture industry is to develop a capacity to upgrade. It the floriculture industry this may be achieved by expanding the product range and the services offered (e.g. customised packaging). Product differentiation entails greater skill in production, more post-harvest care and logistics, larger capital investment and improved innovation capabilities.

As information is pivotal in the floriculture industry, information technology links the various members of the supply chain in order to ensure timely logistics and product traceability. Throughout the supply chain, the demands of the buyers decrease profit margins, become barriers to entry and increase competition. In essence, the floriculture industry is dynamic. Only those suppliers that provide services difficult to substitute will remain competitive in this industry.

1.2 RESEARCH QUESTION AND AIMS

The following research question will be addressed in this study:

What impact do the challenges of the global floriculture industry have on the competitiveness of the floriculture industry of South Africa and its integration into the global market?

The South African floriculture industry is discussed from the perspective of the GCC and the GVC approach, with the following aims:

For the primary research question, the following aims can be studied: firstly, to assess the competitiveness of the South African floriculture industry in the global market; secondly, to determine the extent to which the South African floriculture industry is integrated into the global

market; and thirdly, to determine how the South African floriculture industry can become more integrated in order to enhance its competitiveness in the global market.

1.1 RESEARCH METHODOLOGY

This research consisted of both a survey of the literature and an empirical study.

1.3.1 Literature study

A literature survey was done on the core available literature on globalisation, GVCs and GCCs. The work of Dicken (1998), Deardorff and Stern (2000), Gereffi (1994, 1999a & 1999b), Gibbon (2001, 2002 & 2003), Gereffi and Korzeniewics *eds.* (1994) Hamann (2001), Van Grunsven and Smakman (2001 & 2002), Porras (2003), Dolan and Humphrey (2000), Kalpinsky and Morris (2001) and others were surveyed.

1.3.2 Empirical study

Firstly, case studies were done of two South African floriculture producers.

Secondly, field research was conducted in the Netherlands in collaboration with Tilburg University's "Instituut Voor Ontwikkelingsvraagstukken" (IVO). Interviews with certain role players in the Netherlands' floriculture industry were also conducted. The Netherlands is the centre around which the international floriculture trade revolves. It is the largest exporter of floricultural products. Due to the high concentrations of supply and demand in the Netherlands, the prices of floricultural products are set here (CBI, 2003a).

Structured mail-based questionnaires were used. A copy of the questionnaire is included in Appendix A. The membership list (2002) of the South African Flower Export Council (SAFEC) was used as a sample frame.

Thirdly, a survey of floriculture firms was done.

1.4 DEMARCATION OF THE STUDY

In chapter one, the background and problem statement of this study are outlined. Globalisation and its influences are discussed, as well as the core elements of the GCC and GVC approaches. An overview of both the local and global floriculture industries is given, along with the importance of analysing the floriculture industry through the perspective of global chains. The purpose and method of this study are finally outlined.

In chapter two, the theories of globalisation and of GCCs and GVCs are discussed according to the literature available on these topics. The focus of this chapter is on globalisation, but through a specific perspective. The focus is on the participation of a firm in the global market by forming part of a GCC or a GVC. Globalisation is defined and its origin and effects are discussed. The GCC and GVC approaches are defined and discussed according to the elements of these approaches, as indicated in the problem statement.

Chapter three provides insight into the application of GCC and GVC research in the analysis of the horticulture industry. The importance of the horticulture export industry to developing countries, in terms of employment and poverty, is outlined. Horticulture GVCs and GCCs are discussed where a link is drawn between the theory and practice through an examination of a horticulture commodity chain. An introduction is given to floriculture chains.

In chapter four, the attention is drawn to the international and national (South African) floriculture industries. The attributes and challenges of the global floriculture arena are discussed, together with a detailed description (e.g. the influence of the local market on South Africa's exports, South Africa's competitors and the problems experienced in the industry) of the South African floriculture industry.

Chapter five focuses on the survey that was done to evaluate the South African floricultural exporters' competitiveness. A questionnaire was mailed to the South African floriculture exporters. The questionnaire contained the elements of the GCC and GVC approaches, as discussed in chapter two. The results were analysed to provide aggregate and average findings and conclusions were drawn in order to determine the South African export floriculture industry's competitiveness.

In chapter six, the study is summarised, final conclusions are drawn and recommendations are made for further study.

CHAPTER 2
GLOBALISATION, GLOBAL COMMODITY CHAINS AND GLOBAL VALUE CHAINS

2.1 INTRODUCTION

Gereffi, Humphrey and Sturgeon (2001: 1) point out that globalisation became synonymous with the international economy in the late 20th century. The significance of globalisation can therefore not be ignored. Kaplinsky and Morris (2001: 1) state in this regard:

> For many of the world's population, the growing integration of the global economy has provided the opportunity for substantial economic and income growth. This integration also provides opportunities for developing countries to achieve sustainable growth in income in order to address issues such as poverty and inequality.

Globalisation can lead to an increase in income and job opportunities in countries. Kaplinsky and Morris (2001: 17) refer in this regard to China's economy, which grew at a rate of 10,2 per cent per annum in the 1980s and 12,8 per cent during the 1990s. This rapid growth significantly reduced poverty. Globalisation also provides a means by which a greater provision and quality of differentiated final products are available in countries – to the advantage of consumers. Companies, either large or small, that are innovative and competitive, gain from globalisation. As competition increases quality and keeps prices low, it also benefits consumers.

However, despite these encouraging comments the effects of globalisation have not only been positive. Kaplinsky (2000b: 3) regards the growing inequality between countries as the most important negative effect of globalisation. According to the United Nations Conference on Trade and Development (1997: 5-6), the world economy has been characterised by increasing inequality and slow growth since the 1980s. Inequality has risen in terms of skills and of income. Globally, wage inequality between skilled and unskilled workers has grown. Income gaps, however, widen the discrepancies between the North and the South. For example, in Africa the average income is now only 7 per cent of that in the industrial countries, and in Latin America the average per capita income has fallen from more than a third of the "northern" level in the late 1970s to one quarter in the 1990s (Santarelli & Figini, 2002; Kaplinsky, 2001; Heshmati, 2003).

One of the mechanisms whereby globalisation can influence the levels of poverty and inequality in a country is through the manner in which its firms participate in the global production, trade and distribution systems. Globalisation, as seen through the perspective of value chains, does not only consider international trade in goods and services, but also how the firms that participate in global trade are linked through a variety of sourcing and contracting arrangements (Gereffi *et al.*, 2001: 1).

Nadvi (2004: 21) explains how researching the participation of a firm in a global commodity or value chain can shed light on globalisation issues:

- This type of research enables an analysis of whether engagement in global value chains can deliver positive outcomes for the poor – not only in terms of income gains, but also in respect of employment stability, income security and working conditions.
- It also facilitates an understanding of the impact of global trends on workers in developing countries that participate in a value chain organisation. These trends include retail concentration and the increasing importance of product, labour and environmental standards.
- Finally, it analyses the circumstances in which winners and losers from trade liberalisation are generated.

The focus of this chapter is on globalisation, but through a specific perspective. The focus is on the participation of a firm in the global market by forming part of a GCC or a GVC. Section 2.2 will define globalisation and discuss its origin and its effects. Section 2.3 will discuss the theory of GCCs and of GVCs. The chapter concludes with a summary in section 2.4.

2.2 GLOBALISATION

Since the collapse of the Millennium Round talks of the World Trade Organisation in Seattle in 1999, the debate on globalisation has altered. It has become clear that globalisation could not be accelerated through narrow trade and investment liberalisation (free trade) without addressing its social dimensions. Therefore aspects such as civil society, poverty and inequality, environmental costs and economic instability especially in developing countries needed to be addressed (Weisbrot, 2000; Howard, 2000).

In order to understand the results of globalisation, as well as the phenomena of GVCs within globalisation, globalisation is subsequently defined (section 2.2.1) and explained by examining its history (section 2.2.2). The measurement and effects of globalisation are discussed in sections 2.2.3 and 2.2.4 respectively.

The World Bank's study on globalisation, growth and poverty (2002) provides the most comprehensive data on globalisation. It therefore serves as a primary resource in this section.

2.2.1 Definitions of globalisation

There are various definitions of globalisation:

- "Globalisation is an umbrella term referring to the erosion of barriers to international flows of goods, finance and know-how." (Schmitz, 1999: 1628.)

- "Globalisation – the growing integration of economies and societies around the world – is a complex process that affects many aspects of our lives." (Stern, 2002: 4.)

- "Societies and economies around the world are becoming more integrated. Integration is the result of reduced costs of transport, lower trade barriers, faster communication of ideas, rising capital flows, and intensifying pressure for migration. Integration – or globalisation – has generated anxieties about rising inequality, shifting power and uniformity." (World Bank, 2002: 1.)

- "Globalisation is defined as the pervasive decline in barriers to the global flow of information, ideas, factors (especially capital and skilled labour), technology, and goods." (Kaplinsky & Morris, 2001: 15.)

- "The concept of globalisation is explained qualitatively as the degree of economic integration among geographically dispersed activities. This is opposed to the extension of activities across boundaries, which is referred to as 'internationalisation'." (Ballard & Schwella, 2000: 738.)

- "Globalisation processes are qualitatively different from internationalisation processes. They involve not merely the geographical extension of economic activity across national boundaries but also – and more importantly – the functional integration of such internationally dispersed activities." (Dicken, 1998: 5.) Dicken (1998: 5) also explains the difference between globalisation and internationalisation: "Internationalisation processes involve the simple extension of economic activities across national boundaries. It is, essentially, a quantitative process, which leads to a more extensive geographical pattern of economic activity."

In essence, globalisation is the accelerated growth of the world economy, i.e. the development of international market economies. Santarelli and Figini (2002: 7) point out that globalisation is characterised by markets becoming increasingly open (particularly through the elimination of barriers to trade in goods and services and the development of an integrated financial market) and by the decreasing role of the state in the economy.

2.2.2 History of globalisation

Globalisation has been evident in the world for more than a century. The first phase of globalisation stretched from 1870 to 1914. The cause of the first phase of globalisation was the acceleration in the development of transport. The reductions of trade barriers also spurred globalisation. According to the World Bank (2002: 3), countries began to benefit from increased economics of scale; hence the flow of goods, capital and labour rose dramatically. Labour flows were 10 per cent of the world's population (more than 60 million people migrated from Europe to less developed parts). Exports relative to world income almost doubled to 8 per cent. Foreign capital more than tripled relative to income in the developing countries of Africa, Asia and Latin America. The global per capita income rose, but only the countries participating in globalisation gained from it. The gap of inequality widened between these countries and those who did not participate.

The First World War, the Great Depression and the Second World War caused the global rise in economic rates to decrease. Countries established policies of protectionism policies and fell back on nationalism. This phase is known as the deglobalisation period (1914 – 1945). The World Bank (2002: 27) indicates that the reason for this phase was that the countries wanted to generate demand in their individual domestic economies in order to stimulate job creation. The results

were threefold. Firstly, world exports declined (it was back to the level from which it started in 1870). These protectionist policies had caused eighty years of technical progress in transport to become undone. Secondly, the foreign direct investment of developing countries fell to 4 per cent (far less than it had been in 1870). Lastly, migration decreased as governments imposed stringent restrictions on newcomers in their countries.

The World Bank (2002: 27) states that, although the world seemed to have retreated from globalisation, the results of this era were severe for those who experienced the inequality between the countries. One would have thought that the levels of inequality would decrease, but the opposite happened. The absolute number of poor people rose by 25 per cent between 1914 and 1945.

The second phase of globalisation was from 1945 to 1980. Due to the many problems experienced by being inward oriented (i.e. nationalism), this phase oriented itself toward internationalism. The focus was on the integration of countries, especially the rich ones (for example Japan, Europe and North America). Trade was liberalised by the reduction of trade barriers. However, trade liberalisation did not include all countries and products. Developed countries encouraged trade amongst themselves, especially the trade of manufactured goods. Developing countries, however, still faced barriers. They were not able to trade manufactured products. Their only salvation was to export primary commodities to the developed countries. This was, however, also difficult as developing countries implemented inward-oriented policies by erecting barriers against each other and against developed countries. Thus, the developing countries were isolated from potential development and capital flows, increasing the ever-rising world inequality. The developed countries produced value-added manufactured products, while the developing countries remained fastened in the exports of primary products and commodities. The result was greater even-handedness between the developed countries and more inequality between developed and developing countries. The rapid growth in this phase was also known as the golden age for the industrialised economies. Unfortunately, the oil crisis in the late 1970s brought this golden era to an end (World Bank, 2002).

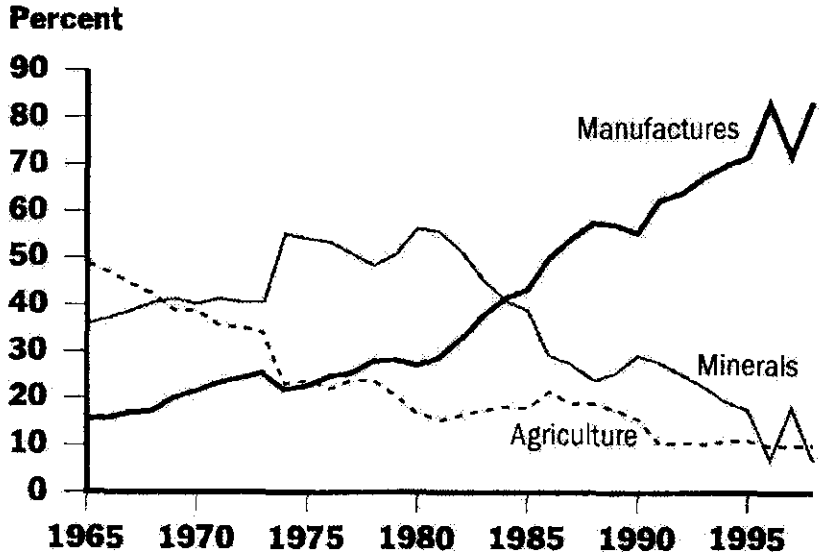
The third and ongoing phase of globalisation began in 1980. Progress in the development of technology and communications stimulated this recent era of globalisation. The World Bank (2000: 1) points out how this era changed the fate of developing countries. The most significant event in this era has been that the developing countries opened up their economies by reducing

the barriers that had hindered the development of their domestic markets and their links to the international economy.

Due to the changes in their international trade policies, the developing countries were now able to achieve economies of scale in labour-intensive manufactures, thus gaining a competitive advantage. Hence, the developing countries were able to make progress in the world economy. According to the World Bank (2002: 32), manufactures of developing countries rose from less than a quarter of developing country exports to more than 80 per cent in 1998. This increase is shown in figure 2.1. Another important advancement in the exports of developing countries was the increase in the export of services (the figure rose from 9 per cent to 17 per cent) (World Bank, 2002: 32). This is an indication that developing countries have indeed progressed.

Figure 2.1 illustrates that high value merchandise exports of developing countries have increased significantly since the 1980s. Dicken (1998: 36), however, indicates that not all developing countries were as successful in the exports of merchandise. Compared to Asian countries, sub-Saharan Africa performed poorly.

Figure 2.1: Shares in merchandise exports in developing country exports



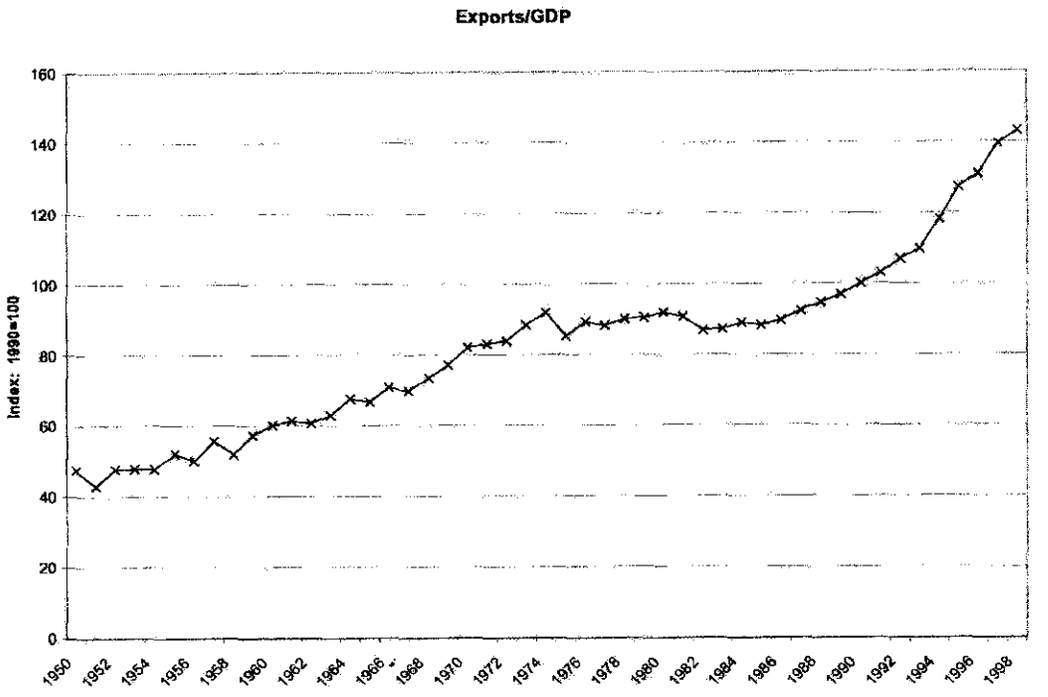
Source: Martin (2001) (cited in the World Bank, 2002: 32)

2.3 Measurement of globalisation

It is not easy to measure the process of globalisation. Loots (2001: 8) identifies several indicators that measure countries' participation in globalisation. The first indicator is trade (imports plus exports). The participation in international trade illustrates the openness of the countries' economies. The second measure of participation is the total net portfolio investment (equity and bonds). The final indicator is international investment, i.e. the total net foreign direct investment flows.

Deardorff and Stern (2000), Kaplinsky (2000a) and Dicken (1998) have applied the indicator of trade statistics to measure the process of globalisation. The trade statistics are illustrated in figure 2.2 where the index of the ratio of world merchandise exports is shown.

Figure 2.2: Index of ratio of world merchandise exports to world GDP (1990 = 100)



Source: WTO, International Trade Statistics, 1999 (cited in Deardorff & Stern, 2000: 49)

Figure 2.2 illustrates the growth of international trade over the last half century. Deardorff and Stern (2000: 4) explain that the graph is measured as an index of the ratio of world exports to world GDP (1990 = 100). The graph indicates that this ratio increased moderately through the early 1970s. The ratio stalled until the min-1980s, when its growth resumed and it grew

especially fast in the mid-1990s. Eventually, by 1998 it was more than three times what it was in 1950.

Dicken (1998: 24) provides another example of how much world trade has increased. Between the period of 1948 and 1953 world trade had increased at an average annual rate of 6,7 per cent. During the period between 1958 and 1963 the rate had risen to 7,4 per cent. From 1963 to 1968 it had accelerated further to 8,6 per cent.

It is evident that worldwide economic activity has increased due to open markets, competition and the free flow of goods, services, capital and knowledge (ICC, 2000).

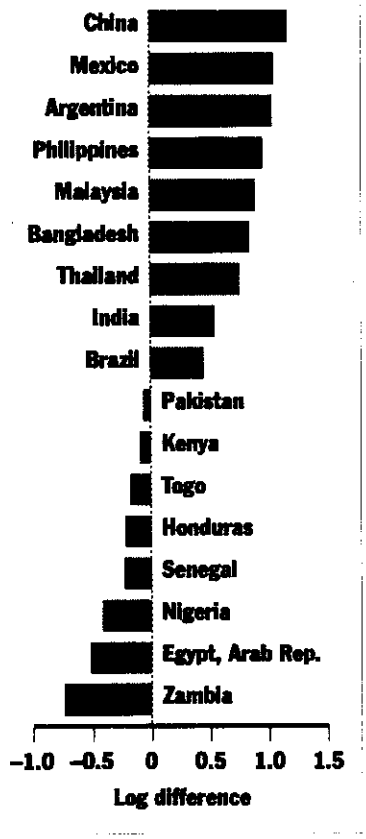
2.2.4 Winners and losers in globalisation

According to Stern (2002: 4-5), a wide range of domestic reforms (covering governance, the investment climate and social service provision) and international actions (which provided access to foreign markets, technology, and aid) were required in order to alleviate poverty caused by globalisation.

There is evidence that globalisation (or global integration) has reduced the number of poor people in the world. The figure declined by 120 million between 1993 and 1998 (World Bank, 2002: 2). The World Bank (2002: 6) indicates that China, India, Uganda, and Vietnam are examples where participation in globalisation has reduced poverty. In China for example, the number of rural poor declined from 250 million in 1978 to just 34 million in 1999.

Unfortunately only 24 of the developing countries (about three billion people) increased their participation in the global economy – notably China, Brazil, Hungary, India and Mexico. The rest of the developing countries (about two billion people) experienced negative growth rates and became even poorer. They are called the "less globalised" countries, meaning they are not participating strongly in globalisation (World Bank, 2002). These countries include most of Africa and the Former Soviet Union. Figure 2.3 indicates differences in the export performances of developing countries over a period of twenty years. The World Bank (2002: 34) explains that figure 2.3 indicates that some developing countries (e.g. China, Mexico and Argentina) increased their trade relative to income. Other developing countries (e.g. Pakistan, Kenya and Nigeria), however, experienced a decline in trade to GDP.

Figure 2.3: Change in trade/GDP for selected countries, 1977-1997



Source: World Bank (2002: 35)

Thus, some countries have gained from globalisation, while others have been left behind.

It is clear that globalisation has shaped the world as it is today. Globalisation provides many opportunities for countries to reap the benefits of the expanding global market. However, according to the World Bank (2002: 7), these opportunities are only utilised by those who participate in the global market. Hence, inequality is created between those who utilise these opportunities and those who are not able to participate in the globalisation process.

Both the World Bank (2002: 7) and Kaplinsky (2000b: 5) give reasons why some poor countries are not able to participate in the globalisation process. The World Bank (2002: 7) explains that the inequality may be the result of inadequate policies and infrastructure, weak institutions and corrupt governance, and civil war. It could also be due to adverse geography and climate.

Kaplinsky's (2000b: 5) reasons are similar to those of the World Bank, e.g. the lack of resources in some countries hindered participation in globalisation and world trade. However, he argues

that some countries that have participated in globalisation have not been able to gain from it. Hence, not only those excluded from globalisation are experiencing inequality. Kaplinsky (2000b: 5) illustrates his argument by providing the following statistics: in sub-Saharan Africa, the trade/GDP ration has raised from 51 to 56,1 per cent between 1985 and 1995; however, their relative income shares and absolute standards of living have declined.

Kaplinsky (2000b: 7) provides an answer as to why the developing countries that have participated remain poor. The answer is that these developing countries have experienced what is called "immersing growth". Kaplinsky (2000b: 7) defines "immersing growth" as follows:

> Immersing growth describes a situation where there is increasing economic activity (more output and more employment) but falling economic returns.

Kaplinsky (2000b: 7) uses the examples of the Brazilian and the Dominican Republic industries (respectively leather shoes and jeans) where, due to increased competition and declining international prices, real wages fell. Thus, they experienced "immersing growth".

The parties that are adversely affected by globalisation are not, as assumed, only in developing countries. Many are in industrially advanced countries. For example, inequality between skilled and unskilled labour wages has increased in industrially advanced countries. It should be noted that the developed countries have succeeded in reducing inequality in their own countries through such means as government grants and education, whereas it is not the case in developing countries. Developing countries have generally not been able to achieve the reduction of inequality in their countries (Kaplinsky & Morris, 2001: 17).

It is therefore important to participate in global markets, but how one participates will determine if one can achieve sustainable income. One possible way to reap the benefits of globalisation is producer participation in global chains. The role of GCCs and GVCs will subsequently be discussed.

2.3 GLOBAL COMMODITY CHAINS AND GLOBAL VALUE CHAINS

The matter of globalisation is made difficult by the fact that participation in globalisation does not necessarily guarantee sustainable income. Therefore, the method or manner of participation

in global markets needs to be examined. The IDS (2002) have identified three modes in which individual producers participate in global markets:

- The producers act as individual sellers to individual buyers in free markets.
- The producers act as individual sellers, selling into global markets. This is done by the formation of durable relationships. These relationships require extensive coordination and cooperation.
- The producers participate in global markets through their role in vertically integrated transnational corporations (TNCs). Dicken (1998: 177) defines a transnational corporation as a firm that has the power to coordinate and control businesses in more than one country, even if the TNC does not own these businesses.

The IDS (2002: 1-2) further explains that the way in which individual producers participate in these chains will determine a number of factors which are key to an understanding of the spreading of the gains from globalisation and the sustainability of income growth. It will determine their:

- Access to incomes in the distribution of the gains from participating in the global economy,
- Their roles within these global chains,
- Access to market niches with differential possibilities of profitable production, capacity to change their role in the chain, and
- Their ability to move into new and more profitable chains.

By focusing on the chain rather than on the individual firm will explain where the upgrading and innovating opportunities for a firm, are in order to generate a larger sustainable income. It also helps to identify the various actors within the chain who have the power to influence the chain and the policies that may be implemented to better the distribution of income (IDS, 2002).

This section discusses the theory of GVCs (section 2.3.1) and GCCs (section 2.3.2). The theory explains the relation of the concepts, their origin, as well as the relevant aspects surrounding the two approaches.

Before discussing the two approaches, one needs to understand the differences and similarities between them. Porras (2003: 44) distinguishes between the GCC approach and the GVC analysis:

> The GCC approach emphasises the internal governance structure of the supply chain and the role of leading firms in setting up global production and sourcing networks. The GVC analysis highlights the relative value of the activities required to bring a product or service from conception through the different phases of production, through delivery to end consumers to their final disposal after use.

Kaplinsky (2000b: 9) recognises resembling characteristics between the value chain and the global commodity chain approaches. Both focus on the international dimension of the activities, the power of lead firms and coordination of global activities, and the importance of upgrading. Kaplinsky (2000b: 9) criticises the latter approach, as the word "commodity" limits it to the production of undifferentiated products that have low barriers to entry. He explains that in order to generate a sustainable income, producers have to position themselves chains that produce non-commodity product and where there are high barriers to entry.

These two concepts are interrelated. Both show the sequence of events (i.e. the flow of the chain) that takes place when a product is produced. However, the focus of the GCC approach differs from that of the GVC approach. The GCC approach focuses mainly on the political economy. Hence it aims to encourage sustainable development. It considers the material stream, i.e. the production processes, but also analyses the environmental aspects. The GCC approach analyses the relationships between the actors. Both approaches analyse the governance structure within the chain. The governance structure identifies the organisation in the chain that has the most market power, that organises the chain and that defines what the products have to be. However, the GCC approach is more concerned with coordination across firm boundaries. This is where the clearest distinction lies between these two approaches. The GVC approach essentially focuses on the value aspects and the distribution thereof in the chain.

Although there are differences between the two approaches, some research make little distinction between them. For instance, Barrientos, Dolan and Tallontire (2003) incorporate elements of the GCC approach in the GCV analysis. Gibbon (2003) indicates no distinction between the concepts. According to this indication, one or the other term can be used.

2.3.1 Global value chains (GVC)

Kaplinsky provides the most comprehensive information on GVCs. His research therefore serves as a primary resource in this section.

Concerning the role of GVC research, Kaplinsky (2000b: 7) asks the following two questions:

- Is it possible to determine those factors that drive the distribution of the gains from global production and exchange (in order to explain both why some parties have gained and others have lost from the process of globalisation)?
- Can an analysis be used to identify policy levers (relevant at all levels, i.e. individuals, households, firms, regions and countries), which may lead to a different and more favourable distributive outcome?

Kaplinsky (2000b: 7) states that the GVC analysis has an important role to play in meeting the above-mentioned objectives.

2.3.1.1 Contribution of the GVC analysis

Kaplinsky and Morris (2001: 14) state that the contribution of GVC research is to assist in the explanation of the distribution of benefits, especially of income, to those who participate in the global market.

Gereffi *et al.* (2003: 18) add to the above-mentioned reason of the importance of GVC research by indicating that it is key in understanding how firms in developing countries can participate in and benefit from the global economy. The analysis also indicates what the risks of exclusion from the global market might be. Finally, it determines how the net gains from the participation in these global chains might be increased.

In particular, value chain analysis provides insight into six aspects. These aspects explain how the value chain approach sheds light on the above-mentioned questions concerning participating effectively in globalisation and the policy implications. Kaplinsky and Morris (2001: 22-23) explain them as follows:

- The value chain analysis addresses the nature and determinants of competitiveness, and makes a particular contribution in raising the sights from the individual firm to the group of interconnected firms.
- By focusing on all the links in the chain (not just on production) and on all activities in each link (for example, the physical transformation of materials in the production link), it helps to identify which activities are subject to increasing returns, and which are subject to declining returns.
- As a result of being able to make these distinctions regarding the nature of returns throughout the various links in the chain, policy makers are assisted in formulating appropriate policies and making necessary choices. These may be to protect particularly threatened links (e.g. poor informal operators) and/or to facilitate upgrading of other links in order to generate greater returns.
- The value chain analysis shows that even though competitiveness may have been achieved, the mode of connection into the global economy may require a focus on macro policies and institutional linkages, and these require a different set of policy responses to those that deliver firm-level competitiveness.
- Participating in global markets, however competitive at a single point in time, may not provide for sustained income growth over time. By focusing on the course that participation in global markets involves, value chain analyses allow for an understanding of the dynamic determinants of income distribution.
- Value chain analysis need not be confined to assessing the extent to which participation in global markets determines the spreading of the gains from globalisation. It can also be used to understand the dynamics of distributions of incomes within countries, particularly in large economies.

In summary, value chain analysis looks at the "bigger" picture. It does not only consider competitiveness at firm level, but also considers the competitiveness of all of the inter-linked firms in a global chain. By focusing on all the links, i.e. horizontal and vertical, it is able to determine which firms are profitable. This enables policy-makers to use the correct instruments which would help the firm to become more profitable (by helping them to upgrade, for example). As mentioned, value chain analysis takes in the "bigger" picture; therefore it also assists policy-makers in determining which macro policy instruments to use. Value chain analysis gives insight

into income distribution, both within and between countries, to assist in the search for better patterns of income distribution.

2.3.1.2 Origin of the value chain concept

According to Kaplinsky (2000a), the concept of a value chain was mainly shaped by two theories. Porter (1985) formed the first theory. He described the path of the physical transformation of the product as well as the support services provided by the firm as a value chain. Porter used the term "value stream" as an extension of the value chain concept, to describe the linkages between firms or industries. The second theory came from the work of Gereffi (1994), building on the world systems theory.

Other similar concepts to that of a value chain are the French *filière* approach and the global commodity chain approach. A detailed description is given in section 2.3.2.1.

2.3.1.3 Description of the value chain

The value chain is defined as follows:

- "The value chain describes the full range of activities which are required to bring a product or service from conception, through the intermediary phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use." (Kaplinsky, 2000b: 8.)

- "The value chain describes the full range of activities that are required to bring a product from its conception, through its design, its sourced raw materials and intermediate inputs, its marketing, its distribution and its support to the final consumer." IDS (2002.)

A simple value chain consists of the following four links: design and product development, production, marketing, and consumption and recycling. Each link consists of specialised activities, for example: the activities in the production link are inward logistics, the transformation of inputs, and packaging.

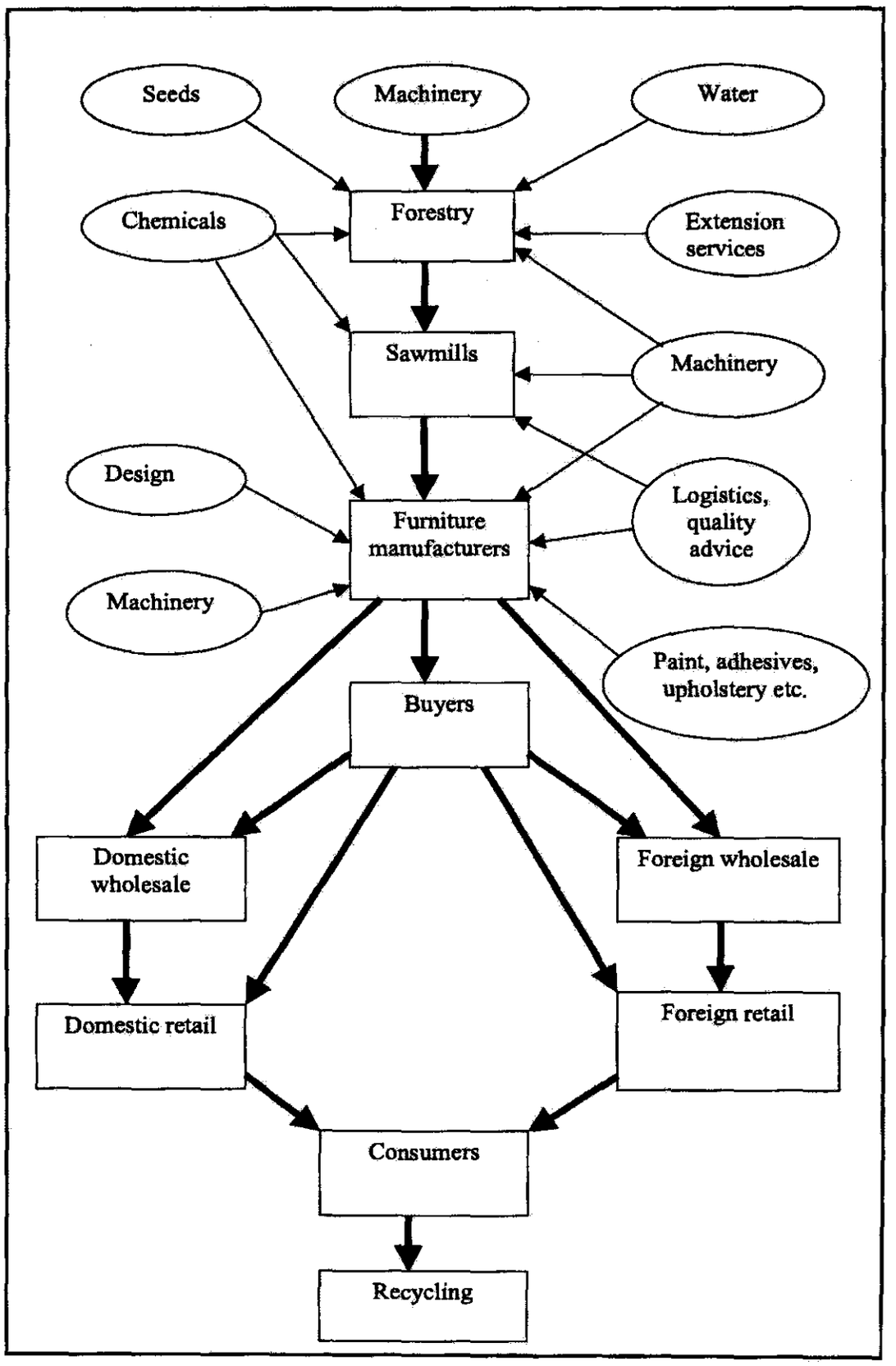
Value chains are not always that simple, they have many complex links. Some of the links in the value chain could form part of another value chain.

Figure 2.4 illustrates an extended value chain, namely the forestry, timber, and furniture value chain. Kaplinsky, Memedovic, and Morris and Readman (2003: 5) explain the flow of this particular value chain. The forestry sector involves the provision of seed inputs, chemicals, equipment and water. Cut logs are sent to the sawmill, which obtains its primary inputs from the machinery sector. From there, sawn timber moves to the furniture manufacturers who, in turn, obtain inputs from the machinery, adhesives and paint industries. They receive their design and branding skills from the service sector. Depending on which market is served, the furniture then passes through various intermediary stages (i.e. wholesalers and retailers) until it reaches the final customer. The consumer recycles or refuges the furniture after use.

2.3.1.4 Studies of selected GVCs in the industry

Kaplinsky (2000a & 2000b) links the effects of globalisation to the GVC analysis. Hamann (2001) examines globalisation trends in the food and agro-industries by using the GVC approach to determine future competitive situations. Kaplinsky, Morris and Readman (2001) and Kaplinsky *et al.* (2003) focus on the wood furniture value chain by determining possible upgrading prospects. Barrientos *et al.* (2003) use the value chain approach's analytical framework for understanding the development of codes of conduct in African horticulture. Barrientos (2001) also examines gender issues and the flexibility thereof in GVCs. Humphrey and Schmitz (2001) as well as Gereffi *et al.* (2003) examine the governance aspects of GVCs. Morris (2001) determines how value chain cooperation could be created.

Figure 2.4: The forestry, timber and furniture value chain



Source: Morris and Kaplinsky (2001: 5)

2.3.1.5 Elements of the value chain analysis

Kaplinsky (2000a & 2000b) and Kaplinsky and Morris (2001) provide the most comprehensive analysis of the three fundamental constructs of the value chain approach.

(a) Barriers to entry and rent

According to Kaplinsky and Morris (2001: 25), economic rent is the focus of the value chain analysis. They explain the concept of rent in the value chain analysis:

> The value chain is an important construct for understanding the distribution of returns arising from design, production, marketing, coordination, and recycling. Essentially, the primary returns accrue to those parties who are able to protect themselves from competition. This ability to insulate activities can be capsulated by the concept of rent, which arises from the possession of scarce attributes and involves barriers to entry.

Ricardo (cited in Kaplinsky & Morris, 2001: 25) states that one could achieve or gain economic rent if one owns a scarce resource, e.g. land. If one does not own a scarce resource, it may act as a barrier to entry in achieving economic rent. Economic rent can also be accrued through the other production factors, i.e. capital, labour, and entrepreneurship. Schumpeter (cited in Kaplinsky & Morris, 2001: 26), however, believed that one could create scarcity through innovation. Innovation could lead to the development of products that achieve greater returns.

Globalisation has increased the need for innovation. As countries develop their own production capabilities, barriers to entry in production are lowered. Subsequently, competition increases. In other words, more and more countries produce the same products. If one wants to achieve economic rents, one has to innovate. Innovation could lead to new products or to the participation in activities outside of production, e.g. design and marketing (Kaplinsky, 2000b: 11). Thus, competitive forces keep entrepreneurs from gaining economic rent (prices are kept at a low level). However, increased competition pressures entrepreneurs to innovate and search for new products, therefore enabling them to profit.

Gereffi (1999b: 6) classifies these rents or assets in three categories. The first category of rents is tangible. Such rents may be obtained through the use of unique machinery. The second category

of rents is intangible (for example rents gained through a well-known brand). The final category of rents is intermediate, such as those obtained through marketing skills.

Kaplinsky and Morris (2001: 28) provide the following examples of the different types of rents:

- Technology rents (having command over scarce technologies),
- Marketing rents (possessing better marketing capabilities and/or valuable brand names),
- Organisational rents (possessing superior forms of internal organisation),
- Relational rents (having superior quality relationships with suppliers and customers),
- Policy rents (operating in an environment of efficient government, constructing barriers to the entry of competitors).

Gereffi (1999b: 6) has grouped the various forms of rents according to the categories of producer-driven and buyer-driven commodity chains. He states that those leading firms in producer-driven and buyer-driven commodity chains use barriers to entry to generate different kinds of "rents" in global industries. According to Gereffi (1999b: 6), producer-driven chains rely primarily on technology rents and organisational rents. Buyer-driven chains, on the other hand, rely on relational rents, policy rents and brand-name rents.

In summary, barriers to entry determine the distribution of rents. The decrease in barriers to entry led to an increase in global producers, which caused competition to increase and resulted in lower profits. Consequently, economic rent is lower. Thus, the participants in the value chains are constantly searching for new forms of rent.

(b) Governance

Kaplinsky and Morris (2001: 29) explain that value chains are governed when restrictions are set in terms of the product, processes and logistics. These restrictions have consequences up or down the value chain and comprise activities, actors, roles and functions.

The concept of governance indicates that within a value chain, one party (known as the key actor or lead firm) is responsible for coordinating and regulating the various activities performed by the links (i.e. the connected firms or actors) in the chain. The lead firm or key actor divides the activities between the firms participating in the chain. Thus, they are responsible for the division

of labour. They are also responsible for assisting firms to perform more complex activities (therefore, identifying economic rent opportunities). In essence, they determine the insertion of producers into their value chain (Kaplinsky, 2000b: 12).

Kaplinsky (2000a) states that governance has become increasingly important in the current era of globalisation and advancing international trade. In earlier times, trade existed through arm's-length relationships, i.e. goods were simply manufactured and exported. No coordination was required. In the globalisation era, however, trade is much more complex as more countries take part in it. Coordination is a vital requirement for the functioning of a value chain. Logistics (who ships what, where and when) form a big part of the coordination process. The integration of the different components of the final products and the compliance with the quality standards also have to be coordinated.

Thus, coordination usually entails managing the above-mentioned restrictions through the activities undertaken by various firms performing specific roles in the chain. It also requires monitoring the outcomes, connecting the activities of the actors, establishing and managing the relationships between various links in the chain, and organising the logistics to maintain networks of a national, regional or global nature. More than one firm might exercise coordination within a value chain (Kaplinsky & Morris, 2001: 29).

Humphrey and Schmitz (2001: 20-21) also emphasise the importance of governance in value chains. Through governance developing countries can gain access to markets, acquire production capabilities and receive technical assistance. Governance assists in understanding the distribution of the gains throughout the value chain and possible policy initiatives for government.

According to Kaplinsky and Morris (2001), governance can be understood in two categories. The first is to ensure that due to certain initiating activities, e.g. designing a product, the value chain can be established to perform the functions to create the product (i.e. ensuring consequences along the chain). The second form is to actively manage these functions in the chain to ensure that the products are created (i.e. to ensure that the consequences are met). The same firm need not necessarily exercise these two forms of governance. The lead firm or driver can still initiate the value chain, but firms down the chain can do the management or coordination.

Three forms of governance can be distinguished. The first form is the rules set by the governing party, which define the conditions for participation in the chain. These rules could be divided into three categories. They are legislative governance, judicial governance, and executive governance. These types of governance could be exercised by parties within (e.g. producer associations) or outside (e.g. environmental standards) of the chain. The first type is legislative governance. Legislative governance defines the basic rules that have to be followed by the parties who want to participate in the chain. The second type is judicial governance. This type reviews the performance of the participants to check if they comply with the rules set by the legislative governance. The third type is executive governance. Executive governance's function is to help the participants meet the above-mentioned rules (i.e. this governance is proactive) (Kaplinsky, 2000a).

The second form is when the governing parties impose sanctions. The sanctions could be either negative (e.g. limiting a producer's role because of poor performance) or positive (e.g. not auditing a producer as severely when he meets specified standards).

The third form of governance is legitimacy, i.e. the degree of trust between the governing party and the other parties. Thus, if there is a high degree of trust between the parties, the governing party usually has legitimacy and the relationships between the parties are durable (Kaplinsky & Morris, 2001).

(c) Systemic efficiency

To achieve efficiency in the value chain system, the governing party needs to ensure close cooperation and trust between the links of the chain. Due to the global nature of such a chain, governing parties have a greater degree of responsibility. This involves helping participants in the chain (those that are located in developing countries) to upgrade. The objective is to ultimately increase the efficiency of the chain (Kaplinsky, 2000a).

2.3.1.6 Types of governance in GVCs

Initially, as in the case of GCCs, two types of value chains were identified. They are buyer-driven and producer-driven chains (see section 1.2.2). These structures were developed from the

GCC framework. Their definition and descriptions are in essence the same; therefore the concepts are discussed in sections 2.3.2.8 and 2.3.2.9.

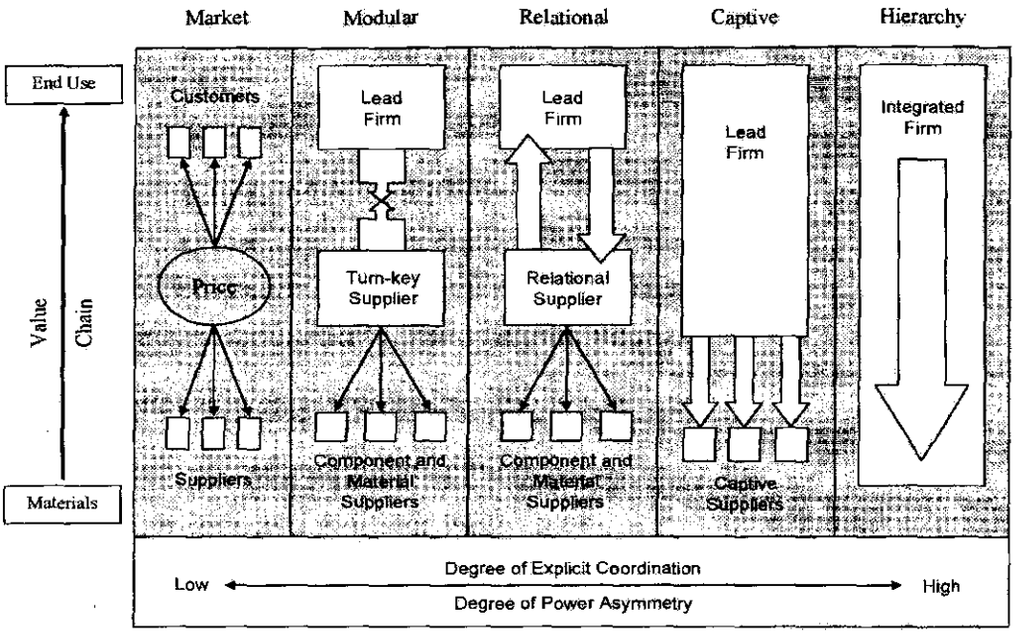
However, Gereffi *et al.* (2003: 4) note that due to recent research done by, for example, Sturgeon (2002) on the electronics industry and on contract manufacturing, it became clear that the GCC framework did not adequately specify the variety of network forms that existed. Therefore they developed five basic types of value chain governance. These types were developed from the understanding that market-based relationships among firms and vertically integrated firms (hierarchies) require various forms of coordination. This calls for governance to facilitate the coordination between the firms.

According to Gereffi *et al.* (2003: 4-5), the five types of value chain governance are only analytical. The analytical findings were derived from the empirical assumptions of studies completed on global value chains. Gereffi *et al.* (2003: 4-5) define the five types of value chain governance as:

- Markets. Market linkages do not have to be completely short-term, as typical of spot markets; they can persist over time, with repeat transactions. The essential point is that the costs of switching to new partners are low for both parties.
- Modular value chains. Suppliers in modular value chains make products to a customer's specifications, which may be less or more detailed.
- Relational value chains. Complex interactions exist between buyers and sellers, which often creates mutual dependence and high levels of asset specificity (asset specificity is investment by the actors in a chain in order to obtain or complete a particular transaction). This may be managed through family, reputation, or ethnic ties.
- Captive value chains. In these networks, small suppliers are transactionally dependent on much larger buyers. Suppliers face significant switching costs and are, therefore, 'captive'. Such networks are frequently characterised by a high degree of monitoring and control by lead firms.
- Hierarchy. This governance form is characterised by vertical integration. The dominant form of governance is managerial control, flowing from managers to subordinates or from headquarters to subsidiaries and affiliates.

The five GVC types can be explained by the illustration in figure 2.5. They are arrayed along the dual spectrums of explicit coordination and power asymmetry. The small arrows represent exchange based on price while the larger block arrows represent thicker flows of information and control, regulated through explicit coordination Gereffi *et al.* (2003: 10).

Figure 2.5: Five global value chain governance types



Source: Gereffi *et al.* (2003: 9)

Research conducted by Gereffi *et al.* (2003: 6) has enabled them to develop three factors on which the theory of value chain governance is based. These factors are:

- The complexity of information and knowledge transfer required to sustain a particular transaction, particularly with respect to product and process specifications;
- The extent to which this information and knowledge are codified and, therefore, transmitted effectively and without transaction-specific investment between the parties to the transaction; and
- The capabilities of actual and potential suppliers in relation to the requirements of the transaction.

Gereffi *et al.* (2003) apply these factors to the various governance types. The buyers and suppliers could only exercise the factors in a high or low degree. An example of such an

application is to the hierarchy governance type. Once the manufacturing of products is complex, transactions cannot be codified (they have to be specified). Due to the complexity, adequate suppliers may be hard to find, as a result the lead firms may be forced to develop the products with their own production processes.

Table 2.1 indicates application of the factors found in the governance types. Each of the five governance types provides a trade-off between the benefits and risks of outsourcing activities in the value chain (Gereffi *et al.*, 2003: 8).

Gereffi *et al.* (2003) note that there are eight possible combinations of the three factors. Two of them are, however, not viable. Therefore, only five of them generate GVCs. The reason is that low complexity of transactions and low availability to codify is unlikely to occur, thus excluding two combinations. A supplier could also be excluded from the chain if his capabilities are poor or low when the transactions are simple and can be codified (i.e. the manufacturing of the products does not entail difficult specifications).

Table 2.1: Key determinants of global value chains

Governance Type	**Complexity of Transactions**	**Ability to codify transactions**	**Capabilities in the supply base**	**Degree of explicit co-ordination and power asymmetry**
Market	Low	High	High	Low ⇕ High
Modular	High	High	High	
Relational	High	Low	High	
Captive	High	High	Low	
Hierarchy	High	Low	Low	

Source: Gereffi *et al.* (2003: 8)

In summary, the structure of global value chains depends critically upon three variables: the complexity of transactions, the ability to codify transactions, and the capabilities in the supply base. Through the analysis of these variables, one can determine value chain governance.

2.3.1.7 Upgrading and innovation in a GVC

The difference between a firm that achieves sustainable income growth and a firm that experiences 'immersing' growth (see section 2.2.4) lies in their capacity to innovate. Innovation means that the firm is continually improving the development of its products and processes. However, innovation in itself may not be adequate. Innovation means very little if the firm's rate of innovation is slower than that of its competitors. Thus, the process and speed of innovation are known as upgrading (Kaplinsky & Morris, 2001: 37).

How does a firm know which of its products and processes need to be upgraded? Kaplinsky and Morris (2001: 37) advise the firm to identify those attributes in the firm which:

- Provide value to the final customer
- Are relatively unique in the sense that few competitors possess them and
- Are difficult to copy, that is, where there are barriers to entry.

Therefore, a firm should concentrate on developing those attributes and outsource those functions that do not meet the above-mentioned criteria. If the firm is able to do so, it might be able to achieve sustainable upgrading.

In the GVC approach, upgrading of a firm's activities need to be seen in the context of the entire chain in which that firm participates. Kaplinsky and Morris (2001: 38) point out that the upgrading challenge needs to be viewed in a wider perspective. Thus, the composition of the various activities may change, both within the chain and in the distribution of intra-chain activities. Hence, it is easier to determine how the products and processes are to be upgraded by which firm within the context of the chain.

According to Kaplinsky and Morris (2001: 38), firms can upgrade by following the following methods:

- Process upgrading: increasing the efficiency of internal processes in such a way that these are significantly better than those of rivals, both within individual links in the chain (e.g. increased inventory turns), and between the links in the chain (e.g. more frequent, smaller and on-time deliveries).

- Product upgrading: introducing new products or improving old products faster than rivals. This involves changing new product development processes both within individual links within the value chain and in the relationship between different chain links.
- Functional upgrading: increasing value added by changing the mix of activities conducted within the firm (e.g. taking responsibility for, or outsourcing, accounting, logistics and quality functions) or moving the locus of activities to different links in the value chain (e.g. from manufacturing to design).
- Chain upgrading: moving to a new value chain (e.g. Taiwanese firms moved from the manufacture of transistor radios to calculators, to TVs, to computer monitors and now to WAP phones).

2.3.1.8 Measurement of 'value'

Gereffi *et al.* (2001: 5) state that at the heart of GVC research is 'value'. Therefore, an important aspect of this type of research is how the 'value is created and measured. Upgrading is associated with adding value; therefore value in a GVC needs to be assessed. Gereffi *et al.* (2001) have identified three possible measures.

The first measure is to examine the firm's profits. This will indicate how the global income shares have been distributed throughout the chain. Profits show the return on capital employed as well as the rents inccurred by the firm. As profit is the reward on capital, it does not specify the returns on labour or the productivity of labour. These issues are important in the analysis because they determine who gains from participating in the chain and who does not. Profit as an indicator is also problematic as the data is difficult to obtain, and if obtained, it does not provide answers to the questions concerning value at different stages and locations (Gereffi *et al.*, 2001: 5).

The second measure is determining the value added. Value added can be determined through two methods. The first method is to calculate the value-added shares for the different links in the chain, in other words break down the price to see how much each actor is paid. For example, a dress sells in the US for $100. $6 is paid to the workers, $9 to the contractor, $22,50 is paid for the fabrics, $12,50 to the manufacturer, and the retailer pockets $50. Another method is more macro-specific. Distributions by countries can be established by examining international import and export data, thus to obtain the value of the national value-added shares. A second source of

information may be industry reports or primary research techniques, such as interviews with the actors in the chain (Gereffi *et al.*, 2001: 6).

The third method is price mark-ups. This is the most unreliable method as price mark-ups are not in correlation with the volume of sales, or with the actual profits. A high price mark-up does not necessarily mean high profits, as the expenses of running the business may be very high (Gereffi *et al.*, 2001: 6).

Therefore, careful consideration ought to be given to each of these measures of value before implementing them. The measure chosen should reflect the value of the segments in the countries of concern.

2.3.1.9 Challenges of GVC analysis

Gereffi *et al.* (2001: 2-3) have identified several difficulties that exist in GVC analysis. The first challenge is the existence of many similar concepts in the literature that describe more or less the same thing. Examples of these concepts are global commodity chains, value chains, value systems, production networks, and value networks. The concept value chain has been chosen because it focuses on the entire chain (i.e. on all of the firms that form the links in the chain), rather than on an individual firm. Subsequently, matters of power, governance and the dynamics of the chains can be addressed.

The second challenge is the lack of a well-defined theoretical framework. This makes generalisations that can be derived from case studies difficult. The precise meanings of the terms used in value chain analysis are also poorly defined. This leads to ambiguities in generalisations. For example, the distinction between the concepts of buyer-driven and producer-driven chains did not leave room for other possible structures of governance. However, as explained in section 2.3.1.5, this problem has been addressed by Gereffi *et al.* (2003).

2.3.2 Global Commodity Chains (GCCs)

To understand the theory of GCCs, one needs to first establish the relevance of this concept in analysing the problems of inequality caused by globalisation.

Several authors have explained the importance of the GCC analysis:

- "The GCC perspective starts from the premise that analysing the dynamics and structure of global industries is a useful way to understand the local consequences of globalisation for firms and workers." (Bair & Gereffi, 2001: 1888.)

- "The GCC approach recognises, but also furthers the idea of globalisation as a defining feature of the contemporary era by considering specific developmental consequences of the changing organisation of capitalism at an international, regional and domestic level." (Clancy, 1998: 122.)

2.3.2.1 Similar concepts

Kaplinsky and Morris (2001) explain the various concepts of a value chain. The first concept, formulated by Porter (1985), is that of a value system. He identifies the different stages of the production process in a value chain. These stages can be divided into the various activities necessary to transform raw material into the final product, the services (e.g. marketing) performed and the supporting activities (e.g. human resources) given. Porter notes that these functions need not be done in the same value chain. Other chains that specialise in these functions could do it, thus linking the two chains (i.e. outsourcing). A value system is therefore a value chain with numerous links.

The French *filière* approach is another theory that resembles the value chain concept. According to Raikes *et al.* (2000: 391), it was initially developed for the agriculture sector, but was later on used in various other sectors such as electronics and telecommunications. Kaplinsky and Morris (2001: 7) describe the *filière* concept as the flow of physical inputs and services in the production of a final product, either a good or a service. They point out that the French *filière* approach is similar to Porter's work as it is concerned with quantitative technical relationships. However, this analysis has not been used for international or global value chains, only for national value chains.

The final concept used to portray the value chain is that of global commodity chains (GCC). Gereffi (1994) has contributed to the analytical and normative usage of the value chain concept,

particularly because of its focus on the power relations, which form a core part of the value chain analysis. See also Kaplinsky and Morris (2001: 7).

The GCC approach differs from the above-mentioned concepts in four respects. Gereffi (1999b: 8-9) outlines the differences:

- The GCC framework incorporates an explicit international dimension into the analysis.
- It focuses on the power exercised by the lead firms in different segments of the commodity chain, and it illustrates how power shifts over time.
- The GCC framework views the coordination of the entire chain as a key source of competitive advantage that requires using networks as a strategic asset.
- It looks at organisational learning as one of the critical mechanisms by which firms try to improve or consolidate their positions within the chain.

2.3.2.2 History and definition of commodity chains

Commodity chains are defined as follows:

- "A commodity chain is a network of labour and production processes whose end result is a finished commodity." (Hopkins & Wallerstein, cited in Gereffi & Korzeniewics, 1994: 17.)

- "Commodity chains as composed of links that represent discrete, though interrelated, activities involved in the production and distribution of goods and services." (Bair & Gereffi, 2001: 1888.)

- Commodity chains trace the social and economic organisation surrounding the global "life" of a product, ranging from the first stage of raw material extraction through consumption of a finished good." (Clancy, 1998: 122-123.)

Each product has inputs that produce outputs, which could be used as inputs for another process. The chain normally flows from the raw materials (inputs) to the industrial product (output). Raw materials, or the secondary products, are usually produced in developing (peripheral) countries,

while the industrial products are manufactured in developed (core) countries. The final and intermediary products can, however, be produced in one (semi-peripheral) country. Usually, the developed countries are monopolists, thus generating high profits. Developing countries are subjected to high competitive pressures, causing them to generate low profits. Dicken (1998: 7) explains that production processes are no longer confined to one country. Globalisation has caused production processes to be scattered through many geographical regions, forming a wide range of relationships that need to be organised on different scales.

Through the transformation of these inputs, these processes become part of a network of commodity chains. Hopkins and Wallerstein (1994: 17) describe the use of monitoring a network of commodity chains:

> By tracing the networks of these commodity chains, one can track the ongoing division and integration of labour processes and thus monitor the constant development and transformation of the world economy's production system.

Thus, these processes can be performed in several countries. The proportion of the processes allocated in countries may change due to the cyclical rhythms (repetitive fluctuations) of the world economy.

To understand the influences of the cyclical rhythms on commodity chains, Hopkins and Wallerstein (1994) examine the processes, also known as boxes, in a commodity chain. The boundaries of the boxes are subject to change because they are socially defined, meaning they are set to adhere to rules and regulations. These changes may be due to technological advances or to the transformation of social organisations. Boxes may be defined differently in different countries, two boxes may be known as one, or vice versa.

Hopkins and Wallerstein (1994) analyse the social organisation of the basic units (i.e. the firms or links) of a commodity chain. These units are responsible for the production of the boxes. They consider several aspects in the analysis of the social organisation of these units.

The first aspect is whether a box (i.e. a production process) is monopolised by a number of production units. The world economy today is characterised by free enterprise and free ownership. It therefore promotes de-monopolisation. The production units, however, constantly

seek high profits through technological advances and the changing of organisational boundaries, making de-monopolisation very difficult.

The second aspect concerns the geographic location of the production units. Boxes that are classified as core or primary processes are usually located in very few countries (usually in developed countries), whereas peripheral or secondary boxes are located in a large number of countries (usually in developing countries). Core boxes can become peripheral boxes due to cyclical changes. If these cyclical changes cause a downward shift in demand, the number of production units is reduced. This decreases the geographical spread of the production units.

The third aspect involves the number of commodity chains in which a box is situated. The more diverse linkages the box has, the more specialisation occurs. Specialisation within a box is usually reduced when the economic cycle is in a phase of contraction.

The fourth and fifth aspects entail the ownership (property arrangements) and labour control of a box in a commodity chain.

In summary, Hopkins and Wallerstein (1994) find that the expansion and the contraction phases are regulated by the Kontratieff cycle. Alexander (2002: 1) explains that the Kontratieff cycle (or long wave) theory holds that capitalistic economies grow in a cyclic fashion with an average periodicity of about fifty-three years. Raikes *et al.* (2000: 392) identify how chains react during these two phases. During expansionary phases, the lengths of chains increase and become more vertically integrated (two or more boxes are part of the same firm), while monopolistic concentration among boxes is reduced. In phases of contraction the occurrence is vice versa. (QuickMBA: Strategic Management, 1999-2004) defines vertical integration as the degree to which a firm owns both its suppliers and its buyers in a chain. Vertical integration affects a business unit's position in its industry in terms of cost, differentiation and other strategic issues.

Within a chain, two elements are very important in terms of cost, i.e. labour costs and transaction costs. These costs have opposing effects during cyclical shifts. During an expansion phase, transaction costs are reduced because of vertical integration and geographical merging of the chain's boxes. During a contraction phase more boxes are added (i.e. subcontracting occurs) and geographical separation of boxes materialises. The result is lower labour costs.

2.3.2.3 Origin of GCCs

Gereffi and others developed a framework called GCCs during the mid-1990s. The purpose of this framework is to link the concept of the value-added chain directly with the global organisation of industries (Gereffi *et al.*, 2003: 3). Raikes *et al.* (2000: 391) state that the perspective of the GCC analysis is on the political economy of development, especially on underdevelopment issues. This analysis originated from the dependency as well as from the world systems theory. A brief definition of these theories will be examined.

The dependency theory originated in the 1970s. The theory suggests that their extensive reliance and dependence on developed countries cause the low levels of development in developing countries. Some supporters of the dependency theory claim that developing countries will remain underdeveloped because developed countries – under the guise of multinational corporations – take advantage of the resources in developing countries without reinvesting some of the surplus they obtain through production. Therefore, no development can take place, as there is no investment (UK Learning, 2003: 1). Thus, developing countries remain reliant on developed countries to provide, for example employment opportunities in their multinational corporations. However, the power that the developed countries have over developing countries depends on the relative importance of the resources that each controls (Morrissey & Filatotchev, 2000: 7).

Wallerstein (1974) developed the world systems theory in 1974. This theory is a continuation of the dependency theory. The world systems theory focuses on both development and underdevelopment, providing an explanation for uneven development. The historical perspective of the world systems theory focuses on the world itself (i.e. the world system) at specific points in time. It does not consider specific regions (e.g. Latin America, Africa) (Anon., 2001: 4).

Gibbon (2001: 346), Daviron and Gibbon (2002: 141), as well as Morrissey and Filatotchev (2000: 7-8) point out the similarities and the differences between the dependency theory and the GCC analysis.

- "These theories are similar in that both address governance in international trade and industries. They also focus on how a party participating in the international trade and industry can add value to its activities, in other words develop. The differences between these two concepts are that the GCC analysis does not restrict the governance to

multinational corporations, nor is development only achieved through the connection or relationship between the government and multinational corporations. The GCC analysis has a sectional and regional focus. This separates it from the dependency theory." (Gibbon, 2001: 346.)

- "The dependency theory examines the connection between complaint Third World states and TNCs (for definition, see section 2.3), while the GCC approach analyses the link between a specific group of economic agents and the elaboration of globally dispersed trade-based production networks." (Daviron & Gibbon, 2002: 141.)

- "The GCC concept extends the research done on the dependency theory by analysing the inter-linkage of international markets." (Morrissey & Filatotchev, 2000: 7-8.)

2.3.2.4 Importance of GCCs

Due to globalisation and the increase in private ownership, production processes are increasingly spread across various countries. Each country produces those processes in which it has a comparative or cost advantage. Hence, global networks that connect the production processes have been established. In these networks, one can observe the international division of labour. Therefore the purpose of the GCC framework is to explain the changing world and the effects that these changes have on national development and industrialisation. This framework also provides insight into the relationships that link the various processes. In essence, the GCC approach gives another perspective how to analyse the reconstruction of the patterns in the new global economy (Gereffi, Korzeniewics & Korzeniewics, 1994: 1).

According to Gereffi *et al.* (1994: 2), the GCC approach is important because it provides an analysis of world economic spatial inequalities in terms of the difference in access to markets and resources. It does not only consider where the participants in a GCC are situated, but it also takes into account and analyses the relationship (or linkages) between them. This is done to understand the organisation of such a chain and the reasons why some of the linkages may or may not change.

2.3.2.5 Definition of GCCs

GCCs are defined as follows:

- "A GCC consists of sets of inter-organisational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world economy. These networks are situationally specific, socially constructed, and locally integrated, underscoring the social embeddedness of economic organisation." (Gereffi *et al.*, 1994: 2.)

- "A GCC is a network of production, trade and service activities, which is functionally integrated, value creating, and international, that covers the complete transformation of a raw material from its extraction, through intermediate manufacturing stages, to a specific end product. This captures the increasingly internationalised search of businesses for value-added generation and allocation." (Instituut Voor Ontwikkelingsvraagstukken – IVO, 2003: 3.)

A GCC is therefore a network with global linkages of transactions that incorporates all aspects of the international and national environments. This network comprises all the facets of production and is continually concerned with adding value to the product or commodity produced.

The facets of the production process in a GCC are represented in nodes or boxes. The nodes are in consecutive order, depicting the stages of production. They range from the assembly of inputs, labour, transportation, distribution, and consumption. All of these nodes are linked by the organisation of the GCC.

The IVO (2003: 3) distinguishes three elements of the GCC analysis:

(a) The strategic decisions of firms.

Firms may make a strategic decision to develop global networks. In these networks, they form linkages and externalities with developing countries and regions. Their networks need to be both competitive and profitable. Therefore they may increase and expand the number of nodes in their

networks. The GCC approach makes a systematic analysis possible and considers not only the flow of the materials used in the production processes, but also the value added with each stage.

(b) An analysis of control rather than ownership of production factors.

It is important to identify the governance structure of the chain. This helps to understand the nature of the driving force of the chain, i.e. is it a producer-driven or a buyer-driven GCC. The driving force (or lead firm) of the chain sets up and maintains the production and trade networks. The GCC approach analyses how the lead firm sets up and maintains the links within the chain.

(c) A focus on value creating activities of firms.

GCC analysis examines the complete value-adding process. It takes into account international market transactions, the impact of institutions and imperfect markets within the chain. It should be noted that the lead firms of these chains are usually situated in developed countries. This may be the reason why there are income disparities between them and the actors in developing countries.

Thus, the GCC approach explains development in the Third World. It goes beyond national policies by describing that international or global forces also influence development. These forces influence development by providing external global linkages in the production processes. They vary from industry to industry. It is clear that in the globalised world today, governments do play a role in development with their policy-making, but these policies are not the only factors that can affect their countries' advancement. One of these factors could be the strategy of the international or lead firm. They might, for instance, decide to let only women work in their production lines, thus advancing development by providing employment to a previously disadvantaged sector of the population.

2.3.2.6 Problems with the definition of GCCs

Raikes *et al.* (2000: 400-401) point out several ambiguities in the definition of a GCC. They ask whether a GCC constructed by a lead firm is a singular chain for a commodity, or a manufactured good; and whether every flow of produce initiated by the lead firm is part of that singular chain, or a chain on its own. It is also difficult to determine where a GCC starts and

where it ends, and how the transactions or processes are divided up. There is no set definition. Some researchers categorise the processes into segments, and others specify the processes into boxes or nodes. It is also difficult to specify how chains should be constructed (e.g. lengthwise or sideways?).

Raikes *et al.* (2000: 401 & 413) further explain that it is complicated to show how different chains merge or become separated and how to indicate the links between them. When one only looks at parts of a chain, several important linkages may be lost. For example, in the cotton-textiles and textiles apparel, an important intermediary set of decisions and processes, such as the combination of cotton and synthetic fibres, can be excluded. This set is important because of the competition between natural fibres and petrochemical-based synthetics. It is also relevant because of consumer demand and the industrial requirements of the fibres.

Therefore, a number of concepts are defined too loosely. The definition of a GCC (where the lead firm plays the central role) does not leave room for the analysis of the flow of commodities or products that are not organised by a lead firm. Lead firms do not govern all flows of produce from developing countries. Hence, these produce flows are excluded from possible analysis. However, this may indicate that there are alternative means by which a chain can be organised (Raikes *et al.*, 2000: 410).

2.3.2.7 Four dimensions of GCCs

Gereffi (1994: 97) identifies three central dimensions of a GCC:

- The first dimension is an 'input-output structure', i.e. a set of products and services linked together in a sequence of value-adding economic activities.
- The second dimension is the 'territory covered', i.e. the spatial dispersion or concentration of production and distribution networks, comprising enterprises of different shapes and sizes.
- The third measurement is the 'governance structures', i.e. the authority and power relationships that determine how financial, material and human resources are allocated and flow within the chain.

Both Gibbon (2001) and Raikes *et al.* (2000) examined these structures. According to their examination, the first two dimensions have only been used descriptively to outline the conformation of the specific chains. The third element has received the most attention thus far. The reason is that this dimension explains the main concepts concerning barriers to entry as well as the chain coordination. The distinction between buyer-driven and producer-driven chains is derived from this dimension.

Gereffi (1999b) developed the fourth dimension, i.e. the 'institutional framework' that surrounds the chain in 1999. This dimension is used to describe the conditions under which the lead firms or key agents incorporate dependent agents through their control of both market access and information. The information entails technological aspects and knowledge of markets (Raikes *et al.*, 2000: 393). Ponte (2001: 2) also indicates that this dimension specifies how the state of affairs in local, national and international context shape each activity within the chain. Porras (2003: 41) adds policies to this dimension. He explains that this dimension entails policies and organisational terms that affect the distribution of value in the chain.

2.3.2.8 Structures within a GCC

According to Sverrisson (2004: 18), a commodity chain can only be qualified as a GCC if a single, binding governance structure coordinates the flow of value-adding activities across one or more countries. Sverrisson (2004: 19) adds to this by suggesting that even if economic activities include exports and imports in their 'input-output structure' but lack the unification provided by the 'governance structure', they are not CGGs, but something else (e.g. market-based trading networks).

If a 'governance structure' is present in a GCC, then an important distinction needs to be made within the chain to determine the party that governs the chain. The chain can be either producer-driven (governed by the producer) or buyer-driven (governed by the buyer).

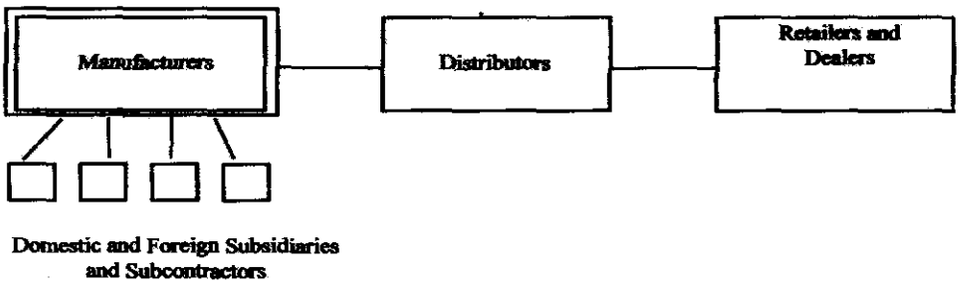
Gereffi (1999: 41) defines a producer-driven GCC as follows:

> Producer-driven GCCs are those in which large corporations usually transnational, manufactures play the central roles in coordinating production networks (as well as their

backward and forward linkages). These industries are capital intensive and technology intensive and produce, for example, automobiles, aircraft, and computers.

The countries in which the TNCs have production facilities usually vary in their levels of development. They participate in various GCCs by producing mainly labour-intensive components. The TNCs headquarters usually exercise the control in a producer-driven GCC. The only way for a lead firm in a producer-driven chain to accumulate profits is to either produce in large quantities (and use the advantage of economies of scale), or to have a competitive advantage in terms of technology. Ford and Mercedes-Benz are examples of producer-driven GCCs. Figure 2.6 illustrates a producer-driven commodity chain.

Figure 2.6: Producer-driven commodity chains[1]



Source: Gereffi (1999b: 26)

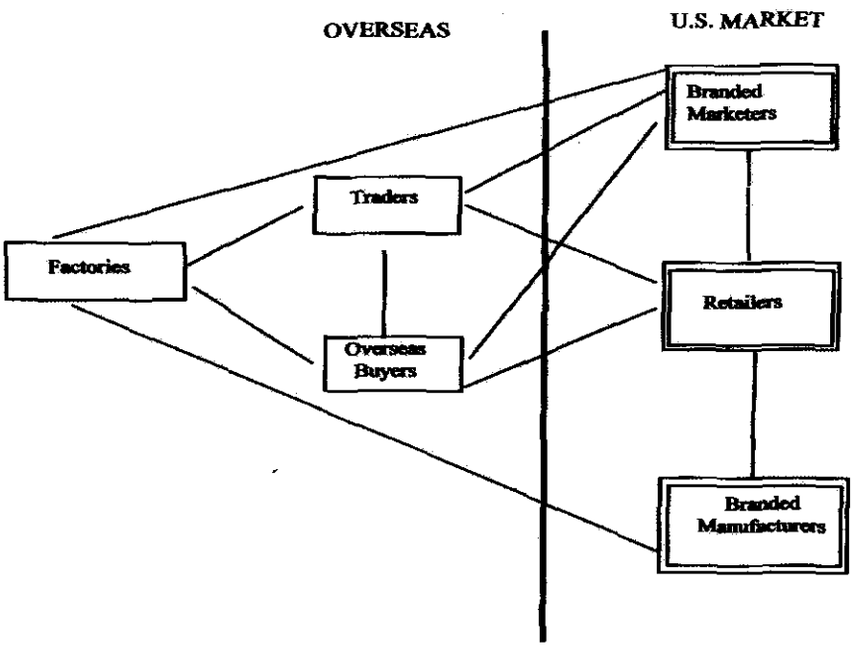
Gereffi (1999: 41-42) defines a buyer-driven GCC as follows:

> Buyer-driven GCCs refer to those industries in which large retailers, branded marketers, and branded manufacturers play pivotal roles in setting up decentralised production networks in a variety of exporting countries, typically located in the Third World. These industries are labour-intensive, usually producing consumer goods, e.g. garments, footwear, and toys.

[1] The solid arrows are primary relationships and dashed arrows are secondary relationships. Retailers, branded marketers and traders require full-package supply from overseas factories. Branded manufacturers ship parts for overseas assembly and re-export to the manufacturer's home markets Gereffi (1999b: 26).

The firms in these developing countries produce finished goods, according to their contracts with the buyers. The contract establishes the design and specifications for the production of the goods. The producers have to adhere to these conditions. Nike, Reebok and The Gap are examples of firms in buyer-driven GCCs. These firms do not own production facilities, they only design and market their products. They have a complex network of specialised contractors that produces the products; some of their tasks include manufacturing, packaging, and shipping. The lead firms in buyer-driven GCCs have to coordinate and integrate these different tasks to be able to sell final the product that is according to their specifications. They gain profits from efficiently organising their network and combining their functions, such as research, design, sales, marketing and financial services in a manner that adds value. Profits could also be generated by exploiting new markets (Gereffi, 1999b). Figure 2.7 illustrates a buyer-driven commodity chain.

Figure 2.7: Buyer-driven commodity chains[2]



Source: Gereffi (1999b: 26).

[2] The solid arrows are primary relationships and dashed arrows are secondary relationships. Retailers, branded marketers and traders require full-package supply from overseas factories. Branded manufacturers ship parts for overseas assembly and re-export to the manufacturer's home markets (Gereffi, 1999b: 26).

Table 2.2 illustrates the main contrasts between a producer-driven and a buyer-driven GCC. These chains have different industrial sectors and are financed by different types of capital. They also vary in their core competencies (at firm level) and in their entry barriers (at sector level). The central TNC supplies finished goods in producer-driven chains (for the definition of a TNC, see section 2.3). In buyer-driven chains, locally owned firms in developing countries make the goods. The types of networks that the chains use indicate the final distinction between these two types of chains. Gereffi (1999b: 7) identifies the network used by the two types of chains:

> The producer-driven chain, i.e. the TNC, establishes investment-based vertical networks. The buyer-driven chain, i.e. the retailers, designers and the trading companies set up and coordinate trade-based horizontal networks.

Gibbon (2001) has identified another possible structure of a GCC, namely international trader-driven commodity chains. He developed this concept to analyse changes in the chains for primary commodities. The commodities examined are cotton and table fish in Tanzania. According to Gibbon (2001: 351), the international trader-driven chains for primary commodities have the following characteristics:

- They have relatively low value-to-weight ratios, with labour-intensive direct raw material production functions and otherwise low barriers of entry to this function.
- They are globally dispersed and have a locally discontinuous supply pattern.
- They have strong tendencies to market saturation and they have a final demand side which is either dispersed (e.g. cotton) or concentrated but segmented with respect to commodity variety (e.g. coffee, cocoa).

Gibbon (2001) explains how these traders operate in a GCC. They coordinate the commodity chains by obtaining continuous supply, in the correct amount, for processors. Therefore, they are not tied to processors, but they do maintain relations with the processors so as to have continuous demand. They buy from any supplier, as long as they adhere to minimum standard requirements. These low requirements, compared to the stringent requirements in both producer- and buyer-driven chains, provide opportunities for exporting (Sverrisson, 2004: 23). It is thus clear that international traders exercise loose and indirect control and governance over the chains.

Table 2.2: The main characteristics of producer-driven and buyer-driven global commodity chains

	Producer-Driven Commodity Chains	Buyer-Driven Commodity Chains
Drivers of Global Commodity Chains	Industrial Capital	Commercial Capital
Core Competencies	Research & Development; Production	Design; Marketing
Barriers to Entry	Economies of Scale	Economies of Scope
Economic Sectors	Consumer Durable Goods Intermediate Goods Capital Goods	Consumer Non-durable Goods
Typical Industries	Automobiles; Computers; Aircraft	Apparel; Footwear; Toys
Ownership of Manufacturing Firms	Transnational Firms	Local Firms, predominantly in developing countries
Main Network Links	Investment-Based	Trade-Based
Predominant Network Structure	Vertical	Horizontal

Source: Gereffi (1999b: 25)

Sverrisson (2004: 24) points out the difference between trader-driven GCCs and buyer- and producer-driven GCCs. Traders, as opposed to the lead firms in buyer- and producer-driven chains, are not close to, nor do they control the end point. They uphold international standards and prices. They base these standards and prices on those determined by supply and demand. In

other words, trader-driven chains operate through the market. Power exists in trader-driven chain, but not to such an extent that a 'governance structure' can be identified.

Therefore, producers in developing countries can insert themselves into a trader-driven chain easier than in buyer- and producer-driven chains.

2.3.2.9 Problems with the buyer- and producer-driven distinction

Raikes *et al.* (2000) identify several aspects regarding the distinction between a producer- and buyer-driven chain, the term 'driven' as well as the changing nature of a GCC that needs to be considered. These aspects arose because the above-mentioned concepts have thus far been used in an inflexible manner.

The first aspect concerns the term producer- and buyer-driven chains. Raikes *et al.* (2000: 397) ask if a GCC is exclusively producer-driven or buyer-driven. Is it possible for a chain to have more that one 'driver', say, a participant in the chain that could also obtain power? Further, is it possible for a buyer and a producer in the same chain to share power?

The second aspect concerns the term 'driven'. Raikes *et al.* (2000: 398) find it difficult to determine if the buyers in various GCCs 'drive' their respective commodity chains differently or similarly. Examples of chains with different dominant buyers are the fresh fruit and vegetables chain ('driven' by supermarkets), the cocoa and coffee chains ('driven' by processors) and the grain and cotton chains ('driven' by international traders).

The third aspect is concerned with the changing nature of GCCs. According to Raikes *et al.* (2000: 398), no fixed distinction exists between a buyer- and producer-driven chain. A lead firm or key agency could shift downstream over time (i.e. controlling the brand name and marketing, in other words, market access, and outsourcing the control of the production of the product). Thus, transforming from a producer to a buyer. Therefore: do GCCs remain in the same category (either buyer- or producer-driven) over time?

In summary, a clear distinction between a buyer- and producer-driven chain is still a research hypothesis and cannot be used to explicitly define every chain. Some chains have little governance, making it hard to determine who the "driver" is. Other chains have characteristics of

both a buyer- and a producer-driven chain. Many chains also have various participants, each exercising some degree of governance (Kaplinsky, 2000a).

3.2.10 Governance in a GCC

According to Kaplinsky (2000a: 124), the concept of governance is important as it sheds light on those factors determining the type of the inclusion of different producers into the global division of labour.

Bair and Gereffi (2001: 1888) state that GCCs are driven by lead firms that coordinate and govern (control) the organisation of the production process. The lead firm (i.e. the firm that initiates the GCC) oversees the 'governance' within the chain. Van Grunsven and Smakman (2002: 83-84) indicate that the lead firm allocates producers in terms of their ability to develop certain capabilities required for production, the surrounding infrastructure and accessibility of the producers, their available resources, and the producers' own government's policies and incentives (see section 2.3.2.11).

In return, the lead firm provides assistance to the producers in terms of finance, technical know-how, training, and product and process specifications. They also facilitate the upgrading processes of the producers (Kaplinsky *et al.*, 2003: 18). This ensures continuous control and coordination.

Control and coordination are important, especially in the complex world of globalised trade. Producers in the GCC are spread across different countries and it is the task of the governing party to link and manage their activities. The lead firm has to ensure that the components produced by the various producers are consistent with the design and that they comply with the set standards. Also, the components have to be assembled. Therefore coordinating the various modes of shipment is crucial.

2.3.2.11 Role of regulating agencies

One form of a regulating agency is government. The role of government in the GCC is significant. They can influence the positioning of certain industries through industrial, trade and investment policies, infrastructure, and investment in supporting industries. Standards set by the

government (e.g. environmental standards regarding pesticide usage) can influence production. Government can therefore be a determining factor for buyers in their choice of suppliers.

According to Gereffi (1999b), the type of GCC chain (i.e. buyer-driven or producer-driven) in which a country participates, determines the role of the state. In producer-driven chains, government should assume an interactive role. Thus, they should assist producers by using industrial policy instruments such as export promotion schemes. The role of government in buyer-driven GCCs should be only to assist the participating parties. They should be concerned with creating an environment that would support exporting firms – maintaining efficient transport systems, providing subsidies for raw materials and effecting adequate financial systems.

The policies in the importing country (usually a developed country), or where the buyer is located, also play a significant role. They implement measures such as tariffs or quotas that are detrimental to exporters in developing countries. For the buyers, these measures are of little significance. When import quotas are filled, they simply find alternative producers in other countries that have not yet exported the amount allowed by the policies. This leaves the previous exporters in need.

Morrissey and Filatotchev (2000) identify several measures that governments of developing countries can implement to influence the choice of buyers in selecting producers. The first measure is trade policy reforms. These reforms provide motivation for exporters. The trade policy reforms, however, have to be effective in the sense that they should assist in lowering the natural trade barriers (e.g. high transportation costs as a result from being landlocked) that prevent the country from participating and obtaining gains of globalisation. By doing so, transaction costs for exporters would lower, making them more competitive.

The second measure is to abate transportation delays, such as faster customs clearance procedures. This is important for buyers because it ensures effective flow of logistics in the GCC. Government needs to encourage education, entrepreneurship and the development of skilled workers. This ensures that the local producers obtain the necessary capacity and productivity that global buyers seek. The third measure is to intensify the legal system in order to ensure that legal rights are practised. This will aid firms in becoming more internationalised and will attract foreign direct investment (Morrissey & Filatotchev, 2000).

Another form of regulating agencies is international organisations that set global trade rules or international policies, e.g. the World Trade Organisation (WTO), the World Bank and the European Union. Therefore, no matter how large or small the firm, it still has to adhere to national and international regulatory systems (Morrissey & Filatotchev, 2000).

2.3.2.12 Studies of selected GCC in the industry

Bair and Gereffi (2001: 1885) have studied the export-oriented blue jeans industry of Torreon. They used the GCC framework to assess the developmental implications of the apparel industry's growth in Torreon. Gereffi (1999a: 37) uses the GCC perspective to analyse the social and organisational dimensions of international trade networks. He uses the example of the Asian apparel commodity chain. Clancy (1998) applied the GCC analysis to the service sector, in particular the tourism industry. Gibbon (2001) uses the GCC framework for two primary commodity chains, i.e. table fish and cotton, in less developed countries. He uses the example of Tanzania and explains the cases for upgrading as well as the failures to upgrade. Van Grunsven and Smakman (2001 and 2002) have published two studies on the competitive adjustment and advancement in GCCs. They use the case of the Singapore (East Asian) garment industry. Pedersen (2002) examines how the process of coordination between logistics, trade and production has played itself out in African agriculture-based commodity chains. Gibbon (2002) has studied the South African clothing sector by focusing on its export performances and constraints.

2.3.2.13 Participation in a GCC

As discussed in section 2.2, participation in globalisation is very important. However, it is not quite as simple as that. Kaplinsky (2000a: 118) explains:

> If those who had lost from globalisation had been confined to the non-participants, the policy implications would be clear – take every step to be an active participant in global production and trade. However, the challenge is much more daunting than this, since the losers include many of those who have participated actively in the process of global integration. Hence, there is a need to manage the mode of insertion into the global economy, to ensure that incomes are not reduced or further polarised.

The GCC approach expresses the importance of how an industry inserts itself (i.e. the mode of integration) into a chain that creates value with each link. Therefore, the growth of the industry and the extent thereof will depend on how the industry integrates itself into the GCC.

According to Sverrisson (2004: 24-25) entering a GCC can happen in three ways depending on the character of the chain:

- In a producer-driven chain, a Third World producer can hope to enter as the producer of one or more components, or of the components of components.
- In a buyer-driven chain, developing country producers should provide finished products, packaged and ready.
- In trader-driven chains, producers should provide unfinished or intermediate products, e.g. fish.

2.3.2.14 Upgrading in a GCC

Upgrading, i.e. how a firm can better itself or its position in the chain and global market in order to achieve a competitive advantage and thus sustainable income, forms a central part of the GCC analysis, as well as of the GVC analysis (see section 2.3.1.6). Upgrading is very similar in both of these approaches (GVC and GCC) as indicated by Sverrisson (2004: 17). In order to export, according to the GCC theory, developing country producers must find a place for themselves in GCCs. Upgrading of (export) activities implies moving to better positions within their chains and performing activities that add more value. Upgrading also implies a learning course and advocates of the GCC concept assume that learning through connections within GCCs is both feasible and desirable (Sverrisson, 2004: 17).

The GCC approach has been primarily used for the manufacturing sector, thus the focus of many studies is industrial upgrading. Gereffi (1999b: 16) states that, due to globalisation, commodity chains are scattered around the globe. The processes conducted in the chains are performed in different geographical areas. This increases opportunities for developing countries to participate and gain from trade because it provides greater scope for them to specialise in the labour intensive stages of the manufacturing process of a commodity.

Gereffi (1999b) distinguishes between four levels of upgrading:

- At product level (product upgrading), the firm could upgrade by producing more complex goods of the same type (he uses the example of moving from cotton shirts to men's suits).
- At the level of economic activities (or process upgrading), the firm could become more involved with sophisticated production, marketing and design tasks.
- The third level is intra-sectoral (or intra-chain upgrading) progression. Here a firm could upgrade by producing higher value goods instead of finished items. This will involve forward and backward linkages along the supply chain.
- Finally, industrial upgrading may be in terms of an inter-sectoral (or inter-chain upgrading) shift from low-value, labour-intensive industries to capital and technology intensive ones. Gereffi (1999b) uses the example of a shift from the production of clothes, to the production of cars, to the production of computers.

Sverrisson (2004: 24-25) classifies the type of upgrading opportunities according to the linkages within a chain. Thus, different upgrading opportunities are possible for firms that operate either in a producer-, buyer- or trader-driven chain:

- In a producer-driven chain, upgrading means enhanced capability to make more complex components or to make simple components more effectively in order to put competition out of business. An example of such components may be automotive components.
- Upgrading in a buyer-driven chain, such as the apparel industry, implies that the firm should have sophisticated organisational capabilities. Spinning and weaving will not necessarily ensure participation in an apparel chain. The firm will have to fill out orders by organising the activities in the production process, during which the firm has to make sure that the import quotas in the importing countries have not yet been filled. If the quotas have been filled, they should re-route their exports to other countries whose quotas have not yet been filled.
- Upgrading in a trader-driven chain may be to export commodities/products during, or following on, every phase of the production process, in any stage of completion.

Gereffi *et al.* (2001: 5) explain that the different types of upgrading are relevant as they assist in the analysis of both the firms and the development strategies of the countries they are located in. These development strategies indicate how the firms should move themselves into high-value, sustainable niches in the global economy.

Upgrading opportunities vary from the type of chain to the type of industry. Upgrading in a manufacturing industry is different from upgrading in, for instance, the horticulture sector. Although the GCC theory originally centred on analysis of the manufacturing and service sectors, it has started to be applied to agricultural systems as well (Ponte, 2001: 2).

For the purposes of this study, upgrading in the horticulture industries is discussed in chapter three (through the example of the fresh vegetable chain).

2.4. SUMMARY

The purpose of this chapter was to provide insight into globalisation, its origins and its influences. Globalisation has been evident in the world for more than a century and can be described as the acceleration in the global movement of information, labour, goods and services. Globalisation has both positive (e.g. it increases countries' income) and negative (e.g. it increases world inequality) effects, creating winners and losers. These effects influence all, from the individual through to the government, in both developed and developing counties.

As globalisation accelerates international trade, it is important for countries to participate in the global economy, otherwise they might not benefit from the gains. However, not all countries that participate are successful, implying that participation does not guarantee sustainable income. It is therefore essential to understand how the countries (i.e. the firms) take part in the globalisation process. Firms have to be viewed in a global context, as taking apart in international trade automatically links them with other firms. In other words, these firms form a chain of global links. Two approaches have been used to determine the international dimension of activities of firms, i.e. the GVC and GCC approaches. These approaches are very similar, yet their focuses differ. The GVC approach focuses on the relative value aspects of the production processes, distribution and consumption. The GCC approach focuses on the governance structures in the chain and the influence of lead firms on the participants in the chain.

A GVC can be described as a series of activities that transform a product from its conception to its consumption. These activities include all of the inputs and outputs (i.e. links) used in this process. The GVC approach consists of three main elements. They are barriers to entry and rent, governance and systematic efficiency. Intertwined in these elements is the continuous process of innovation or upgrading. A decrease in barriers to entry leads to an increase in global producers, which causes competition to increase and results in lower profits. Consequently, economic rent is lower. Therefore participants in the value chains must constantly seek new forms of rent in order to gain a competitive advantage. In other words, they have to be innovative. Governance suggests that one party is responsible for coordinating and regulating the various activities performed in a product's development. Value chains are governed when parameters are set regarding products, processes and logistics. The GVC approach distinguishes five types of governance structures. Systematic efficiency implies that the governing party in the chain ensures that there is close cooperation and trust between the parties in the chain. Due to the global nature of such a chain, governing parties have a greater degree of responsibility. This involves helping participants in the chain (those that are located in developing countries) to upgrade. The objective is to ultimately increase the efficiency of the chain.

A GCC can be described as a network with global linkages of transactions that incorporates all aspects of the international and national environments. This network comprises all the facets of production and is continually concerned with adding value to the product produced. The GCC approach consists of four elements, namely the input-output structure, the territory (geography) covered, the governance structures, and the institutional framework. Production processes, employees and products that form value-adding economic activities describe the input-output element of the GCC approach. Geographical coverage indicates the spatial dispersion or concentration of production and distribution networks, comprising enterprises of different shapes and sizes. Governance is the authority and power relationships that determine how financial, material and human resources are allocated and flow within the chain. This approach identifies three governance structures. The institutional framework indicates the conditions under which the governing party exercises control over market access and information on a global level. In other words, how small producers, via their buyers, gain indirect access at a lower cost to markets, knowledge and technologies.

These approaches are relevant as they determine possibilities for firms to upgrade their activities in the chain or to move into more profitable chains. It identifies the role players in the chain and

the factors that influence the chain. Finally, it also determines the distribution of income. This is especially important for those firms located in developing countries, as they usually participate in the lower end of the chain where there are low-value-added activities.

CHAPTER 3
HORTICULTURE COMMODITY AND VALUE CHAINS

3.1 INTRODUCTION

In chapter two, an overview was given of the theory of the GCC and the GVC approaches. In this chapter, the GCC and GVC approaches are applied in the analysis of the horticulture industry. Horticulture can be defined as the science or art of cultivating fruits, vegetables, flowers, or ornamental plants (On-Line Dictionary, 2004). As floricultural products (flowers and ornamental plants) are categorised as part of horticultural products, an examination of the horticulture sector provides a background in understanding the importance and relevance of this sector to developing countries. This chapter is therefore an introduction to the examination of the GCCs and GVCs which integrate South Africa's floriculture industry into the global floriculture market.

As various studies have been done on both the horticulture and agriculture sectors, the difference between these two sectors is not always clear. Agriculture can be defined as the science, art and business of cultivating crops and raising livestock (in other words, farming) (On-Line Dictionary, 2004). Studies on the horticulture sector include those of Dolan and Humphrey (2000), Dolan, Humphrey and Harris-Pascal (1999), Raynolds (1994), Goldfrank (1994) and Porras (2003). These studies examine the trade of fresh fruit and vegetables of different countries. Gibbon (2001), Larsen (2003), Ponte (2001), Fitter and Kaplinsky (2001), and Phyne and Mansilla (2003) have all studied various elements of the agricultural sector (e.g. coffee and cotton).

Section 3.2 outlines the importance of the horticulture export industry to developing countries. Section 3.2 further indicates that horticulture plays an important role in alleviating poverty and addressing gender-issues. Horticulture GVCs and GCCs are discussed in section 3.3. Section 3.3 also draws a link between the theory and practice by examining a horticulture commodity chain. Section 3.4 briefly explains the floriculture chains. The chapter concludes with a summary in section 3.5

3.2. IMPORTANCE OF THE HORTICULTURAL EXPORT INDUSTRY IN DEVELOPING COUNTRIES

Humphrey, McCulloch and Ota (2004: 63) indicate that horticulture exports (i.e. non-traditional agricultural exports) have been the fastest growing export sector in developing countries.

McCulloch and Ota (2002: 2) underline Humphrey *et al.*'s (2004) comment by stating that horticultural exports have grown significantly in many sub-Saharan countries while many other agricultural commodities have faced standstill and declining world prices. The importance of the horticulture industry lies in the fact that it provides a substantial source of foreign exchange, generates ample employment and has contributed to the upgrading of agricultural production skills.

According to Barrientos *et al.* (2003: 1513), export horticulture increases employment and foreign trade in developing countries, as in the case of sub-Saharan Africa. Thoen *et al.* (2000: 1) estimate that during the past twenty years horticulture exports in sub-Saharan Africa have doubled, generating more income than traditional commodities such as coffee and cocoa. Barrientos *et al.* (2003: 1514) studied the horticulture export industries of South Africa, Kenya and Zambia. These countries rely on horticulture exports to the European markets. Between 1998 and 1999, 66 per cent of all South African fruit, 94 per cent of all Kenyan flowers and 100 per cent of Zambian export-quality vegetables and flowers were exported to the European Union. According to interviews done by Barrientos *et al.* (2003: 1514), the horticulture export industry provides employment for 283 000 workers in South Africa (deciduous fruit sector), 40 000 to 70 000 workers in Kenya (cut-flower sector) and 8000 in Zambia (flowers and vegetables). Hence, the horticulture export industry forms an important part of the advancement of developing countries.

McCulloch and Ota (2002) examine the impact of export horticulture on poverty alleviation in Kenya. They compare households earning an income from the horticulture industry to those that earn an income from a different industry. Households in both rural and urban areas have been observed. Although they have experienced difficulties with the collection of their data and their sample size is relatively small, their conclusion is still noteworthy. They concluded that households working in the export horticulture industry were better off than those who did not.

They were, however, not sure whether these households earned a higher income as a direct result of their participation in the high-income earning horticulture industry.

Therefore, the export horticulture industries of developing countries are a source of income and employment. These industries display great potential and should be developed even further.

There are two particularly important roles that horticulture can play, i.e. in connection with poverty and gender.

3.2.1 Horticulture, poverty and globalisation

Nadvi (2004: 22) states that the international horticulture sector provides an ideal connection between globalisation and poverty. Nadvi (2004) explains his statement by providing the following reasons. Firstly, the horticulture sector is appropriate for poverty considerations as production is mainly labour-intensive and the employees usually have a low level of skills (most of them are women). Further, in high poverty rural areas, horticulture provides employment opportunities for unskilled workers who do not own land. However, these employment opportunities may only be of a seasonal or casual nature.

Secondly, due to increasing horticultural exports, this sector is integrated into the global market. The form of integration is through the participation in GVC (this subject is discussed in section 3.3). Once a developing country, especially its horticulture small landholders, participates on a global scale, more employment opportunities may be created in order to alleviate poverty (Nadvi, 2004: 22).

The third reason is that, due to trade liberalisation in developing countries, many of these Third World horticulture producers are exposed to increasing competitive pressures. They face competition from both developing and developed countries. Inexperienced small landholders may not be able to withstand the pressures (Nadvi, 2004: 22).

Fourthly, in the global market, several challenges face the horticulture firms, which may have considerable impacts on the firms themselves and on their workers. Along with the competitive pressures are complex requirements and high standards that must be adhered to. The requirements are imposed by the importing country's government as well as by the importing

firm. The importing firms may regard standards as a form of rent and a protection of their corporate image. This may influence poverty in an adverse manner if these firms cannot cope in such an environment (Nadvi, 2004: 22).

Finally, the fifth reason is that import markets, especially in Europe, are increasingly concerned with the sociological aspects of international trade. These aspects are health and safety regulations, labour practices, ethical and environmental concerns. A regulation imposed recently in the horticultural industry is the EUREPGAP (European Fresh Produce Importers and Retailers) (see section 4.2.6.1). Horticultural firms have to comply with these regulations; otherwise they might loose valuable buyers. These global regulations have a positive impact on poverty issues, as they improve the working conditions of the workers. Thus, workers might now be able to work more productively and increase their income in this way (Nadvi, 2004: 23).

Horticulture can thus play an important part in poverty alleviation. If the industry functions successfully in the global market, poverty may very well be reduced in developing countries. However, there are many variables that may influence the success of the industry. Therefore, horticulture industries in developing countries need guidance. Guidance can be given in the form of being part of a GVC or a GCC where buyers in developed countries support their suppliers in developing countries.

3.2.2 Horticulture and gender

The horticulture export sector of developing countries is an important source of employment, especially to women. In the horticulture export sector of the countries (South Africa, Kenya and Zimbabwe) studied by Barrientos *et al.* (2003: 1514), between 50 and 75 per cent of the employees are women. Women are generally employed in the labour-intensive horticulture industry, as the work requires sensitive handling of highly perishable products. These women are productive and perform value-adding activities such as processing and packaging, which provides rent to the owner. However, these activities do not require skills and the remuneration for it may be minimal (Barrientos, 2001).

Unfortunately, wages in the horticulture sector are usually higher for male workers than for female workers. Dolan and Sutherland (2003) find that although the Kenyan horticulture export

sector comprises 60 per cent female workers, the average wages for the male workers were higher than for the female workers.

Thus, the horticulture export sector provides employment opportunities for female (generally unskilled) workers. However, the functions the women perform are classified as "women's work" therefore, their chances to move into higher income positions labelled as "men's work" are slim (Dolan & Sutherland, 2003: 32).

3.3. HORTICULTURAL GCCs AND GVCs

Gibbon and Raikes (2000: 68) state that the international markets and GCCs of certain horticulture products, such as temperate fruit, bananas and pineapples, have long since been established. Other horticulture products' (e.g. fresh vegetables, 'exotic fruit' and cut flowers) global markets and GCC have only recently emerged. For example, global fresh vegetable chains emerged in the 1960s and 1970s and the global 'exotic' fruit and cut flower chains emerged in the 1980s and 1990s (see section 4.2.1). The existence of these chains was made possible by cool chain technology and the global expansion of the airfreight industry. However, uncertainty remains as to the extent to which high value fresh vegetables, 'exotic' fruit and cut flowers are integrated into the international markets. Leading African exporters of these horticultural products are South Africa, Egypt, Kenya, Côte d'Ivoire and Zimbabwe.

These African (developing) countries participate in global chains. Nadvi (2004: 24) explains that if the horticulture sector of a country participates in the global market through a GVC, employment and income may increase. As indicated in section 3.2, workers in the horticulture export sector receive higher wages than those working in sectors that do not export. However, the amount of income depends on where the worker is situated within the GVC. Those workers performing the value-added activities in the higher end of the chain often receive higher wages than those in the lower end of the chain. For example, employees that prepare, pack and process fruit and vegetables, will earn more than those who merely perform harvesting activities.

Unfortunately, insertion into an export GCV also has its downside. Producers from developing countries have to comply with stringent demands on quality, health and labour conditions. They may not always have the infrastructure or finances to cope and comply with these demands. Hence, they may be excluded from the export chain, as fierce competition exists. Due to

increasing global competition amongst buyers, pressure is put on the prices of horticultural products. They simply pay less for the same high quality horticultural products. As the producers do not want to be excluded from the chain, they accept the lower prices. This has the largest effect on temporary, unskilled workers, as they loose their jobs. These workers are usually black women. Hence, unemployment increases.

Clearly these developing countries benefit from the inclusion in global chains as income and employment have increased. As indicated, the inclusion may also have adverse effects on poverty. Nadvi (2004: 21) states that GVC research is relevant in the sense that it maps the distinct groups that participate in these chains. Hence, it explains the impact of participation in a global market, especially on smaller firms, informal producers and on workers (e.g. poor women). These poor workers are those that are affected most by the unsuccessful participation of their employer in the global market, as they only become poorer if they become unemployed. GVC research also focuses on upgrading and indicates consequences thereof on the structure of the chain and on all of the participants. Once a participant is able to upgrade his activities, it provides potential gains for the development of the participant and his workers. Ultimately, upgrading provides the opportunity for the horticulture export industry as a whole to grow.

Section 3.3.1 discusses chain research done on the international trade of fresh vegetables. The section explains the international trade of Costa Rica and of Kenya and Zimbabwe in this particular sector.

3.3.1 Fresh vegetables chains

Dolan and Humphrey (2000: 148) indicate that the production of fresh vegetables is important because they are a good example of non-traditional agricultural export crop which have the potential for agricultural diversification and higher income gains.

3.3.1.1 Vegetables in a global chain

Sales of speciality vegetables (21 per cent in volume) and prepared fresh food (34,3 per cent in value) have increased significantly in the 1990s (Fearne & Hughes, cited in Dolan & Humphrey, 2000: 153). These increases are due to changes in consumption patterns (consumers are more health conscious) and technological advances (e.g. better refrigerated shipping).

Porras (2003: 196-197) identifies the main role players in the international fruit and vegetable chain:

- The US has both import and export markets. Imports to the US are from Chile, New Zealand and South Africa.
- In the European Union, Germany has the largest import market, Spain is the main supplier and the Netherlands is responsible for the physical distribution of the produce.

Porras (2003: 199) lists the thirteen main growers of vegetables and melons in the world. They are China, India, the EU-15, USA, Turkey, Egypt, Korea (Republic), Russian Federation, Japan, Iran, Brazil, Mexico, Nigeria and Poland. China is the largest producer of vegetables. Other important producers are India, the EU-15 (especially France, Italy and Spain), the US and Turkey. Out of the thirteen countries, only two African countries are listed (Egypt and Nigeria). Porras (2003: 200) observes that international vegetable chains flow from developing countries to developed countries. Approximately 60 per cent of world vegetable imports go to developed countries. These developed countries largely trade amongst themselves.

Porras (2003: 200) states that the horticulture export sectors of both Africa and Central America show great potential for development, especially as European countries have focused their investments on export-oriented horticulture sectors.

3.3.1.2 Structure of the global vegetable chain

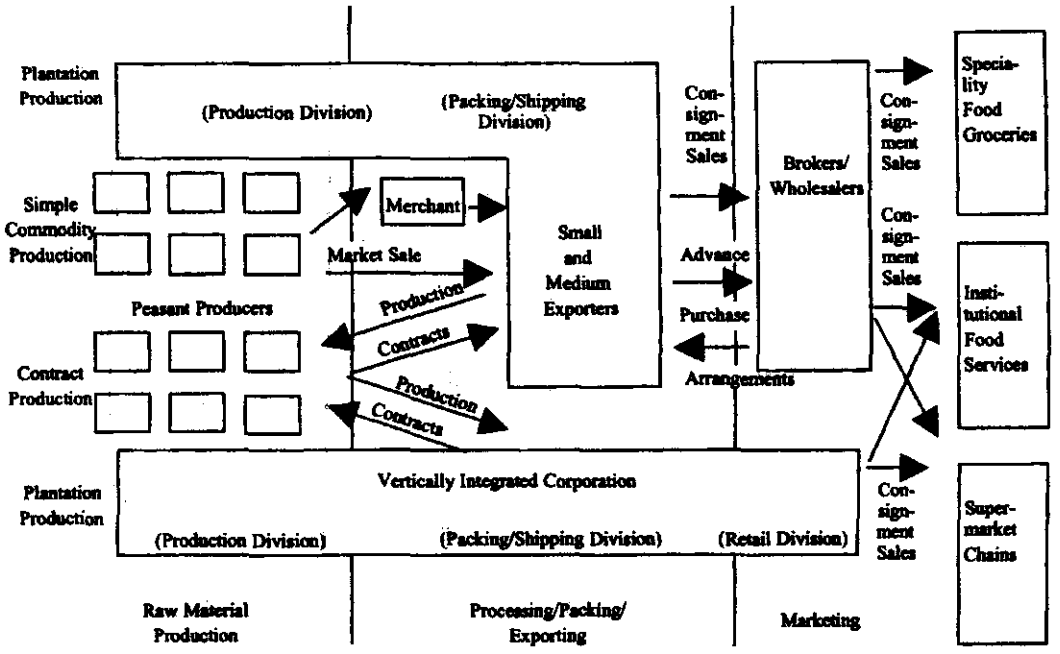
According to Porras (2003: 197), the segments that make up vegetable chains are:

- Cultivation,
- Processing and packing,
- Export and import, and
- Final distribution

The actors that take part in this chain are small and medium farmers, processors or exporters, importers, wholesale markets and retail markets (supermarkets). Three types of actors cultivate and harvest the vegetables, i.e. small and medium farmers, exporters or large multinational firms

that own supplying plantations, and large farmers who provide supplies on a contract basis. After harvesting, exporters process, pack, store and deliver the produce to the international markets. Once the produce reaches the international wholesale markets, it is sold to supermarkets, speciality food groceries and institutional food services. Supermarkets may have their own produce supply chains (Porras, 2003: 197). These actors and activities are illustrated in the international vegetable commodity chain as shown in figure 3.1. Raynolds (1994: 149) also explains figure 3.1 by indicating that this international fresh produce commodity chain depicts three interlocking processes, i.e. raw material production, combined processing packaging and export activities, and marketing and consumption activities. These activities are carried out or undertaken either by the produce-exporting firm or by other associated firms.

Figure 3.1: Fresh vegetable commodity chain



Source: Raynolds (1994: 150)

From figure 3.1 it is clear that, in the fresh vegetable commodity chain, there are different distribution channels through which the fresh vegetables reach the final consumer. Raynolds (1994: 148) explains the supply channels through which an exporter (or supplier) can obtain produce. The first channel is through an open market system. The exporters purchase their produce in the local market from merchants or directly from the producers. The second channel is for the exporters to have their own internal production system. Here the exporters operate a farm and make use of hired labour. In other words, the production is vertically integrated and

thus centrally managed. This is a better option than the first because now the exporters have control over the production, processing, packaging, and export activities. Hence, the exporter can ensure consistent quality and supply. The third channel is to engage in a contract production system. The exporters form an agreement (a contract) with the producers. According to the agreement, the producers have to deliver fresh produce in a certain quantity, of a certain quality at a certain time. In return, the exporters provide production inputs, such as credit, technical products and services. This is also an optimal opportunity, because the exporter obtains the produce in the quality he desires at the right time (which ensures consistency of supply), while he does not have the risks and costs that are associated with farming (e.g. concerns about land and labour).

3.3.1.3 Entry barriers

It is not always possible for a producer or exporter to become part of a global chain. Several limitations or entry barriers exist that may prevent them from participating or from gaining rents.

An entry barrier may be the stringent requirements of consumers, supermarkets and governments. A supplier's technical capabilities and market knowledge may be inadequate, preventing it from being included in the chain. Certain entry barriers exist over which potential participants have no control. One of them is the European Union (EU) markets border measures and trade preferences. These determine the access that developing counties have to the EU markets. Tariffs may be imposed in order to protect EU producers from foreign competition. Trade agreements, however, assist developing countries to gain access to international markets (Porras, 2003). See also section 2.3.1.5 a.

3.3.1.4 The governance structure

Porras (2003: 234) identifies the traders (supermarkets) and the exporters (processors) as the key agents who coordinate and dominate the fresh vegetable chain. Due to the high elasticity of demand for fresh produce (consumers change supermarkets if their demands are not met), supermarkets are engaged in fierce competition. They compete not only in terms of price, but also in terms of non-price factors. Dolan *et al.* (1999: 10-13) identify these non-price factors as quality, packing, product variety, delivery, innovation, food safety and ethical trade.

The fresh vegetable chain is generally classified as a buyer-driven chain (see section 2.3.2.8). However, there may be instances where it is supplier-driven. The key agents or lead firms are the decision-makers and they link a wide array of producers situated in developing countries to the consumers. See also sections 2.3.1.5 a and 3.2.10.

Gibbon and Raikes (2000: 69) explain the structure of horticulture GCCs:

> There are a number of distinguishable GCCs for horticulture products, differentiated on the one hand by whether they end with developed country supermarket chains or some other kind of outlet, and on the other hand by the extent to which production functions are integrated with other upstream functions.

According to Porras (2003), three types of structures or trends exist in the fresh vegetable chain:

- The first structure is that of the UK. In the UK large supermarkets, such as Marks & Spencer, dominate the market with their own brand names. The supermarkets define what is produced, how and by whom. The actors (i.e. producers and exporters) in the chain are included in the chain if they can provide the above-mentioned non-price factors and comply with governmental regulations. Thus, these requirements set by the supermarkets determine whether or not an actor has the capabilities to be included into the chain. If the actor does not have the capabilities, the requirements could act as barriers to entry. Once an actor is included into the chain, it is advantageous as employment is created. However, only the large actors take part in this chain (Porras, 2003: 206-207).
- The second structure is that of the USA. In the USA, the market is influence by the growers and the shippers. Shippers consolidate the produce of the producers. Hence, small and medium producers are able to take part in the international markets. The produce is consolidated to meet the buyers' requirements. The shippers source products from different regions and also from abroad, thus supplying produce all year round (Porras, 2003: 208).
- The third trend is for multinational corporations (MNOs) and international traders to establish global brands and diversified product lines, for example Dole and Del Monte (Porras, 2003: 208). Gibbon and Riakes (2000: 71) also identify the chain structure of MNOs (e.g. Unilever and Outspan / Unifruco). They explain that these corporations produce crops on their own plantations. The produce is transported in dedicated shipping

fleets to the importing countries. In each of the importing countries, the corporations have their own cooling systems. The MNOs tend to control the chains of fresh produce that is not destined for supermarkets.

In order to understand the workings of fresh vegetable commodity or value chains, one needs to examine such a chain. The fresh vegetable chains in Costa Rica and in Kenya and Zimbabwe are discussed as case studies.

3.3.1.5 Case study: Costa Rica

Costa Rica produces fresh baby vegetables for the international market. Baby vegetables form part of the international chain of fruit and vegetables. Porras (2003) studies the fresh baby vegetable sector of Costa Rica by using the GCC approach. The aspects discussed in this section were taken from his study.

(a) Input-output structure

Porras (2003) divides the production of fresh baby vegetables into three segments, i.e. farming, processing and marketing.

- Farming consists out of land preparation, planting, fertilisation (spraying) and harvesting. A grower's association provides assistance in the aspects of farming. In Costa Rica, 25 producers grow baby vegetables. Out of the 25 producers, only two are large producers. One of the large producers supplies only seeds and seedlings. The small-scale producers belong to two organisations. These organisations are processors, i.e. they sell the baby vegetables both nationally and internationally. The small-scale farms buy seeds from the organisations (at a lower price). In turn the organisations guarantee that they will buy their produce at a fixed price. Hence, the organisations control and coordinate the type of baby vegetables produced and the marketing thereof. The baby vegetables are washed and packed on the farms. The farmers conduct quality control and transportation of the produce themselves. Employment on the farms consists of families; those with experience help to train the others.
- Processing has three stages, delivery of the products by the farmers, final classification and packing. The processing organisations conduct these activities for the small-scale

producers. There is a continuous search for quality improvement. The organisations sell the produce to the national and international market – either directly or via a distributor.

- The success of marketing depends on the post-harvesting cooling systems. The organisations have different marketing strategies, e.g. some strive for innovation and quality. Others want to obtain personalised contracts and increase the knowledge of the farmers in aspects of the trade. These products are marketed successfully as the farmers pool their resources, thus achieving economies of scale and ensuring high quality products.

(b) Location

Baby vegetables are produced in the province of Cartago. Here the altitude, climate and soil are favourable for the production of baby vegetables. The traders and processors are also situated in Cartago. The small-scale farmers' vertical integration enables them to compete successfully in national and international markets. The farmers concentrate on farming and the processors conduct the marketing.

(c) Institutional policy dimension

The government of Costa Rica has implemented several measures to stimulate the country's exports. For example, implementing free trade measures, allowing mini-devaluations, establishing an institute to assist in export activities and simplifying the paperwork involved in exporting.

As the horticulture industry of Costa Rica became more vertically integrated, employment in this sector rose. More women were employed to perform delicate activities such as harvesting and packing. The washing and packing of the baby vegetables are considered activities that add value to the products.

The integration of the farms enabled economies of scale for profitable processing and marketing. However, several problems plague the industry, e.g. outdated technology and poor communications. The government has assisted the farmers in order to improve their operations through seminars and trade fairs.

Baby vegetables were originally produced in order to diversify the exports. However, exports only take place during two months of the year. Fortunately, the domestic demand has increased significantly, enabling the industry to sustain the production of baby vegetables throughout the year.

(d) Orientation of the chain

The Costa Rican baby vegetable chain supplies the national as well as the international markets. The international chain is classified as buyer-driven (the produce is sold to brokers who sell to supermarkets).

In the national market power is shared by the processors and the traders (supermarkets). The processors determine what and how much the producers should cultivate of a certain product. They sell the produce to the traders. However, before the traders receive the produce, they already know where and when they will sell it. Thus, production and marketing is coordinated. The traders regulate the production in order to prevent overproduction, which would drive down prices. Producers do not plant unless they are certain that a trader will buy the produce from them. The processors have more power that the local supermarkets, therefore they are able to ask a price premium for their produce. Hence, this chain is supplier-driven.

Producers are excluded if they do not adhere to the regulations set by the processors. Producers who are not vertically integrated find it hard to survive, mainly due to the high cost of seeds.

Porras (2003: 222) estimates the distribution of the final price between the segments of the domestic market in the baby vegetable chain in Costa Rica in 2000. This is illustrated in table 3.1. The farmers and the processors obtain less than 50 per cent of the final price. The supermarkets receive the largest share.

Table 3.1: Distribution of the final price of baby vegetables in the Costa Rican chain

Agent	Domestic Price ½ kg / colones	% of the distribution of the consumer price
Farmer	50	14
Processor	110-160	13-44
Supermarket	150-200	42-55
Consumer price	360	100

Source: Porras (2003: 222)

(e) Contribution of the GCC analysis

In summary, Porras (2003: 234) explains the value of the GCC analysis of the baby vegetable chain. Through this analysis it was established that the chain is oriented by demand in the international arena and by both demand and supply in the domestic markets. The chain shows possibilities of growth in both the national and international markets. However, entry barriers may prevent these growth possibilities. The policies of the government, as well as innovation, will enhance the competitiveness of this sector.

3.3.1.6 Case study: Kenya and Zimbabwe

Dolan and Humphrey (2000) and Dolan *et al.* (1999) study the fresh vegetable sector of Kenya and Zimbabwe by using a GCC approach. Fresh vegetables are traded between the UK and Kenya and Zimbabwe. The aspects discussed in this section were taken from their studies.

(a) Origin of the chain

According to Dolan and Humphrey (2000: 160), the exports of horticulture products to the UK have grown significantly since the 1980s. In 1997, Kenya was the largest and Zimbabwe the second largest exporter of these products to the EU.

Due to the high elasticity of demand of fresh produce, competition amongst the UK supermarkets increased. The supermarkets no longer compete in terms of price, but in terms of service (having a wide variety of products that are consistent in taste and appearance available throughout the year). The implementation of new regulations and laws (e.g. the Food Safety Act

1990) required traceability of the products, hence requiring supermarkets to control their produce. Supermarkets consequently refrained from buying from wholesale markets. Instead they established a chain of specialised producers and exporters – importers in Kenya and Zimbabwe, and importers in the UK.

(b) Governance of the chain

The UK supermarkets have requirements which the participants have to meet (and exceed). Before the inclusion of a new participant, the supermarkets determine if the business has the capabilities to meet the requirements. Thus, they ensure specialisation throughout the chain. Once included into the chain, the supermarket may exclude a participant if he does not perform adequately. These participants are mostly large businesses, as very few developing country producers have the capabilities to meet the requirements. In other words, the small producers and exporters are excluded.

This fresh vegetable chain is thus classified as buyer-driven. Raikes and Gibbon (2000: 623) find that buyer-driven chains have great efficiency (economies of scale) and welfare benefits (prices are kept low). See also sections 2.3.1.5 a and 3.2.10.

(c) Participants in the chain

Dolan *et al.* (1999) identify the participants in the fresh vegetable chain as African growers, African-based exporters, UK-based importers and UK supermarkets. Figure 3.2 illustrates the flow of produce in the African fresh vegetable chain.

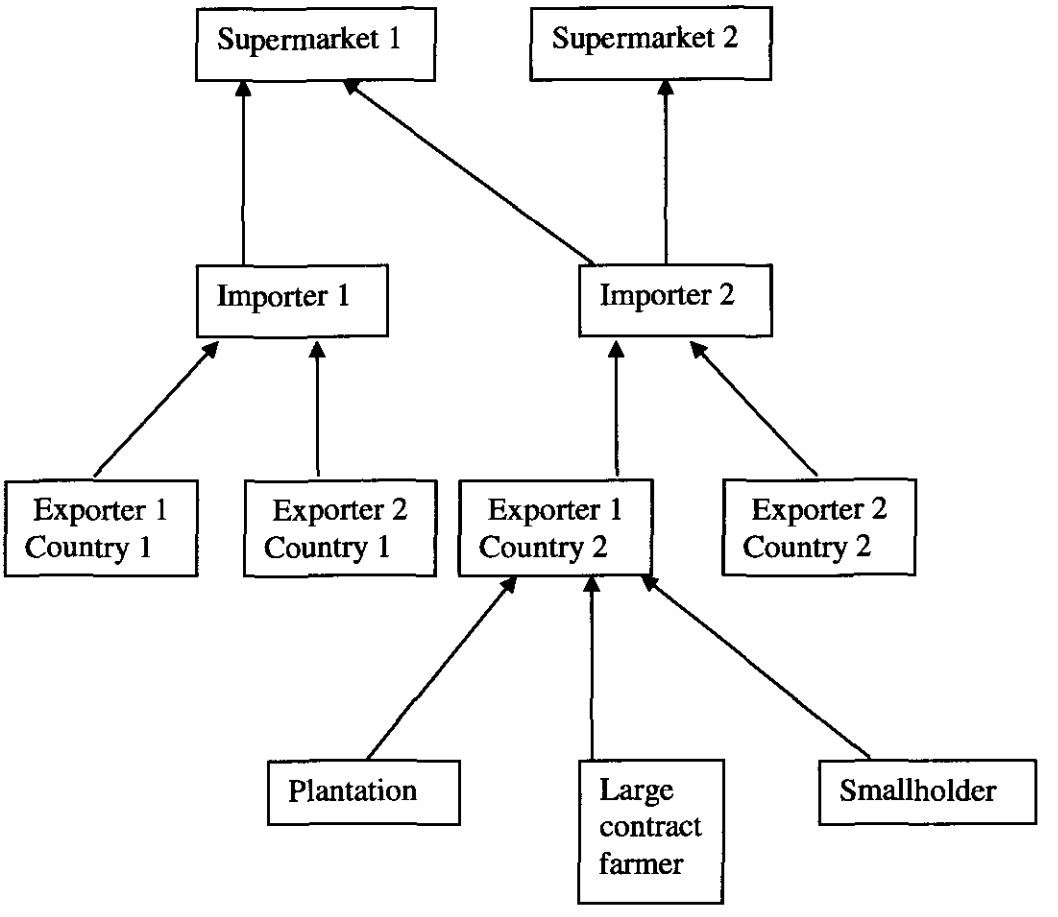
The participants have the following tasks (Dolan *et al.*, 1999: 16):

- African growers grow and harvest the crops.
- The African-based exporter has to make certain that the food comply with the UK's standards and legislation. He then processes, packs, stores and transports the products. The exporter also manages the cold chain, i.e. he has to make sure that the products are cooled throughout the distribution channels. Finally, the exporter assists the producers in the training of their personnel in quality and safety requirements.

- The UK-based importer checks the produce (to ensure that the foods are on the correct standard), repacks and labels it and creates product combinations. The UK importer sells the products to the supermarkets. It should be noted that the supermarkets do not have exclusive relationships with the importers. The importers may also sell their products to wholesale markets and the catering industry.
- The UK supermarkets receive different product ranges from different importers. They sell the products to the consumers.

Figure 3.2: The African fresh produce chain

→ The arrow indicates the flow of produce



Source: Dolan *et al.* (1999: 17)

Dolan *et al.* (1999: 16) note that most exporters export a large proportion of their supply to one country. In contrast, importers source from more than one country in order to have supply

throughout the year and to ensure that they will have supplies should one of the exporters fail to provide produce.

(d) Distribution of returns

Dolan *et al.* (1999: 12) examine the distribution of returns that are generated by the export of two types of beans from Kenya and Zimbabwe to the UK. Their findings are that the returns are concentrated in the UK. The greatest margins of income end up with the supermarket. The costs of the producer, exporter and packaging only amount to 22,6 to 27,2 per cent of the final price. Table 3.2 illustrates the cost structure that results from the exports of these types of vegetables

Table 3.2: Cost structure of Africa fresh vegetable exports to the UK

		One tonne export lot of mangetout from Zimbabwe	**Export of fresh vegetables from Kenya**
Stage	**Price per tonne (GBP)**	**% of final price**	**% of final price**
Producer	630	11,9	14,1
Exporter	291	5,5	
Packaging	274	5,2	13,1
Airfreight and handling	1036	79,6	21,2
TOTAL CIF from Africa	2230	42,2	48,4
Importer charges and commission	624	11,8	6,1
Supermarket			
Stock-out	714	13,5	
Other costs	285	5,4	45,5
Mark-up	1427	27,1	
TOTAL price	5281	100	100

Source: Dolan *et al.* (1999: 13)

(e) Upgrading

The supermarkets determine what is produced, by whom and how. In other words, they determine the distribution of the activities in the chain. Dolan *et al.* (1999) identify five activities in the GCC of fresh vegetables: growing, post-harvest processing, transport and logistics, marketing and innovation. The supermarket is concerned with branding, product innovation, product design, and marketing. By dividing the other activities such as quality, control, logistics, storage, distribution and transport between the participants in the chain, the supermarkets reduces its costs as well as its risks.

Each of the participants in the chain (i.e. the growers, exporters, and importers) has to add value to their activities. Otherwise they might be excluded from the chain. According to Dolan *et al.* (1999), growers can add value by extending their activities to bar coding and labelling the products, and by processing the vegetables to produce ready-to-eat packs. However, performing these functions may require large investments in machinery and facilities. Uncertainty about interest rates and exchange rates may inhibit investment and prevent competitiveness. They further suggest that importers and exporters can add value by providing technical support to the growers, improving logistics and assisting with product development. Exporters, however, should constantly better their products in order to be proactive in the market. They could, for example, help with investment in the production of the products to ensure proper post-harvest care. They could also help control the pack houses to ensure that the products are cooled, graded and packed in temperature- and humidity-controlled conditions. This will prolong the shelf life of the products and thus add value.

Dolan *et al.* (1999: 11) have visited a supermarket in the Brighton area in order to illustrate how value can be added through the preparation of products (processing) and attractive packaging. Table 3.3 indicates how value is added to carrots. These activities clearly create a price premium.

Table 3.3: Adding value to carrots

Price	*Weight and Price*	*Price per kilo*
Basic carrots, class1	18p per lb, loose	34,9p
Basic carrots, bagged, class 1	87p, 1 kg bag	87p
Peeled and sliced carrots	350g bag, 99p	£2,83
Carrot batons (peeled, chopped, washed, ready-to-eat)	200g bag, 59p	£2,95
Peeled, ready-to-cook mini carrots	300g bag, 85p	£2,83
Mini carrots in tray	225g tray, 99p	£4,40
Mini-crunch carrots (peeled, chopped, washed, ready-to-eat)	100g bag, 60p	£6,00

Source: Dolan *et al.* (1999: 12)

Supermarkets gain several advantages by allowing the other participants in the GCC to upgrade (they push some of the activities back along the chain). They achieve reduced costs as labour is cheaper in Africa than in the UK and it is not necessary to repackage the products in the UK (defected products are already detected and discarded in Africa). Transportation costs are also reduced as packaged food has a higher value-to-weight ratio (Dolan *et al.*, 2000: 25-6).

The participants are in the short term protected from being substituted in the chain, due to their competence and the relationships they have built up. In the end, however, they have to be innovative and upgrade their activities in order to prevent substitution.

(f) The role of the exporters

Exporters play an important role in this fresh vegetable chain. They have to perform several functions, and if they are unable to, these functions act as barriers to entry. According to Dolan *et al.* (1999), exporters have to ensure consistency of quality, reliability of supply and the perseverance of the products. Therefore, they have to help manage the production and processing systems to ensure quality, install control mechanisms to ensure reliability of supply and monitor the use of chemicals to ensure perseverance. Exporters also have to make sure that post-harvest care is done properly so that the products have a longer shelf life.

The retail sector demands flexibility and reliability in the supply, and so logistics and transport are two of the most important aspects in this chain (the products only have a short period in which they can be marketed). The exporters, so as to be able to react quickly to orders, have installed a Just-in-Time (JIT) management system. This system reduces time between harvesting, packing and delivery. Efficient logistics depend on the quick exchange of information and knowledge between the participants in the GCC. Integrating the participants in the chain electronically could accomplish this. Thus, the flow of the products throughout the chain could be traced. Exporters have to secure air cargo space to be able to transport the products rapidly in a reliable manner. Large exporters are able to pre-book airfreight services because they have the resources and volumes required. Small exporters, however, have to compete with passengers for air space, which can only be arranged just before departure.

Exporters need to constantly develop new products and diversify the existing ones. By working closely with the importers, this could be achieved. Once they develop new products and innovative packaging, they reduce the risk of being substituted by the supermarkets. Exporters are also dependent on importers for market information about the changes in consumer preferences, as well as for technical information. With this information the exporter is able to ensure that the product mix and product packaging adhere to the customer preferences.

(g) Contribution of the GCC analysis

The studies of Dolan and Humphrey (2000) and Dolan *et al.* (1999) apply the GCC concept to illustrate the international trade in fresh vegetables. They identify the governance structure of the fresh vegetable chain by determining the key decision-makers (the UK supermarkets). They also identify the outputs and the structure of the chain, as well as the impact that the supermarket requirements have on the exporters and the producers in sub-Saharan Africa (Kenya and Zimbabwe). Thus, the GCC approach provides insights into the changing nature of the fresh vegetable trade. It is important to be aware of these changes, especially if the exports of these horticulture products are to be developed.

In summary, they have established that only large exporters are included in this exclusive chain. They recommend that small exporters need to be included through, for example, integration into the large export businesses. As innovation and market diversification are the keys to

competitiveness, government needs to develop capabilities to enhance product development. The ultimate goal is to sustain a long-term competitive advantage.

3.4 FLORICULTURE CHAINS

As indicated in section 3.3, the trade of horticultural products (especially fresh fruit and vegetables) have integrated developing countries with developed countries. This is also the case in the trade of floricultural products, which form part of horticulture products (see section 3.1). The floriculture industry consists of the cultivation and trade in cut flowers, cut foliage, potted plants and bedding plants (see section 1.1).

According to Gibbon and Raikes (2000: 71), African exports of cut flowers during 1996 and 1997 were approximately 60 000 tons. Kenya provides half of the African production. Therefore, the floriculture sectors of African countries are active sources of horticultural exports. Gibbon and Raikes (2000: 71) further state that global flower commodity chains have been emerging. These chains resemble the fresh vegetable GCC. In other words, large-scale African producers source directly to either supermarkets or large distributors. Two chains have been identified, one sources to British supermarkets and the other one to German distributors (Omniflora and Florimex).

In spite of the emergence of such chains, the majority of African producers export their cut flowers to the auctions (see section 4.2.5.1 a) in the Netherlands. The Dutch flower auctions have historically been the most important channels through which floricultural products from developing countries have reached the wholesalers and retailers (Collinson, 2001: 8). Malter, Reijtenbagh and Jaffee (1999: 58) indicate that the reason may be that distribution through the Dutch auctions may have been the only marketing option that the developing country producers knew about. The auctions are situated throughout the Netherlands and each exporter needs to be represented by a local agent. The exporters pay a certain fee for agent and for the use of the auctions' facilities. As the volume of flowers sold at the auctions and the payment of fees cannot be controlled, exporters often receive a lower price for their products than in the case of direct sales to supermarkets and distributors. Once sold at the auction, the flower products are re-exported to Europe, the USA and Japan.

Therefore, supermarkets do not play such a large role in the marketing of floricultural products as with other horticulture products. However, Collinson (2001) indicates that consumption patterns of buyers are changing. Buying behaviour has shifted from occasional to regular flower purchasing. This increases supermarket supply chain relationships and erodes the importance of the Dutch auctions (producers are increasingly establishing direct contacts with overseas buyers). Hence, the increasing volume of purchases has emphasised the importance of convenience stores (e.g. supermarkets and fuel station shops) as retail outlets. Although supermarkets continue to purchase floricultural products from the auctions in the Netherlands, direct trade with the producers and their import agents has gained considerable importance in recent years.

3.5 SUMMARY

It is clear from chapter three that the horticulture export industries have recently become more significant for the developing counties, due to their stagnant traditional agricultural industries. Therefore, the diverse horticulture export industry's high value products (i.e. fruit, vegetables, cut flowers and ornamental plants) are increasingly developing income and employment opportunities for these countries. This industry plays a pivotal role in alleviating poverty and creating employment in developing countries, especially for previously disadvantaged groups such as women.

Exports of non-traditional agricultural products of developing countries have increased, which enabled these countries to become more integrated into the global markets. This integration was made possible through the emergence of global chains, which originated due to the development of cool chain technology and the global expansion of the airfreight industry. Participation in global chains has both positive and negative effects. It increases income and employment opportunities. However, the requirements (e.g. first class quality and comprehensive environmental protection) set by the buyers may be too stringent for the developing country producers to comply with. Hence, they may not be able to participate, which could result in an increase in unemployment.

Research has been done on the international integration of the fresh vegetable industry. This has highlighted the various aspects involved in the participation in a global chain. Stringent competition exists in this industry, which is enhanced by entry barriers (e.g. requirements of consumers and tariffs). Therefore, not all producers are able to participate in a fresh vegetable

chain. This is indicated by the governance structure of the fresh vegetable chain, which is generally classified as buyer-driven. However, in some instances it may also be supplier-driven. These aspects have been illustrated through the case studies of the fresh vegetable export industries of Costa Rica, Kenya and Zimbabwe. The case studies indicate that the fresh vegetable chains are constantly changing. The governing parties in these chains have an impact on the participation of all the parties involved, for example on the exporters and the producers. It is therefore essential for the participants to continually improve their competitive positions through innovation, as this ensures long-term participation into the fresh vegetable chain. Ultimately, the producing country will achieve a sustainable income through their competitive integration into the global market.

As floricultural products fall into the same category as fresh fruit and vegetables, the structures of their chains have certain similarities. Floricultural products are generally distributed via the Dutch auctions. However, trends and consumer preferences are becoming increasingly important. Hence, the international floriculture industry is changing and global chains are emerging. The aspects surrounding the global floriculture industry are discussed in the next chapter.

CHAPTER 4
THE FLORICULTURE INDUSTRY

4.1 INTRODUCTION

In chapter three, it is clear that the global horticulture industry, including the floriculture industry is changing. These changes are the result of globalisation (see section 2.2). An advantage of globalisation for the floriculture industry is that the consumers' incomes have increased, causing their consumption to increase as well. Unfortunately, competition in this industry has also grown. Many developing countries, now part of the global economy, have shifted their production by focusing more on higher value horticulture exports (see section 3.2). The increase in competition has made the playing field very tough because supply has been exceeding demand (De Groot, 1998: 2).

According to De Groot (1998: 2), retail outlets no longer simply sell their products to uninformed consumers. Consumers are becoming sophisticated buyers and are therefore much more demanding. Consumers regard quality, environmentally sound production, wide variety, service and price as critical aspects when they purchase floricultural products. Producers have to compete not only in terms of these aspects, but also with other substitute products (e.g. consumers may buy flowers or chocolates for someone's birthday).

Along with these changes are the changes in the viability of certain markets and in the final markets (see section 3.4). New regulations and integrations have changed the markets for floricultural products (e.g. the European integration and the democratisation in Eastern Europe). Traditional markets (e.g. France) are becoming saturated. However, new markets such as the USA and Japan are developing. Established outlets such as florist shops no longer dominate the final markets of floricultural products. Big retailers are becoming important suppliers to the consumers (De Groot, 1998: 3).

It is thus clear that the potential of floriculture producing countries, such as South Africa, can be developed if these countries' industries position themselves into new markets and so become integrated into new and profitable chains (see section 3.4).

The objective of this chapter is to examine both the international and national (South African) floriculture industries. Section 4.2 discusses the international floriculture arena. Section 4.3 discusses the South African floriculture industry. The chapter concludes with a summary and conclusion in section 4.4.

4.2 THE INTERNATIONAL FLORICULTURE INDUSTRY

The two market surveys of the Centre for the Promotion of Imports from Developing Countries' (CBI) – one on cut flowers and foliage (2003a) and the other on plants and young plant material (2003b) – provide the most comprehensive information of the international floricultural. Section 4.2 is demarcated as follows: overview of the international floriculture industry (section 4.2.2), international market types (section 4.2.3), international floriculture trade (section 4.2.4), the international floriculture trade structure (section 4.2.5), requirements for market access (section 4.2.6) and the products and varieties (section 4.2.7). This section also comprises the consumption of floral products (section 4.2.8), market segmentation (section 4.2.9), trends in the floriculture industry (section 4.2.10) and floricultural products' prices (section 4.2.11).

4.2.1 Overview

Before the 1970s, most of the world floriculture consumption was supplied by domestic production. Consequently, international trade in these products was largely limited to cross-border trade. International trade (i.e. the world market) expanded due to the use of frequent and reliable air transport and the development of advanced receiving, handling and shipping facilities (USITC, 2003: 37).

Nowadays, domestic production is declining while global imports of floricultural products are increasing. Demand exceeded supply in the world market in the 1970s and 1980s. It was during this period that Africa and Latin America developed their floriculture production and their export capabilities. Throughout the 1990s international floriculture production continued to increase. Demand, however, stabilised or increased only marginally in the main consumption markets, which made trading competitive in most markets. Hence, world production of floricultural products (especially of cut flowers, e.g. roses) surpassed demand, resulting in a significant price decline (USITC, 2003: 37).

4.2.2 International role players

Floriculture producers are spread across the world. The producing countries are discussed in two sections, i.e. European producers and non-European producers.

4.2.2.1 European producers

According to the CBI (2003a: 21), the main production countries in Europe are the Netherlands, Germany and Denmark. In recent years, the production areas (see table 4.2) and number of growers of floricultural products in these northern European countries have declined. The total production has, however, remained stable, as scale enlargement and productivity improvements have taken place (i.e. the average cultivated area per company and output per hectare is increasing). The data provided by table 4.1 gives an indication of the levels of floriculture production in Europe.

Table 4.1: Production of cut flowers and pot plants in selected EU countries (in euro million)

Country	Production	Year
The Netherlands	2 057	2002
France	1 503	2000
Germany	1 135	1997
Italy	859	1999
Denmark	354	1998
Spain	345	1990
Austria	240	1999
Belgium	238	1999
Sweden	199	1990
UK	114	2000
Finland	76	1999

Source: AIPH Yearbook of the International Horticultural Statistics (1999-2002) (cited in CBI, 2003a: 21)

The CBI (2003a: 21) reports that some of the EU countries listed in table 4.1 (e.g. Belgium, Germany, Finland, France, the Netherlands and the UK) have recently had lower levels of cut

flower production than in the previous years[3]. In contrast, Eastern European countries such as Hungary and the Czech Republic have had small increases in their production.

The development of the area used for floriculture production varies considerably between the EU countries. Countries showing increases in their production areas are the Mediterranean countries such as Spain and Italy, while in the Northern European countries such as the Netherlands, Germany and Denmark, production areas are declining. Table 4.2 draws a comparison between the production areas in different years of various EU countries, which indicate the decline in the production areas.

Table 4.2: Area under production for cut flowers and pot plants (in ha)

Country	**Area**	**Year**	**Area**	**Year**
The Netherlands	8 526	1999	8 479	2000
Italy	7 654	1994	8 463	1998
Spain	4 127	1994	7 617	1997
Germany	7 066	1996	7 056	2000
UK	7 230	1998	7 297	2000
France	6 628	1998	6 628	1999
Belgium	1 684	1998	1 721	1999
Denmark	628	1996	444	1999
Finland	141	1999	141	1999
Sweden	86	1996	63	1999

Sources: AIPH Yearbook of the International Horticultural Statistics (1999, 2002) (www.aiph.org), Flower Council of Holland (2003) (cited in CBI, 2003a: 21)

The European Union's total production of cut flowers is fairly stable. However, in some instances it is declining. Production is shifting from Northern Europe to Southern Europe. Although there are fewer growers, they have applied high-tech production methods with which they obtain the best quality floricultural products (CBI, 2003a: 21). This makes them fierce competition for non-European producers.

[3] It should be noted that current production data is unavailable; therefore the report of the CBI (2003a: 21) is the only indication of the current status of EU floriculture production.

4.2.2.2 Non-European producers

The production of floricultural products in the main non-European cultivation regions (Asia, Africa and the Americas) is described in this section. The production areas are indicated in tables under each region and provide insight into the extent of floriculture production in these regions.

(a) Asia and the Middle East

Table 4.3: Area under flower and foliage production in the Middle East and Asia (in ha)

Asia	**Area**	**Year**
MIDDLE EAST		
Israel	1 910	1996
Turkey	670	1993
ASIA		
China	59 527	1994
India	34 000	1995
Japan	8 050	1994
Thailand	7 000	1995

Source: AIPH Yearbook of the International Horticulture Statistics (cited in Van Liemt, 1999: 3)

According to De Groot (1998), Israel is the main producer in the Middle East. Israel's competitive advantage is its product innovation and knowledge transfers. Israeli producers receive government support in the form of duty-free concessions. Due to the reduction of import duties by the EU, the EU is their main export destination. The production areas of Israel have increased indicates this (from 1 910 in 1996 to 2 245 in 1998) (www.aiph.org).

The largest floriculture producers in Asia (the Pacific) are India, Japan, Thailand, Malaysia, Korea and China. India's competitiveness is enhanced through sufficient winter and summer sunshine, high temperatures, good soil and water quality, and low investment and labour costs. Approximately 30 per cent of the floriculture production is exported. However, the quality of the products does not meet the European and Asian markets' standards. Japan and China produce mainly for their domestic markets. China has increased its production of cut flowers from 100 million stems to 400 million stems in a period of three years. In Thailand the production areas

have increased from 7 000 in 1995 to 8 320 in 1998, and the production of ornamental plants (e.g. bonsai and potted plants) is also rising. Table 4.3 indicates the production areas of the Middle East and Asian countries (De Groot, 1998).

(b) Africa

The largest African producers are Kenya, Zimbabwe, Morocco and South Africa (see section 4.3). Other African competitors are Zambia, Malawi, Tanzania and Uganda. Trade agreements with the EU have facilitated the development of knowledge and infrastructure as well as access to the European markets. The bulk production of floricultural products is destined for the European market, but exports to the Asian markets are also increasing. Poor transport conditions and the unstable political environments in certain African countries are detrimental to the development of the respective floriculture industries. The African counties take advantage of market opportunities such as supplying the European markets during the winter and producing indigenous floricultural products. South Africa is the only African country that is more focused on the domestic market (see section 4.3.3) than the international market (De Groot, 1998). Table 4.4 indicates the area of production for selected African countries.

Table 4.4: Area under flower and foliage production in Africa (in ha)

Africa	**Area**	**Year**
Kenya	1 280	1995
Zimbabwe	940	1995
Côte d'Ivoire	690	1995
Morocco	427	1992

Source: AIPH Yearbook of the International Horticulture Statistics (cited in Van Liemt, 1999: 3)

(c) North and South America

According to De Groot (1998), the North American (US) growers supply approximately 90 per cent of the local market. American growers do not experience fierce competition, due to the (sometimes) low dollar exchange rate and the rigid phytosanitary requirements for imports. Production in this region is year-round and the floriculture and horticulture industries are the fastest growing segments in the USA.

The two main Latin American producers are Colombia and Ecuador. Colombia's main production is in roses and carnations. Colombia's advantages are their favourable climatic conditions, length of day, stable temperatures, relatively cheap and abundant labour and favourable location with respect to the North American market. Rising production costs, low quality and diseases are factors that might hinder Colombia's floriculture production. Ecuador's production areas are growing considerably (from 500 ha in 1994 to 2084 ha in 1995) and are largely focused on roses (AIPH, 2004). Ecuador's advantages are their favourable climate, abundant water and cheap land. Table 4.5 indicates the areas under floriculture production in the Americas.

Table 4.5: Area under flower and foliage production in the Americas (in ha)

Americas	**Area**	**Year**
NORTH AMERICA		
USA	15 522	1995
Canada	691	1996
LATIN AMERICA		
Mexico	5 000	1994
Colombia	4 200	1995
Costa Rica	3 600	1994
Ecuador	500	1994
Dominican Republic	400	1995
Peru	200	1994

Sources: AIPH Yearbook of the International Horticulture Statistics (cited in Van Liemt, 1999: 3) and www.aiph.org

It is clear from the above that the production areas (in ha), and therefore production, are different in each country. Israel's production area is considerably smaller compared to the production areas in Asia (Thailand, Japan and India). China has by far the largest production area (59 527 ha), which makes the second largest production area, i.e. that of the USA (15 522 ha), seem insignificant. Africa has very small production areas, compared to its developing competitors in countries such as Mexico, Colombia and Costa Rica. The countries with small production areas have to expand their cultivated land area in order to increase production and improve their competitive positions (i.e. an increase in volume lowers prices).

4.2.3 International market types

The Kaiser Study (2000: 19) has identified five types of international markets:

- Volume markets. These are developed markets that import the greatest volume, e.g. Germany, UK, France and Italy.
- Emerging markets. These markets are underdeveloped, of medium quality and indicate high growth, e.g. the Czech Republic, Poland, Hungary, Greece, Portugal and Spain.
- Evolving markets. These are developed markets that are opening up and have increasing export potential, e.g. Japan, UK and the USA.
- Niche markets. These are medium-sized, highly developed and high per capita spending markets, e.g. Switzerland and Sweden.
- Redistribution markets. These markets act as a primary re-distributor of floricultural products, e.g. the Netherlands.

These markets were evaluated in terms of their overall market size, their capacity to import, the import tariffs, phytosanitary requirements, local distribution capabilities and the intensity of competition in the markets. The Kaiser Study (2000: 20) has identified these various markets' attributes. They are discussed in the paragraphs below.

(a) Volume markets

The strengths of the volume markets are:

- Size: the size is $1bn to $6bn per market and accounts for 90 per cent of the EU imports.
- Although imports are subject to EU phytosanitary regulations (see section 4.2.6.1), these regulations are fairly relaxed.
- All of these markets have well-developed distribution infrastructure, except for Italy.
- These markets are receptive to new and exotic floricultural varieties.

The weaknesses of the volume markets are:

- Imports are subject to large EU import tariffs.
- These markets have had slow growth (less than 3 per cent), except for the UK (more than 15 per cent).
- These markets are very sensitive to quality.
- Fierce competition exists in these markets as a result of the intra-EU trade (particularly in the Netherlands).
- These markets provide to the masses, due to the growth in the supermarket channel. This type of channel is becoming increasingly price sensitive.
- There is significant (increasing or decreasing) pressure on airfreight.

(b) Evolving markets

The strengths of the evolving markets are:

- These markets are huge retail markets ($7bn to $14bn).
- They show reasonable growth rates (5 to 10 per cent), particularly in the amounts of imports.
- Evolving markets are dominated by traditional varieties, but significant demand is developing for new exotic varieties.
- These markets have well-developed distribution infrastructure.

The weaknesses of the evolving markets are:

- Domestic and neighbouring suppliers dominate the markets.
- They have strict phytosanitary requirements.
- These markets are quality sensitive.

(c) Emerging markets

The strengths of the emerging markets are:

- These markets have a forecast for strong growth (more than 20 per cent).
- They have a low sensitivity to product quality.
- There is a relatively low intensity of competition.

The weaknesses of the emerging markets are:

- These markets are small (less than $500m each), with small populations.
- Per capita spending is low.
- The distribution infrastructure is underdeveloped.
- Retailer distribution is low, therefore a limited scope for 'direct sales'.
- Emerging markets are immature with only minimal demand for new exotic varieties.

(d) Niche markets

The strengths of the niche markets are:

- Per capita spending is high.
- These markets have good distribution infrastructure and scope for increasing direct sales to supermarkets.
- The phytosanitary requirements are relaxed.

The weaknesses of the niche markets are:

- The niche markets are highly price and quality sensitive.
- There is little potential for long-term growth.

(e) Redistribution market (via the Netherlands)

The strength of the redistribution market is:

- This market provides a cost-effective way of reaching low volume markets.

The weaknesses of the redistribution market are:

- These markets are highly competitive.
- There are significant mark-ups, which increases costs.
- The redistribution market is highly price sensitive.

In summary, volume markets are favourable in terms of their size and preferences for all product types. Evolving markets are importing more than before and have well-established distribution networks. Despite their high growth rates, emerging markets are too small to generate significant foreign currency. Finally, niche markets are difficult to serve, as they impose high quality requirements (The Kaiser Study, 2000: 21).

4.2.4 International trade

Van Liemt (1999: 3) states that international trade of floricultural products are largely organised along regional lines. The Asia-Pacific countries are the main suppliers to Japan and Hong Kong. Both New Zealand (70 per cent) and Taiwan (90 per cent) sell their exports to Japan. The suppliers to Hong Kong are China, Taiwan, Malaysia, Singapore and New Zealand. African and other European countries are the principal suppliers to the European markets. For example, Kenya (60 per cent), Zimbabwe (80 per cent) and Zambia (90 per cent) send their exports to the Dutch auctions. The USA is mainly supplied by Colombia and Ecuador. Both of these countries export more than 70 per cent of their products to the USA.

According to Van Liemt (1999: 2), the world floriculture trade is characterised by a high degree of concentration by product and sources. Germany is the main market for imports and the Netherlands is the world's leading exporter. This section discusses both exports and imports of floricultural products.

4.2.4.1 Exports

Table 4.6: The world exporters of floricultural products $000

Rank 1999	Rank 2000	Rank 2001	Rank 2002	Country	Total 1999	Total 2000	Total 2001	Total 2002
				Total	7 914 629	7 662 924	7 321 619	9 012 352
1	1	1	1	Netherlands	4 078 068	3 810 620	3 730 960	4 350 353
2	2	2	2	Colombia	550 149	570 335	441 312	551 218
3	3	5	3	Italy	295 940	268 927	275 086	546 448
4	5	6	4	Denmark	287 482	261 628	270 139	527 271
5	4	4	5	Belgium	273 800	267 603	280 032	353 620
9	8	8	6	Germany	199 973	197 978	224 045	296 638
12	9	10	7	Kenya	156 471	164 204	186 669	238 018
7	6	7	8	USA	217 611	220 871	231 658	236 682
6	-	3	9	Canada	267 850	305 593	285 342	214 900
14	13	14	10	France	122 701	112 238	93 599	214 288
13	12	11	11	Spain	138 556	134 793	156 869	212 493
10	11	12	12	Israel	166 999	154 600	152 753	178 957
11	10	13	13	Costa Rica	160 722	161 055	120 862	156 264
8	7	9	14	Ecuador	211 340	215 977	198 019	155 828
17	15	15	15	Zimbabwe	40 104	64 928	66 427	69 501
18	17	16	16	Guatemala	57 257	64 128	52 865	67 251
15	14	17	17	Mexico	61 392	66 487	47 864	64 870
21	19	19	18	UK	38 790	42 003	39 957	63809
22	20	22	19	New Zealand	35 675	36 477	27 337	51 944
20	29	23	20	China	40 951	16 039	23 731	43 825
23	21	21	21	South Africa	35 146	33 424	30 240	38 649
24	22	20	22	Poland	29 084	30 493	35 608	38 096
16	16	18	23	Thailand	61 051	64 167	46 869	33 523
37	31	28	24	Uganda	9 363	13 665	16 042	23 378
29	28	26	25	Zambia	16 997	16 162	16 404	23 231

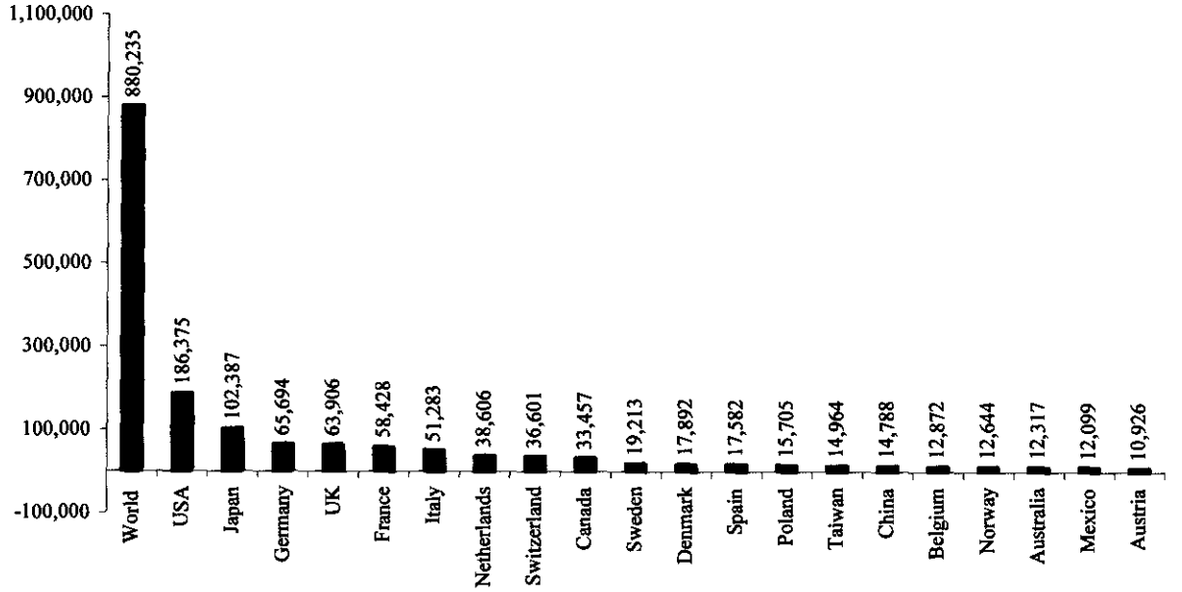
Source: Pathfast Publishing, 2004

The world export floriculture trade has grown significantly over the past few years. This is indicated by the 25 per cent increase in the total world floriculture exports from 1999 to 2002, as illustrated in table 4.6. The growing number of competitors in this industry has also influenced the increase in the trade – in 1999 there were 80 exporters of floricultural products and in 2002 the number of exporters was 103 (Pathfast Publishing, 2004). Table 4.6 shows the top 25 world exporters of floricultural products as they ranked in 2002. Europe is the primary source of the world's exports. However, developing countries are increasing their market share every year. Only the Netherlands and Colombia have been able to maintain their positions as the two largest exporters from 1999 to 2002.

4.2.4.1 Imports

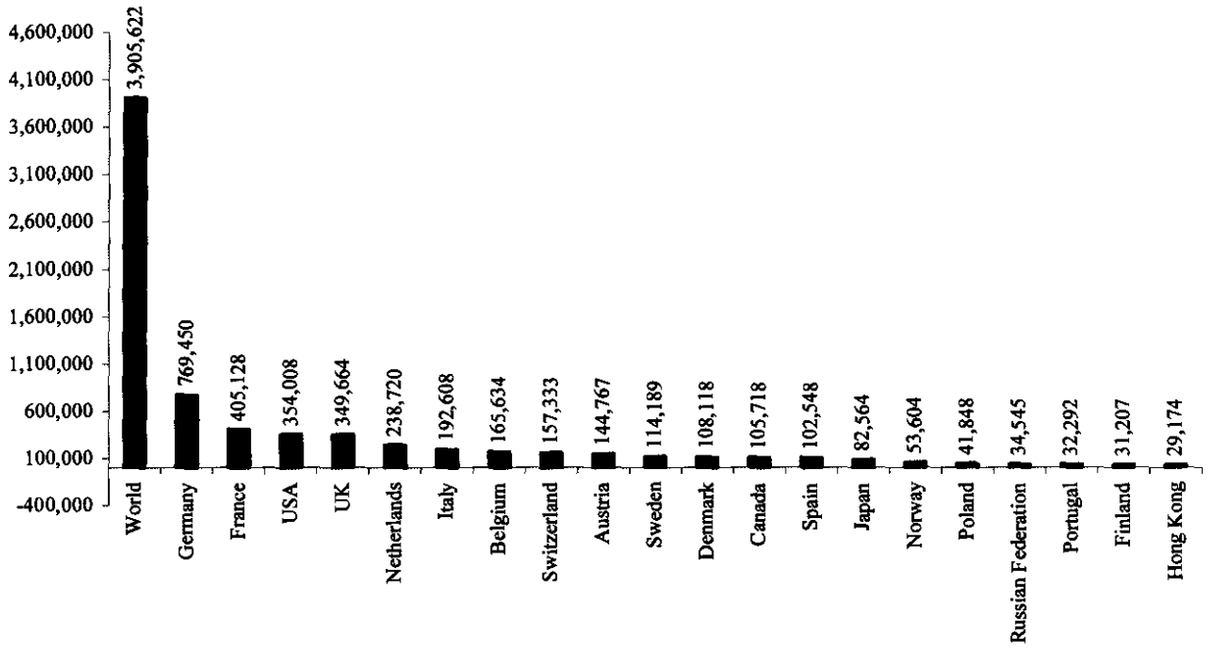
In 2002, the total world imports of floricultural products were approximately US$10 billion. Floricultural products are categorised in the Harmonised Code System (HS) as codes 0601 (bulb and tubers), 0602 (plant and cuttings), 0603 (cut flowers and flower buds) and 0604 (foliage and branches). Figures 4.1, 4.2, 4.3 and 4.4 respectively indicate various importing countries' share of the total amount of world imports according to the different HS codes of floricultural products.

Figure 4.1: List of to 20 importers of the product HS 0601 (bulbs, tubers, etc.) in 2002 (US$000)



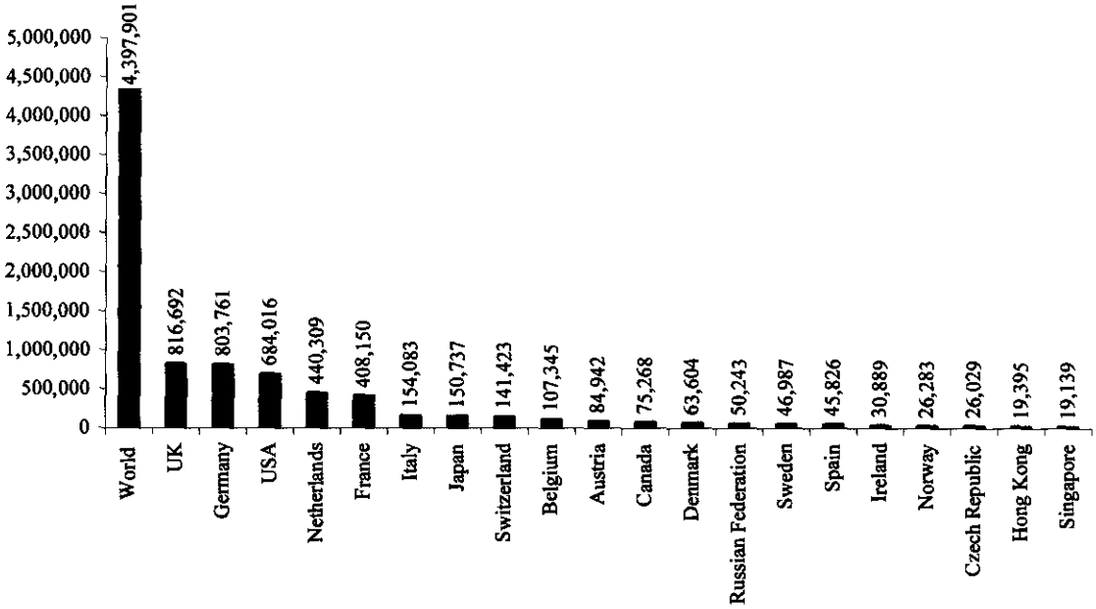
Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website: www.tips.org)

Figure 4.2: List of top 20 importers of the product HS 0602 (plants, live, cuttings etc.) in 2002 (US$000)



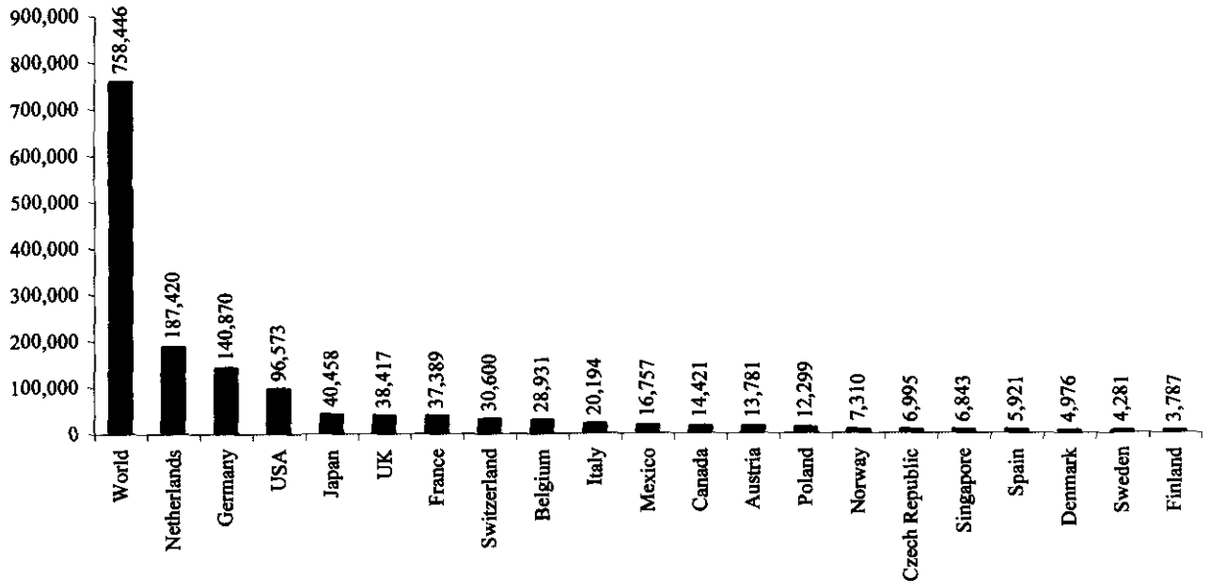
Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website: www.tips.org)

Figure 4.3: List of top 20 importers of the product HS 0603 (Cut flowers and flower buds for bouquets fresh or dried) in 2002 (US$000)



Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website www.tips.org)

Figure 4.4: List of top 20 importers of the product HS 0604 (foliage, branches, etc.) in 2002 (US$000)



Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website: www.tips.org)

Van Liemt (1999: 7) points out that Europe imports around 70 per cent of the world imports (mostly intra-European trade). As indicated in figures 4.1 to 4.2, Germany is the largest import market. The German market imports one third of the total European imports. Other sizable European markets are the United Kingdom and France. The Netherlands re-exports a large proportion of their floricultural imports. Non-EU countries such as the USA, Japan and Switzerland are also large import markets for floricultural products. Table 4.7 outlines the value and volume of cut flower and foliage imports to the EU from 1999 to 2001 by European Union countries, non-European Union countries and developing countries.

Overall, the value of imports into the EU has increased, whereas the volume has decreased. The increase in value may be due to the increase in productivity of production methods and the improvement of the products' quality. The decrease in volume may be due to the decline in consumption (see section 4.2.8). The Netherlands is the largest importer into the EU. This is because the Netherlands serves as a redistribution market (see section 4.2.3) and re-exports its imports. Spain is the second largest importer in the EU. Most imports from non-EU countries are from Kenya, Israel and Colombia.

Table 4.7: Imports of cut flowers and foliage into the EU, 1999-2001 (euro thousand/tonnes)

	1999		2000		2001	
	Value	**Volume**	**Value**	**Volume**	**Value**	**Volume**
Total	2 796 417	700 496	3 068 470	646 287	3 009 341	603 620
Intra EU	2 213 837	522 057	2 378 915	476 991	2 295 818	436 823
Extra EU	582 580	178 439	689 555	169 296	713 523	66 797
Developing countries	455 047	138 912	533 254	125 911	574 905	131 612

Source: CBI (2003a: 95)

4.2.5 International trade structure

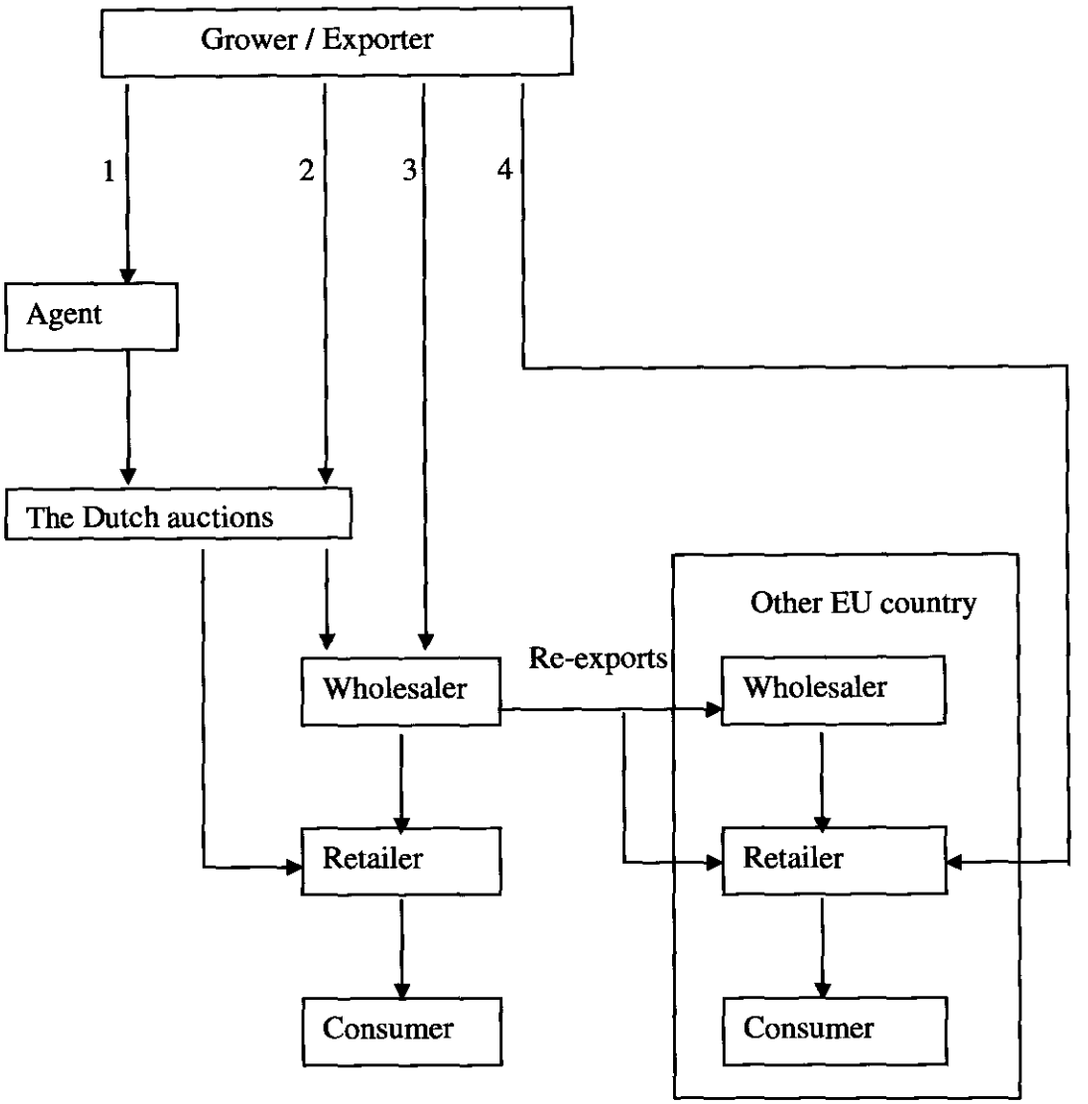
The international trade structures of the two product groups, i.e. cut flowers, and foliage and plants are discussed in the following sections.

4.2.5.1 Cut flowers and foliage

According to the CBI (2003a: 49), four trade channels (illustrated in figure 4.5) exist through which developing countries export cut flowers and foliage to the EU. They are:

- Via one of the auctions
- Via an agent
- Via an import wholesaler or
- Directly via a European retail chain.

Figure 4.5: Distribution network of the cut flower trade in the European Union



Source: CBI (2003a: 49)

(a) Auctions

Auctions were developed over a century ago to sell highly perishable fresh produce (e.g. fish, vegetables and flowers) (Malter *et al.*, 1999: 58). The first flower auctions were set up in the early 20th century in the Netherlands. Nowadays, there are ten floriculture auctions in Europe, four of which are in the Netherlands. There are three auctions, namely the Aalsmeer Flower Auction (VBA), FloraHolland (both in the Netherlands) and the NBV-UGA (in Germany), that facilitate foreign suppliers with their import departments. The other auctions are oriented towards the marketing of local floriculture production (CBI, 2003a: 49).

The Netherlands is the centre around which the international floriculture trade revolves. Due to the high concentrations of supply and demand in the Netherlands, the prices of the floricultural products are set there. Through the Netherlands, the bulk of both domestic and foreign floricultural products are distributed to the European markets. The Dutch auctions handle 85 per cent of the domestic produce and 80 per cent of imported flowers. However, only growers in the EU, not international growers, own these auctions (i.e. they are the members of the auctions). The main purpose of the auctions is to handle the produce they receive from their member growers. The customers of the auctions are the Dutch wholesalers. They buy produce from the auctions and re-export it to the European markets (CBI, 2003a: 49-50).

The CBI (2003a: 50) explains how the Dutch auctions function. The floricultural products are sold either by means of the auction clock or through the various intermediary offices.

- The auction clock. Once the products arrive at the auction, an auction inspector each examines a batch with respect to maturity, length and number of buds. They sort the flowers according to various grade classifications and standards. This involves checking for diseases and pests, colour deviations and leaf yellowing. All information gathered by the inspectors is stored in the auction computer and the products are cleared for auctioning. The products are conveyed to the auction room where they are put up for sale. The auctioneer describes the products (name of the grower, species, quality, class and grading code) and reveals any relevant information on the computer. The single hand of the clock begins at a high price and moves progressively lower until a prospective buyer, by pushing a button, halts the hand of the clock. The price indicated is the purchase price. After the products are bought, they are conveyed to the packing areas, which are rented by the buyers in the auction. Here the products are packed for transportation. All of the processes described are highly automated.
- The intermediary office. This office of the auction acts as an intermediary between a seller and a buyer on a commission basis.

Apart from the Dutch auctions, a computerised auction also operates in the trade of floricultural products. East African Flowers, the largest private non-EU importer of produce, established the Tele Flower Auction (TFA) in 1995. The TFA only focuses on imports from outside of Europe. The auctioning is done through a computer network where the buyers are some of the biggest wholesalers in the Netherlands. The TFA buys on a contract basis and do not impose quantitative

restrictions on imports. The criteria for supply and commissions are corresponding with that of the traditional auctions (CBI, 2003a: 50).

The CBI (2003a: 73) states that a grower needs an annual licence in order to be able to supply to an auction. The licence indicates that the grower may supply specific varieties of a certain quality over a specific period. The requirements for such a licence are that the grower has to have three flights per week and supply an agreed percentage of his output. If the grower fails to comply with these requirements, his licence will not be renewed the following year.

Malter *et al.* (1999: 59-60) explain the advantages and disadvantages for a grower to use the auctions as a trade channel. The growers avoid intricate and serious problems of selling directly to importers and wholesale customers by providing growers with simple accounting and payment is fast and guaranteed. The growers receive information on their sales and market trends. However, as the prices are determined in an open market, a grower may receive a lower price if the market is oversupplied. In addition, their products may not sell if they are fit for a small niche market that appeals to fewer buyers, or if they are too expensive.

(b) Agents

As auctions only provide import infrastructure such as roller beds for airplane pallets and satellite offices in supplying countries, they rely on external agents to perform the various import functions such as cutting, rehydrating and repacking of flowers. Therefore, agents form part of the auction supply chain (a grower can supply directly to an auction or supply to the auction via an agent). The importance of agents has increased as they transport the flowers from the airport to the auction, there they pack the flowers according to the auction's regulations. The agents form the link between exporters who lack local representatives and the auctions (CBI, 2003a: 50).

Recently, agents have increased their importance by providing a wide range of services such as consultancy, product and marketing information, and import materials. These activities have increased the exporters' competitiveness by allowing them to achieve higher levels of consistency and quality (CBI, 2003a: 51).

According to the CBI (2003a: 51), agents are becoming more involved in their supply chain by purchasing and consolidating flowers in supply countries, investing in flower farms, providing information on consumption trends, advising on environmental programmes and checking the quality-related aspects of the distribution chain. Agents are also diversifying their supply base by distributing growing volumes – not only to the Dutch auctions, but also to supermarket chains and foreign importers. Hence, they are increasingly servicing off-auction clients, therefore posing a threat to the market share of the auctions.

(c) Importing wholesaler

Exporting directly to European wholesalers is suitable for large as well as small to medium-sized exporting companies. The costs of direct exports may be less than when flowers are sold via the Dutch auctions (handling costs are 25-25 per cent of the auction revenue). When floricultural products are exported directly to other European countries, prices are not augmented by such costs (CBI, 2003a: 51).

The import wholesaler provides various functions to the exporters, such as information about the quality standards, packaging, presentation and assortment. Import wholesalers provide valuable advice on the growth of the flowers and young plant material, transportation and handling care to the exporters. Many importing wholesalers also act as export wholesalers or wholesalers (CBI, 2003a: 51).

However, the CBI (2003a: 73) indicates that import wholesalers prefer to conduct business on an arm's-length basis without long-term contracts. They continuously search for products to fulfil their assortment.

(d) Retail chains

According to the CBI (2003a: 51), it is a growing trend for European retail chains (e.g. supermarket chains, do-it-yourself stores or garden centres) to purchase large volumes of flowers directly form growers, coordinate logistics across diverse markets. Hence, these chains avoid the auctions. The reason for this extension in the sales of cut flowers is that the supermarkets are broadening and diversifying their product portfolios. For example, supermarkets in the UK are no longer sourcing floral products only in terms of the price. Non-price factors such as quality

and service are becoming important in their marketing strategies. For that reason supermarkets invested heavily in supply chain relationships and are pushing value-added activities down the chain towards the exporters. The supermarkets intend to buy directly from growers throughlong-term contracts. As Dutch growers are obligated to sell their products through the auctions, supermarkets source their products through African growers. African producers are capable of producing large volumes for a set price, making them attractive to supermarkets (Van Liemt, 1999: 26). For example, the exporters in Kenya have tailored their production operations to sell directly to the European retail outlets. However, the ability of an exporter to supply this chain is dependent on specific requirements (e.g. MPS and EUREPGAP) (see section 4.2.6). This requires significant investment in production and post-production facilities and operational quality systems (e.g. ISO) (see section 4.2.6). Additional costs may occur if the retailer requires specific packaging in terms of marketing and labelling (CBI, 2003a: 51).

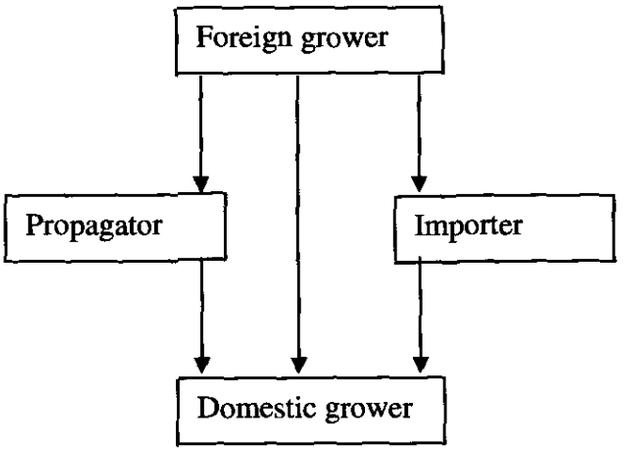
The CBI (2003a: 51) states that the entry of supermarkets into the trade structure of flowers offers significant potential market growth. However, the quality specifications set by these supermarkets are very high; they are mainly interested in sourcing from large suppliers that can offer a wide array of products.

4.2.5.2 Plants

The two product groups of plants, i.e. young plant material and finished plants have different trade structures.

Young plant material (for cut flowers and pot plants) is propagated in European countries such as the Netherlands, France, Italy, Germany and Belgium. Due to the high labour costs in Europe, these European companies have developed low-cost specialised production facilities in developing countries. The developing countries operate under a licence from the European company and the facilities are only concerned with the multiplication processes of the plants. The European company is responsible for the development of new varieties, selection, breeding and marketing (CBI, 2003b: 47). The European companies sell the young plant material to growers in various European countries. Figure 4.6 illustrates the trade structure of young plant material.

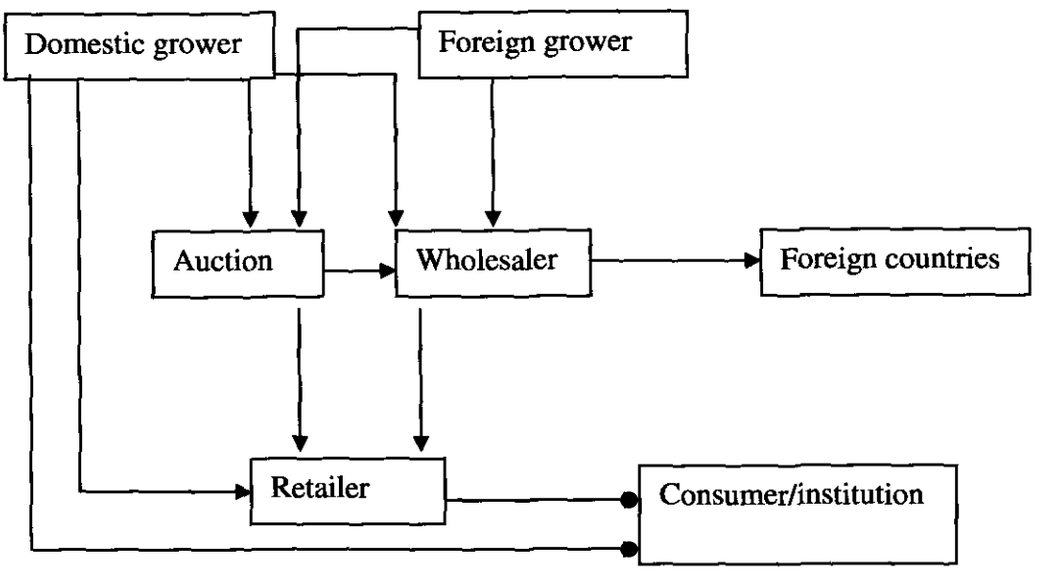
Figure 4.6: Distribution structure of young plant material



Source: CBI (2003b: 47)

Figure 4.7 illustrates the trade structure for finished plants. Finished plants are small flowering or large foliage plants.

Figure 4.7: Distribution structure of finished plants



Source: CBI (2003b: 47)

The aspects in the European floricultural trade structuring of pot plants and young plant material are similar to those aspects discussed in section 4.2.5.1 on cut flowers and foliage.

4.2.5.3 Distribution to the final consumer

The floricultural products reach the final consumers through two levels, i.e. the wholesale level and the retail level. Both local and export wholesalers form vital links in the chain from growers to consumers. After the wholesalers have received their produce, they repack it in the right form, quantity and packaging required by the buyers. Export wholesalers purchase their products either directly from the growers or from the various auctions. They tend to sell directly to the retailers. Thus, eroding the importance of importers. However, importers still perform vital functions in the assembly of a broad assortment of products and the formation of strong relationships with their suppliers (CBI, 2003a: 51).

E-commerce also forms part of the wholesale level. Electronic order systems for the trade of floricultural products are becoming more and more popular. Several parties have established such systems, e.g. FlorECom and FlowerAccess in the Netherlands (CBI, 2003a: 51).

On the retail level, traditional florists still dominate in the final distribution of floricultural products. However, the shares of nurseries, garden centres and market and street vendors are also important as retail outlets. In recent years, the importance of supermarkets has grown in the distribution of the floricultural products to the final consumers (CBI, 2003a: 51).

According to the CBI (2003a: 52), florists offer a higher quality, broader assortment and more attractive presentation of floricultural products than other retail outlets. Florists provide services (e.g. making bouquets and deliveries), information and advice about the products to their customers. They are also more likely to accept new innovative floricultural products than other retail outlets. The street and market retail outlets are dependent on impulse purchases. They maintain their market share by providing a wide range of flowers at strategic locations and at low prices. Supermarkets sell floricultural products on a self-service basis. They have increased their flower assortments by providing ready-made bouquets and various pot plants.

Florists in the Netherlands, Germany, France and Italy dominate the sale of flowers. In the UK, supermarkets have the largest percentage of sales of flowers (CBI, 2003a). Florists also dominate the sale of plants in Germany, France, the Netherlands, Italy and Spain. In the UK, the supermarkets and garden centres are the leading retailers of pot plants (CBI, 2003a).

4.2.6 Requirements

The trade and export of floricultural products are complex. Several requirements exist that producers have to meet in order to be able to gain access to the European markets. These requirements are divided into two categories, namely non-tariff barriers and tariff and quota barriers.

4.2.6.1 Non-tariff trade barriers

Several non-tariff barriers have to be taken into account when a producer intends to export his floral products. They range from legislative requirements, phytosanitary issues (i.e. regulations which prevent the introduction of pests and diseases that are not as yet present in the EU) and environmental and social regulations concerning the growing and harvesting conditions in which the plants and flowers are grown (CBI, 2003a: 57).

(a) Relevant legislative requirements

The first relevant legislative requirement is the plant health (phytosanitary) legislation. As the import of floricultural products may spread diseases and pests, there are restrictions concerning the international trade of these products. The Directive 2000/29/EC prevents the spread of harmful organisms within the importing country by stating that any non-EU country that exports plants and flowers to the EU has to issue a phytosanitary certificate for their shipments. This certificate proves that the shipments meet the phytosanitary requirements of the importing country. Without such a certificate the shipments may be denied entry by the importing country. The importing country will nevertheless inspect the shipments, and if a consignment is found to be contaminated, the necessary steps will be taken (i.e. the consignment will not be allowed into the country and their produce might be banned from the EU) (CBI, 2003a: 57).

Another regulation is the Convention on International Trade in Endangered Species (CITES), which lays down provisions for the protection of endangered species of fauna and flora. The trade in products containing material from endangered species may, for instance, be prohibited or restricted (CBI, 2003a: 58).

The third category of legislative requirements is breeders' rights. According to the CBI (2003a: 59), breeders create new varieties of a certain size and appearance, that are resistant to diseases and that can adapt to certain climatic and agricultural conditions. These new varieties are available to producers, enabling them to diversify their product range. Therefore, in order to compensate the breeders for their efforts, producers need to pay royalties to the breeders or acquire licences from them. The new varieties can only be obtained through the breeder and may not be reproduced. Several protection frameworks exist to protect new plant varieties. At international level there is the International Union for the Protection of New Plant Varieties (UPOV), at European level there is the Community Plant Variety Office (CPVO) and in other countries there are national plant registration offices.

(b) Quality and grading standards

The first specification of product quality, according to the CBI (2003a: 60), is the EU regulation 316/68 and the Federation of Dutch Flower Auctions' (VBN) product specifications. As the quality of floricultural products demanded by European traders and consumers is very high, the VBN has laid down product specifications that stipulate the products' quality, their grade, packaging, and information that have to be provided on the products' packaging. These specifications ensure that the growers are aware of the quality demanded by European importers.

Another quality management system is the ISO 9000 standards. The International Organisation for Standardisation (ISO) is the largest international developer of standards, which are also being used in the floriculture sector. If a grower complies with the requirements set by the ISO in terms of his processes and procedures, he will receive an ISO certificate permitting him to use the ISO 9001 logo on his products' packaging. Once a grower implements this quality assurance system, it is an ongoing process in which his production is constantly improved (CBI, 2003a: 60).

(c) Trade-related environmental issues

Environmental aspects of products have become a major issue in Europe (see section 4.2.10.2). The leading European food retailers promote and encourage the best agricultural practices in the production of animals, fruits, vegetables, crops, flowers and ornaments. The retailers achieve this through the framework EUREPGAP (Euro-retailer Produce Working Group for Good Agricultural Practice). The aim of this framework is to ensure food safety in the production chain

by improving communication between all of the participants. These standards set by the EUREPGAP initiative is only applicable to those who supply to the retailers that form part of this initiative, for example Albert Heijn, Safeway and Tesco. However, this may change in the near future (CBI, 2003b: 63).

As the demand for environmentally sound products is increasing, consumers demand products (with easily recognisable labels) that are produced according to the legal stipulations. Such labels are referred to as 'ecolabels', implying that the production of the products had a reduced impact on the environment compared to similar products. Ecolabels are voluntary and provide a competitive edge in terms of marketing to those who use it (CBI, 2003b: 64).

Another important environmental programme discussed by Van Liemt (1999: 24) is the Floriculture Environment Programme, i.e. Milieu Project Sierteelt (MPS). The MPS was created by the Dutch floriculture sector:

- in response to consumers' concerns about the way in which floral products were being produced.
- to raise the awareness of the grower.
- to improve the floriculture sector's generally poor image.

Participating growers must keep record of and lower their use of fertilisers, energy and waste. In 2002, MPS had 4 500 participants in the Netherlands and 500 international participants in 29 countries (CBI, 2003a: 61). MPS is not only aimed at reducing the burden on the environment caused by the cultivation of floral products, it has also incorporated quality and social aspects. For example employment conditions such as working hours, wages, occupational health and safety (i.e. the safe use, handling and storage of pesticides) (Van Liemt, 1999: 24).

The CBI (2003a: 61) states that MPS is a business-to-business label, thus the consumers are not aware of this commitment (in contrast to ecolabels). Once a grower has met the requirements of the environmental audit, he receives the label and will be checked regularly. Although MPS-graded flowers and plants are priced the same as non-MPS products, the MPS-graded products are of a higher quality. It is often difficult for developing countries to obtain the MPS label, as the audits are expensive and the quality requirements are based on those of the developed

countries. It is, however, a marketing and management instrument that could provide a competitive advantage.

Another environmental standard is the ISO 14001 standard. It provides several norms which producers have to comply with in order to let external parties know that they are producing in environmentally conscious manners (CBI, 2003b: 64).

(d) Trade related social, health and safety issues

According to the CBI (2003b: 65), the main health and safety concern in the floriculture industry is the use of pesticides, as it could have adverse implications at the production site, as well as on the competitiveness of the products on the European markets. Other important health and safety issues are good housekeeping (e.g. emergency provisions and hygiene precautions), safety of machines and physical straining.

Large role players in the German floriculture industry (e.g. the flower importers and wholesalers and the German florist's association), together with human rights and development organisations developed the Flower Label Programme (FLP) in 1998. The FLP sets standards of human rights and environmental protection for flowers farms through, for example, non-use of toxic pesticides and chemicals, and prohibition of child and forced labour. Countries become members of the FLP once they comply with the FLP standards (CBI, 2003a: 61-62).

Another label that aims to improve the working and living conditions of the floriculture industry and the environment, is the Fair Flowers & Plants (FFP) label. This label has not yet been implemented in the market (CBI, 2003a: 62).

(e) Packaging

The CBI (2003a: 63) explains that packaging is used to protect the floral products against mechanical damage (e.g. the handling of carton boxes and vibrations during transport) and to create a more favourable microclimate (i.e. the climate required to keep the floral products fresh). Packaging is very important, as it influences the products' quality. It represents the quality and protects the products. The quality of the products can deteriorate if they are bruised and/or transported under less than optimum conditions of temperature and humidity.

Different types of packaging materials are used, depending on the type of floral products, the function of the protection, the influence over the microclimate required, the type of transport and the importers' requirements. For example, cut flowers are packed in a plastic or paper cover to protect them and are transported in boxes (CBI, 2003a: 63). Cuttings and other young plant material are also transported in boxes and wrapped in paper (CBI, 2003b: 66).

As the trade in floral products generate a considerable amount of packaging waste such as boxes, trays and plastics, it is advisable for producers to use environmentally sound packaging (which can be re-cycled and re-used) (CBI, 2003b: 67).

4.2.6.2 Tariffs and quotas

In general, all goods entering Europe are subject to import duties. The level of tariffs depends on the country of origin and the product itself. In the 1970s the develop countries designed the Generalised System of Preferences (GSP). The aim of the GSP is to promote and support the exports from developing countries by granting them preferential access to the internal markets of developed countries. Imports from developing countries are admitted at a reduced tariff and imports from the least developed countries at a zero per cent tariff. The preferential rights were reviewed, and in 1997 a new scheme of preferential rights was established. Two conditions are attached to the application of the GSP preferential tariff. Firstly, only goods originating in a beneficiary country are eligible for GSP treatment. Secondly, the goods must be exported directly from the exporting country to the EU. At present, 179 countries take part in the GSP scheme where they receive some trade preferences (CBI, 2003a: 63).

According to the CBI (2003a: 64), import duties are levied on the value of the products when they enter the EU (i.e. customs value). The import duty is calculated according to the Incoterm used in the international sales transaction. An Incoterm stipulates the risks, costs and responsibilities of both the buyer and seller in an international transaction (ITRISA, 2004: 115). In the case of an importer who buys FOB (Free on Board)[4], the import duty will be calculated on

[4] The Free on Board Incoterm implies that the seller delivers when the goods pass the ship's rail at the named part of shipment. The buyer has to bear all the costs and risks of loss or damage to the goods from that point (www.icc.org).

the basis of the FOB price, increased by the shipment costs up to the entrance into the EU. Import duties are constantly changing, for example when a quota is exhausted.

(a) Financial instruments in the EU

The EU uses several instruments to promote environmentally sound products. One method is levying of 'environmental taxes' or awarding tariff preferences (e.g. GSP) on products. Another method is the establishment of various taxes such as 'ecotax' to discourage the entrance of polluting products into the EU market (CBI, 2003b: 68).

(b) Value added tax (VAT)

Although the fiscal borders of the EU disappeared in 1993, the harmonisation of VAT (tax levied at consumer sale's level) rates has not yet been achieved. Taxes on ornamental horticulture can have a significant effect on producers, as VAT drives prices up high and ultimately lowers consumer demand – when France increased its VAT rate, it resulted in a 20 per cent loss of sales (CBI, 2003a: 66). Table 4.8 indicated the various VAT rates for cut flowers and foliage (2003) and pot plants (2002).

From table 4.8 it is clear that Finland, Sweden, the UK and Denmark have high VAT rates. As discussed in the above paragraphs, it may be detrimental to floriculture producers as it increases the price and subsequently hinders consumption.

Table 4.8: VAT rates applied to pot plants and cut flowers and foliage in the EU

Country	Pot plants 2002 VAT %	Cut flowers and foliage 2003 VAT %
Finland	22	22
Sweden	25	25
UK	17,5	17,5
Denmark	25	25
The Netherlands	6	6 or 19
Belgium	6	6
Germany	7	7
Greece	8	8
Spain	7	7
France	5,5	5,5
Ireland	12,5	12,5
Italy	10	10
Luxembourg	6	6
Austria	10	10
Portugal	12	12

Sources: DGXXI European commission (2002) (cited in CBI, 2003b: 68) and European Commission Directorate-General Taxation and Customs Union (CBI, 2003a; 66).

4.2.7 Products and varieties

A product range can consist of several different product groups (range width, e.g. cut flowers), each with several different products (range depth, e.g. roses). Each product can consist of several varieties. For example, hundreds of rose varieties exist (CBI, 2003a: 78).

In recent years, several trends have developed in the demand and market of floricultural products, especially of cut flowers. According to Thoen *et al.* (2000: 5), one such trend is product diversification within the market in response to consumer demand for greater variety. Consumers demand a wider range of flower varieties, scents and colours. New varieties are added to the market every year. These varieties receive a higher price than the varieties that have

been traded commercially for some time. For example, in 1996 a new rose variety 'Black Beauty' was sold at a price ten times more than the 'Garnette', which had already been traded on the market for a long time (Van Liemt, 1999: 18).

Thoen *et al.* (2000: 5) state that the share of the leading flower varieties within the Dutch auction system has declined from 75 per cent to 64 per cent between 1991 and 1997. (The share of roses, for instance, has declined from 24 per cent to 20 per cent.) Other leading varieties such as chrysanthemums and carnations have also declined in that period. This declining trend has continued and can be seen in table 4.9. Both roses and chrysanthemums (bunches) have a declining growth rate.

Table 4.9: Top ten cut flowers species sold at the Dutch auctions in 2003 (euro million)

Species	**2003**	**% Change (2002-2003)**
Roses	681,3	-2,6
Chrysanthemum (bunch)	299,1	-2,6
Tulips	185,9	+8,6
Lilies	160,0	-4,8
Gerbera	105,9	-1,7
Cymbidium	65,7	-0,7
Freesias	60,2	-3,0
Anthurium	42,6	+2,6
Alstroemeria	40,0	-10,1
Chrysanthemum	37,7	+7,5

Source: Flower Council of Holland (2004)

Related to the product diversification, is the accelerated life cycle of particular varieties of cut flowers. The reason for this advancement is the increase in demand for new varieties. The suppliers, i.e. researchers, seed companies and flower distributors are responding to this demand. Pressure is placed on growers, as the demand for their products does not last as long as before. This is most evident in the case of roses (the average life cycle for roses is five to seven years). For example, the variety 'First Red' fetched a price of 74 Dutch cents in 1995. In 1998 it fetched

only 44 Dutch cents. This indicates that the preference for this variety has decreased, thus shortening its life cycle (Thoen *et al.*, 2000: 5).

4.2.8 Consumption

Per capita consumption for floricultural products varies substantially between the markets. According to Thoen *et al.* (2000: 5), per capita consumption has increased because flowers are no longer considered luxury items or reserved for holidays and ceremonies, thus moving away from the idea market to the lifestyle market (see section 4.2.9). Per capita consumption is highest in Switzerland, the Netherlands and Norway. Slow economic growth may have an impact on per capita consumption in various European countries. Table 4.10 illustrates the per capita consumption for floricultural products during 2001 and 2002.

From table 4.10 it is clear that per capita consumption of cut flowers have increased in Belgium, China, Denmark, France, Greece, Hungary, Ireland, Croatia, the Netherlands, Austria, Portugal, Russia, Slovakia, the Czech Republic, the UK, Sweden, and Switzerland. The countries with an increase of more than 1 per cent are Belgium, Greece, Hungary, Ireland, Slovakia, the UK and Switzerland. All of the countries' per capita consumption for pot plants has increased (except China, the Netherlands, Slovenia and Spain). The countries with an increase of more than one per cent are Belgium, Denmark, Germany, Finland, Hungary, Ireland, Croatia, Norway, Austria, Portugal, the Czech Republic, the UK, Sweden and Switzerland. Thus, the major consumption and import markets are Belgium, Greece, Hungary, Ireland, the UK and Switzerland.

Table 4.10: Per capita consumption in euro for 2001 and 2002

	Cut flowers		Pot plants	
Country	**2001**	**2002**	**2001**	**2002**
Belgium	40,7	43,6	15,3	26,4
China	0,5	0,7	-	-
Denmark	39,5	40,0	39,6	42,8
Germany	39,4	37,7	43,8	45,5
Finland	35,7	34,2	25,1	27,7
France	32,6	32,7	19,4	19,5
Greece	14,3	16,3	6,4	7,0
Hungary	10,7	12,5	5,7	6,5
Ireland	28,4	30,5	9,8	10,8
Italy	33,1	33,1	9,5	9,6
Japan	34,1	30,8	-	-
Croatia	5,9	6,7	5,5	7,1
The Netherlands	59,8	59,9	33,8	33,4
Norway	57,4	58,3	54,9	56,1
Austria	43,8	44,4	30,6	34,0
Poland	7,4	7,1	2,3	3,2
Portugal	16,0	16,6	5,2	6,8
Russia	2,8	2,9	0,7	0,9
Slovenia	29,7	24,9	17,4	16,4
Slovakia	6,5	7,3	1,7	2,2
Spain	17,5	19,2	15,8	10,3
Czech Republic	8,9	9,2	3,8	5,1
UK	37,3	39,9	11,3	12,3
USA	28,3	26,4	-	-
Sweden	33,8	33,9	41,2	42,8
Switzerland	91,4	94,0	40,0	42,4

Source: Flower Council of Holland (2004)

4.2.9 Market segmentation

People purchase flowers and plants for various reasons. There are two types of consumer markets, i.e. the idea market (when consumers purchase floral products for special occasions) and the lifestyle market (when consumers buy floral products for their homes and workplaces). Both reports completed by the CBI (2003a & 2003b) have studied the consumption patterns of the buyers in the member states in the EU. These patterns are discussed in the following paragraphs.

4.2.9.1 Segmentation by purpose of purchasing

Consumers buy floricultural products as gifts, for special occasions or for personal use. The chief purpose of purchasing flowers (40 to 50 per cent) and plants (30 to 40 per cent) is to give them away as gifts. Between 20 and 30 per cent of flowers and plants are bought for special occasions, such as St. Valentine's Day, Mother's Day and Christmas. Flowers (20 to 25 per cent) and plants (30 to 35 per cent) are bought for the consumers' personal use, usually to decorate their homes. Companies such as restaurants and businesses also buy floricultural products for decorative uses. 60 per cent of all flowers and plants are bought at florists. The rest are bought at street vendors and supermarkets. The main products competing with floricultural products are chocolates, jewellery and wine, as they are bought for the same purposes. Consumers will buy these competing products if the price of the floricultural products is too high or if they are of poor quality (CBI, 2003a & 2003b).

4.2.9.2 Segmentation by buyers

(a) Women versus men

According to the CBI (2003a: 18), flowers are mostly bought by women older than 45, living in an urban area with middle to high income. In European countries, flowers are mainly purchased by stem, rather than in ready-made bouquets. Although women also buy plants, the share of men as buyers is increasing (CBI, 2003b: 18).

(b) The age of buyers

Young people (under the age of 30) are buying less cut flowers than before. The reasons may be that they are working and have little time to purchase and enjoy the flowers, they might have children who could knock over the vases, and they attach less emotional value to flowers than older people do (CBI, 2003a: 18). The CBI (2003b: 18) states that people over the age of 25 usually buy plants. The older buyers prefer flowering pot plants to foliage pot plants.

(c) Institutions as buyers

Companies purchase flowers for the purposes of decorating their offices and to give them away as birthday and anniversary gifts (CBI, 2003a: 18). Institutions such as companies, restaurants and hotels buy plants for the same decorative purposes (CBI, 2003b: 18).

4.2.10 Trends

A trend can be defined as both the direction in which something is developing (tendency, inclination, line of development) and the latest fashion. According to the Flower Council of Holland (2004), fashion and fashion developments are by no means restricted to clothes. They move into every area of the consumer's life, affecting behaviour, design and use of colour. The way one furnishes and decorates one's home has everything to do with the developments in fashion. Brown, cosy and intimate may be the development in fashion at one time, whereas white, spacious and distanced could become fashionable at another time. Flowers and plants need to fit into these moods and in this sense, are susceptible to trends. Varieties and colours both need to fit into the latest fashion image.

Who are the trendsetters that define fashion? First and foremost are the designers. However, the media plays a pivotal role in ensuring that the various designers' work is brought to the attention of the consumer. Fashion, interior design and house and garden magazines, as well as television programmes, all ensure that the newest trends are presented to the consumer in a manner which will influence his or her decisions (Flower Council of Holland, 2004).

4.2.10.1 Consumption trends

According to the Flower Council of Holland (2004), trends can be divided into style groups, i.e. groups that classify different types of floriculture consumers. The consumers' consumption patterns vary according to, for example, their geographical region, their income, as well as the magazines they read and the shops where they buy their home accessories. Thus, various consumer groups can be identified. The CBI (2003a: 18) states that wealthy consumers may buy bouquets with more expensive flowers, whereas less affluent people may buy only simple bunches of flowers. However, general trends can be identified among European consumers. European consumers expect flowers to be colourful and beautiful, as they attach emotional value to the flowers. For example, roses indicate love and lilies are a symbol of purity. The criteria that consumers set when purchasing flowers are quality (36 per cent), price (13 per cent), the species of flowers used in bouquets (13 per cent) and the colour of the flowers (10 per cent). Further criteria for flowers are freshness, long vase life and scent. Cut flowers in fashionable colours and flower forms are generally priced at a premium above the average products. The traditional primary colours of red, yellow, white and blue have always been in demand. However, the fashion in interior décor sets the trends (see section 4.2.7).

Several consumption trends can also be identified for plants. Flowering and green houseplants are becoming increasingly popular due to their year-round availability. Plant consumption is favourably influenced by the fact that people, especially Europeans, are going out less and staying at home more, making them sensitive to the comfort and decorations of their homes. A new trend is to add value to plants by presenting them in decorative and fashionable containers. Thus, consumers are able to determine at a glance whether these plants will fit into the décor of their homes (CBI, 2003b: 19).

4.2.10.2 Environmental and social dimensions of floriculture production

According to the CBI (2003b: 19), consumers have become more concerned about the environment and the preservation thereof. These concerns are regarded as a trend, as they influence the consumption of floricultural products. Due to these environmental concerns, consumers are making stringent demands with respect to the manner in which the products are produced. As agro-chemicals are used in the production of floricultural products, it may not only have an adverse effect on the environment, but also on the social dimensions such as worker safety and water quality. The Netherlands has established several initiatives in order to reduce

the environmental impact of floriculture production. One of these initiatives is a floriculture environmental project called MPS (Milieu Project Sierteelt). These initiatives are discussed in section 4.2.6.1.

4.2.11 Prices

As discussed in section 4.2.7.1, the world market prices for floricultural products are set at the Dutch auctions due to their large market share. The prices of these products are influenced by both the products themselves and by external factors such as holidays and festivals.

The CBI (2003a: 55) outlines the factors that influence producers' prices of cut flowers:

- Seasonality
- Variety
- Size of buds
- Stage of opening of buds
- Uniformity of bud-opening stage
- Colour-brightness of flower
- Bud damage
- Uniformity of stem length per bunch
- Uniformity of bud size per bunch
- Consistency within and between consignments
- Colour and quantity of leaf
- Freedom from chemical deposits and water-marking
- Freedom from pests and diseases
- Packaging
- Overall appearances
- Temperature of flowers on arrival
- Vase life
- Regularity of consignments
- Buyer's previous experience of suppliers

According to Van Liemt (1999: 18) and the CBI (2003a: 55), the prices of cut flowers have several dimensions which cause them to fluctuate. They are:

- The average annual prices of cut flowers have been fairly constant and in some cases been declining in the past few years. This is due to the accelerated growth of the market. Supply is exceeding demand, causing the decline in the prices in the past few years. The price of roses has experienced the sharpest price decline of all major flower types (see section 4.2.7). However, growth in the producers' productivity has reduced the decrease in profits (see section 4.2.2.1).
- The prices of cut flowers experience short-term (intra-day) fluctuations. These fluctuations are most common at the auctions, as the quantity auctioned cannot be controlled. The prices may decline if large quantities are auctioned on one day. Climatic conditions also cause these intra-day fluctuations.
- The prices of cut flowers follow a seasonal pattern. Prices are at their lowest during the summer of the countries north of the equator. The reason being that during this period the production in these countries reaches its peak. The prices are at their highest during November and December. However, imported products sell for lower prices than the Dutch products, even if they are imported during November and December. This is due to the superior quality of the latter and the fact that Dutch growers supply a wider range of products, including a number of specialised, high-priced flowers.
- The prices also vary because of differences in the quality of the cut flowers. Quality cannot be determined when the product is sold. It is only revealed when the buds of the flower open up, and can be seen in the length of the vase life. Therefore a producer's reputation may be a determinant in establishing prices.
- Large gaps exist between the price of new and bulk products. New and "special" varieties fetch much higher prices than the regular products.

The pricing structure has an influence on the price of the floricultural export product. This is illustrated in table 4.11 where a cost comparison is made between exporting via a Dutch auction and via a direct German chain.

In table 4.11, the market price in Germany is based on the auction price. Although many exporters consider it more attractive to export directly to the German market due to the undercut in margins and higher FOB (Incoterm, i.e. Free on Board) prices, it is not always the best option.

The auctions may provide an auction price of up to 20 per cent higher for loyal foreign suppliers than for irregular suppliers of average quality. Thus, auctions pay for high quality. The costs of marketing (i.e. telephone and fax) and finance (auctions guarantee weekly payments whereas direct sales result in monthly payments) are not included in this German cost structure. Another advantage of the auctions is that quality inspection and the reasons for rejections are transparent. These reasons may not be as clear when supplying directly to a market. The auctions also provide current market information to their suppliers (Thoen *et al.*, 2000: 35-36).

In essence, trade margins vary greatly depending on the type of product, the distribution channel, the continuous changes in supply and demand and the resulting price fluctuations (CBI, 2003b: 75).

Table 4.11: Value chain analysis for the export of Kenyan roses to the German market

Via Dutch auction			**Directly to German market**		
Participant	**Chain**	**Prices**	**Participant**	**Chain**	**Prices**
Exporter	FOB Nairobi	€0,08	Exporter	FOB Nairobi	€0,09
Freight forwarder	+ Freight costs	€0,04	Freight forwarder	+ Freight costs	€0,04
Auction	C&F Auction + auction costs (15%) auction price	**€0,12** €0,02 **€0,14**	Importer	C&F Auction + handling fee Net sales Commission (15%)	**€0,13** €0,01 **€0,14** €0,02
Dutch wholesaler	+ Dutch wholesale margin (20%)	€0,03	German wholesaler	C&F German wholesaler + margin (20%)	€0,16 €0,03
German wholesaler	C&F German wholesaler + margin (20%)	**€0,17** €0,03	German retailer	+ German retail margin	100-200%
German retailer	+ German retail margin	100-200%			
	+ VAT	7%		+ VAT	7%
Consumer	Consumer price	€0,44- €0,64	Consumer	Consumer price	€0,41- €0,60

Sources: Thoen *et al.* (2000: 35) and CBI (2003a: 75)

4.3 THE SOUTH AFRICAN FLORICULTURE INDUSTRY

According to Petitjean (cited in the USITC Industry and Trade Summary on the US cut flower industry, 2003: 32), Eastern and Southern Africa's floriculture industries thrive through the approximately 1 400 growers and 5 500 ha of cultivated land in these regions. Approximately 80 000 tons of cut flowers were exported in 2001. The floriculture sector in Eastern and Southern Africa grew at an average rate of 10 to 15 per cent per year in the late 1990s. The reasons for the growth in the floriculture industries in the African regions were improved logistics, flower quality, post-harvest handling conditions and complying with international regulations regarding safety, wage rates, environmental awareness and water management. African producers also benefit from competitive production costs and higher productivity than other EU suppliers such as Israel and Latin America. The challenge for most African countries is to attract medium and long-term investment funds for the expansion of small-scale floriculture projects (USTIC, 2003: 33).

The South African Trade Map (2004) indicates that floriculture exports in Southern Africa (the SADC countries, of which South Africa forms part) exceeded US$125 million in 2002. This section discusses South Africa as a Southern African producer of floricultural products. Section 4.3 is demarcated as follows: overview (section 4.3.1), South Africa's position in the international markets (section 4.3.2), the South African floriculture market (section 4.3.3), South Africa's competitiveness (section 4.3.4), South Africa's competitors (section 4.3.5) and floriculture production and employment (section 4.3.6). This section also consists of the South African floricultural products (section 4.3.7), packaging (section 4.3.8), logistics (section 4.3.9), marketing (section 4.3.10), sales (section 4.3.11) and the problems experienced in the South African floriculture industry (section 4.3.11).

The Kaiser Study (2000) on the South African floriculture industry provides the most comprehensive information pertaining to this section.

4.3.1 Overview

South Africa is located in an area known as 'high tropics' i.e. high elevation is combined with tropical and subtropical latitudes. This produces a relatively mild climate throughout the year, which is generally favourable for floriculture production (Matler *et al.*, 1999: 46).

The local flower industry developed around the establishment of the local flower auction (Multiflora) in 1945 (see section 4.3.3). A few large producers that only supply the local market have been dominating the South African floriculture industry ever since. Exports were confined to indigenous products such as the protea. However, after the lifting of the economic sanctions against South Africa, new export-oriented growers have emerged. South Africa has a large domestic market (i.e. local demand) (see section 4.3.3), which discourages some exporters from directing their efforts towards exporting (Malter *et al.*, 1999: 44-47).

4.3.2 South Africa's position in the international floriculture industry

South Africa exports cut flowers, plants, foliage and bulbs every day across of the world by air. The floral products, which top the volume and value ladder, are roses, chrysanthemums, carnations, gladioli, lilies and irises. Cut flowers account for approximately 60 per cent of floral exports, foliage about 20 per cent, bulbs 17 per cent and plants around 3 per cent (Nofal, 2001).

South Africa has maintained the 21st position for three years (2000 to 2002) in the index of world floriculture exporters (see table 4.6). Table 4.12 provides a detailed indication of the types of floricultural products exported from 1998 to 2002.

Table 4.12: The South African floriculture industry's export performance in $000

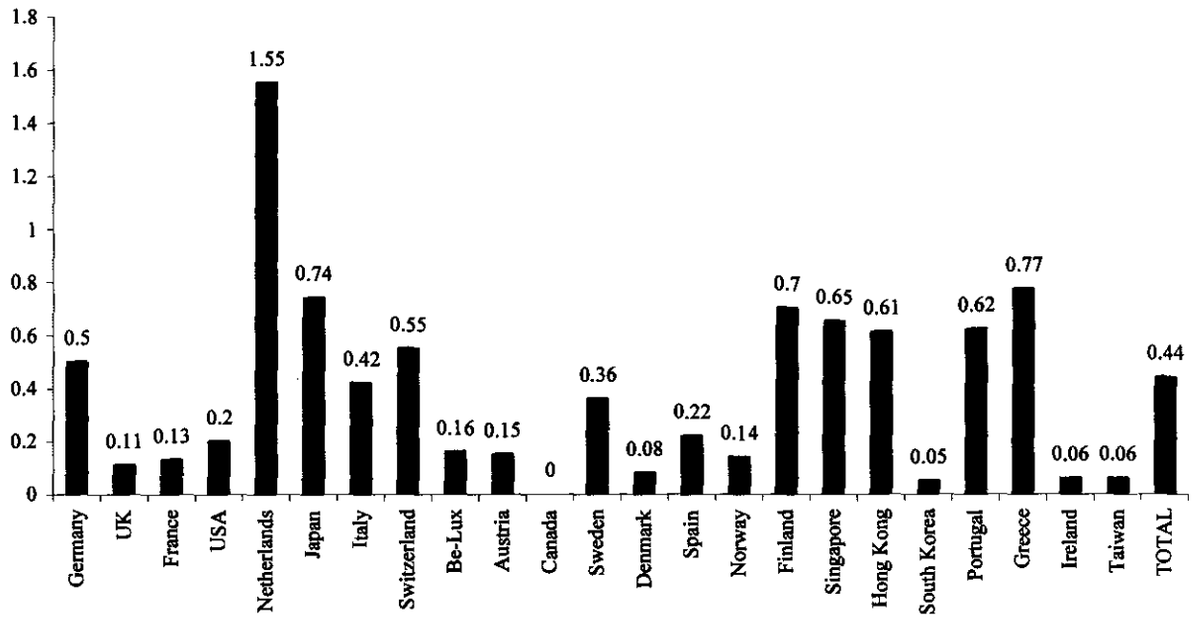
Year	Total	Bulbs	Plants	Cut flowers	Cut foliage
1998	38 355	3 601	5 214	14 646	14 884
1999	35 146	3 676	5 316	14 468	12 686
2000	33 424	3 931	5 947	12 086	11 461
2001	30 240	1 777	5 411	12 793	10 259
2002	38 649	4 259	8 251	12 028	14 111

Source: Pathfast Publishing, 2004

From table 4.12 it is clear that the South African floriculture industry is active in the international markets. Export activity decreased from 1999 to 2001. This may be due to the strong appreciation of the rand during that period, which deterred exports. Exports again increased significantly in 2002 (this was due to the weak rand). Compared to other developing countries, South Africa's export revenue from floriculture is very low– Colombia earns US$367 million, Costa Rica earns US$126 million, Kenya earns US$118 million and Zimbabwe earns

US$53 million per annum (The Kaiser Study, 2000: 14). These countries export only one type of floral product to one type of market. South Africa has a wide range of products and a strong infrastructure, yet its market share of the world import market is 0,44 per cent. This is illustrated by figure 4.8.

Figure 4.8: 1998 South African penetrations of world imports in percentages

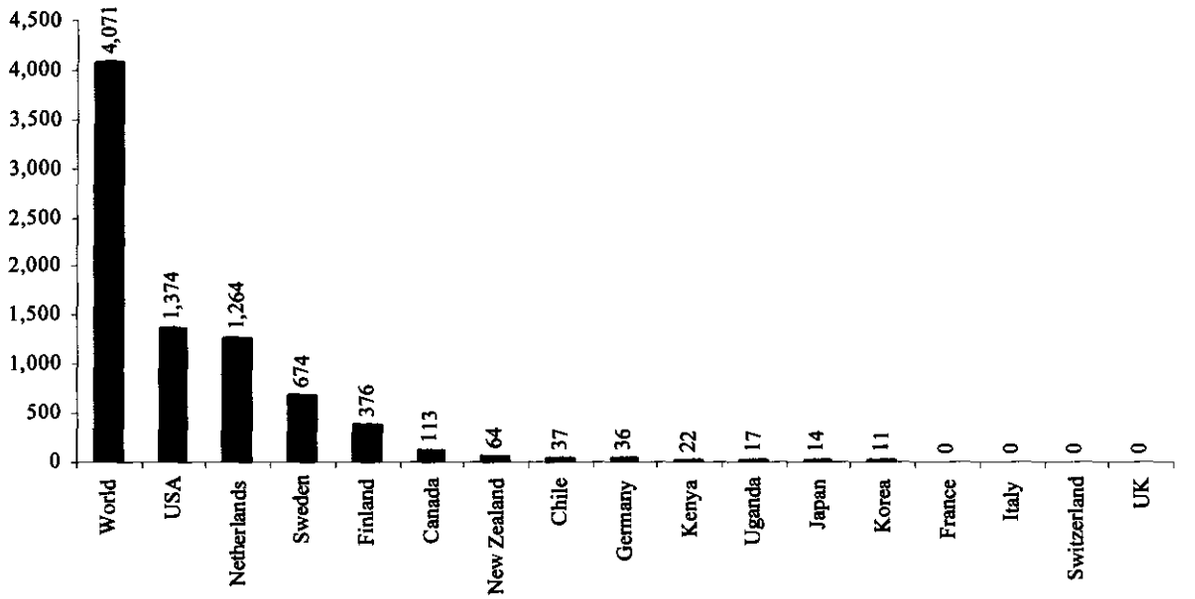


Source: AIPH (cited in Kaiser Study, 2000: 15)

The following figures (i.e. figures 4.9, 4.10, 4.11 and 4.12) also indicate South Africa's more recent export performance (2002) by illustrating the share of South African floricultural products imported by various countries. Again, the illustration is according to the Harmonised Code System's (HS) classification of the floricultural products.

Figure 4.9 indicates that South Africa's exports represent 0 per cent of world exports of the products classified as HS 0601. South Africa's ranking is 14th in world exports (in US$000) of these products. The USA is the largest importer with a share of 34 per cent. The Netherlands is the second largest importer with a share of 31 per cent. Sweden is the third largest importer; its share is 17 per cent. The largest export growth (in value) between 2001 and 2002 was to Germany (500 per cent p.a.) and to Kenya (340 per cent p.a.), whereas export growth (in value) to Japan declined by 70 per cent (www.tips.org).

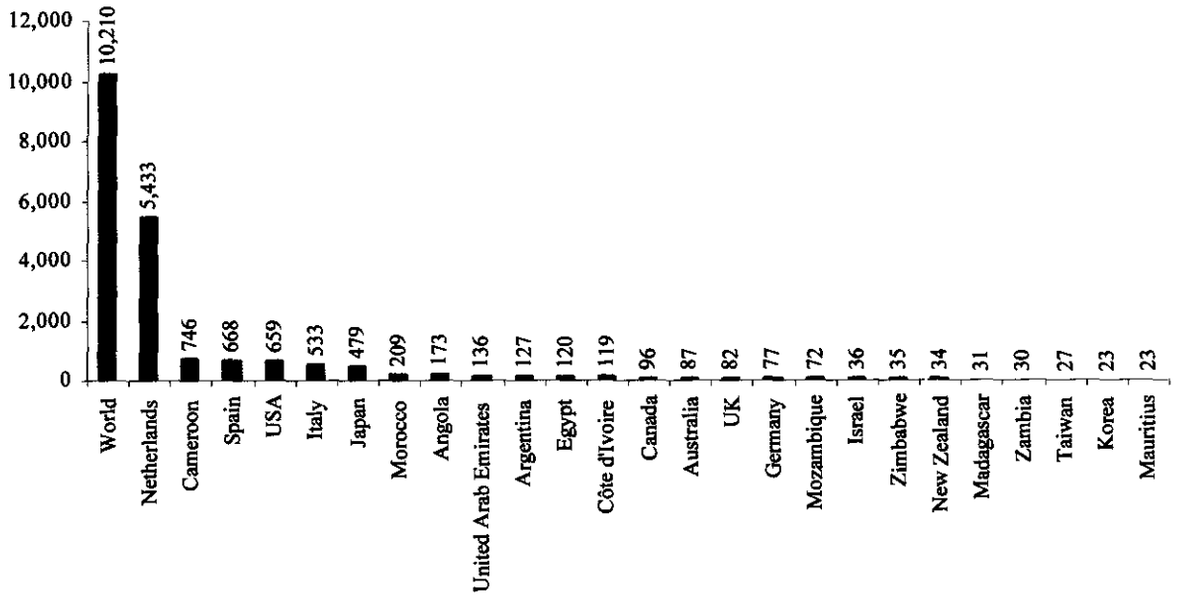
Figure 4.9: Import markets for HS 0601 products (bulbs, etc.) by South Africa



Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website www.tips.org)

Figure 4.10 illustrates that South Africa's exports represent 0 per cent of world exports for the HS 0602 products. South Africa's ranking is 24th in world exports (in US$000) of these products. The smaller importing countries are Brazil (19), China (17), Jordan (16) and Saudi Arabia (14). The Netherlands is the largest importer, with a share of 53 per cent. Cameroon and Spain follow – both with a share of 7 per cent of the imports. Exports (in value) grew by 3 075 per cent (p.a.) to Argentina, 715 per cent to Spain and 553 per cent to Morocco (www.tips.org).

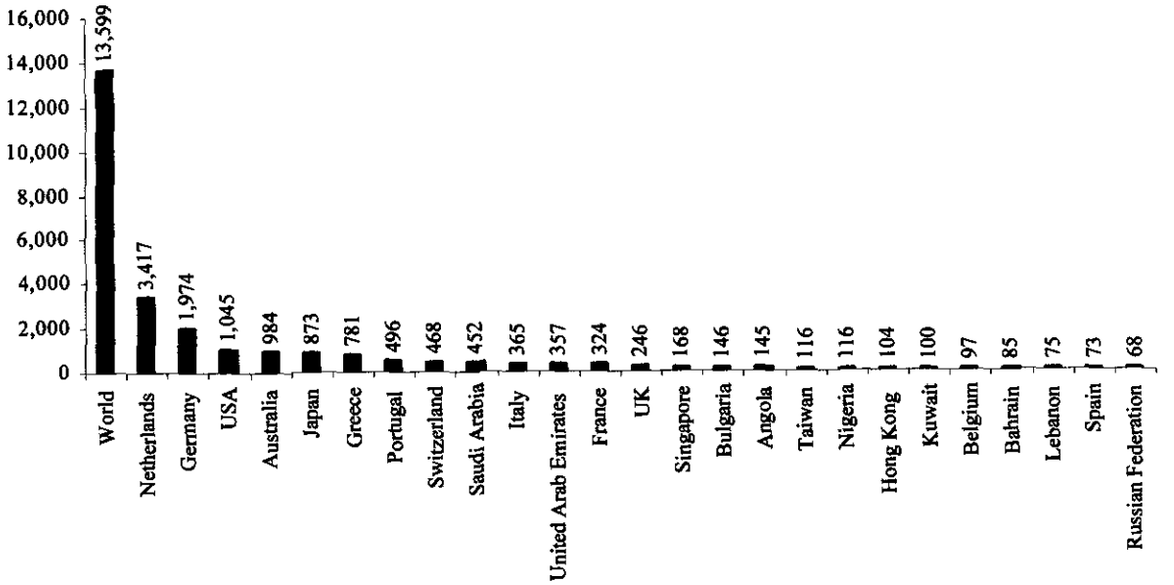
Figure 4.10: Import markets for HS 0602 products (plants, etc.) by South Africa



Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website www.tips.org)

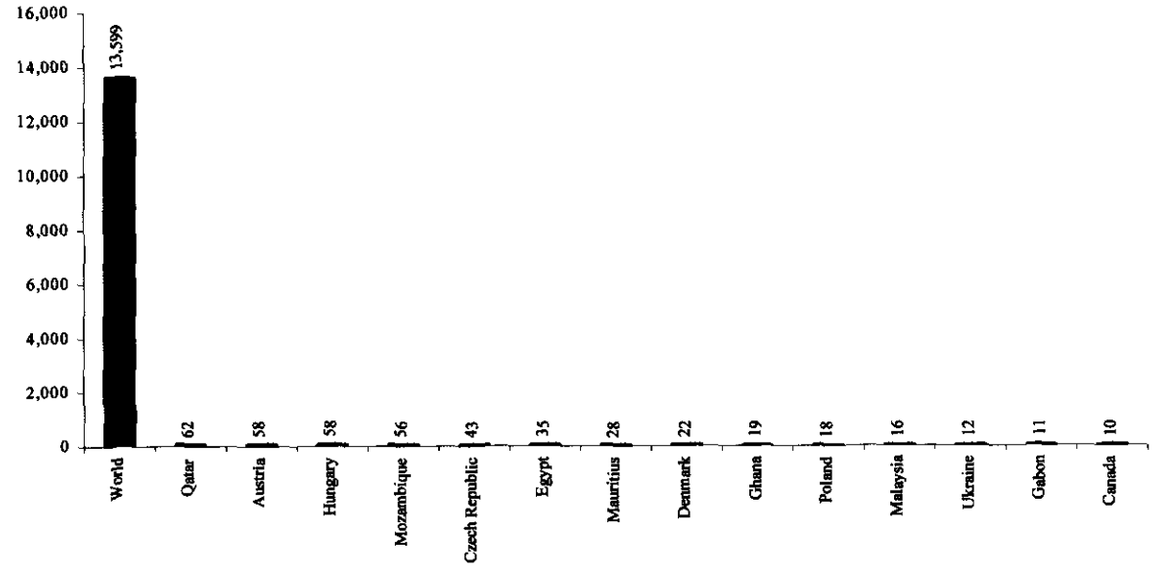
Figures 4.11.1 and 4.11.2 both illustrate South Africa's exports of the HS 0603 products. South Africa's exports represent 0 per cent of world exports of this product. South Africa's ranking is 25th in world exports (in US$000). The Netherlands is the largest importer, with a share of 25 per cent. Germany follows the Netherlands and imports 15 per cent of the products from South Africa. The USA is the third largest importer and its share is 8 per cent. Exports (in value) grew by 1 600 per cent (p.a.) to the Russian Federation, 500 per cent (p.a.) to Ukraine and 267 per cent to Gabon. However, it declined the most in Brazil (-91 per cent) and in Zimbabwe (-78 per cent) (www.tips.org).

Figure 4.11.1: Import markets for HS 0603 products (cut flowers etc.) by South Africa



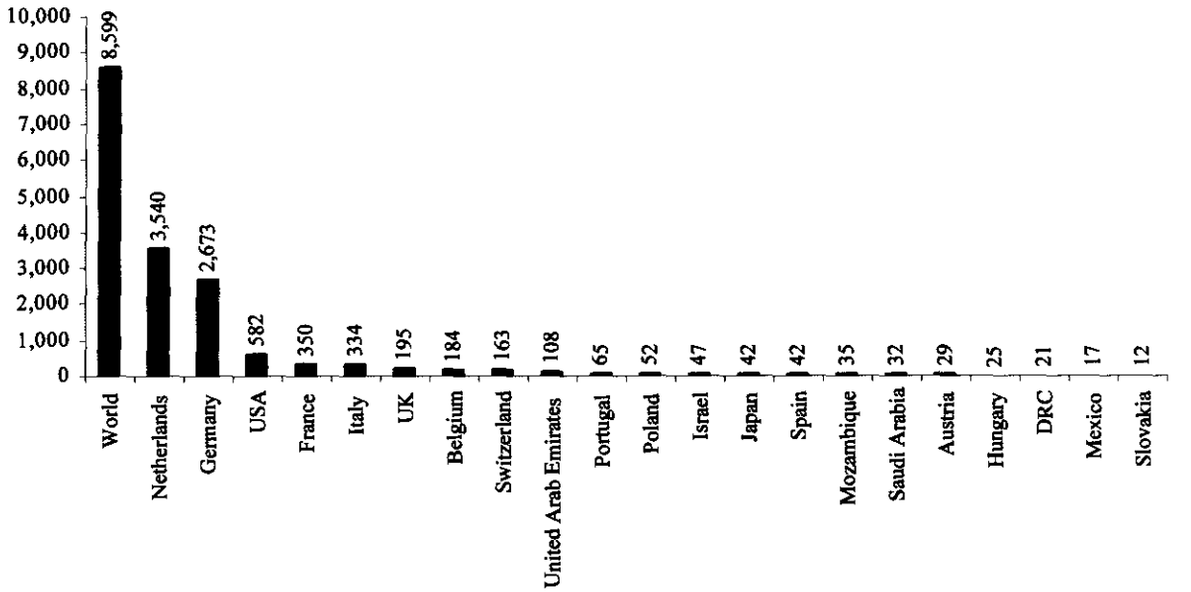
Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website www.tips.org).

Figure 4.11.2: Import markets for HS 0603 products (cut flowers, etc.) by South Africa



Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website www.tips.org).

Figure 4.12: Import markets for HS 0604 products (foliage, etc.) by South Africa



Source: ITC Calculations based on COMTRADE statistics (cited in the South African Trade Map website www.tips.org).

South Africa's exports represent 1 per cent of world exports for this product. South Africa's ranking is 16th in world exports (in US$000) of these products. The Netherlands is the largest importer, with a share of 41 per cent of the exports. Germany follows the Netherlands and imports 31 per cent of the products from South Africa. The USA is the third largest importer and its share is 7 per cent. Exports (in value) grew by 3 500 per cent (p.a.) to the United Arab Emirates, 183 per cent to Portugal and 94 per cent to Mozambique. However, it declined the most in Austria (-42 per cent) and in Spain (-57 per cent) (www.tips.org) (see figure 4.12).

According to Van Rooyen and Van Rooyen (1998: 553), South Africa's relatively low share in world exports is the result of a combination of the following factors:

- South Africa was kept out of the global market due to political isolation.
- The industry consists of large growers that have been supplying the local market for many decades. These floriculture producers concentrate on the local demand and are reluctant to export.
- The distribution channels for South African floriculture exports are not well developed.

- The local market in South Africa demands a lower grade floral product. Therefore the quality compared to the products in the European market is inadequate. In other words, the South African producers are not prepared to produce consistently high quality flowers in order to adhere to international standards.
- The local demand for flowers is very large. This deters producers to make profits from exports.

Van Zyl (2002: 41) reports that the South African floriculture producers face many obstacles in exporting. The volumes of floriculture produce in South Africa are not sufficient to achieve economies of scale. For example, Kenya produces 100 000 tonnes whereas South Africa produces only 8 000 tonnes. The South African export volumes are divided between the northern and southern production areas. These areas have different airports, which further decreases the possibility of achieving economies of scale. Transport costs of floricultural products are very high – approximately US$1,65 per kilogram, which amounts to 50 per cent of the total costs. Large exporters manage to reduce the transport costs to 30 per cent of total costs. Other obstacles are the limited airfreight space, EU requirements concerning paperwork and import tariffs (currently 7,5 per cent). De Bruin (cited in Van Zyl, 2002: 41) states that the South African flower farmers are not geared for exports in the same way as, for instance, the exporters in Kenya. The reason is that Kenya has no significant local market. The local market in South Africa discourages exports (see section 4.3.1). According to De Looze (2003: 32), the quality of most of South Africa's floricultural products sold in the local market is B grade. These low-grade products are constraining the development of the local market, as they are not of export quality. Nofal (2001) and De Looze (2003) state that growth in floriculture is only possible if local consumption of high-grade products expands (the local market is becoming saturated) and if exports increase.

The bulk of South African floricultural products are exported to the EU (60,83 per cent), mainly to the Netherlands and Germany (Nofal, 2001). However, there is a steady growth in exports to non-EU countries. In the Middle East, South African exports rose from 1 per cent in 1995 to 5 per cent in 2003 (Lourens, 2004). Figure 4.5 indicates that South African floricultural products are exported to all of the major import markets such as Germany, the UK and France (see figure 4.1).

4.3.3 South Africa's domestic market

According to Nofal (2001), the domestic flower market is very active. Every weekday morning between 7 and 9, at the Multiflora market in City Deep, Johannesburg, floral products valued at approximately R1 million (R130 million per annum) are auctioned through the Dutch Clock system (see section 4.2.5.1). Multiflora is a private company owned by the floriculture growers. The products are currently being auctioned on behalf of 450 growers. Around 400 florists, distributors and wholesalers attend this auction. The sales at Multiflora account for around 60 per cent of local sales, which mainly go to wholesalers, florists and hawkers. The wholesalers distribute the floral products to almost every city, town and village across South Africa (Multiflora, 2004). The rest of the transactions are conducted privately. These transactions are on a contractual basis between buyers (especially supermarkets) and growers. Another auction, Flora Town, has opened up in Midrand. This auction further develops the local market.

In South Africa, the domestic retail market is changing considerably. This change is similar to the changes in the European markets (see section 4.1). There is an increase in direct marketing through supermarkets and the Internet, which is shrinking the role of the Multiflora auction (Van Zyl, 2002: 41). According to De Bruin (cited in Van Zyl, 2002: 41), turnover is moving away from florists to supermarkets. The supermarket chain Woolworths is currently selling the most flowers. This group has researchers that identify the best flower producers in order to ensure quality. Their supply chain is kept short to ensure the freshness of their products. The Pick 'n Pay supermarkets are also expanding their flower selection.

The South African flower consumption is currently at level one. De Looze (2002: 29) explains the levels of consumption. At the first level, consumers buy flowers for special occasions such as weddings, parties or funerals. These flowers are only required to have a short vase-life. The second level is purchasing flowers as gifts. (For example on birthdays or when friends or family are ill.) These products need to have a relatively long vase-life. The third level is the buy-for-your-own-consumption level. Here consumers buy flowers for their own use. These flowers need to have a long vase-life. It is only at stage three that the local floriculture market develops. No African country has reached the third or the second level yet. According to De Looze (2003: 33), once South African consumers are exposed to large volumes of high-quality flowers with a long vase-life at affordable prices, consumption will increase. This will move consumers from level

one to three, via level two. Hence, the annual consumption of the country will increase, which is necessary for the growth of the floriculture industry in South Africa (see section 4.3.2).

4.3.4 South Africa's competitiveness

Due to globalisation (see section 2.2), markets around the world have opened up in the international trade of commodities. The South African floriculture producers are therefore subjected to increasing competition from other producers worldwide (see section 4.2.4.1). Thus, it is important that the competitiveness of the South African floriculture industry be levelled with the other sub-Saharan countries, such as Kenya, Zambia, Uganda and Zimbabwe. This requires subsidisation, preference trade agreements and the development of technology in order to be able to compete cost-effectively in the international arena (Van Rooyen *et al.*, 1998: 554).

Van Rooyen *et al.* (1998: 551) discuss the competitiveness of South Africa in relation to other floriculture exporting countries such as Kenya and Zimbabwe. South Africa has the following advantages:

- South Africa has the most advanced economic and physical infrastructure in Africa.
- South Africa has the largest domestic floriculture industry in Africa.
- The South African manufacturers are able to supply every necessary input required for production.
- The logistics and freight are the best in Africa.

The South African floriculture industry also faces several disadvantages. Van Rooyen *et al.* (1998: 551) explain them as follows:

- The exporters face high import tariffs in the EU (see section 4.3.2).
- South Africa has less favourable climatic conditions for floriculture than its counterparts in the rest of Africa.
- Labour costs are very high with a large degree of labour unrest.
- It is difficult to organise the growers, as they are scattered over a large geographic area (see section 4.3.2).
- There is a lack of motivation among growers to export (see section 4.3.2).

- The local market is very active, but it has low standards and does not prepare the growers to export (see sections 4.3.2 and 4.3.3).
- Affordable credit is scarce.
- Information systems are ineffective.
- There is a lack of research support.
- Plant material is very expensive.

The Kaiser Study (2000: 16) indicates that South Africa has a strong competitive position due to the following factors:

- There is a worldwide demand for South African indigenous products, particularly in the UK, Germany, Japan and Holland.
- The South African floricultural products are diverse, which will protect the industry from shifts in both geographical and product demands.
- South Africa's climate guarantees supply to the Northern Hemisphere counter-seasonally.

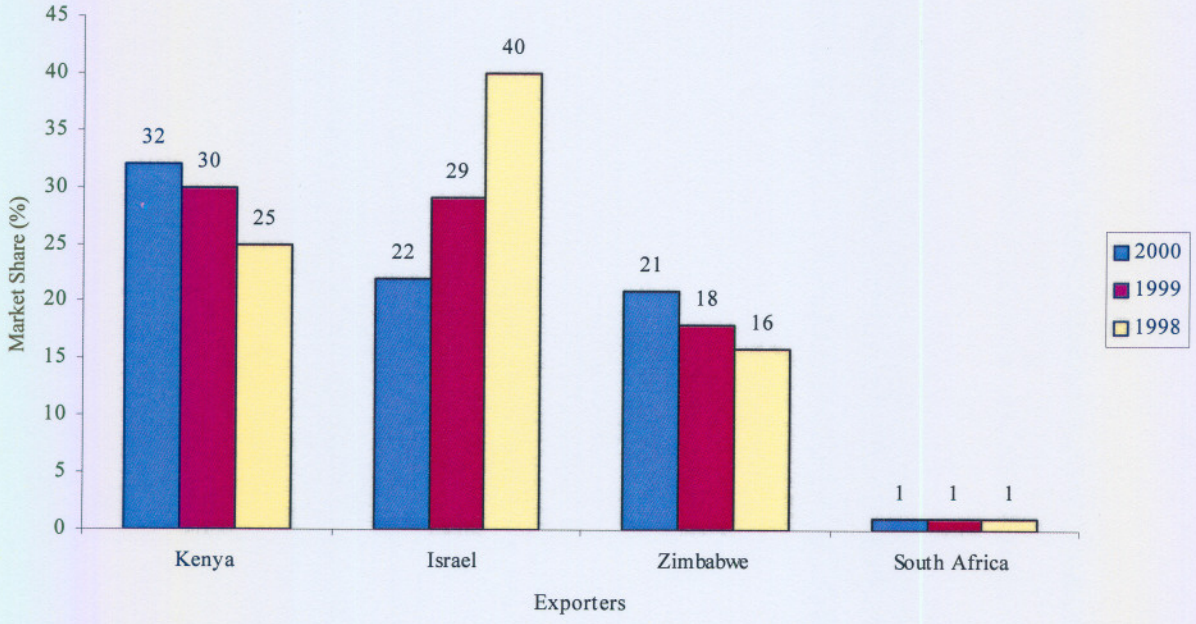
However, other competitors are compromising the above-mentioned natural advantages of South Africa. South Africa's indigenous products are being copied and improved by its competitors in Europe, the Middle East, the US and the Pacific Rim, as there is no protection strategy in place. The competitiveness of South Africa is further hindered by the quality perception and delivery capabilities, which rely on efficient supply chains and industry support (The Kaiser Study, 2000: 16). The reasons are that South Africa's floral products' quality is perceived as poor (The Kaiser Study, 2000: 27) and the distribution channels for South Africa are not well developed (see section 4.3.2).

The Kaiser Study (2000: 18) has identified the best way for South Africa to increase their competitiveness. The floriculture industry has to build a world-class export capability with an efficient supply chain and establish a supporting environment which will assist in the export of high quality and innovative products to opportunity markets.

4.3.5 South Africa's competitors

South Africa's main competitors are in the Third World (Nofal, 2001). They are Zimbabwe, Kenya, India, Ecuador, Colombia, Zambia, Tanzania and Uganda (Van Zyl, 2002: 41 and De Looze, 2003: 32). Many of these countries are flourishing in their floriculture exports, as opposed to South Africa. Zimbabwe and Kenya have doubled their exports of floral products into the EU countries between 1990 and 1994, while South Africa's exports (as a percentage of total cut flowers and foliage) exported to the same destination, declined by 0,02 per cent (Poggiolini, 2001). Another example is to examine the world floriculture export rankings of these countries in 2001 and 2002, as indicated in table 4.6. According to this, Kenya improved its position by moving up from the 10th to the 7th place, Zimbabwe maintained its position in the 15th place, Israel stayed in the 12th position, Zambia moved up from 26th to 25th, Uganda improved from the 28th to the 24th place and Colombia maintained its position in the 2nd place. South Africa has kept its 21st position from 2000 to 2002. Figure 4.13 illustrates the above-mentioned through the graph of the market share of Kenya, Zimbabwe and South Africa's exports to the Netherlands.

Figure 4.13: The main non-EU exporters to the Netherlands



Source: Van Zyl, 2002: 41

It is clear from figure 4.13 that South African exporters have a market share of only 1 per cent in Europe (South Africa's main export market), whereas Kenya's share was 25 per cent in 1998 and

increased to 30 per cent in 1999 and to 32 per cent in 2000. Thus, Kenya's market share in exports is growing while South Africa's share is stagnant (Van Zyl, 2002: 40).

In essence, it is not the countries that compete against each other, but the producers and their products. Many producers grow the same products in similar conditions. Thus, competition is based on non-price factors (e.g. quality) and not on direct production factors (e.g. cost and climate). The Kaiser Study (2000) has identified the countries that are the main competitors to South Africa in the European and Japanese markets, by product. Table 4.13 outlines the competitive countries and their various products.

Table 4.13 indicates that competition for South Africa in terms of the diverse products produced (see section 4.3.7) is fierce. Countries in both developed and developing countries are competing against South Africa for a share in the international floriculture markets.

Table 4.13: South Africa's competitors in European and Japanese market (by product)

Products	**Competitors to European (UK, Germany and the Netherlands) markets**	**Competitors to the Japanese market**
Protea & other fynbos	Israel: All Protea & Leucospermum	Australia: All products
	Australia: All products	USA: Protea
	USA (California & Hawaii): Protea	
	Zimbabwe: All Protea & Leucospermum	
Traditional greenhouse flowers	The Netherlands (actual production): All products	Japan (domestic market): All products
	Colombia: Carnations & roses	The Netherlands: Bulbs
	Ecuador: Roses & summer flowers	Thailand: Orchids
	Kenya: Roses & summer flowers	
	Zimbabwe: Roses, carnations & summer flowers	
	Zambia: Roses	
Foliage	USA: Leatherleaf	China: "Potted" foliage
	Costa Rica: Leatherleaf	USA: Leatherleaf
	Italy: All products	

Source: The Kaiser Study, 2000: 16

4.3.6 Production and employment

The successful development of a country's floriculture industry depends on a certain set of pre-conditions concerning production. These are: the existence of a basic market opportunity for local producers to supply the overseas markets (e.g. counter-seasonally), abundant cheap labour, suitable human capital, risk-taking entrepreneurs, adequate infrastructure and financing arrangements (Malter *et al.*, 1999: 50).

The Kaiser Study (2000: 29) has characterised the current floriculture production in South Africa as follows:

- Production is unfocused and not linked to the international market demand.
- Products are perceived by the marketplace as poor and of a lower quality due to the lack of a quality mark. Inefficient post-harvest handling exacerbates the poor quality of the products.
- Production is unstructured in terms of planning.
- In South Africa, floriculture production is not considered a good and safe investment opportunity from a financial point of view.
- Production is insufficient to meet the international market demand, especially for indigenous products.

The aspects concerning production of floricultural products have become increasingly important seeing as competition is based on non-price factors such as image, shelf-life and ease of traceability. These factors have not been a primary concern for South Africa floriculture producers (The Kaiser Study, 2000: 29).

According to the Kaiser Study (2000: 30-31), South African producers need to focus their production more on indigenous products (e.g. fynbos and foliage), thus increasing or maximising the export production volumes. Due to South Africa's location and its high labour costs, it is not as competitive as its African counterparts in the cultivation of traditional products such as roses. For example, Kenya is located near the equator and has therefore a milder climate for rose cultivation. Kenya also has an abundance of cheap labour (Van Straten-Botha, 1999: 51).

Floriculture producers also need to participate in quality programmes such as the MPS (see section 4.2.6.1). These quality or eco-labels will become a prerequisite for floricultural imports into Europe within the next five years and will therefore become more significant non-trade barriers. The problem with the quality of South African products lies in the post-harvesting practices (i.e. treatment and physical handling of the products after harvesting) of the producers. Once these practices improve, the quality of the products will be both consistent and of a high value (The Kaiser Study, 2000: 30-31).

The production of floricultural products is an important source of employment. The industry currently employs 17 500 people in South Africa (The Kaiser Study, 2000: 5). The floriculture industry of South Africa has more attractive employment ratios than other agricultural and manufacturing activities. Eckert *et al.* (cited in Van Rooyen *et al.*, 1998: 553) have conducted a study where floriculture production was compared to forty-seven other agricultural and non-agricultural activities in the Western Cape. The floriculture industry ranked sixth highest in employment creation and also sixth highest in the potential value added per one million rand invested. From an equity point of view, the floriculture industry ranked fourth where the impact on wealth and income redistribution was measured (i.e. the Gini ranking). The redistribution impact was especially significant to the poorer segments of society, as it could generate both employment and income for these segments. When all of these factors were combined (i.e. employment generation, added value and wealth distribution) into a development impact index, the floriculture industry performed third highest of all forty-eight sectors. As the nature of the South African floriculture industry is similar in the various production areas, it is possible to apply the results from the Western Cape study to the other provinces. Thus, the floriculture industry of South Africa can make a significant contribution to economic growth, redistribution and development in South Africa.

Unfortunately, the high cost of labour is driving the floriculture producers towards the mechanisation and automation of the various production processes. Another problem concerning employment is the rigidity of the labour market (especially the laws governing seasonal and temporary employees). Floriculture producers need flexibility in labour, due to the seasonal nature of the industry (Poggiolini, 2001).

Within the floriculture sector, employment in the production of indigenous products is, on average, four times higher per rand of capital investment than the production of traditional

greenhouse products (e.g. roses and carnations). Thus, the production of indigenous products is cheaper than greenhouse production. However, on a per hectare basis, greenhouse products employ over twice as many people than indigenous products (The Kaiser Study, 2000: 17). The Kaiser Study (2000: 18) provides the specific numbers for both employment and capital investment and they are indicated in table 4.14.

Table 4.14: Employment and investment in the South African floriculture industry

Product	**Capital expenditure/ha (including infrastructure) – R000**	**Employment/ha**	**Employment/R1 million of capital expenditure**
Traditional greenhouse products	1 800	20-25	13
Protea/fynbos (indigenous)	170	10	59
Foliage (indigenous)	220	10	45

Source: The Kaiser Study, 2000: 18

The average employment across the three groups (i.e. if R1 million were invested in each) is 39 people per R1 million of capital expenditure. The Kaiser Study (2000: 30) suggests that the amount of products grown in cultivation (i.e. commercially grown) need to be increased, as such cultivation offers significant opportunities for the creation of employment.

The Kaiser Study (2000: 18) concludes that the South African floriculture industry will be able to create employment for 80 000 people, once exports increased from $30 million to $260 million (taking into account the type of products and economies of scale).

4.3.7 Products

South Africa's floricultural products can be classified into three main groups (The Kaiser Study, 2000: 24). The groups are:

- Indigenous products
  (a) Protea and other fynbos (Proteaceae)
  (b) Foliage (e.g. leatherleaf and coral ferns)
  (c) Indigenous bouquets (combination of (a) and (b))
- Traditional greenhouse products
  (a) Classics (e.g. roses, carnations and chrysanthemums)
  (b) Exotics (e.g. orchids and lilies)
  (c) Summer flowers (filler, e.g. gypsophila and Monte Casino)
  (d) Traditional bouquets
- Mixed bouquets (combination of indigenous and traditional greenhouse products)

According to the Kaiser Study (2000: 25), the largest volume demand worldwide for floricultural products is for traditional greenhouse products. Competition in this market is based on non-cost factors (e.g. perception), which makes it difficult for South Africa as its traditional greenhouse products are perceived as not of internationally approved quality. The market for these products is highly competitive and the products have been trading as commodities. The strongest growth in demand is for a wide variety of indigenous (new and exotic) products. South Africa's indigenous products are generally of a good quality and there is a good continuity of supply of these products. The indigenous products are also South Africa's best performing export products. Indigenous products have an advantage over traditional products, as they require limited capital investment (traditional greenhouse cultivation is capital intensive). On the other hand, greenhouse products' cultivation and harvesting are quicker than that of indigenous products. The latter have a significantly longer product life-cycle.

South Africa's competitors, notably Australia and California, are producing some of the country's indigenous products (e.g. proteas), causing South Africa to loose its market share. Therefore, South African floriculture producers need to maintain their market share by producing new and better products. Another method is to add value by exporting bouquets containing both traditional and indigenous products. Indigenous products (e.g. fynbos) need to be marketed for their potential of adding value to any bouquet (Van Straten-Botha, 1999: 51-52).

Bouquets are becoming increasingly important, due to the worldwide growth in the supermarket channel (see section 4.2.5.1). As it may be expensive to export bouquets, due to its high volume and low value ration, the Kaiser Study (2000: 27) suggests that South Africa should assemble

bouquets overseas in order to ease distribution. A European depot for the assembly of bouquets will allow more efficient exports to smaller volume markets such as Eastern Europe and niche markets such as Switzerland and Scandinavia.

Thus, local exporting producers need to grow niche products and become specialists in order to avoid clashes with the large competitive export countries (e.g. Kenya) (De Looze, 2003: 33).

4.3.8 Packaging

The Kaiser Study (2000: 37) characterises the packaging of South African floricultural products as follows:

- The marketplace perceives the packaging as poor, of a lower quality and dull.
- Industry-wide packaging is unstructured in terms of planning, with different sizes. Thus, there is no standardisation.
- The floriculture industry has adopted a non-strategic approach to packaging with a lack of branding or uniform look to South African floriculture exports.
- Packaging is not as efficient as it could be in terms of capacity utilisation.

According to the Kaiser Study (2000: 38), the South African floricultural exporters currently use a wide range of box sizes to export the same products. Although the stem lengths and leaves differ from product to product, it is possible to standardise some of the box sizes. SAPPEX (South African Producers and Exporters Association), the protea industry-wide body, has standardised a range of box sizes for protea exporters. Their packaging requirements can be consolidated, which means that they are able to obtain favourable rates for the mass production of all SAPPEX packaging. Thus, standardisation is clearly beneficial. However, there are several market-specific recommendations that have to be taken into account when exporting to the various international markets. In Germany, for instance, packaging must be perceived as environmentally friendly, as the German consumers are focused on the preservation of the environment. In Japan, the wholesale outlets prefer smaller-sized boxes than those in Europe, in order to ease the distribution thereof. Another method for floricultural producers to be cost-effective is to ensure the efficient utilisation of space, especially in airfreight.

As indicated in section 4.3.5, competition in based on non-price factors. Packaging is also one of these factors. Exporters can gain competitive advantage if they pack their quality products in an innovative manner. It is imperative for South African floriculture exporters to do this, as there is a low awareness and poor perception of South African exported products (The Kaiser Study, 2000: 40).

The Kaiser Study (2000: 37) concludes that packing of the floricultural products need to be strategic, as they portray the industry's image and plays a vital role in the effective utilisation of space.

4.3.9 Logistics

The Kaiser Study (2000: 45) characterises the South African floriculture industry's export logistics as follows:

- There is sufficient airfreight capacity, particularly to Europe, in peak season (October to February).
- Other perishables (especially fish) receive preferential treatment above floricultural products.
- South African Airways is aggravating the situation by preventing certain airlines with adequate cargo space to compete and by giving preferential treatment to products from Harare.
- The airfreight rates are too high for some products to be cost competitive.
- There is no industry-wide cold chain strategy, particularly for international transfers.

The Kaiser Study (2000: 45) states that floricultural exports are currently conducted on an ad hoc basis. Airlines have little motivation to reduce rates and secure airspace. Thus, producers are not able to benefit from economies of scale. The problem with airlines is aggravated by the fact that they are sometimes not able to meet the producers' orders as a result of insufficient space on the aircrafts. Logistics is therefore the single greatest constraint concerning infrastructure, which inhibits the expansion of South African floricultural exports. The Kaiser Study (2000: 52) suggests that the floricultural export products need to be pooled for transportation. This will result in competitive freight rates and guaranteed space on the aircrafts. Each international market has its own considerations that have to be taken into account when the products are

exported to them. For example, when exporting to Japan (there are no direct flights to Japan), connections have to be made in Amsterdam, where there are specialised cold storage available. Cold chain management, i.e. the transportation of floricultural products in cool temperatures for the perseverance of the products' quality (see section 4.3.12), is conducted on an ad hoc basis rather on an industry-wide basis. The South African floriculture industry needs to develop a post-harvest handling protocol, which will maintain the quality of the products. This protocol has to provide instructions for all the players in the physical handling of the products. For example, airline handlers should know that the floricultural products are not allowed to stand in the sun between flights (The Kaiser Study, 2000: 52).

4.3.10 Marketing

The Kaiser Study (2000: 45) characterises the South African floriculture industry's current marketing as follows:

- Marketing initiatives are conducted on an individual basis. There is limited marketing for the industry as a whole.
- The marketing of the industry as a whole is limited to product-based industry associations, such as SAPPEX (proteas).
- There are restricted marketing and promotional efforts; the producers merely publicise pamphlets for the purpose of marketing. There is limited representation of the South African floriculture industry at important international flower shows.

Marketing is key to the success of the development of the South African floriculture industry, as there is currently a low awareness of South African products and product characteristics in the international markets.

There is an increasing demand for new and exotic products of a high quality. South Africa's naturally diverse products fit this description. The market is, however, unaware of this untapped source of novelty products. In the instances where the market is aware of South African products (e.g. fynbos), there are generally gross misconceptions about the quality and consistency of supply (The Kaiser Study, 2000: 56).

The Kaiser Study (2000: 57-59) suggests that the low awareness and misperceptions of South African products need to be rectified through industry-wide marketing campaigns. Marketing campaigns should entail advertising (e.g. in trade journals and in interior decorating magazines) and promotions – such as the Kenya Flower Day established in the UK by the Kenyan Flower Council. Every passenger travelling to the UK on this day receives a flower. South Africa could supply to supermarkets and florists in target markets on special days such as St. Valentine's Day. Marketing can be consistent throughout the main markets; however, each market has a characteristic that makes it unique. For example, flower arranging is an art in Japan, hence it is best to promote South African products through florist schools where floral designers are trained to influence the society with their designs. In Germany, the market is only aware of the protea and not of the other diverse indigenous products. As import wholesalers and agents dominate the German market, promotion should be done through them.

The marketing problems can also be rectified through the free flow of market and product information. Information is very important in the floriculture industry, as consumer tastes and market characteristics change on a regular basis (see section 4.2.10). Therefore international suppliers need to be flexible and responsive to the changes in the market. Generally South African floriculture producers gain information on an individual basis and they keep that information to themselves (see section 4.3.12). The Kaiser Study (2000: 60) suggests that an industry-wide depository of market information needs to be created.

4.3.11 Sales

According to the Kaiser Study (2000: 64), the sales of floricultural products are hindered by the following:

- The fact that South Africa has no permanent presence in the international target markets.
- Awareness of South African floricultural products is low, due to insufficient volumes of product samples in the international markets.
- Agents work for individual exporters, rather than for the floriculture industry as a whole.
- The industry has limited links with South African representation in the overseas markets.
- Awareness of South African floricultural products in the supermarket channel is low, due to limited direct sales to multiples (e.g. Marks & Spencer in the UK) in the past.

The international marketplace has not been exposed enough to the wide range of South African floricultural products that are available. Individual exporters with adequate resources have been able to visit prospective buyers and deliver samples of their products. Thus, there is awareness of South African floricultural products, but not at such a level that it will increase international sales. The Kaiser study (2000: 65) recommends that more samples of the South African products be delivered to the international markets, as it is essential for establishing new relationships. Establishing overseas contacts (i.e. a network) is another way in which awareness that South Africa is a world-class supplier of floricultural products can be enhanced.

4.3.12 Problems in the South African floriculture industry

The first problem area identified by Van Rooyen (1998: 20) lies in the production of commercial cut flowers. Low profits are the main problem of cut flower producers in South Africa. However, production is considered to be sub-optimal in terms of factors which influence long-term high-quality farming practices. These factors are:

- Labour management problems. The wages in South Africa are much higher than in the other African countries competing in the export of cut flowers. South Africa needs to be competitive in terms of labour productivity, since it cannot compete in terms of wages. Unfortunately, long and intensified working hours could cause labour dissatisfaction, causing workers to resign.
- Inappropriate disease and pest control. Floriculture producers have inadequate chemical fungicides and pesticides to prevent and control diseases. International research done on this is not appropriate for the South African conditions and the local capacity to do research is limited. Several producers have conducted research on their own. However, they are extremely secretive and keep all of the research they acquire to themselves in order to maintain their competitive edge over the other producers.
- A weak knowledge base. Production technology is mainly imported from Europe. The production technology has to be adjusted for the conditions in South Africa, as it was originally developed for the conditions in Europe. In Europe the cost of labour is very high, the availability of land is limited and Europe has adverse weather conditions. Thus, the technology is more capital-intensive and is focused on changing the effect of bad weather on floriculture production. South Africa, on the other hand, has good weather

conditions and relatively cheap labour. Thus, the producers in South Africa require more labour-intensive technology.

- Secrecy in the industry. South African floriculture producers see each other as competitors rather than colleagues. Secrecy aids the producers in gaining a competitive edge over each other, but it hinders the international competitiveness of the South African floriculture industry in the international markets. Cooperation in the local floriculture industry could lead to sharing of knowledge on how to minimise production and transport costs and optimise production practices so as to become more competitive in the international markets.

The second problem area identified by Van Rooyen (1998: 20-21) is the sub-optimal commercialisation in the South African floriculture industry. The factors that contribute to this problem are:

- Unfair international competition. In terms of the Lomé Convention, developing countries gain duty-free access to the EU. Yet, South Africa has to pay a tariff for access. Floriculture imports from African countries are subjected to an import tariff, but the prices of these floriculture imports are still lower than the prices obtained at Multiflora (see section 4.3.3), resulting in unfair competition for the South African producers in their own domestic market.
- Inadequate market information. Floriculture producers no longer set the prices for their products – traders and consumers do. This is due to the changes in the consumption patterns of the consumers. Therefore, producers who supply the local market must continuously obtain information on world prices. If their prices are too high, importers will simply import floricultural products and make a profit. Obtaining market information will enable producers to regulate their exports and so target countries where the prices are highest. South African producers generally do not have strategies for their various market segments, finding new niche markets or discovering what the consumer preferences are. They merely observe the price and quantity signals in the markets. South Africa has no formal ongoing market research for floricultural products, nor any governmental aid. This is one of the reasons for the sub-commercialisation of the floriculture industry. Van Rooyen (1998: 21) states that research cannot be left to the private sector, since research is considered a public rather than private good. It should be noted that the Department of Trade and Industry have since (in 2000) contracted the

Kaiser Associates to conduct a study on the potential of the South African floriculture industry. The results of this study are yet to be implemented.

- A relatively high wage rate. As indicated earlier, South Africa's wage rate is much higher than that of other African countries. Labour costs in South Africa account for 10 to 20 per cent of the annual operating costs (excluding managerial costs). Labour costs of South Africa's competitors such as Zimbabwe and Zambia are between 6 and 8 per cent of the annual operating costs (excluding managerial costs). The relatively high wage rates in South Africa make the floriculture industry a less attractive investment opportunity for European investors, compared with the floriculture industries of Zimbabwe, Zambia, Uganda, Kenya and Malawi where there are high levels of foreign investment. South Africa still has an advantage over Europe, where the wage rates are between 30 and 40 per cent of the annual operating costs.
- Quality loss in distribution. According to Van Rooyen (1998: 21), a limited number of South African floriculture producers make use of cold transport. Cold transport is a necessity for the perseverance of the products' quality, especially when competing in the international markets. Inadequate cold transport might result in the products losing their quality between the farm and the wholesaler, retailer or consumer. Flowers are extremely perishable. Thus, for exporters to be competitive in the international markets, where the flowers are delivered an hour after harvesting, they need to make use of cold transport from the farm to the airport.

Van Rooyen (1998: 21) states that the main areas where problems are experienced are in the information infrastructure and marketing channels. According to a communication by Mr. Stelder (2004), logistics and quality are not South Africa's flower industry's biggest problems. According to him, quality can be influenced and manipulated through a good marketing mix. The performance of floriculture exports from South Africa are complicated by a combination of increases in:

- The cost price of production,
- Labour costs,
- Import duties to be paid,
- The inflation rate and
- The position of the rand (appreciation).

In order to illustrate how floriculture export producers function in the local and global floricultural industries, case studies are provided.

4.4 CASE STUDY: SAFROPA

Safropa forms part of a multinational company, of which the parent company (Fides Straathof) is situated in the Netherlands. Fides established a growing facility in South Africa, due to the counter-seasonal production of cuttings and the low cost of labour (compared to the Netherlands). Safropa is situated in the North West Province and has 7 ha of cultivated land. 18 greenhouses are used for the cultivation and production of kalanchöe and chrysanthemum cuttings. Safropa employs around 296 workers, 240 of whom are women.

Safropa exports one million cuttings per month to Fides. From there the cuttings are distributed to greenhouses in Germany, Switzerland and Belgium. Safropa also supplies cuttings to the Japanese market and to local growers. The cuttings are grown in various greenhouses. The grown pot plants and cut flowers are dispersed from these greenhouses and sold to the final customers. An important aspect of their export operations is to ensure traceability of the cuttings. All of the boxes have labels, which trace the cuttings back to the greenhouse it was grown in and the person who harvested it. Therefore, any problems with the plant can be traced back to its origin. Safropa transports the cuttings to the airport in their own refrigerated trucks.

Safropa experiences only a limited amount of operational problems. The problems experienced are the expenses surrounding the import of their greenhouse infrastructure, restricted supply of water (which inhibits the extension of their operations) and limited airspace during the peak seasons (i.e. during Christmas and Easter, fruit and vegetables have an advantage over floricultural products).

Safropa's products comply with the ISO 9001 / 2000 standards. Safropa will be implementing the EUREPGAP programme during 2004. All of their employees are trained in the use of chemicals and their operations comply with the Health and Safety Act of South Africa. Fides assists Safropa with import regulations.

The cuttings (i.e. types, colours, chemicals used, quality, shape, length and shelf-life of the plants and flowers) are developed according to both the growers' and consumers' demands. Safropa

ensures that its cuttings possess all of these qualities by growing the cuttings in their own greenhouses and then selling the plants and cut flowers on the local market. Hence, Safropa is able to determine if its products are in demand and if it is viable to produce them (i.e. will they sell at a price that is high enough to make a profit?).

Safropa provides support in the form of advice (e.g. in terms of plant quality and chemicals) to all growers who buy chrysanthemum cuttings from them. This builds good customer relations and ensures a continuous supply. Safropa continually conducts research on the latest inputs, e.g. new fertilisers and chemicals. However, the company does not develop new varieties. Product innovation is done by Fides (who supplies the parent stock to Safropa). Study groups among chrysanthemum growers have failed, as growers are very competitive and secretive (the growers are afraid that if they share information they might loose their market share).

Safropa pays royalties to the developers of the different types of cuttings. Safropa has to keep record of all the types of plants they grow so that they can pay the correct amount of royalties. It is difficult for Safropa to add value to their products, as they only export the cuttings. However, the growers can gain a competitive edge on the quality of their flowers and the manner in which they are sold to the customers (they could, for example, use a different type of pot to plant the kalanchöe plants in) (Adapted from communication by Mr. Phiri, 2004).

4.5 CASE STUDY: SUNFIELD HOLLAND

Due to increasing demand, companies (especially in the Netherlands) began to specialise in the production of cuttings. This enabled growers to deliver flowers on a fast and regular basis to the market. Cuttings had been produced in Germany and France. However, it quickly became too expensive to do so. Currently, 95 per cent of all the production of cuttings takes place in Brazil, Costa Rica, Uganda, Tanzania, South Africa and Kenya. Africa is less expensive and has a suitable climate for year-round production.

There are currently five companies in the Netherlands that grow chrysanthemum cuttings. One of them is Sunfield Holland. Sunfield Holland (established 25 years ago) is situated in the southern part of The Netherlands in Valkenburg. Sunfield Holland specialises in the cultivation and production of chrysanthemum cuttings. They supply chrysanthemum cuttings, both with and without roots, to nurseries throughout Europe. The production of unrooted cuttings takes place in

modern nurseries in Kenya, Tanzania and South Africa. The reasons why they extended production to Africa are:

- Labour, especially manual labour, is very expensive in the Netherlands. (A field worker is paid 20 euros per hour.) Manual labour is also scarce in the Netherlands, and is mostly performed by foreigners.
- The companies have to supply a steady amount of cuttings to the growers throughout the year.
- Production infrastructure, e.g. electricity and plastic greenhouses, is relatively cheap in Africa. Depending on the weather conditions, electricity is used to heat and cool plastic greenhouses, as these do not allow as much direct sunlight in as glass greenhouses.

Sunfield Holland receives cuttings two to three times per day from their companies in Africa. The cuttings are rooted in the greenhouses at Sunfield. It is too expensive to import rooted cuttings, as they are heavy (because of the soil attached to the plant). The rooted cuttings are sold to the growers. The organisation of the chain they belong to is as follows: Development of new varieties → parent plant material is provided for the growth of cuttings → growers pay royalties and buy cuttings → growth of plants → flowers are transported to auctions → wholesalers buy flowers → flowers are exported by wholesalers (exporters) → retailers buy flowers and flowers are sold in markets, supermarkets and in flower shops.

Sunfield Holland has 100 employees in their Dutch production facility. The company has 11 hectares of production in Africa. In Kenya, 5 hectares are under production and 200 people are employed. Tanzania has 4 hectares with 175 employees and South Africa has 2 hectares with 100 employees (the company in South Africa is a joint venture). Sunfield Holland buys all of the cuttings produced by their African companies. The relationship between them and the African companies is durable and has a high degree of trust. The most important element in the contract between Sunfield Holland and their African companies is the quality of the cuttings. Training is therefore an important aspect in the business of Sunfield Holland. All technical employees are brought to Sunfield Holland for training.

Sunfield Holland's clients (growers) are mostly located in the Netherlands. The growers themselves determine which varieties they want to buy (i.e. which varieties they will profit from). The market dictates the shape, variety and colour of the flowers. For chrysanthemum

growers it is easy to change the varieties they grow, as it only takes two and a half months for chrysanthemums to flower. Roses, on the other hand, take plus minus four years to flower. Consequently, chrysanthemum growers can more easily keep up with new varieties and trends than, for example, rose growers.

Sunfield Holland chose South Africa because of its well developed infrastructure such as roads, airports and communication. Electricity (as mentioned) and coal are also relatively cheap. In South Africa, most of the infrastructure (such as greenhouses and facilities to run the business from day to day) can be obtained, whereas it has to be imported into Kenya and Tanzania. However, Sunfield Holland experiences problems with their South African employees due to labour unions and rigid labour laws. Labour is also more expensive than in Kenya and Tanzania. It was also difficult for them to obtain local financing for their production facility in South Africa (the interest rates were too high and a large amount of securities was required). In spite of the negative factors concerning the production in South Africa, Sunfield Holland feels that they receive a fair price for the cuttings that are produced.

Sunfield Holland, in collaboration with Royal Van Zanten, has an extensive breeding programme within the CBA (Chrysanthemum Breeders Association). The CBA develops and selects new varieties of cut and pot chrysanthemums in their research location in Rijsenhout in the Netherlands. They provide a clean stock of parent plants to growers who have licences that allow them to breed their varieties. Their selection criteria toward new varieties are production, response time, vase life, and a broad variation in colour and flower type, quality and tolerance for diseases (www.cba-nv.nl). Sunfield Holland provides a leading assortment of chrysanthemums as well as new varieties every year. Currently 450 varieties of chrysanthemum exist (of which the most popular colours are yellow and white). Sunfield Holland holds plant breeder's rights of 50 per cent of the total Dutch production. Patents protect their new varieties and growers have to pay royalties to Sunfield Holland.

Planning and logistics are vital for the success of such a business. Orders have to be coordinated between the different production areas to make sure that they supply the correct varieties of cuttings on a specified time. The planning of when to root the cuttings is essential because they have to be supplied to the growers on request. Throughout the various processes of production, the coordination of logistics is vital (adapted from communication by Mr. Van der Meij, 2004).

The case studies provided insight into the organisational functions of two floriculture producers, one situated in South Africa and one in the Netherlands (with production areas in South Africa). These functions show that they are active in the international market through their competitive advantages and links with international affiliates.

4.6 SUMMARY

The purpose of this chapter was to provide background to the international and South African floriculture industries. It indicates the various role players, variables and factors that characterise the industry.

This chapter started out by identifying the manner in which globalisation has affected the international floriculture industry. Competitors, both from European and non-European countries, are emerging continuously. Non-European countries, particularly developing countries, are focusing more on high value horticultural products such as floricultural products. These countries have an advantage over European countries, as they are able to compete in terms of cost factors (e.g. cheap labour). However, consumers are becoming more demanding and this, along with the fact that supply is exceeding demand, causes the base of competition to shift to non-price factors (e.g. quality). It is here that European countries have an advantage, as they have the best technology available for their production processes. Together with the intense competition, developing countries also have to comply with several tariff and non-tariff barriers set by the various developed countries. The international trade structure of floricultural products is also evolving as new distribution channels emerge. For example, the products are no longer only distributed via one of the auctions. They are increasingly sold directly to buyers (e.g. supermarkets). These buyers, especially supermarkets are gaining a larger market share in the sales of floricultural products.

In essence, the global floriculture industry is constantly changing. The heart of these changes is the increasingly significant role played by trends in the markets. Trends are the result of fashion ideas and cause some products to be more popular than others, resulting in fluctuations in the demand for certain varieties and prices of the floricultural products. Hence, determining the segmentation of consumers and their consumption patterns. Current market information on these trends can be seen as the link between the consumers' demands and the products produced.

The South African floriculture industry has significant potential to become a major role player in the international markets. South Africa has many advantages (e.g. infrastructure, climate and inputs) required for the production of floricultural products. Unfortunately, many disadvantages (e.g. high labour costs) and problems (e.g. lack of market information and secrecy in the industry) deter the growth of floriculture exports. South Africa's flower industry is generally regarded as far behind in terms of production capacity. In other words, the set-up of greenhouses is primitive, there are low levels of investments in the industry and the wrong varieties are being produced. South Africa's floriculture market share is only 0,44 per cent of the total world import market. This is a mere fraction of its true potential. The main reasons for the low share in world exports are the magnitude of the domestic market and the fact that the products supplied to this market are not on international quality standards. The floriculture industry of South Africa is also nationally, and not internationally, orientated (the industry is inward looking rather than outward looking). This type of orientation will provide difficulties for the market as the local market's turnover is small and is becoming saturated. In order for the flower industry to survive, exports will have to increase.

South Africa is not able to compete against its African counterparts (e.g. Kenya) in terms of cost factors, as they have a clear advantage (cheap labour). South African producers need to focus on the natural advantages of the country, i.e. the indigenous products, in order to achieve a competitive advantage. As traditional greenhouse products are an important source of employment, South Africa also has to increase their market share of these products. Producers need to focus on non-price factors (e.g. quality) and compete in terms of innovative value chain aspects (i.e. products, production, packaging, logistics, marketing, sales and markets). Thus, the South African floriculture industry can add value to production through commitment to export and by being reliable suppliers of consistent quality products.

In the next chapter, the South African floriculture exporters' positions in the global industry are assessed in terms of their competitiveness.

CHAPTER 5
AN EMPIRICAL ANALYSIS OF SOUTH AFRICA'S FLORICULTURE INDUSTRY

5.1 INTRODUCTION

South Africa's floriculture industry has been found to have underdeveloped potential. The extent to which the industry may become more successful internationally (i.e. to enlarge its market share) may depend on its functioning within the global commodity or value chains. In chapter 2 it was shown that the global commodity chain (GCC) could be described along the following dimensions: input-output structures, geographical coverage, governance and institutional framework. Chapter 2 also discussed the elements of the global value chains (GVC) such as barriers to entry, governance, systematic efficiency and upgrading or innovation.

In this chapter, the purpose is to evaluate empirical evidence on the position of South Africa's floriculture in each of the elements of the commodity and value chains. The chapter is structured as follows: section 2 comprises the methodology in the empirical research, section 3 illustrates the results, section 4 assesses the results and section 5 concludes with a summary.

5.2 METHODOLOGY

In this section, the methodology used is outlined. Firstly, background to the questionnaire is given, as well as the aspects that it entails. Secondly, the composition of the sample is explained. Thirdly, the results are set out.

5.2.1 Questionnaire

The aim of the survey was to assist firms in the floriculture industry to benchmark their international competitiveness. The questionnaire was set up during the months of May and June 2004. A copy of the questionnaire is contained in appendix A. The questionnaire contained five sections, i.e. firm profile and production (geographical and demographical aspects), markets (export activities), distribution (distribution channel structures), innovation (positions on competitiveness) and governance (governance structures).

5.2.2 Sample

The individual growers' information was treated confidentially – only aggregate and average findings would be published. These findings allowed the firms a measure of their international orientation and position in the supply chain. Each participating firm received a report containing the findings.

A total of 56 mail-based questionnaires were sent out to the South African exporters of floricultural products. Their businesses and contact details were obtained from the SAFEC (South African Flower Export Council) membership list (2002). These 56 exporters could be seen as regular exporters of floricultural products. After a period of ten days, the exporters were contacted via telephone. As some of the exporters had not received their questionnaires, several questionnaires were again sent out via fax, post and e-mail. From the telephone conversations, it became clear that three of the exporters no longer produced floricultural products. Three of the telephone numbers were incorrect and one questionnaire was sent back due to an incorrect address. Hence, the sample was reduced to 49 questionnaires. A total of 29 questionnaires were received during July and August (23 via post and 4 via fax). This entails a 59 per cent response rate, which can be considered high for a mail-based questionnaire.

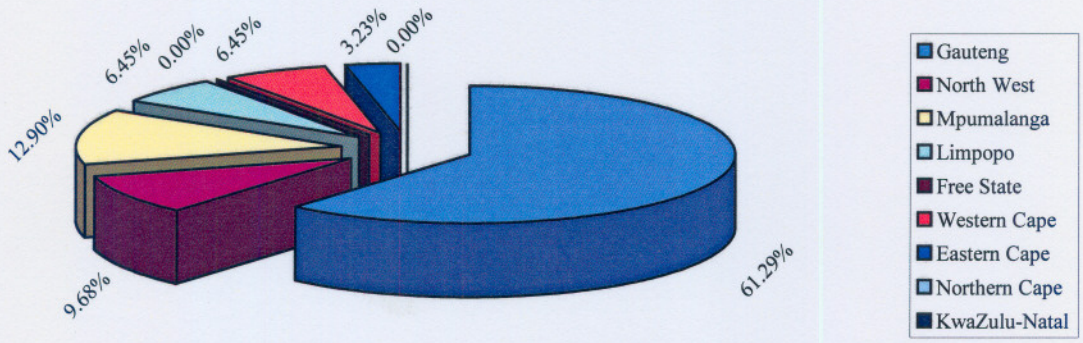
5.3 RESULTS

5.3.1 General firm profile

This section set out to determine biographical and demographical information about the floriculture exporters. In the first question, the respondents were requested to specify the province in which their production operations were located.

One of the dimensions of the GCC analysis is geographical coverage. Geographical coverage includes the dispersion or concentration of the industry, the sizes of the producers and the distribution networks (see section 2.3.2.7). The size of the farms influences exports, the number of employees and the exporters' market share.

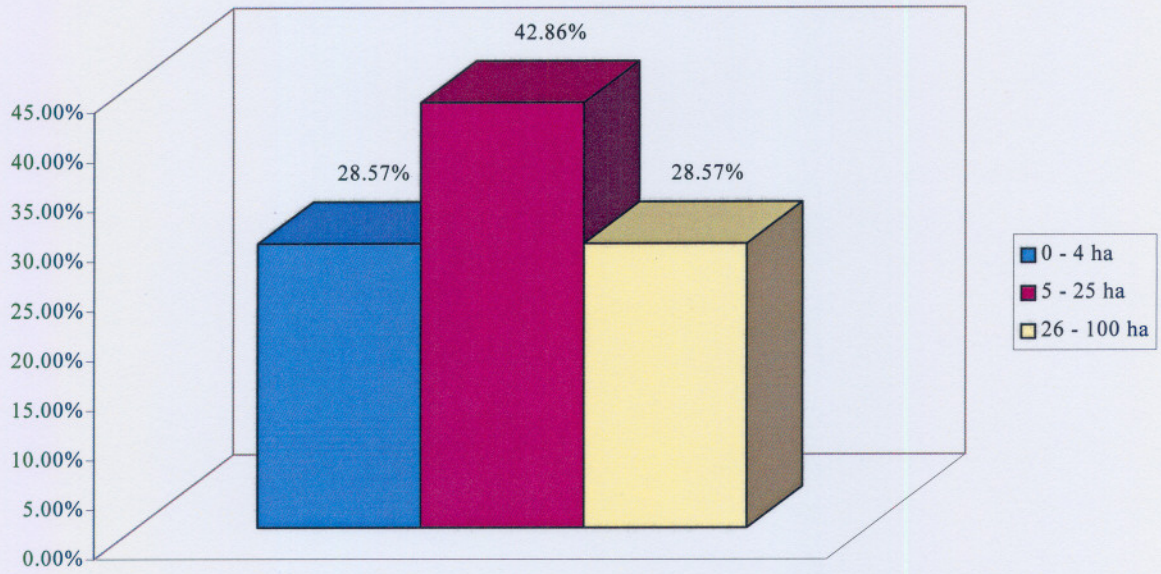
Figure 5.1: Geographical distribution of respondents



It is clear from figure 5.1 that most of the respondents (61,29 per cent) are located in Gauteng, with the second most in Mpumalanga (12,90 per cent) and the third most in the North West province (9,68 per cent). None of the respondents were located in the Free State, KwaZulu-Natal and in the Northern Cape. The exporters that did not respond are located in the following provinces: 65,38 per cent in Gauteng; 7,69 per cent in Limpopo; 3,85 per cent in KwaZulu-Natal; 3,85 per cent in the Western Cape and 19,23 per cent in Mpumalanga.

Secondly, the respondents had to specify the size of their production operations (i.e. farms). Three sectors were given, namely between 0 and 4 hectares, between 5 and 25 hectares, and between 26 and 100 hectares. Figure 5.2 indicates that most of the farms are between 5 and 25 hectares (42,86 per cent), with an even dispersion between 0 to 4 hectares and 26 to 100 hectares (28,57 per cent).

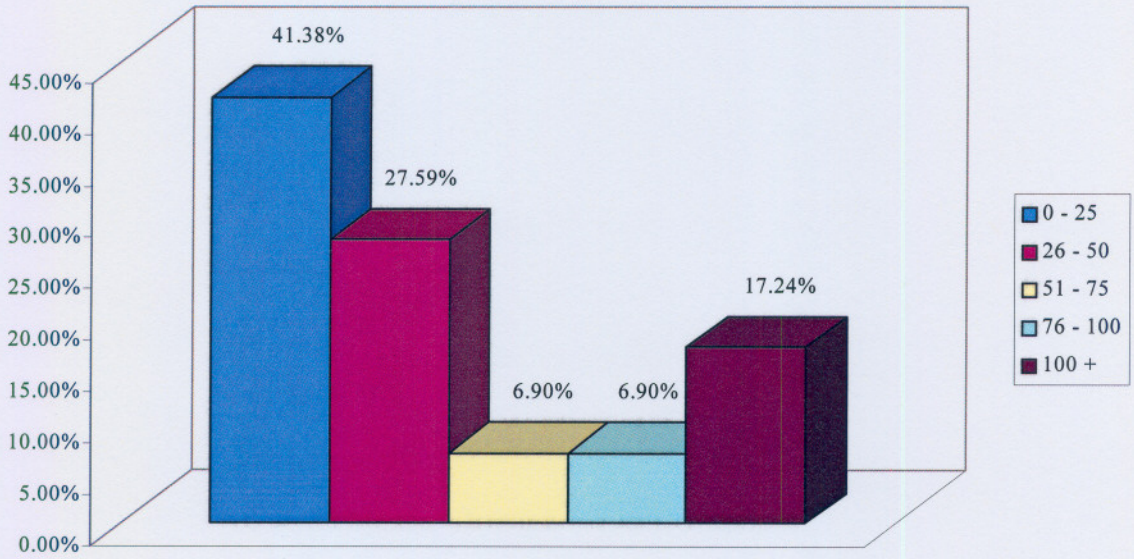
Figure 5.2: Size distribution of the floriculture farms in South Africa



Exports in horticulture are argued to increase employment (especially for women) and foreign trade in developing countries (see section 3.2). The number of male and female employees employed by the exporters signifies employment in the South African floriculture industry (see section 4.3.6).

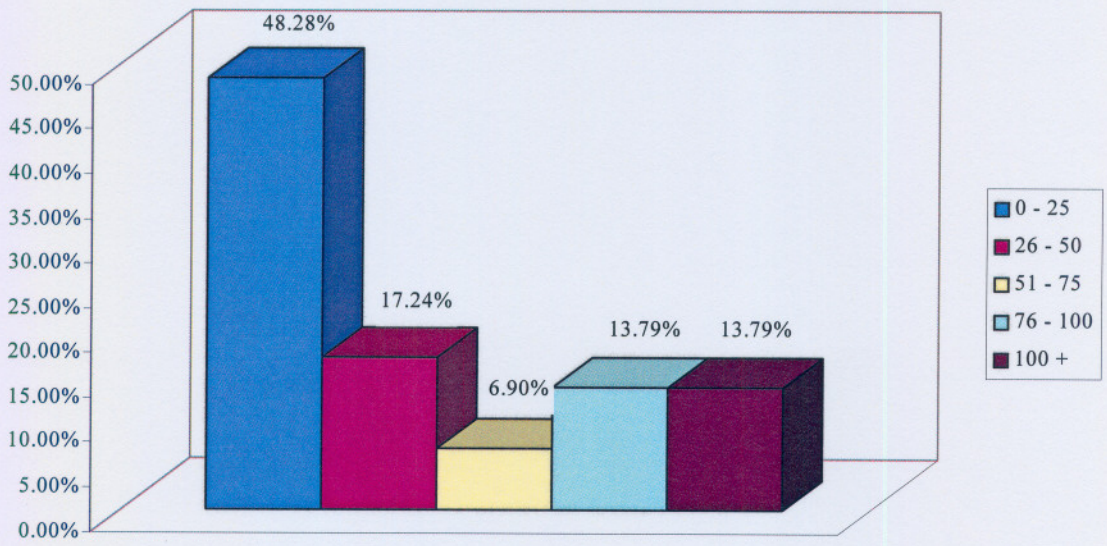
In the third question, the respondents had to specify the number of male employees currently employed by them. They had to choose from four categories: between 0 and 25, 26 and 50, 51 and 75, 76 and 100, and more than 100). It is clear from figure 5.3 that most of the respondents employ between 0 and 25 male workers (41,38 per cent), with the second largest number of male employees being between 26 and 50 (27,59 per cent). A few of the respondents (17,24 per cent) employ over a hundred male workers.

Figure 5.3: Size of the male labour force in South African floriculture



The fourth question set out to determine the number of female employees employed by the respondents. Again, the same categories were used (between 0 and 25, 26 and 50, 51 and 75, 76 and 100, and more than 100). The largest percentage (48,28 per cent) was in the category 0 to 25, with the second most between 26 and 50 employees (17,24 per cent). The rest were spread out between the other three categories. Figure 5.4 indicates the results.

Figure 5.4: Size of the female labour force in South African floriculture



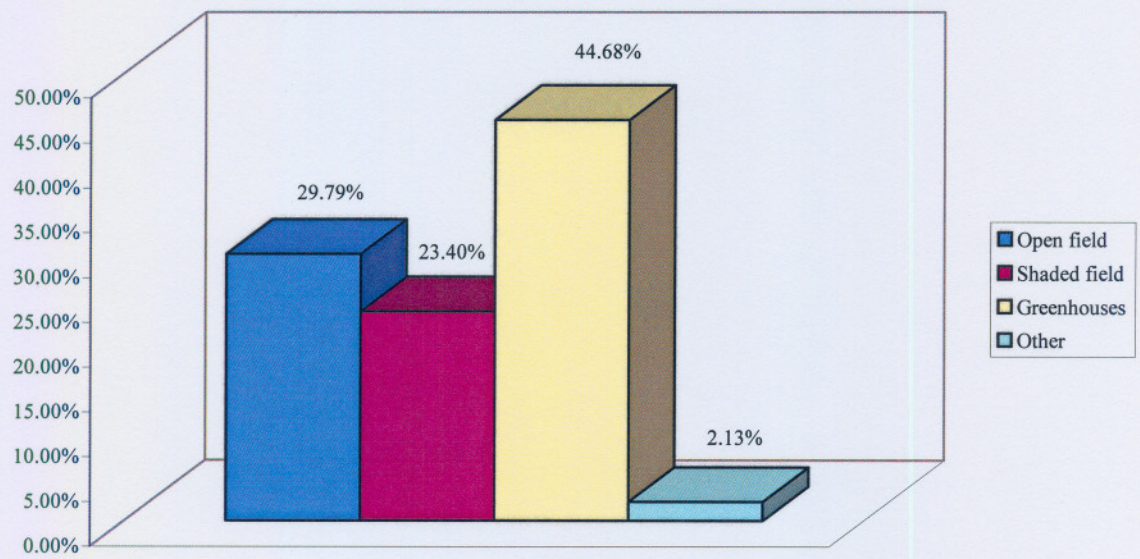
The ratio of male : female workers is 1:1,15. Therefore, for every one male employee there are 1,15 female employees.

5.3.2 Production methods

The method of production used has an influence on number of employees and some methods may even increase employment (see section 4.3.6).

In the fifth question, respondents were asked what type of production methods they use, i.e. open fields, shaded fields or greenhouses. Figure 5.5 illustrates the results. Most respondents use greenhouses for the production of their floricultural products (44,68 per cent), with the second most open fields (29,79 per cent) and the third most shaded fields (23,40 per cent).

Figure 5.5: Production methods used in South African floriculture

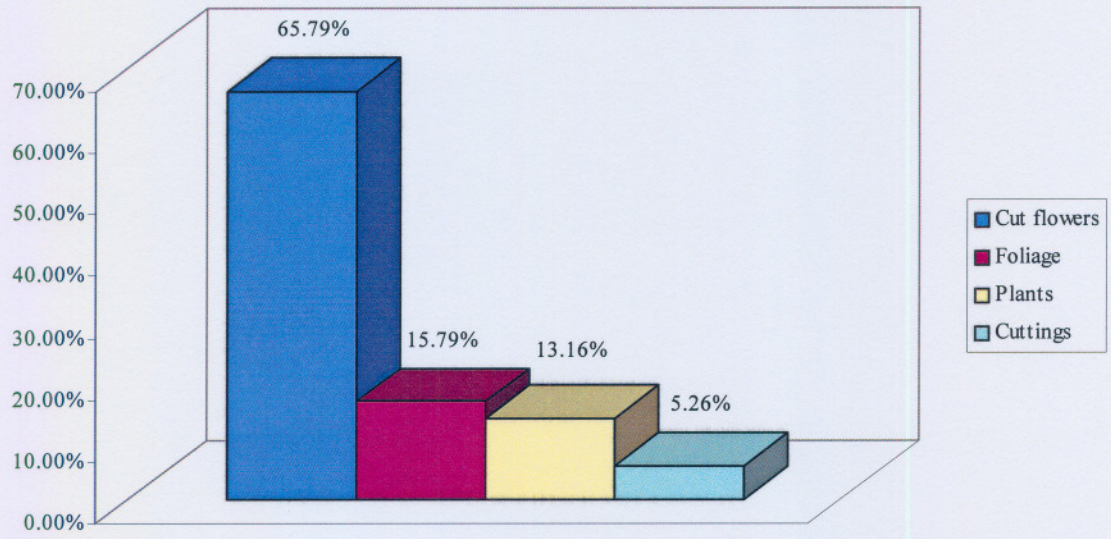


Another dimension of the GCC analysis is the input-output structure (section 2.3.2.7). This dimension is concerned with the types of products, processes and the actors involved in the production activities. The types and varieties (see section 4.2.7) of South African products (see section 4.3.7) are also relevant in terms of demand.

In the sixth and final question of this section, the respondents had to specify the type of products they produce. From the results indicated by figure 5.6 it appears that most of the exporters

produce cut flowers (65,79 per cent). The rest are spread between foliage (15,79 per cent), plants (13,26 per cent) and cuttings (5,26 per cent).

Figure 5.6: Type of products grown in South African floriculture



5.3.3 Markets

Through the second section of the questionnaire the exporters' involvement in international markets were assessed. Five questions were asked regarding the extent of their exports, access to the markets and their compliance with international programmes.

The number of years that the exporters have been exporting determines if they are established in the global market (section 2.2). In the first question the respondents had to indicated the number of years they have been exporting. The categories ranged from 0 to 5, 6 to 10, 11 to 15, 16 to 20, and more than 20. Figure 5.7 illustrates the results. From figure 5.7 it is clear that the majority of the respondents have only been exporting for the minimum amount of years, i.e. between 0 and 5 years (40,74 per cent), with the both the second (6 to 10 years) and the fourth (more than 20 years) categories in the second place (18,52 per cent). The other two categories also had the same amount of respondents (11,11 per cent).

Figure 5.7: Length of exporting experience in South African floriculture

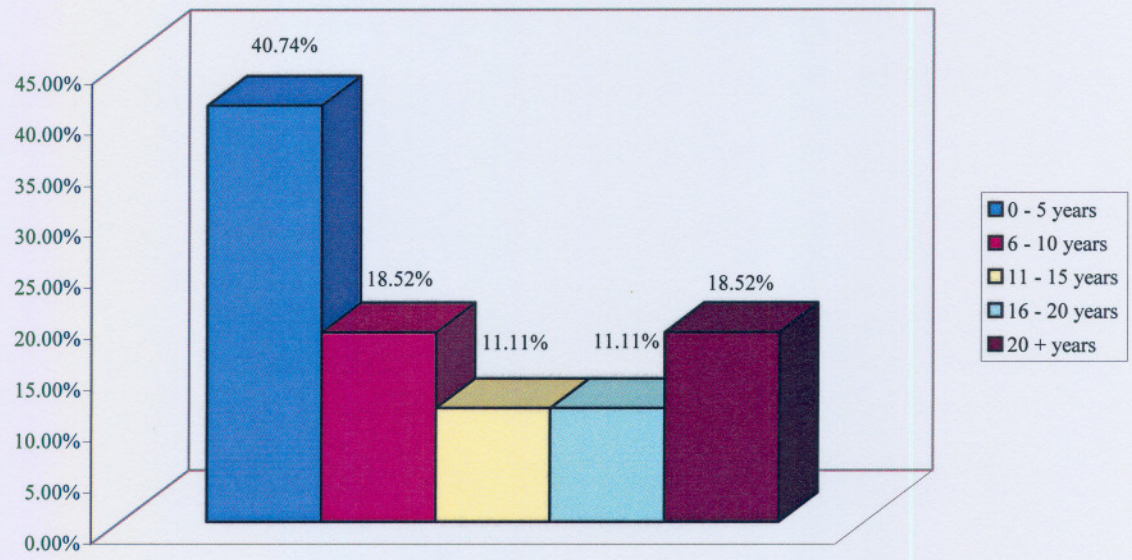
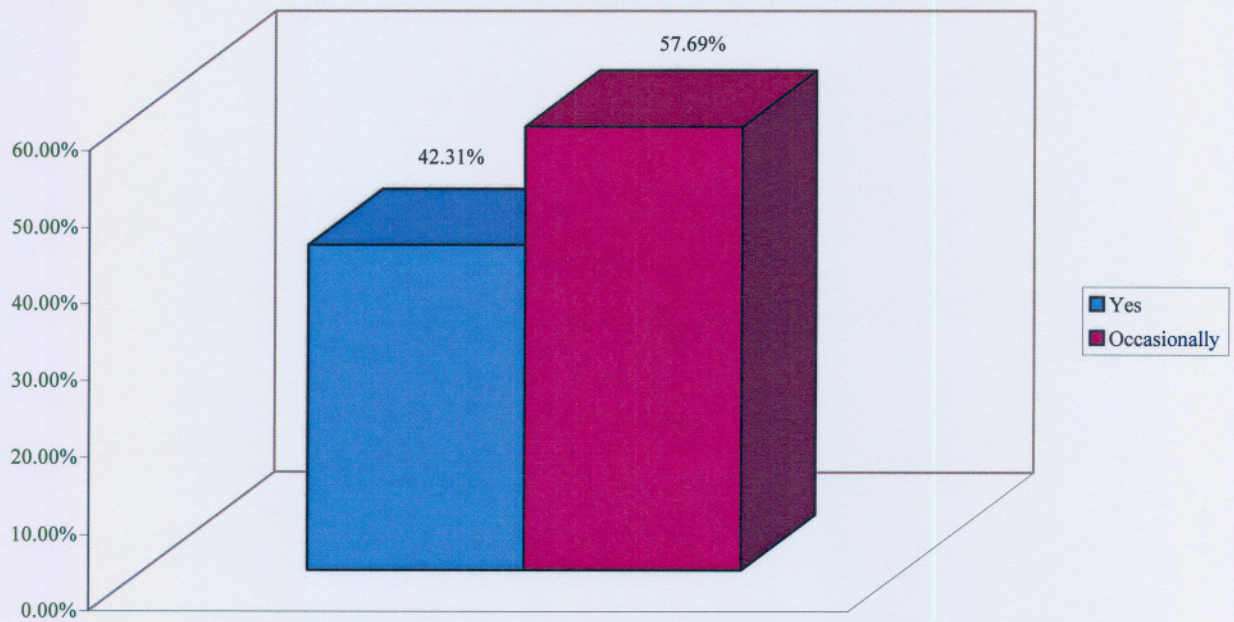


Figure 5.8: Commitment to continuous exporting in South African floriculture

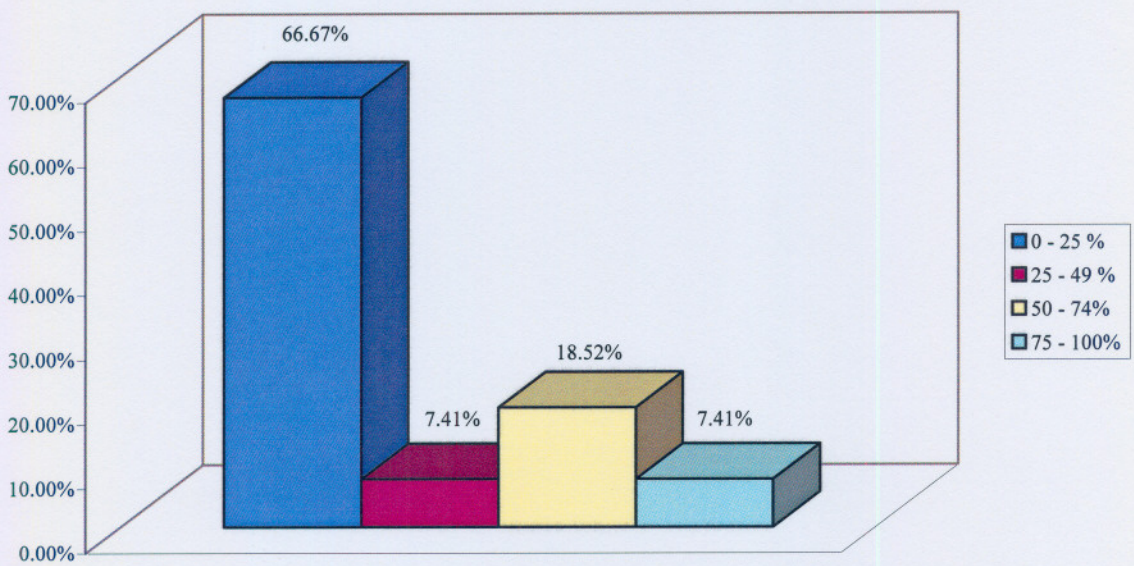


If the exporters export continuously throughout the year, it can be assumed that they are export-oriented. Hence, income generated through floriculture exports is sustainable (see section 3.2). The second question of this category assessed the respondents' commitment to export. The question asked whether the respondents exported continuously or only occasionally throughout

the year. The results are indicated in figure 5.8. Most of the respondents export occasionally (57,69 per cent), only 42,31 per cent export on a regular basis.

The percentage of sales exported also establishes the exporters' commitment to their participation in the international market. If only a small amount of total sales is exported, then foreign earnings decreases and so any opportunities for creating employment opportunities (see section 3.2). In the third question, the respondents had to indicate the percentage of their total sales being exported. The categories ranged from 0 to 24 per cent, 25 to 49 per cent, 50 to 74 per cent and 75 to 100 per cent. The results are shown in figure 5.9. The majority of respondents (66,67 per cent) only export 0 to 25 per cent of their total sales. Around 18,52 per cent of the respondents export 50 to 74 per cent. Only a small percentage (7,41 per cent) export more than 75 per cent of their production.

Figure 5.9: Percentage of sales exported in South African floriculture



From figure 5.9 it is clear that a significant part of the respondents export between 0 and 25 per cent of their sales (66,67 per cent). The rest are spread between the other three categories.

Institutional framework is another dimension of the GCC analysis. This dimension refers to the conditions under which a firm is included into a chain, the manner in which market access and information is obtained and all of the factors (both local and international) that shape the activities in the chains (see section 2.3.2.7). The next question asked how the respondents

became involved in the international markets, i.e. how they gained international market access. Several options were provided from which they had to choose. The options were via direct mail (orders) to their company, personal visits to the various import markets, flower auctions, an invitation by importers to visit their companies, trade fairs or via an MNO (multinational organisation to which they belonged). The results are shown in figure 5.10.

Figure 5.10: Modes of international market access in South African floriculture

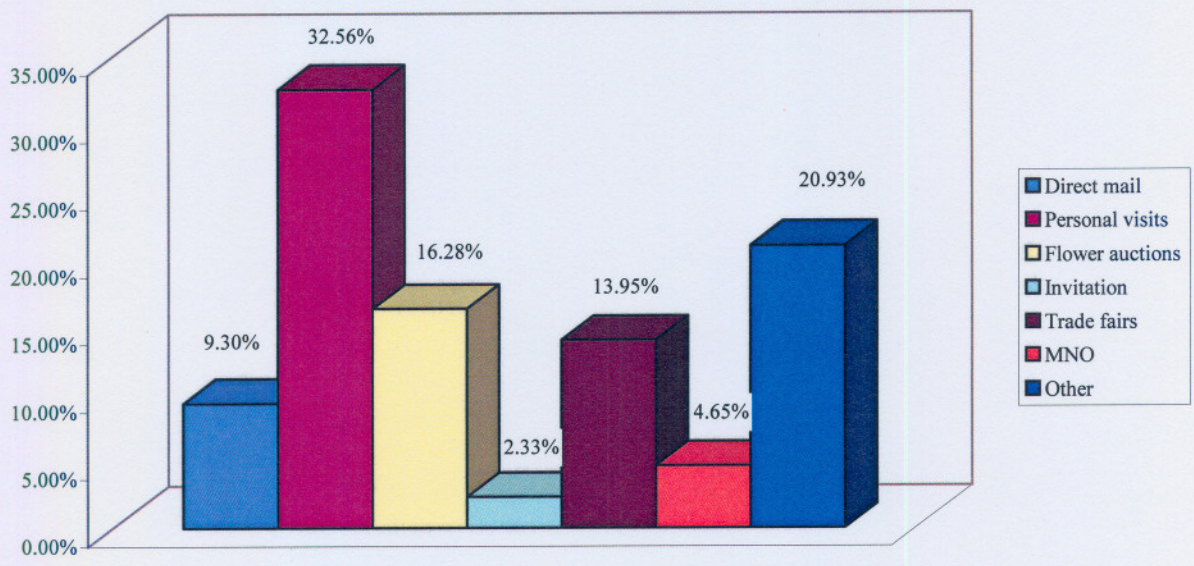
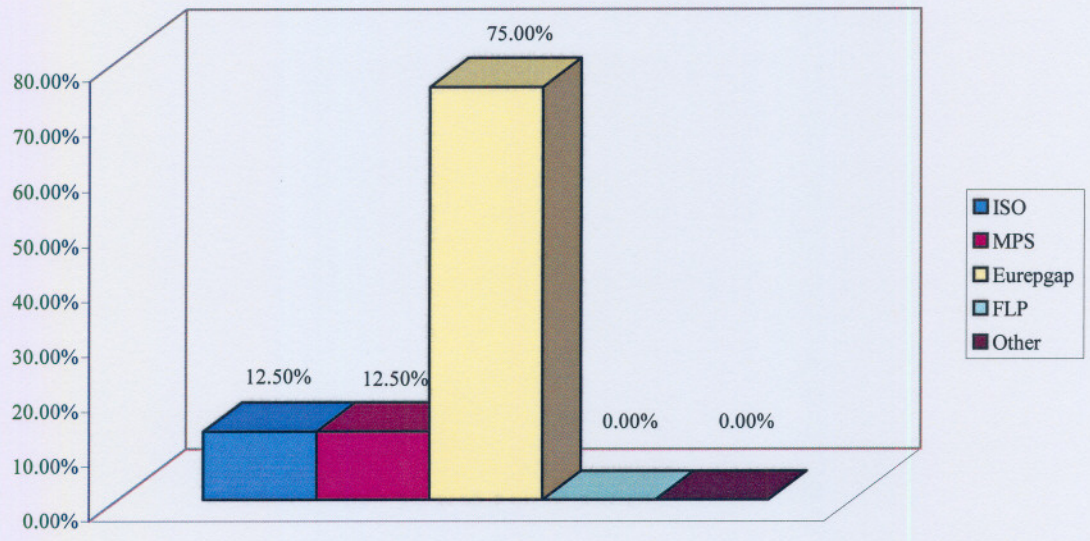


Figure 5.10 indicates that the largest amount of respondents gained international market access by personally visiting the import markets (32,56 per cent), with the second largest group gaining market access through other means that was not mentioned in the questionnaire (20,93 per cent). The rest gain market access through flower auctions (16,28 per cent), trade fairs (13,95 per cent) and direct mail (9,30 per cent).

One of the methods of gaining a competitive advantage and increasing overall competitiveness is to participate in an international floricultural programme (see section 4.2.6.1). The fifth and final question of this section asked the respondents which international programmes they formed part of or participated in. The following programmes were provided: ISO, MPS, EUREPGAP and FLP. Figure 5.11 illustrates the results. The majority of respondents participate in the EUREPGAP programme (75 per cent). A few of the respondents belong to the ISO and MPS programmes (12,50 per cent). None of them form part of the FLP programme. It should be noted that 73 per cent of the respondents do not participate in any international floriculture programme.

Figure 5.11: Participation in international floriculture programmes



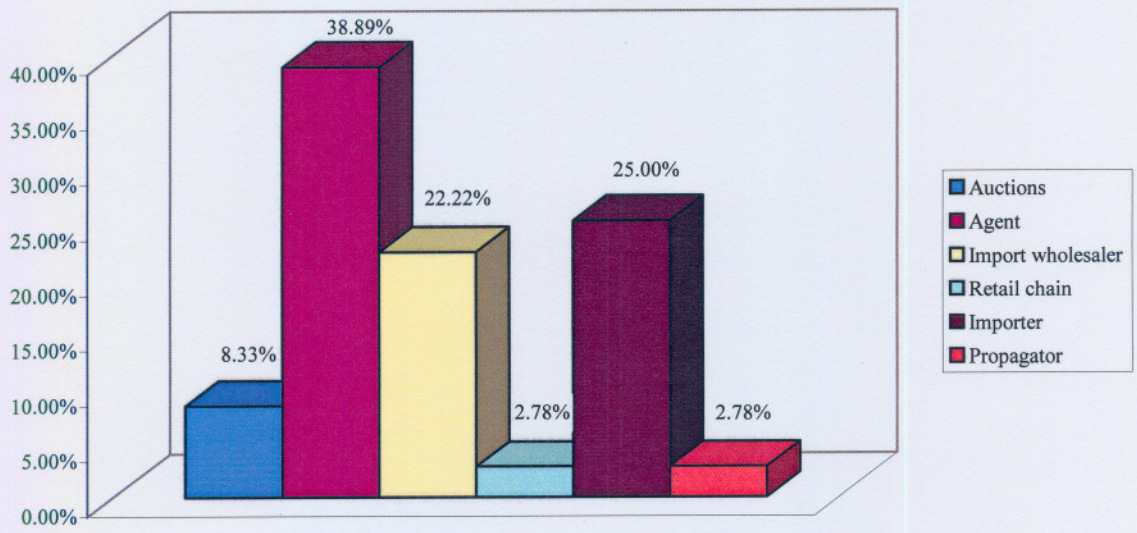
5.3.4 Distribution

In the third section of the questionnaire the respondents had to answer questions regarding the distribution of their exports, i.e. the manner in which they are linked with their international buyers (distribution channels). Important aspects surrounding these channels, such as factors that may hinder the buyers to import the respondents' products and the degree of trust and cooperation in the chains, were also assessed.

Geographical coverage also entails the distribution networks of the GCC chain. Therefore, how the floricultural products enter their export destination and the immediate link to the global market form part of this (see section 4.2.5 and section 2.3.2.7).

In the first question the respondents had to specify the manner in which their products enter their export destinations – in other words the party that forms the link into their export markets. They had to specify one or more of these options, via one of the auctions, an agent, an import wholesaler, a retail chain, an importer or a propagator. Figure 5.12 indicates the results of this question.

Figure 5.12: Methods of international market entry for South African floriculture



It is clear from figure 5.12 that most of the respondents' products enter their export destinations via an agent (38,89 per cent), with the second largest through an importer (25 per cent) and the third largest via an import wholesaler (22,22 per cent).

The second question determines the immediate link in the respondents' distribution channels. This link could be either local or international. The various options were a freight forwarder, an export agent, a foreign importer, a foreign wholesaler, a retail chain or a party in their MNO. Figure 5.13 illustrates the results. It is clear that most of the respondents use the services of domestic export agents (37,50 per cent) and freight forwarders (31,25 per cent). Some of the respondents use the services of foreign importers (21,88 per cent) and wholesalers (9,38 per cent). None of them export directly to a retail chain or, if they form part of an MNO, to a party in the organisation.

Figure 5.13: Immediate links in the floriculture distribution network

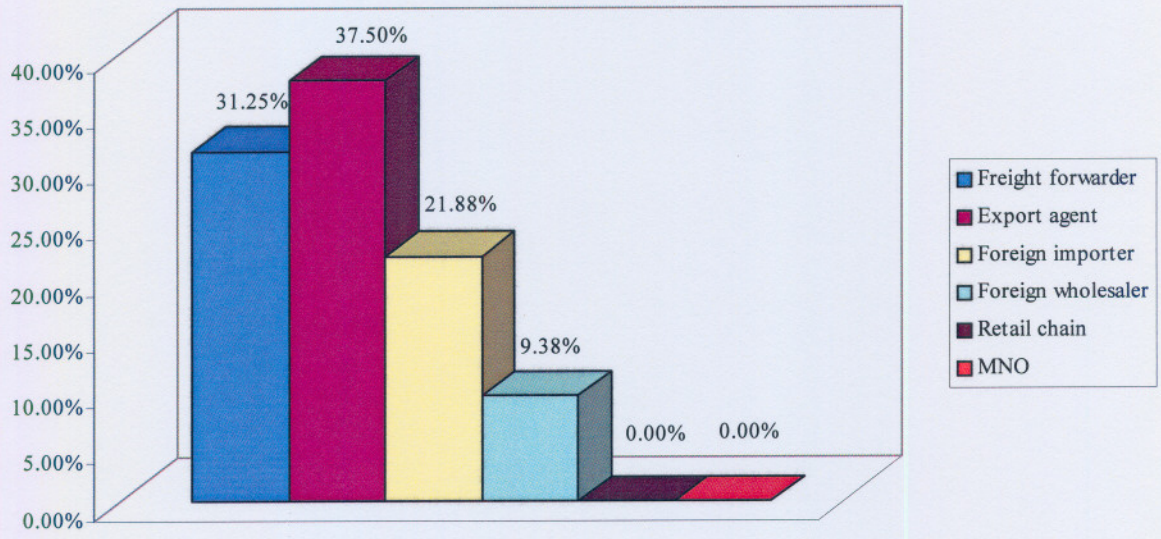
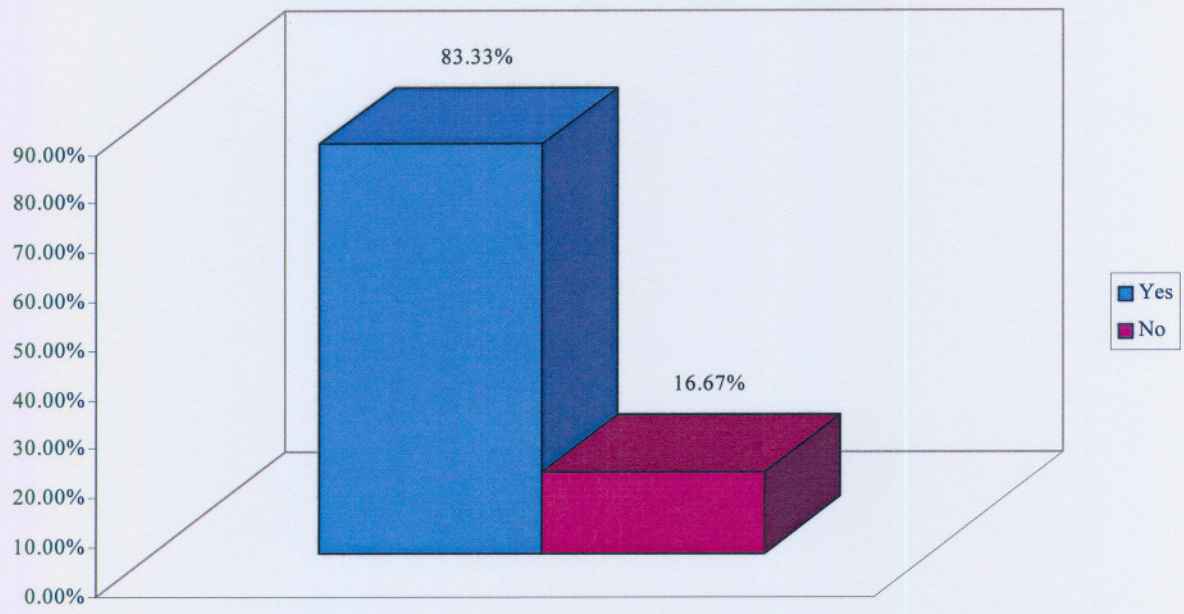


Figure 5.14: The South African floriculture industry's satisfaction with the distribution chain

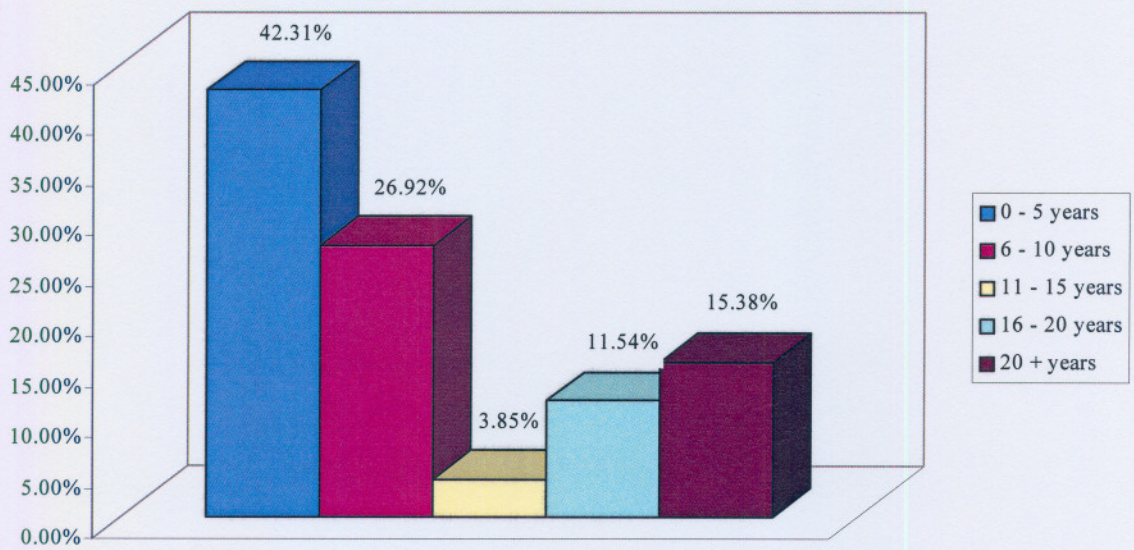


The efficiency of the distribution network (see section 4.3.12) is determined through the exporters' satisfaction with their distribution channels. It also provides the status of the development of South Africa's distribution channels (see section 4.2.3). In the third question the respondents had to indicate whether they were satisfied (yes) or not (no) with the distribution channel to which they belonged. Figure 5.14 shows the results. Figure 5.14 indicates that almost

all of the respondents (83,33 per cent) were satisfied with the manner in which their products are being distributed. Only a small percentage (16,67 per cent) were dissatisfied.

The number of years that the exporters form part of their distribution chains determines the durability of the relationships in those chains, i.e. whether they are long-term or short-term relationships (see section 3.3.1.5 ii e). In the fourth question the respondents had to indicate the number of years they have been part of the channel that distributes their products. There were five categories, namely 0 to 5 years, 6 to 10 years, 11 to 15 years, 16 to 20 years, and more than 20 years. Figure 5.16 shows the categories chosen by the various respondents. Most of the respondents were part of the chains for the category 0 to 5 years (42,31 per cent), with the second largest percentage in the second category of 6 to 10 years (26,92 per cent). The third largest percentage is for respondents who have been part of their distribution chain for more than 20 years (15,38 per cent).

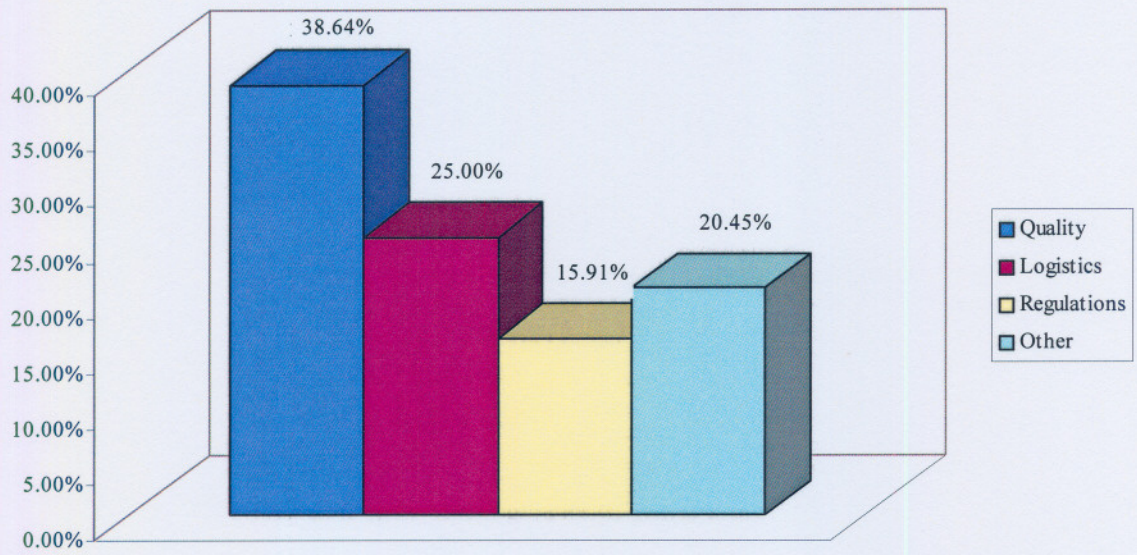
Figure 5.15: Length of participation in the distribution chain



Barriers to entry form part of the GVC analysis (see section 3.3.1.3 and 2.3.1.5a). The requirements (see section 4.2.6) set by buyers or importers could be barriers to entry, which may result in the exporters being excluded from their chains. This also explains the reason why some win and others loose from participating in globalisation (section 2.3.1). One of the requirements may be quality, which is an important aspect in the floriculture industry and should therefore be of relevance to the exporters of South African floricultural products (section 4.3.2).

The sixth question assessed which factors might cause the respondents' trade partners not to purchase their products, i.e. factors that hinder exports. The factors they were able to choose from were poor quality, unreliable logistics, non-compliance with regulations and a category marked "other". Figure 5.16 illustrates the results. Figure 5.16 indicates that the majority of respondents (38,64 per cent) might be excluded form the chain of distributions if the quality of their floricultural products were poor, following this is unreliable logistics (25 per cent). The rest are spread between regulations (15,91 per cent) and other (20,45 per cent).

Figure 5.16: Perceived obstacles to floriculture exports from South Africa



In the sixth question the participant had to reveal whether (yes) or not (no) they form part of more than one distribution chain, thereby measuring the exclusivity of the distribution chains. Figure 5.17 illustrates the results by indicating that 53,85 per cent of the respondents form part of more than one distribution chain. Around 46,15 per cent are part of only one distribution chain.

Figure 5.17: Number of distribution chains used

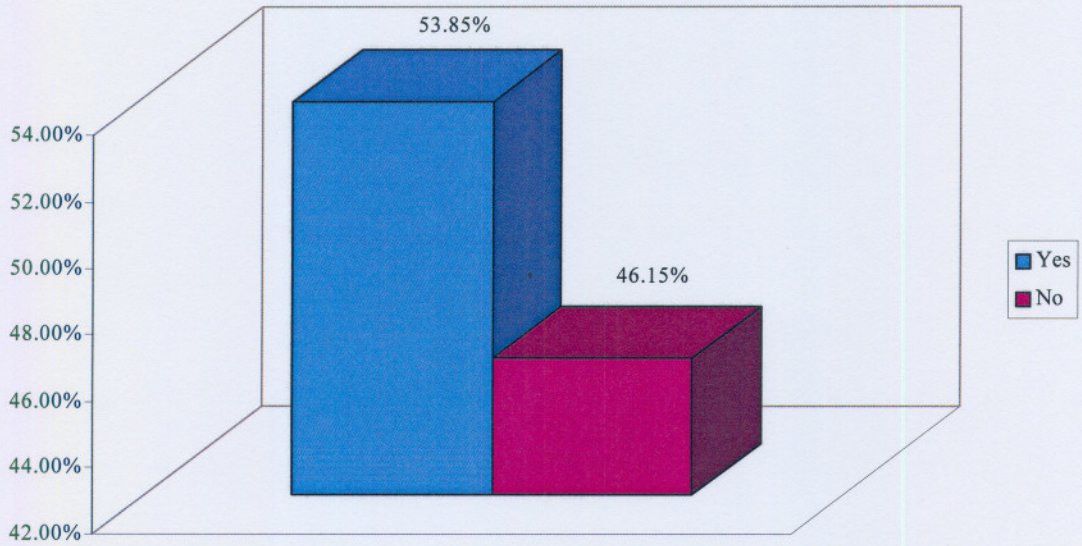
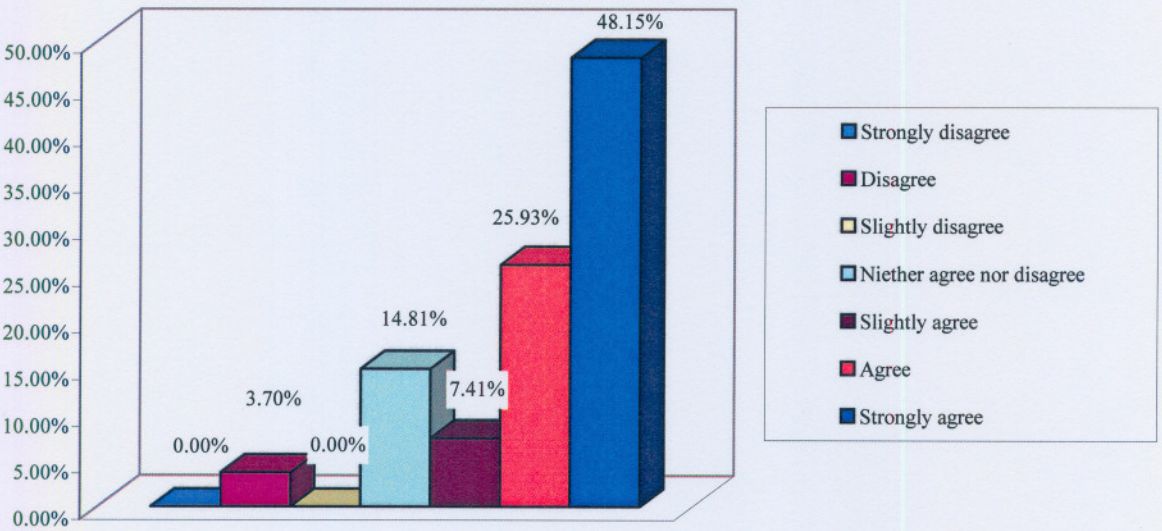


Figure 5.18: There is a strong degree of trust and cooperation in my distribution channel



An aspect of the GVC analysis is systematic efficiency, which can be measure through the degree of trust and cooperation in the distribution chain (section 2.3.1.5c). In the seventh and final question of this section the respondents had to indicate whether there is a strong degree of trust and cooperation in their distribution channels. The question was asked in the form of a scale, which ranged from 1 to 7. One indicated strong disagreement and 7 indicated strong agreement with the statement. The majority of respondents (48,15 per cent) strongly agree with

the statement. 25,93 per cent of the respondents agreed and 14,81 per cent were impartial to the statement. Only 3,70 per cent disagreed with the statement. Figure 5.18 illustrates the results.

5.3.5 Innovation

The fourth section evaluated the importance of information, research and development and innovation to the respondents. In essence, it evaluated both their competitiveness and competitive advantages.

5.3.5.1 Information, research and innovation

The first part of this section was asked in the form of a scale, which ranged from 1 to 7. The respondents had to indicate their degree of agreement with the statements made (1 indicated strong disagreement and 7 indicated strong agreement). The statements were as follows:

- Current market information is important
- Research and development is important for the South African floriculture industry
- I undertake research and development for the advancement of my company
- Innovation in the South African floriculture industry is important for its competitiveness
- My firm undertakes innovation in order to gain competitiveness

Section 5.4.4.1 was tested with Cronbach's coefficient alpha. The Cronbach alpha (SAS manual, 1999) can be defined as:

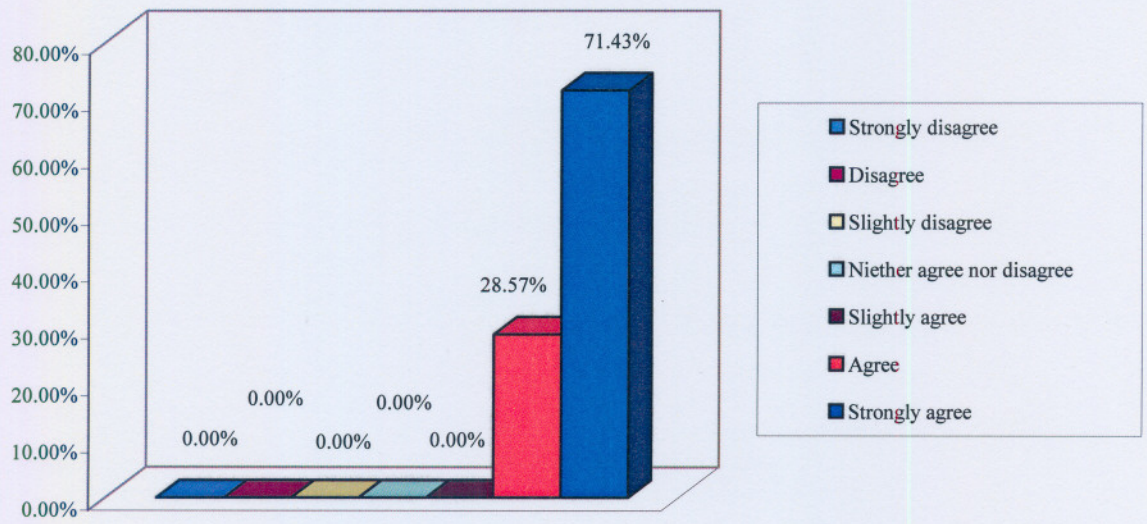
> Interrelated items may be summed to obtain an overall score for each participant. Cronbach's coefficient alpha estimates the reliability of this type of scale by determining the internal consistency of the test or the average correlation of items within the test.

The larger the overall alpha coefficient, the more likely those items are to contribute to a reliable scale. Nannally (cited in the SAS manual, 1999) suggests 0,70 as an acceptable reliability coefficient. Smaller reliability coefficients are seen as inadequate (SAS manual, 1999).

The Cronbach coefficient alpha for the first part of this section is 0,834801, which indicates that the scale is reliable. In other words, the respondents understood the statements correctly.

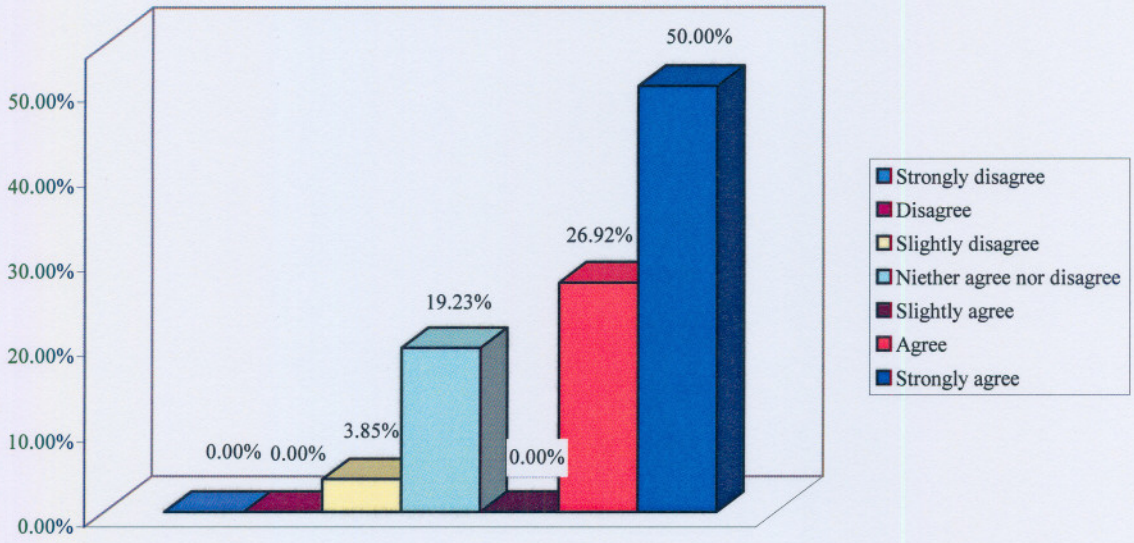
Current market information is vital for any floriculture exporter, as it provides insight into the products and varieties in demand (see section 4.2.7), consumption patterns (see section 4.2.8), prices (see section 4.2.11) and marketing strategies (see section 4.3.10). It is also one of the areas where problems are experienced (see section 4.3.12). The first statement was that current market information is important for the floriculture industry in South Africa. The respondents felt that this statement is true, as 71,43 per cent strongly agreed and 28,57 per cent agreed. Figure 5.19 shows the respondents' reactions.

Figure 5.19: Current market information is important



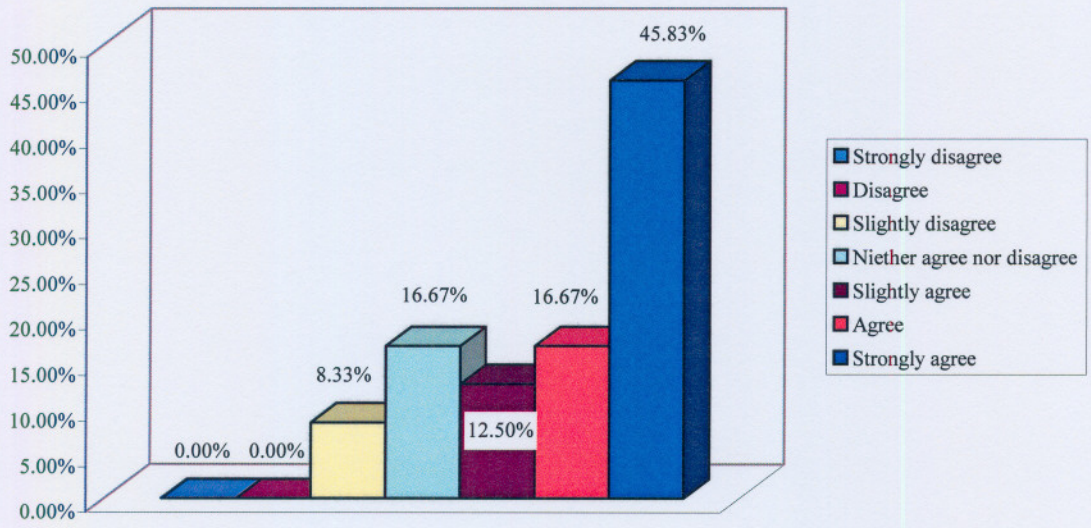
Research and development promotes competitiveness for any industry. Due to the high number of competitors in the world floriculture market (see section 4.2.4.1), it is important for the South African floriculture industry to continuously engage in research and development activities in order to enhance the exporters' competitiveness (see section 2.1.3.7, section 4.3.4 and section 4.3.12). In the second statement, as illustrated in figure 5.20, the respondents had to indicate whether they felt that research and development is important for the South African floriculture industry. The largest group of respondents (50 per cent) strongly agreed with this statement. Around 26,92 per cent of the respondents agreed and 19,23 per cent were impartial. Only 3,85 per cent disagreed that research and development is important.

Figure 5.20: Research and development is important for the South African floriculture industry



As indicated in the question above, the exporters' themselves also need to conduct research and development activities for their own companies' competitiveness (see section 4.3.4). The third statement stated that the respondents undertake research and development for the advancement of their own companies. As shown in figure 5.21, most of the respondents (45,83 per cent) strongly agreed with the statement. The rest were spread between the other options, i.e. agree (16,67 per cent), slightly agree (12,50 per cent), neither agree nor disagree (16,67 per cent) and slightly disagree (8,33 per cent).

Figure 5.21: I undertake research and development for the advancement of my company



Innovation (the act of introducing something new), together with research and development is fundamental for the South African floriculture industry to be able to compete successfully in the global market (see section 2.1.3.7). Innovation is usually the result of research and development efforts. In the fourth statement, the respondents had to express their opinion on whether innovation in the South African floriculture industry is important. The majority of respondents (75 per cent) expressed strong agreement with the statement. The rest were spread among the other options. Figure 5.22 illustrates the results.

As indicated in the question above, the exporters themselves also need to be innovative in their own operations in order to enhance their own companies' competitiveness (see section 2.1.3.7). In the final statement of the first part of this section, the respondents had to indicate if they undertake innovation in their own companies in order to gain or increase their competitiveness. The results (figure 5.23) show a mixture of answers. Around 42,86 per cent strongly agrees, 25 per cent agreed, 14,29 per cent were impartial, 7,14 per cent slightly agreed, 7,14 per cent disagreed and 3,57 per cent slightly disagreed.

Figure 5.22: Innovation in the South African floriculture industry is important for its competitiveness

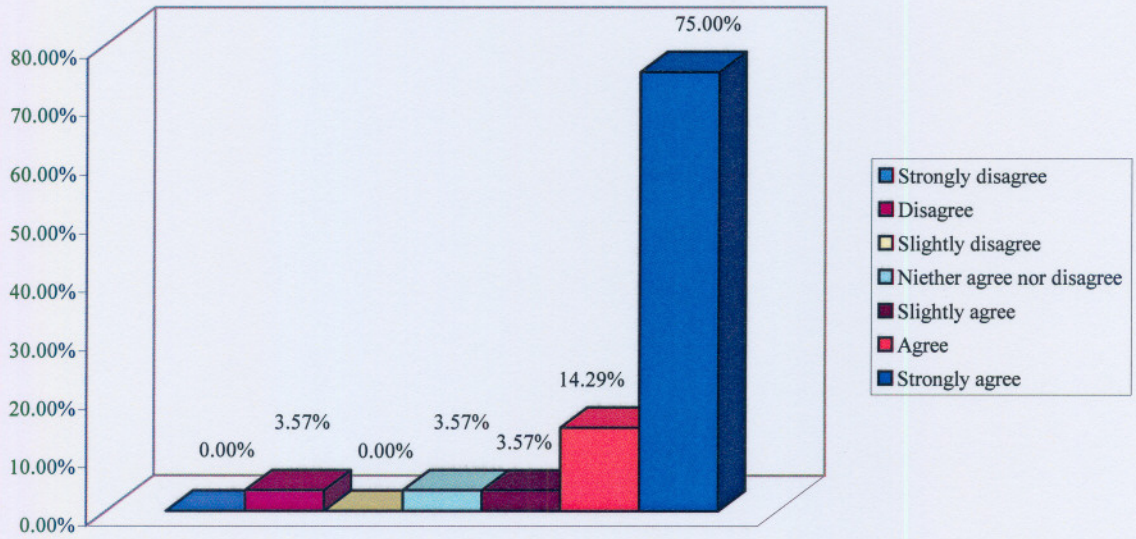
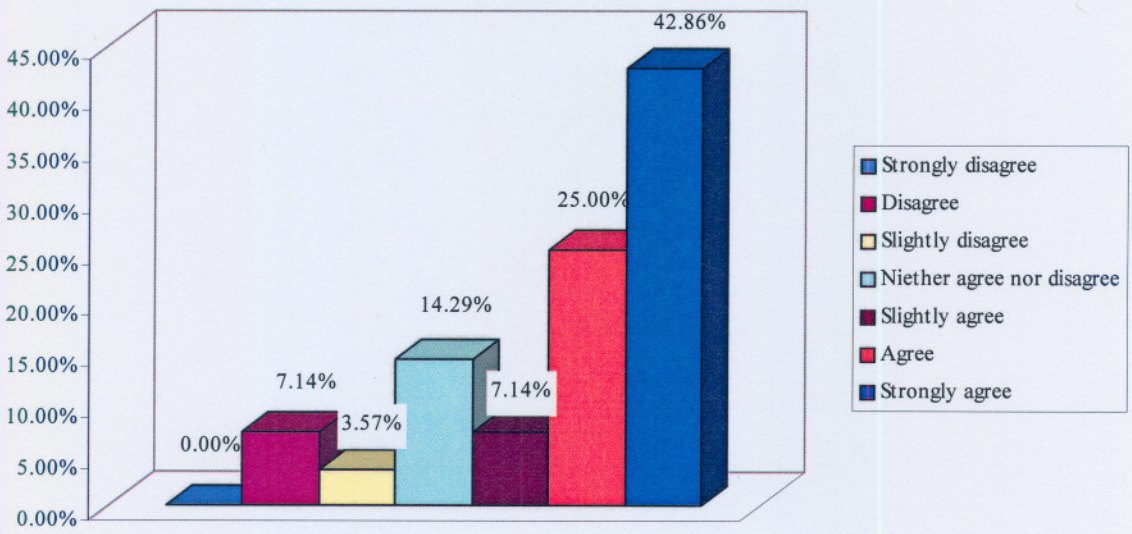


Figure 5.23: My firm undertakes innovation in order to gain competitiveness



5.3.5.2 Information, trends and value

The method in which the exporters obtain market information forms part of the institutional framework of the GCC analysis (see section 2.3.2.7). It also has an influence on their marketing

strategies (see section 4.3.10). In the South African floriculture industry, problems are experienced with market information (see section 4.3.12).

In the first question of the second part of this section, the respondents had to specify the manner in which they obtain the market information, via electronic databases and the Internet, the parties in their distribution channels, the government, SAFEC or other associations, trade fairs, personal contacts outside their companies or published sources (e.g. books, annual reports, analyst reports etc.). Figure 5.24 illustrates the results. Most respondents (24,14 per cent) obtain their market information via electronic databases and the Internet, with the second most (22,99 per cent) through personal contacts. Other important sources are via the parties in their distribution channels (17,24 per cent), published sources (16,09 per cent) and trade fairs (12,64 per cent). Only a small percentage use SAFEC or other associations (4,60 per cent) and the government (2,30 per cent) as sources for their market information.

It is important in this competitive industry that exporters adjust their production according to market trends (see section 4.2.10). In the second question the respondents had to indicate whether (yes) or not (no) they adjust their production according to the market trends (e.g. produce pastel coloured flowers when pastel colours are in demand). Some of the exporters provided examples of how they adhere to market trends. They for example, follow the fashion colours and varieties in demand, change percentage of colours grown, breed stronger varieties, cater for St. Valentine's Day, produce various varieties and colours and change the colour, bud size and length of the products. Figure 5.25 shows the results. The majority of respondents (51,72 per cent) indicated that they do adjust their production according to the trends in the market and 48,28 per cent indicated that they did not.

Figure 5.24: Methods of obtaining market information in South African floriculture

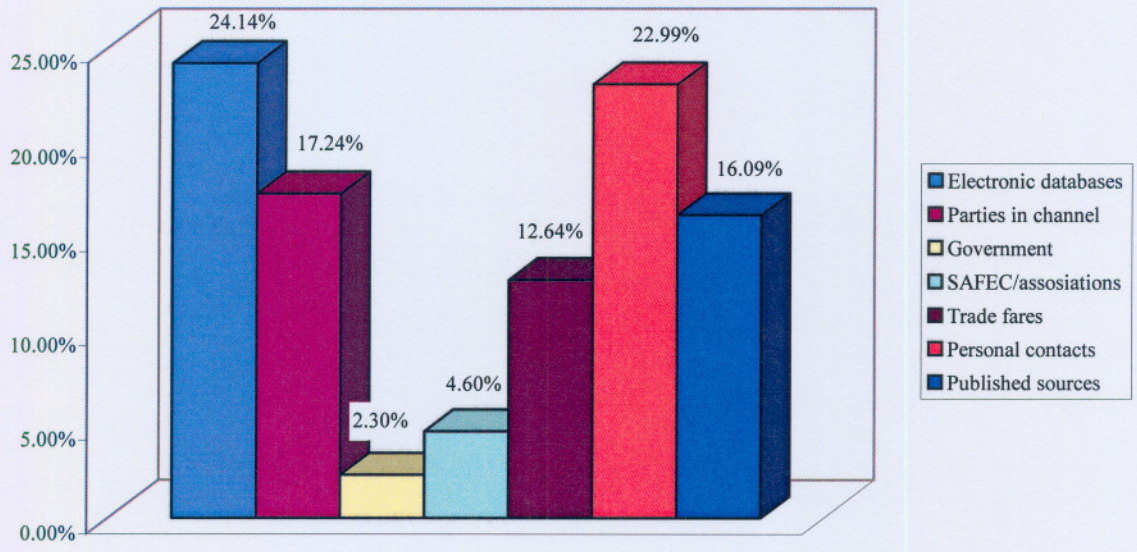
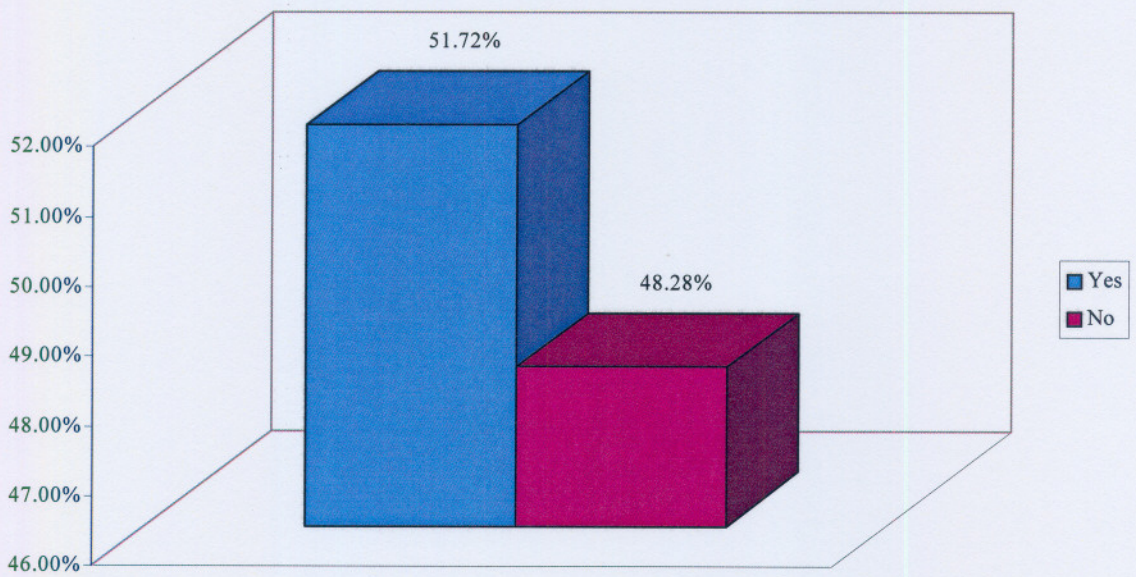


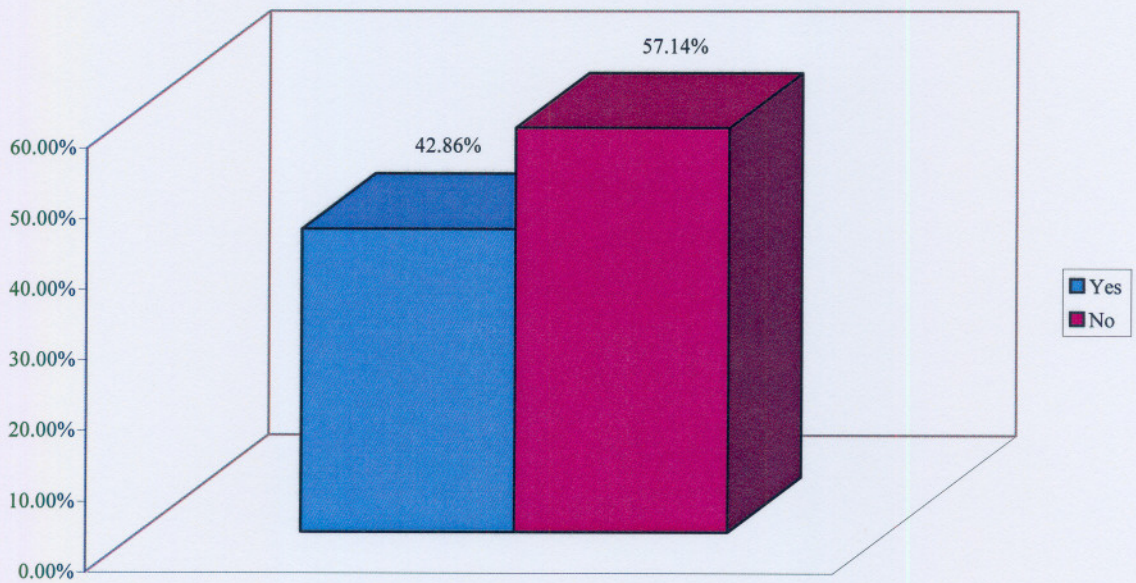
Figure 5.25: Do you adjust your production according to market trends?



Both the GCC and the GVC analysis emphasize the importance of upgrading, as a means for exporters to gain a competitive advantage (or improve their competitive position) and achieve sustainable income (see section 2.3.2.14 and section 2.3.1.7). Upgrading, i.e. adding value to the organisation, can be done in terms of their products or processes (activities).

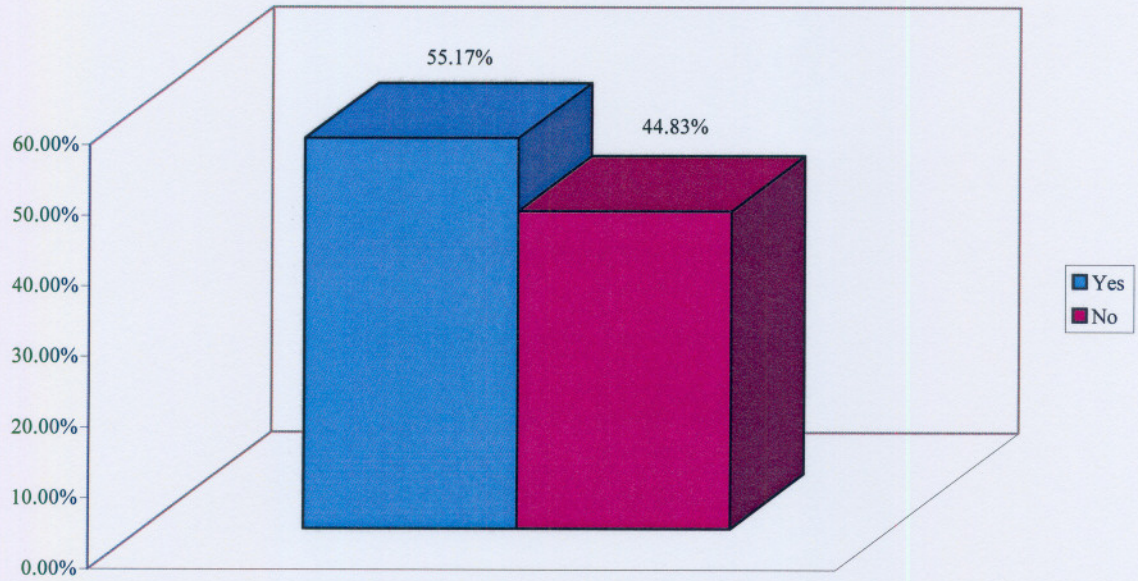
In the third question, the respondents had to indicate whether (yes) or not (no) they add value to their products in order to gain a competitive advantage (e.g. production of new varieties). They provided examples of how they added vale to their products. Some of the exporters use their brand name and others only produce the best quality. Figure 5.26 illustrates the results. Most of the respondents (57,14 per cent) indicated that they do not add value to their products, whereas 42,86 per cent indicating that they do.

Figure 5.26: Do you add value to your products?



In the fourth question the respondents had to indicate whether (yes) or not (no) they add value to their activities in order to gain a competitive advantage (e.g. provide certain types of packaging). They provided examples of how they added vale to their activities. Some of the exporters pack the products according to their customers' requirements and others have their own patent on their packaging methods. Figure 5.27 depicts the results. Most of the respondents (55,17 per cent) indicated that they do add value to their activities, whereas 44,83 per cent indicated that they do not.

Figure 5.27: Do you add value to your activities?



As indicated in the previous questions of this section, competitive advantage is vital for exporters to succeed in this industry. In other words, how producers differentiate themselves from the fierce competition (see section 4.2.4.1 and section 4.3.5) will determine if they will be able to maintain a sustainable income (see section 2.3.2.14 and section 3.2) and create employment (i.e. be winners in the globalisation process) (see section 4.3.6, section 3.2 and section 2.2.4)

The fifth question determined whether the respondents have competitive advantages in terms of their production processes, products, organisational functions or their distribution channels. From figure 5.28 it is clear that the majority of respondents (50 per cent) feel that they have a competitive advantage in terms of their products, with the second most in terms of their organisational functions (27,78 per cent). The rest are spread between their distribution channels (13,89 per cent) and their production processes (8,33 per cent).

It is important that the South African exporters conduct research on their international competitors' operations, as innovation means very little if the exporters' competitors innovate before they do (see section 2.1.3.7). In the final question of this section, the respondents had to indicate whether (yes) or not (no) they conduct research on their competitors' operations and products. Around 55,17 per cent indicated that they do evaluate their competitors and 44,83 per cent do not. Figure 5.29 illustrates the results.

Figure 5.28: Perceived areas of competitive advantage of South Africa's floriculture industry

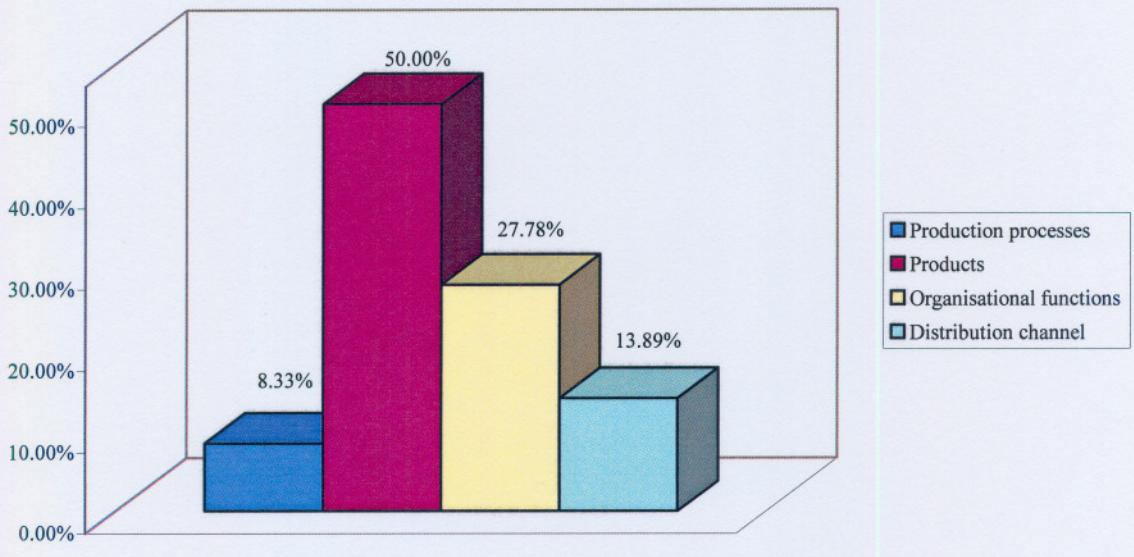
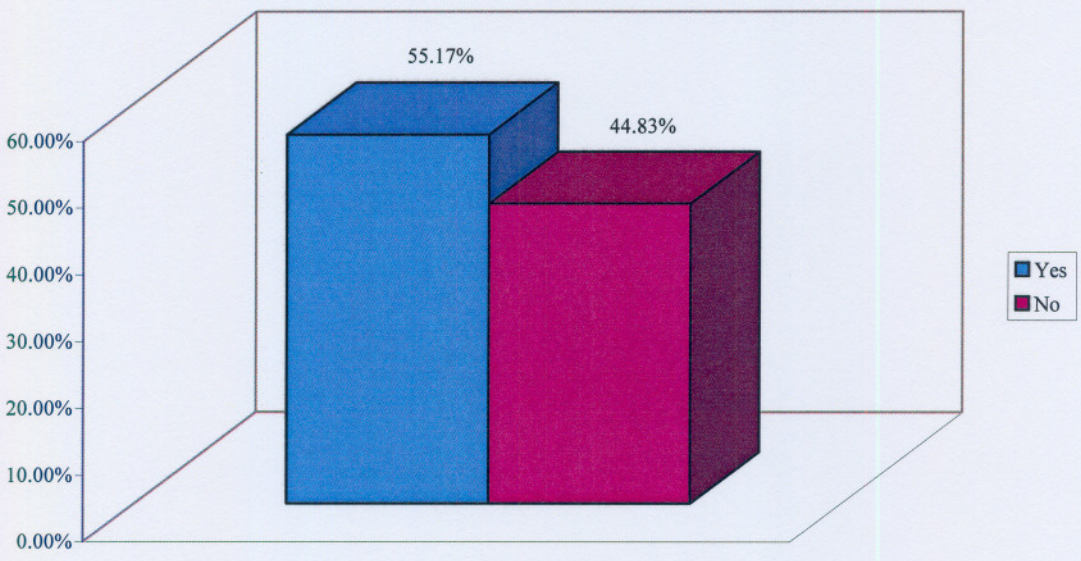


Figure 5.29: Do you conduct research on your competitors' operations and products?



5.3.6 Governance

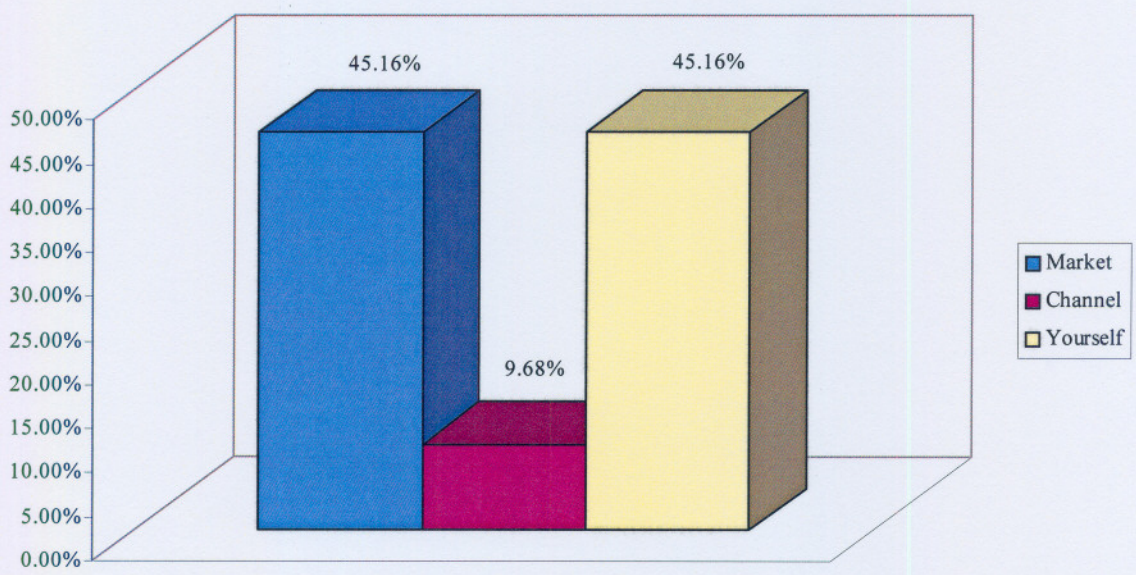
The fifth section aims to determine the governance structures in the international relations (global linkages) of the South African floriculture respondents.

5.3.6.1 Parameters

The first part of this section assesses who (i.e. an organisation) or what (i.e. the market) determines the parameters in terms of the types of products (see section 4.2.7 and section 4.3.7) the exporters produce, the processes (see section 4.3.6) they use in production and the logistic arrangements (see section 4.3.9) of the floricultural exporters (see section 3.2.10 and section 2.3.1.5b).

The first question assesses who or what determines the type of products that the respondents produce – the market, the parties involved in the distribution channel, or the respondents themselves. Figure 5.30 provides the results. An equal percentage (45,16 per cent) is determined by the market and by the respondents themselves. The parties in their distribution channel determine only 9,68 per cent of the types of products produced by the respondents.

Figure 5.30: Who or what determines the type of products that you produce?



The second question assesses who or what determines the type of processes that the respondents use in production – the market, the parties involved in the distribution channel, or the respondents themselves. Figure 5.31 illustrates the results. The respondents mostly determine the type of production processes they use themselves (75 per cent). Around 18,75 per cent are determined by the parties in their distribution channel determines and only 6,25 per cent by the market.

Figure 5.31: Who or what determines the type of processes that you use in production?

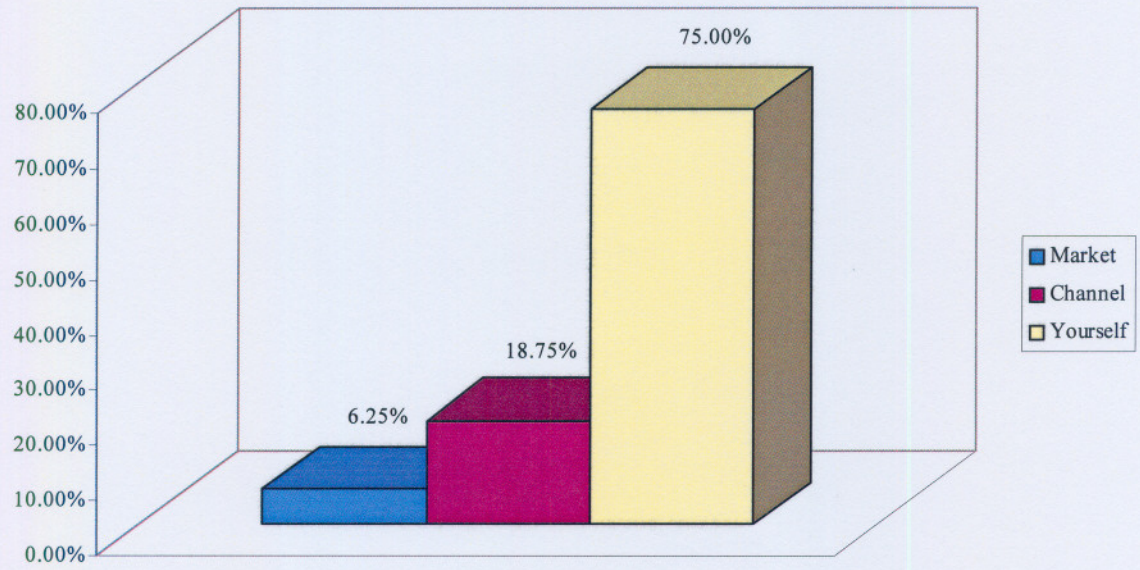
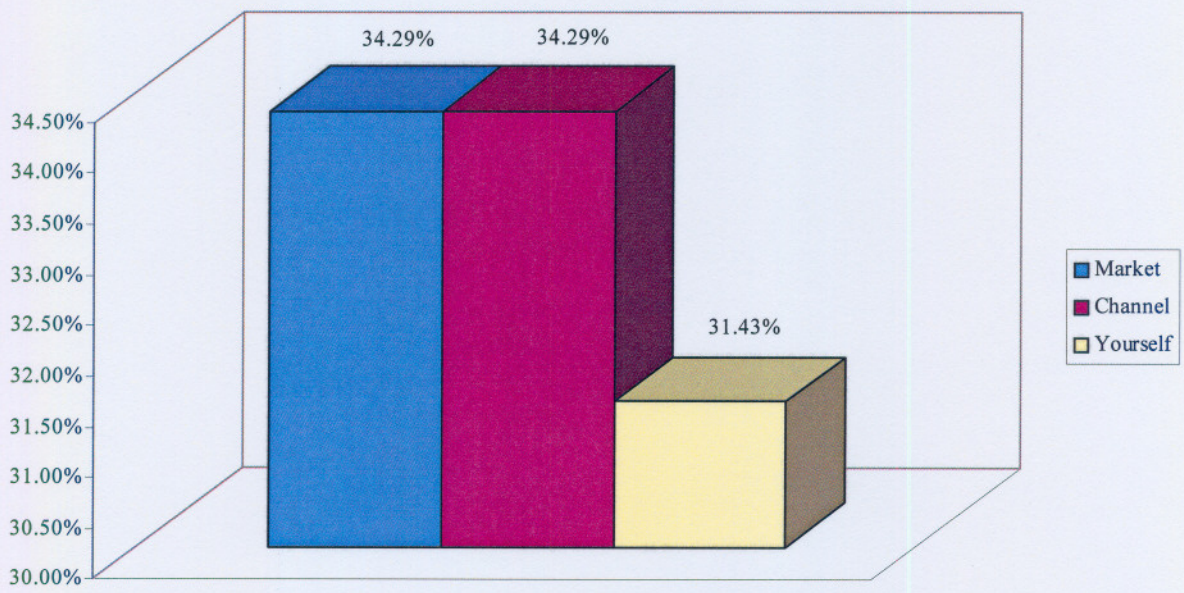


Figure 5.32: Who or what determines the logistical arrangements (how much and when to export)?



The third question assesses who or what determines the logistical arrangements (e.g. how much and when to export). It could be determined by the market, the parties involved in the distribution channel, or by the respondents themselves. Figure 5.32 illustrates the results. An equal percentage (34,29 per cent) is determined by the market and by the parties in the

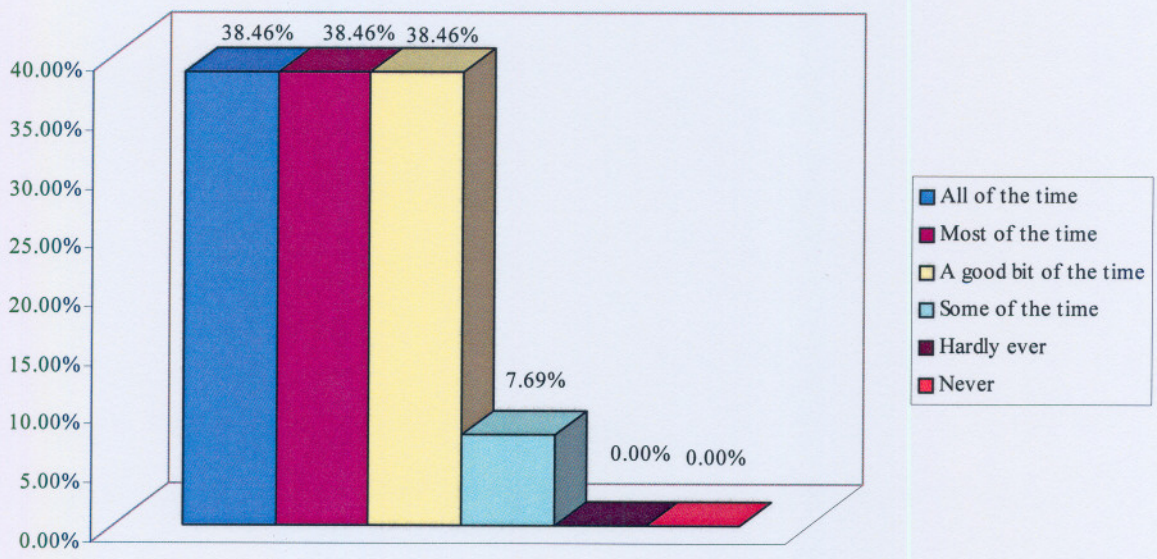
respondents' distribution channels. The respondents determine 31,43 per cent of the logistical arrangements themselves.

5.3.6.2 Governance structures

In the GVC approach, five types of governance are identified (see section 2.3.1.6). This section determines which form of governance, according to the GVC approach, applies to the respondents. The first part of this section was asked in the form of a scale, which ranged from 1 to 5. The respondents had to indicate the occurrence of the activities in the statements made (1 indicated an occurrence of all of the time and 5 indicated that there was never such an occurrence). It was also tested with Cronbach's coefficient alpha (see section 5.4.1.4 a). The Cronbach coefficient alpha for the first part of this section is 0,686861, which indicates that the scale is reliable. In other words, the respondents understood the statements asked correctly.

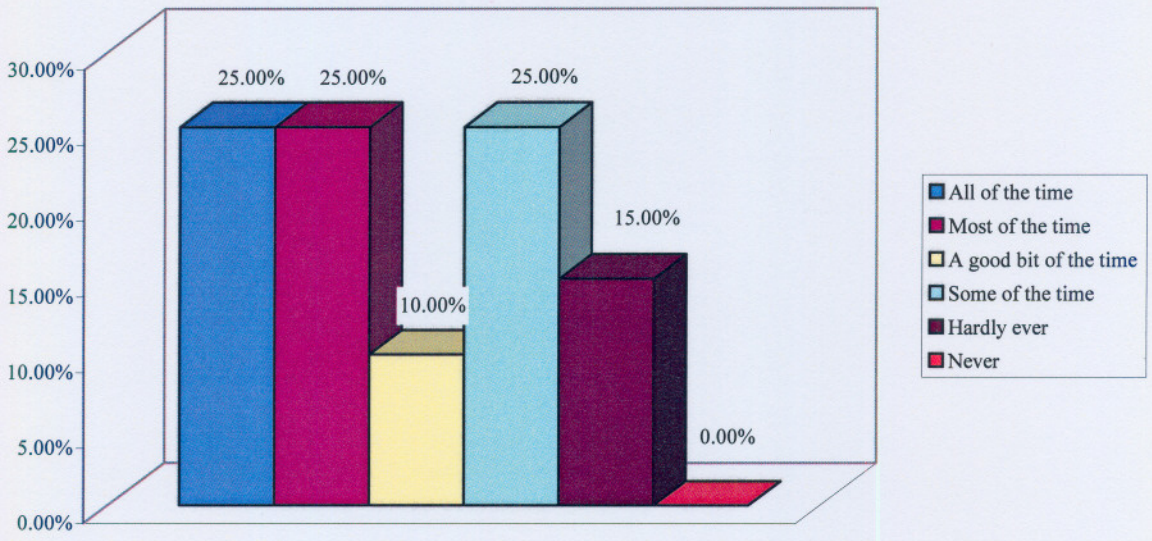
In the first question, the respondents were asked if they export to the same party repeatedly (i.e. market governance). The majority of respondents indicated that they do export to the same party repeatedly, i.e. all of the time (38,46 per cent), most of the time (38,64 per cent) and a good bit of the time (38,46 per cent). Figure 5.33 illustrates the results.

Figure 5.33: Do you export to the same party repeatedly?



In the second question, also related to market governance, the respondents had to indicate whether the cost to switch trade partners is low.

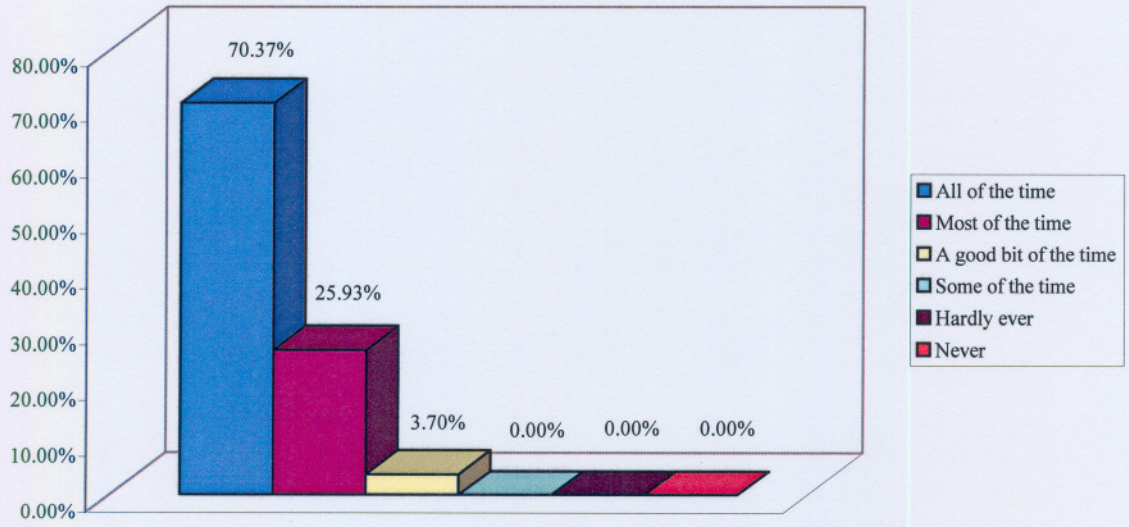
Figure 5.34: Is the cost to switch trade partners low?



From figure 5.34 it is clear that the results vary considerably. However, it can be concluded that the majority of respondents find the cost of switching trade partners to be low.

In the third question, measuring modular governance, the respondents had to specify whether they supply their products according to their customers' specifications. As shown in figure 5.35, most of the respondents supply their products according to their customers' specifications all of the time (70,37 per cent).

Figure 5.35: Do you supply your products according to the customer's specifications?



The fourth question measures captive governance. The respondents had to reveal if their importers of buyers monitor and control their production. From figure 5.36 it can be concluded that the majority of respondents' importers and buyers do not monitor and control their production, i.e. never (44,44 per cent) and hardly ever (11,11 per cent). However, 33,33 per cent of the respondents' importers and buyers do monitor and control their production.

Figure 5.36: Do the importers or buyers monitor and control your production?

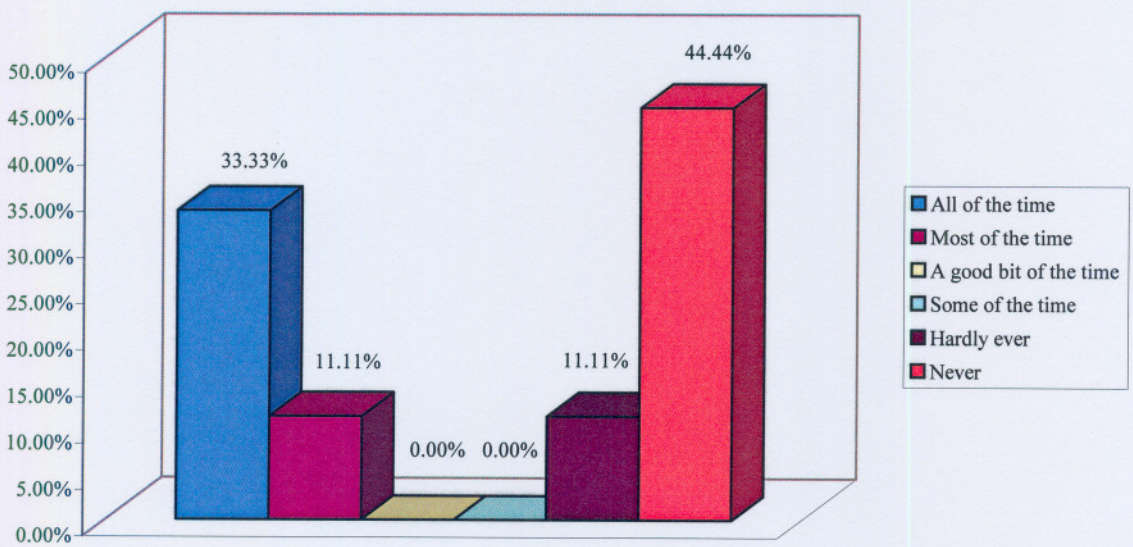
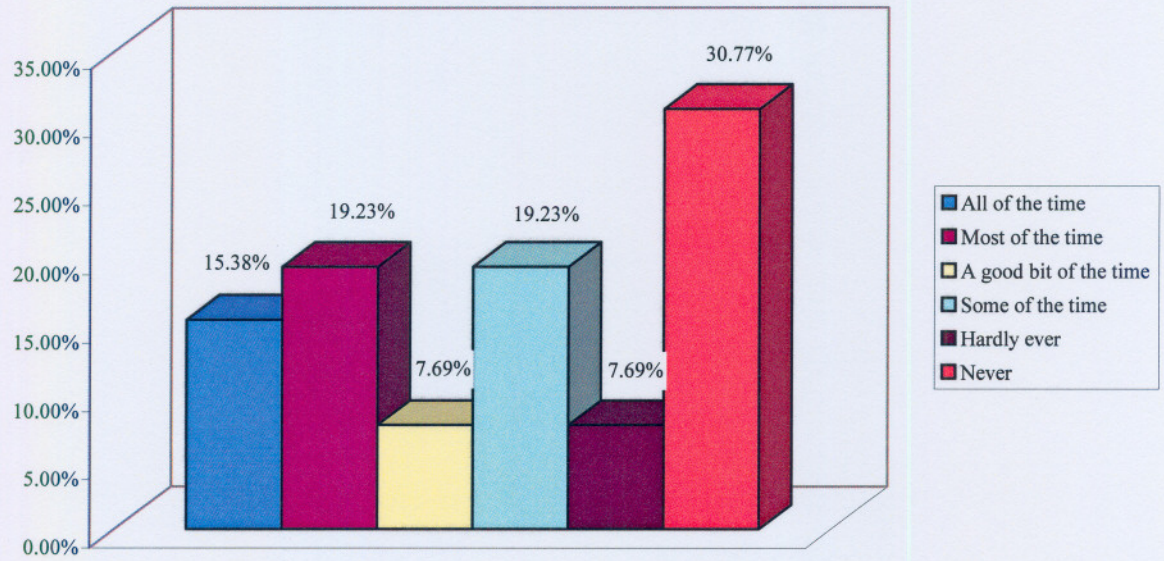
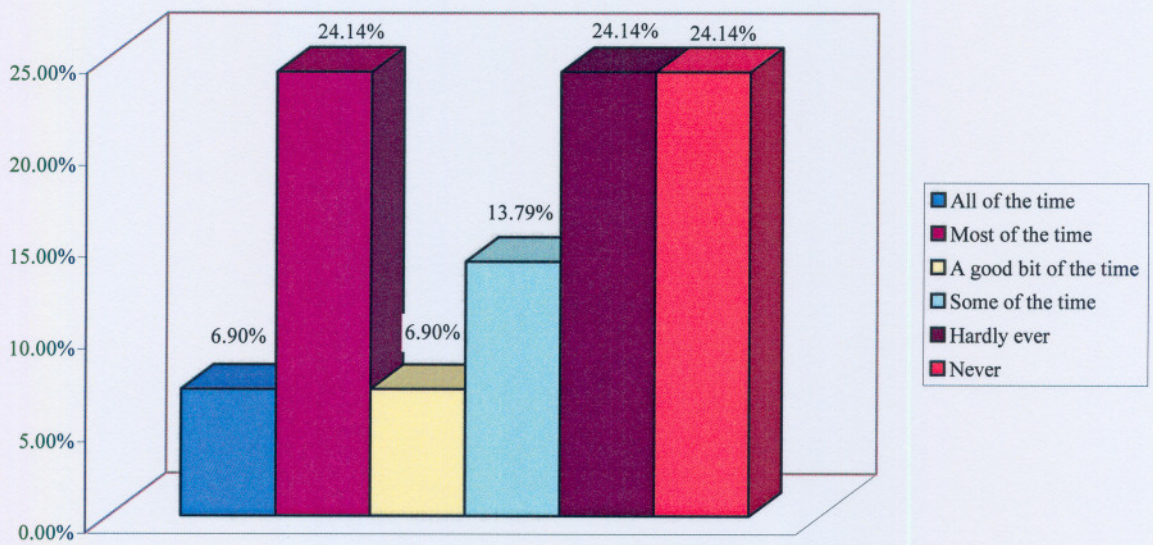


Figure 5.37: Are you and your trade partner dependent on each other?



In the fifth question, measuring relational governance, the respondents had to indicate whether they and their trade partners are dependent on each other. Figure 5.37 shows the results. Most of the respondents and their trade partners are rarely (19,23 per cent) or never (30,77 per cent) dependent on each other.

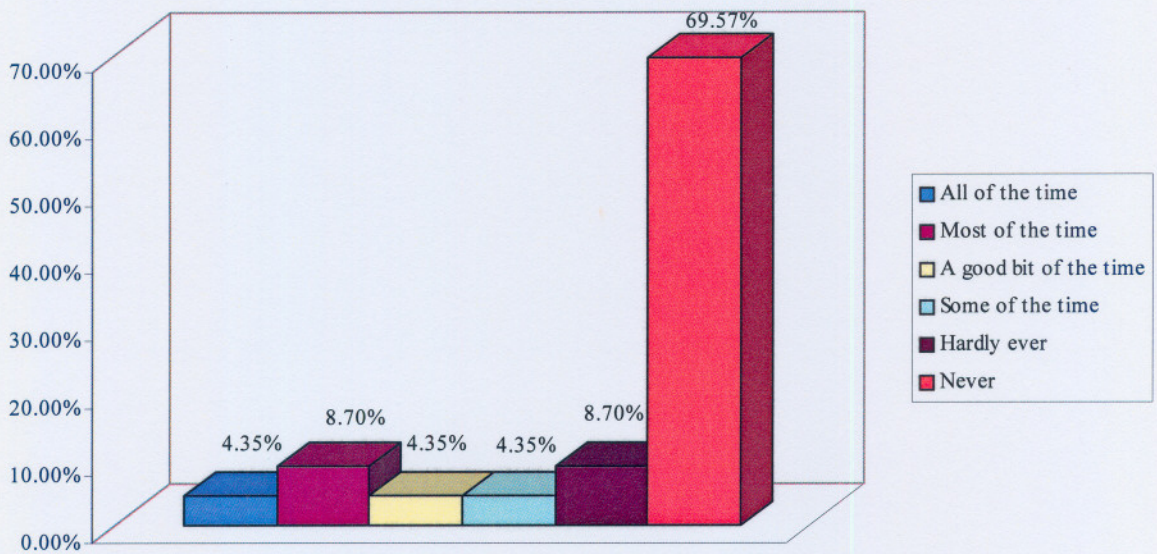
Figure 5.38: Are you dependent on large buyers?



The next question also evaluated captive governance. The respondents were asked if they are dependent on large buyers. The greater number of respondents are not dependent on large buyers. The percentages are as follows: some of the time (13,79 per cent), hardly ever (24,14 per cent) and never (24,14 per cent). These percentages are illustrated in figure 5.38.

The last question of this section and of the questionnaire measures hierarchy governance. The respondents had to reveal whether they are vertically integrated into a chain (i.e. form part of a MNO). Figure 5.39 indicates that the overall majority of respondents are not integrated vertically into a chain (69,57 per cent).

Figure 5.39: Are you vertically integrated into a chain (i.e. part of a MNO)?



5.4 DISCUSSION

5.4.1 International perspective

Competition has been rising in the global floriculture industry. Prior to the 1970s, floricultural products were only produced for the local markets. However, due to the process of globalisation (see section 2.2), borders were eliminated, causing the number of producers to increase. Due to this increase, supply also rose and now exceeds demand. Floricultural imports in the traditional consumption markets (e.g. Germany) are stabilising and increasing only marginally. All of these

factors contribute to create an extremely competitive environment in the floriculture markets (USITC, 2003: 29).

According to De Groot (1998: 18-19), floriculture-producing countries derive their competitiveness from a low cost price, a high level of investment, rapid innovations or their competitive positions and innovations in the past. The countries that gain a competitive edge through rapid innovations are the most effective competitors. Other countries have to rely on these countries for innovative products, hence reducing their competitiveness. Competitiveness in African countries is strong in terms of the basic factors (favourable climate, low costs and adequate supply of cheap land, water and labour). However, there is little investment to develop technology and knowledge – which are prerequisites for innovation.

The aim of this chapter was to provide an indication of the competitiveness of the South African floriculture industry in the global market through the perspective of Global Commodity Chains (GCC) (see section 2.4) and Global Value Chains (GVC) (see section 2.3).

5.4.2 Results

The manner in which firms participate in globalisation determines if the firms are able to achieve sustainable income. The focus of this study is to examine the South African floriculture exporters in a global context in order to determine how they form part of the international industry. The elements of the GVC and GCC approaches enable an analysis of the global chains that they form part of. Hence, identifying the role players and variables within these chains that influence the ultimate income of the exporters.

The results will now be discussed in terms of those elements in order to determine both the consistency of the results with the literature and the extent to which the results confirm or reject preconceived ideas.

5.4.2.1 The GVC approach

In section 2.3.1.3, a GVC is defined by the IDS (2002) as follows:

> The value chain describes the full range of activities that are required to bring a product from its conception, through its design, its sourced raw materials and intermediate inputs, its marketing, its distribution and its support to the final consumer.

There are three general elements of the GVC analysis. They are barriers to entry and rent, governance and systematic efficiency (see section 2.3.1.5).

Barriers to entry (see section 2.3.1.5 a) are factors that prevent a producer from gaining economic rent when they do not have a competitive advantage. The larger the number of countries producing similar products (i.e. as competition increases), the lower the economic rent. As seen in section 4.2.4, the global floricultures industry has numerous participants. Therefore the only method for South African producers to achieve economic rent is through innovation. Innovation implies that a firm continually improves the development of its products and processes. It was found that African floriculture producing countries do not innovate (section 5.5.1). Yet the empirical data indicates that the South African floriculture exporters feel that innovation is very important for the industry's competitiveness. The majority of these exporters state that they are innovative in their operations, in contrast to the literature. However, innovation is only efficient if it is conducted before competitors (see section 2.13.1.7). Research and development should therefore be a priority in any industry. The empirical findings suggest that the South African floriculture exporters believe that research and development is very important for the industry. Most of these exporters undertake to some extent research and development activities in their own firms. The majority of exporters also conduct research on their competitors' operations and products, in an attempt to innovate and before their competitors and so remain competitive.

Governance (see section 2.3.1.5 b) implies that one party is responsible for coordinating and regulating the various activities performed from a product's conception to its consumption. Morris and Kaplinsky (2001: 29) state that value chains are governed when parameters are set regarding products, processes and logistics. As no literature exists that analyses the governance in the South African floriculture's chains, the empirical data sets out to do so. Concerning the

parameters surrounding products, it seems that both the market and the exporters themselves determine the types of products to be produced. The exporters themselves also determine the type of processes they use in their production operations. Parameters regarding logistics, i.e. the party that determines the volumes and time of export, appears to be divided among the market and parties in the chain.

As part of the governance element of the GVC approach, Gereffi *et al.* (2003) have developed five types of governance chains. The chains are identified as market value chains, modular value chains, relational value chains, captive value chains and hierarchy value chains. Again, no literature surrounding these aspects exist, thus the empirical data provides an indication of the governance structures of the South African floriculture chains are. The majority of respondents export to the same party repeatedly and find that the costs involved in switching trade partners are low. Hence, there is a definitive form of market governance in the South African floriculture chains. This implies that in South African floriculture:

- There is a low degree of explicit coordination and power asymmetry
- The transactions are not complex
- Similar knowledge and information can be transmitted effectively to all suppliers
- The suppliers are capable to produce the products in relation to the requirements of the transaction.

Most of the floriculture exporters supply their products according to their customers' specification. In other words, a form of modular governance also exists in the South African floriculture chains. This implies that in South African floriculture:

- There is a lesser degree of explicit coordination and power asymmetry than in market governance
- The transactions are complex
- Similar knowledge and information can be transmitted effectively to all suppliers
- The suppliers are capable to produce the products in relation to the requirements of the transaction.

The majority of floriculture exporters' production are not monitored and controlled by buyers and importers, nor are they dependent on large buyers. Therefore the South African floriculture chains indicated no form of captive governance. Relatively low dependence exists between the exporters and their trade partners, which indicates that the floriculture chains are not relational value chains. Finally, most of the exporters are not vertically integrated into a chain, i.e. they are not part of an organisation where managerial control flows from headquarters to subsidiaries. Hence, there is no form of hierarchy governance.

In light of these findings, the market appears to be the governing party in the South African floriculture chains, with the parties in the chain to a lesser extent. Two types of governance structures exist, which identify the South African floriculture chains as market value chains and as modular value chains.

The third element of the GVC theory is systematic efficiency (see section 2.3.1.5 c). Systematic efficiency implies that the governing party in the chain ensures that there is close cooperation and trust between the parties in the chain. The South African floricultural exporters experience a strong degree of trust and cooperation in their distribution channels. Therefore, as the market is the primary governing party in the floriculture chains, it can be assumed that trust and cooperation are two fundamental aspects in the international floriculture market.

5.4.2.2 The GCC approach

The IVO (2003: 3) defines a GCC as follows (see section 2.3.2.5):

> A GCC is a network of production, trade and service activities, which is functionally integrated, value creating, and international, that covers the complete transformation of a raw material from its extraction, through intermediate manufacturing stages, to a specific end product. This captures the increasingly internationalised search of businesses for value-added generation and allocation.

The GCC theory consists of four elements, namely the input-output structure, the territory covered, the governance structures and the institutional framework (see section 2.3.2.7).

The first dimension is the input-output structure, in other words the production processes, employees and products that form value-adding economic activities. The South African floriculture exporters employ more female workers than female workers (for every one male employee there are 1,15 female employees). This is in line with the literature, as it states that the horticulture export sector (including floriculture) of developing countries is an important source of employment to women (see section 3.2). The production methods have an impact on the number of people employed by the exporters. The majority of South African floriculture exporters use greenhouses in which they cultivate their products. This contributes to employment in South Africa, as greenhouse cultivation requires more employees than any other production method in floriculture. However, greenhouses require more capital expenditure and infrastructure than the other production methods (see section 4.3.6 and table 4.14). The larger part of the South African floriculture exporters produce traditional greenhouse products, i.e. cut flowers. This is in line with the literature, as the largest volume demand worldwide is for these types of products (see section 4.3.7). However, the literature suggests that the South African producers need to focus more on indigenous products such as fynbos and foliage (see section 4.3.6). The empirical data indicate that few exporters focus their production on foliage.

The second dimension of the GCC theory is the geographical coverage, which entails the areas where the floriculture industry is located and the distribution networks. Malter *et al.* (1999: 53) indicate that most of the South African floriculture growers are located in the areas surrounding Johannesburg. The empirical evidence supports this statement as it illustrates that the majority of exporters are in the Gauteng region. Therefore Gauteng is the largest region that generates sustainable income from floricultural exports in South Africa. The sizes of the exporters' farms vary, but most of the farms are medium-sized. This indicates that floriculture production is an important source of income to the exporters. The distribution networks (i.e. channels) of the South African floriculture exports are, according to the literature, not developed to their full potential (see section 4.3.2). However, most of the South African floriculture exporters are satisfied with the distribution of their products to the final destinations. The majority of the exporters even form part of more than one distribution network and have not been part of these networks for more than five years. In contrast to other African floriculture exports (see section 3.4), the South African floriculture exports mostly enter the international market via an agent. The majority of African producers export directly to the auctions and to large retail chains and distributors (see section 3.4). The trade structure (see section 4.2.5) of the South African floriculture industry is as follows: more than 70 per cent of floriculture production in South

Africa are distributed through auction houses (both local and international), 16 per cent of the produce are exported through agents, 6 per cent are exported directly, 12 per cent are sold to local wholesalers and 11 per cent directly to the public (Gardenex, 2004). The immediate links (i.e. the parties that handle the distribution of the products) in the trade structures of the South African floriculture chains are mostly local export agents and freight forwarders. This indicates that South Africa's production capacity, export volumes of floricultural products and trade structures are not as competitive as its African counterparts.

The third dimension governance structures are similar to that of the GVC theory in the sense that it is the authorities that influence the activities and participants in the chain. One such a regulating agency (see section 2.3.2.11) is the various international (mostly European) bodies that implement programmes which encourage, for example, quality, protection of the environment and the health and safety of the employees on the farms (see section 4.2.6.1 and section 4.2.10.2). In the Kaiser Study (2000), South African floriculture producers are urged to participate in such programmes, as they are becoming significant trade barriers (see section 4.3.6). According to the empirical evidence, the majority of exporters do not participate in any programmes, which deters their competitiveness. The buyers in the distribution networks also influence the producers through their requirements (see section 4.2.6). The empirical evidence suggests that the South African floriculture exporters are excluded from their distribution network if their products are of an inferior quality. This indicates that they are aware of the fact that their products are perceived in the international market as not of internationally approved quality (see section 4.3.7). Hence, they are improving their competitive positions by ensuring that their quality is according to the requirements set by the international standards.

The fourth dimension is the institutional framework, i.e. the conditions under which the lead firms incorporate dependent agents through their control of both market access and information (Raikes *et al.*, 2000). As indicated in the element of governance in the GVC theory, the market governs (i.e. controls) the South African floricultural chains. Therefore the market determines how producers can gain access to it and provides information on aspects such as the types of products (see section 4.2.7) in demand, the trends (see section 4.2.10) and quality standards. Most of the exporters gain market access through personal visits to the market (i.e. establishing contacts in the marketplace). Information is essential in the floriculture industry, as it conveys the continuously changing wants and needs of the consumers (i.e. the trends). According to the literature, South African floriculture exporters receive inadequate market information and do not

determine what consumer preferences are (see section 4.3.12). The empirical data suggests that the majority of exporters view current market information as an essential aspect for their competitiveness. They use a wide range of sources to obtain market information, the most popular being electronic databases. Information is only useful if it is acted upon. In contrast to the literature, the majority of South African floriculture exporters use their information proactively by adjusting their production to the current market trends, which enhances their competitiveness.

Another important aspect, not included in the elements discussed above, is upgrading. Due to the floriculture industry's many competitors (see section 4.2.4.1), competition in the floriculture industry is based on non-price factors such as quality and innovation and not on direct production factors (e.g. costs) (see section 4.3.5 and section 4.3.7). Therefore floricultural producers need to differentiate themselves from other producers in order to achieve sustainable income. Upgrading is one such a method through which a floricultural producer can differentiate itself (i.e. gain a competitive advantage). Upgrading is the manner in which a firm improves itself in the global market by adding value to its activities and products (see section 2.3.2.14). According to the empirical evidence, most South African exporters do not upgrade their products (i.e. differentiate or add value to it). However, they indicate that they have a competitive advantage in terms of their products. The exporters do add value to their processes or activities. South African floricultural exporters are still far behind their developing-country counterparts in terms of competitiveness (see section 4.3.5). Therefore upgrading all products and processes needs to be a priority.

5.4.3 Characteristics of the more successful South African floriculture exporters

The more successful exporters are those that export more than 50 per cent of their total sales. Their characteristics will be discussed in the following paragraphs. These floriculture exporters are mostly located in Gauteng and have comparatively large (i.e. 26 to 100 hectares) farms. Their production methods are mainly open fields, in which they produce cut flowers. The majority of their employees are female.

The successful exporters are committed to export (they export on a continuous basis throughout the year), though they have been exporting for less than five years. They have gained market

access mostly through personal visits to the import market. More than half of them do not participate in an international floriculture programme.

These South African floriculture exporters enter the foreign market via agents and domestic export agents for the immediate link in their distribution channel. They have been part of their distribution channels for less than five years and all of them are satisfied with the manner in which their products are distributed. Most of them distribute their products via several distribution channels. The largest perceived obstacle for the exporters is quality. These exporters experience a high degree of trust and cooperation in their distribution channels.

Innovation and research and development are regarded as high priorities for the exporters in both the South African industry and in their respective companies. Current market information is important and is obtained mostly through the parties in the exporters' distribution channels and through electronic databases and the Internet. They do not incorporate the information, as they do not adjust their production according to the trends. These exporters conduct research on their competitors' operations and feel that they have a competitive advantage – mainly through their products, but also through their organisational functions. Upgrading is not a concern for these exporters, as they only add value to their activities and not to their products.

There is a large market influence in the successful South African floriculture exporters' operations. The market influences the types of products they produce and, together with the parties in their distribution channels, the logistical arrangements (i.e. the volumes and time of exports). The exporters themselves determine the types of production processes used for cultivation.

5.4.4 Competitiveness in the South African floriculture industry

As discussed in chapter four, South Africa has a very large and active domestic market (see section 4.3.1 and section 4.3.3). Due to this large local market, South African floricultural producers are not fully oriented towards the international market. However, the domestic market's turnover is relatively small and is becoming saturated. Increased exports is the only way in which the South African industry will be able tot sustain its income. According to the empirical data, the mainstream exporters have been exporting for less than five years.

The nature of the international industry requires its participants to be competitive. The South African floriculture industry can be competitive (i.e. add value to their production) through commitment to exporting and by being reliable suppliers of consistent quality products. However, the empirical evidence indicates that the South African floriculture exporters only export occasionally. The majority of exporters also export the smallest percentage of their total sales. These indications, together with the small number of years that the exporters have been exporting, suggest a lack of commitment to international trade on the part of the exporters. The reason can be traced back to the influence of the domestic market.

5.4.5 Recommendations

The South African export floriculture industry's strengths can be summarised as follows:

- Greenhouses are the most predominant form of production, which tend to be more labour-intensive. Greenhouse products employ over twice as many people as indigenous products. However, the capital investment for greenhouse products is on average ten times greater than that of indigenous products per hectare (see table 4.14).
- Cut flowers are the most produced products, and are in demand worldwide.
- The exporters are satisfied with their distribution channels, which indicates that they are effective.
- The exporters improve their positions in the global market through research and development and innovation in their companies.
- The exporters consider current market information as necessary and use it to keep up to date with the trends in the international industry. They also conduct research on their competitors' activities.
- The exporters differentiate themselves by adding value to their activities.
- The industry's competitive advantage lies in its products and, to a lesser extent, in the exporters' organisational functions.
- The market and the exporters themselves determine the types of products produced, which indicate that only the products in demand are produced.
- The logistical arrangements are made by the market and by the parties in the exporters' distribution channels, which means that the production is coordinated with these parties.

The South African export floriculture industry's weaknesses can be summarised as follows:

- Most exporters have been exporting for less than five years, which implies that they have not yet gained adequate experience.
- Most exporters export occasionally and they export less than 25 per cent of their total sales, this indicates that they are not committed to exporting. They supply the largest percentage of their sales to the domestic market.
- There is little participation in international floriculture programmes, which deters the industry's competitiveness and may be problematical when these programmes become compulsory.
- The exporters do not add sufficient value, or differentiate their products to enhance their competitive positions in the global industry (e.g. produce new varieties).
- The exporters themselves determine the types of production processes used for cultivation, which may not be in line with the quality requirements of the international markets.

In consideration of the above, the South African export floriculture industry appears to be a recent, but growing competitor in the international floriculture market. However, they are lagging behind their African counterparts (e.g. Kenya and Zimbabwe) on the world ranking of floricultural exporters (see section 4.2.4.1). The main factor, which deters South Africa's competitiveness, is its lack of commitment to export.

In recommendation, the South African floriculture exporters need to become more integrated into the global market by increasing both the volumes and values of their exports. In other words, they need to become more committed. They need to shift their focus from the domestic market to the international market. However, there are factors that make this difficult (see section 4.3.12). Therefore the industry needs support, as its growth could result in employment opportunities and sustainable income for the country.

South Africa needs to increase its competitiveness in terms of volumes and values exported. Therefore the entire industry needs to become involved in the international market. There are numerous domestic floricultural suppliers that do not export. Further research could be conducted to determine the reasons why these suppliers do not export, and also to explore the possibilities of developing their operations for the purpose of exporting.

5.5 SUMMARY

The empirical evidence was gathered in the form of a mail-based questionnaire, sent out to the exporters in the SAFEC membership list (2002). The sample frame was initially 56. However, due to incorrect addresses it was reduced to 49. The questionnaire's purpose was to gather data on the competitive position of the South African floriculture exporters. It contained demographical and geographical aspects and sections on innovation, distribution and governance. The data was illustrated in graphs and discussed in terms of the elements of the GVC and GCC approaches.

5.5.1 The GVC approach

Barriers to entry determine the distribution of rents. A decrease in barriers to entry leads to an increase in global producers, which causes competition to increase and results in lower profits. Consequently, economic rent is lower. Therefore participants in the value chains must constantly seek new forms of rent in order to gain a competitive advantage. The global floriculture industry has numerous participants, which reduces the economic rent. Therefore, in order to achieve rent, the South African floriculture exporters need to conduct research and development and be innovative, which they are beginning to do.

Governance implies that one party is responsible for coordinating and regulating the various activities performed from a product's conception to its consumption. Value chains are governed when parameters are set regarding products, processes and logistics. The market itself appears to be the governing party in the global floricultural chains. Two governance structures exist in the industry, namely modular value chains and market value chains.

Systematic efficiency implies that the governing party in the chain ensures that there is close cooperation and trust between the parties in the chain. Due to the global nature of such a chain, governing parties have a greater degree of responsibility. This involves helping participants in the chain that are located in developing countries to upgrade. The objective is to ultimately increase the efficiency of the chain. The governing party, i.e. the market, requires systematic efficiency in the sense that there has to be a high degree of trust and cooperation within the industry.

5.5.2 The GCC approach

The demographical details (i.e. the production processes, employees and products that form value-adding economic activities) of the exporters explain the input-output element of the GCC theory. In terms of production processes, the majority of South African floriculture exporters use greenhouses to cultivate their products, which contributes to employment in South Africa (greenhouse cultivation requires more employees than any other production method in floriculture). However, greenhouses require more capital expenditure and infrastructure than the other production methods. In terms of employees, the South African floriculture exporters employ more female workers than female workers (for every one male employee there are 1,15 female employees). In terms of products, the larger part of the South African floriculture exporters, in line with global demand, produce traditional greenhouse products (i.e. cut flowers). However, the South African producers need to focus more on indigenous products such as fynbos and foliage, as they have a clear advantage in them.

Geographical coverage indicates the spatial dispersion or concentration of production and distribution networks, comprised enterprises of different shapes and sizes. The distribution networks of the South African exporters are well developed. However, the floricultural products are exported indirectly, in contrast to African countries.

The market is the governance structure (i.e. the authority and power relationships that determine how financial, material and human resources are allocated and flow within the chain) in the floriculture industry. It governs or influences the industry in terms of quality programmes, in which the South African exporters do not participate.

The institutional framework indicates the conditions under which the governing party exercises control over market access and information on a global level. In other words, how small producers, via their buyers, gain indirect access at a lower cost to markets, knowledge and technologies. As the market is the governing party in the floriculture industry, it provides information and market access to the exporters. The exporters incorporate the information by adjusting their production to the current trends.

In conclusion, according to the elements of the GCC and GVC approaches, the South African floriculture export industry functions successfully internationally. However, it needs to enlarge

its market share, i.e. it does not participate to its full potential in the globalisation process. Becoming a larger role player in the international industry can do this. Once the South African floriculture exporters are more committed to exporting, the industry's competitiveness will increase. This will also enable the exporters to move into better and more competitive global chains (i.e. export more directly).

CHAPTER 6
SUMMARY AND RECOMMENDATIONS

As a result of globalisation, firms across both developed and developing countries are experiencing increased competition. Globalisation has both positive and negative consequences for firms, and the net effect may depend on the manner in which a country where a firm is located participates in the global market. Both the global commodity chain (GCC) and global value chain (GVC) approaches assess countries' integration (either successfully or unsuccessfully) into the global market.

The international floriculture industry is one that is constantly changing and has a highly competitive environment. These challenges require that its participants be successfully integrated into the market and constantly improve their competitive positions. The South African floriculture industry has become more integrated into the global market since it opened up its economy in 1994. Both revenue and employment in this industry have increased since then. However, South Africa remains fairly uncompetitive compared with its African counterparts.

The initial stages of the study (chapter two) discussed the two approaches in the context of globalisation. The GCC approach has four fundamental aspects, namely the input-output structures, geographical coverage, governance and institutional framework. The GVC approach has three core elements: barriers to entry, governance, systematic efficiency and upgrading or innovation. These approaches are useful in the study of the South African floriculture industry, as they shed light on the stance of the floriculture industry in South Africa. They identify all of the role players and factors that influence the producers' integration into the international floriculture industry. They also determine potential ways in which producers can upgrade their activities or products in order to become integrated more successfully in the global market (i.e. move into more profitable chains). Finally, they also assess the distribution of income in the global floriculture chain.

Thereafter, in chapter three, the importance of an export horticulture industry in developing countries was discussed. This industry has recently become more significant for developing counties due to their stagnant traditional agricultural industries. The exports of non-traditional agricultural products of developing countries have increased, which indicates that they have become more integrated into the global markets through their participation in global chains. The

horticulture industry's high value products (i.e. fruit, vegetables, cut flowers and ornamental plants) are increasingly creating income and employment opportunities (especially for previously disadvantaged groups such as women). In essence, it plays a pivotal role in alleviating poverty in developing countries.

Floriculture forms part of the horticulture export industry and in chapter four both the international and the South African floriculture industries were discussed in terms of their role players, variables and factors which characterise the industry. The international floriculture industry is characterised by severe competition (supply exceeds demand by far). Competitors in the global floriculture industry from both European and non-European countries are constantly emerging. Whereas non-European countries have an advantage over European countries in terms of cost factors (e.g. cheap labour), European producers have more advanced technological production processes and innovative products, which provide them with a clear competitive advantage as the base of competition to shift to non-price factors (e.g. quality). Along with the fierce competition, the industry is also characterised by demanding consumers, numerous tariff and non-tariff barriers set by developed countries and trends. The international trade structure of floricultural products is also evolving as new distribution channels emerge (e.g. floricultural products are bypassing the auctions and are being sold directly to the buyers).

South Africa is in the 21st position of the world floriculture exporters, which indicates that the industry has advantages (e.g. infrastructure, climate and inputs), but also problems (e.g. high labour costs compared to other African producers) in the production of floricultural products. According a communication by the Dutch Floricultural Wholesale Board (2004), the South Africa floriculture industry's main problem, which deters exports, is its orientation. This industry is not oriented towards the international market; it focuses on the large domestic market. In future, this may have serious implications for the industry, as the domestic market's turnover is small and is becoming saturated. In order for the floriculture industry to survive, exports will have to increase. The South African floriculture industry needs to become more competitive.

The empirical study in chapter five examined the South African floriculture exporters in a global context to determine how they form part of the international industry. The study was done through a mail-based questionnaire, sent to the members of the South African Export Council (2002). A total of 56 questionnaires were mailed, but, due to incorrect addresses, the sample was reduced to 49. A total of 29 questionnaires were received, which made the response rate 59 per

cent. The elements of the GVC and GCC approaches enabled an analysis of the global chains that the exporters form part of. Hence, it identified the role players and variables within these chains that influence the ultimate income of the floriculture industry. These findings and approaches are summarised in the following paragraphs.

(a) The GVC approach

From the analysis of the first element of the GVC approach, namely barriers to entry and rents, it became clear that, due to the constant increase in global producers, economic rent is reduced. Therefore, in order to achieve rent and a competitive advantage, the South African floriculture exporters need to conduct research and development and be innovative, which they are beginning to do. The second element, governance, indicated that the market itself appears to be the governing party in the global floricultural chains. In other words, the market is responsible for coordinating and regulating the various activities in these chains. It became evident that two market structures exist in the industry. They are modular value chains (i.e. the suppliers produce the products according to certain specifications) and market value chains (the suppliers repeatedly supply to the same party and the cost to switch trade partners is low). From the third element, systematic efficiency, it became clear that a high degree of trust and cooperation is required in the floriculture industry.

(b) The GCC approach

The analysis of the GCC approach provided insight into the demographical details (i.e. the input-output element) of the exporters. The majority of South African floriculture exporters are situated in Gauteng and use greenhouses to cultivate the traditional greenhouse products (i.e. cut flowers). These exporters employ more female workers than male workers (for every one male employee there are 1,15 female employees). The second element, geographical coverage, indicated that the distribution networks of the South African exporters are well developed. However, the floricultural products are exported indirectly – in contrast to African countries. As indicated in the GVC approach, the market is the governance structure. From this element it became clear that the market governs or influences the industry in terms of quality programmes, in which most of the South African exporters do not participate. The fourth element of this analysis, namely the institutional framework, implied that the market provides information and

market access to the exporters. The exporters incorporate the information by adjusting their production to the current trends.

From the empirical findings in chapter five, it was possible to determine the South African export floriculture industry's strengths and weaknesses. The strengths are summarised as follows. The South African floriculture exporters produce overall traditional greenhouse products, which are in demand worldwide. These products are cultivated in greenhouses. Greenhouses are the most labour-intensive method of floriculture production. It is, however, also the most expensive. The distribution channels of the floricultural products are effective and efficient. The exporters regard research and current market information as their link with the consumers and use it to innovate and keep up to date with the trends. The exporters differentiate themselves from other producers by adding value to their activities. The overall industry's competitive advantage is situated in its products and to a lesser extent the exporters' organisational functions. Both the market and the exporters themselves determine the types of products that they produce, consequently only the products in demand are produced. The logistical arrangements for the export of the floricultural products are made by both the market and by the parties in the exporters' distribution channels, which means that the production is coordinated with these parties.

The South African export floriculture industry's weaknesses can be summarised as follows: the majority of exporters have been exporting for less than five years, which implies that they have not yet gained adequate experience. Most of the exporters do not export on a regular basis, and when they do, they export less than 25 per cent of their total sales. These are indications that they are not committed to exporting – the largest percentage of their sales goes to the domestic market. There is little participation in international floriculture programmes, which deters the industry's competitiveness and may be problematical when these programmes become compulsory. The exporters do not add sufficient value, or differentiate their products to enhance their competitive positions in the global industry (e.g. produce new varieties). The exporters themselves determine the types of production processes used for cultivation, which may not be in line with the quality requirements of the international markets.

It was found in this study that the South African floriculture export industry functions successfully internationally, according to the elements of the GCC and GVC approaches.

However, the industry does not participate to its full potential in the global market, and lacks competitiveness. These findings supported the conclusions from a literature study.

It can therefore be recommended that South African floriculture exporters need to become further integrated into the global market by increasing both the volumes and values of their exports.

There are also numerous domestic floricultural suppliers that do not export or export only a small percentage. Thus, whilst the South African floriculture industry has potential to become a more significant role player in the international markets, it is still hampered by its relative lack of internationalisation. It is recommended that research be conducted to determine the reasons why these producers do not export and the possibilities of developing their operations for the purpose of exporting.

ANNEXURE A

YUNIBESITI YA BOKONE-BOPHIRIMA
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT

WorkWell: Research Unit for People, Policy & Performance, Faculty of Economic & Management Sciences, Tel.: (018) 299 1354 Fax: (018) 299 1360 email: ebnwan@puk.ac.za Internet: www.workwell.co.za

WorkWell
Research Unit for
People, Policy & Performance

SOUTH AFRICAN FLORICULTURE QUESTIONNAIRE

Firm ID

Thank you for participating in our survey. The aim of this survey is to assist firms in the floriculture industry to benchmark their international competitiveness. Your individual growers' information will be treated confidentially, as only aggregate and average findings will be published. However, these will allow your own firm a measure of its international orientation and position in the supply chain. You will receive a report containing our findings.

Please mark the appropriate answer.

SECTION 1: FIRM PROFILE AND PRODUCTION

In which province is your farm located?

Gauteng	1
North West	2
Mpumalanga	3
Limpopo	4
Free State	5
Western Cape	6
Eastern Cape	7
Northern Cape	8
KwaZulu-Natal	9

What is the size of your farm?

0-4 ha	1
5-25 ha	2
26-100 ha	3

How many male employees do you have?

0-25	1
26-50	2
51-75	3
76-100	4
100+	5

How many female employees do you have?

0-25	1
26-50	2
51-75	3
76-100	4
100+	5

What type of production method do you use?

Open field	1
Shaded field	2
Greenhouses	3
Other	4

What type of products do you produce? Specify the types.

Cut flowers	1	
Foliage	2	
Plants	3	
Cuttings	4	

SECTION 2: MARKETS

How many years have you been exporting?

0-5	1
6-10	2
11-15	3
16-20	4
20+	5

Do you export throughout the year?

Yes	1
Occasionally	2

What percentage of sales is exported?

0-24	1
25-49	2
50-74	3
75-100	4

How did you gain international market access?
Via:

Direct mail to the import company	1
Personal visits to the import markets	2
Flower auctions	3
An invitation to importers to visit your company	4
Trade fairs	5
The multinational organisation to which you form part of	6
Other	7

Which international programmes do you form part of?

ISO	1
MPS	2
EUREPGAP	3
FLP	4
Other:	5
Specify:	

SECTION 3: DISTRIBUTION

How do your products enter their export destinations?
Via

One of the auctions	1
An agent	2
An import wholesaler	3
A retail chain	4
An importer	5
A propagator	6

Who forms the next link in your distribution chain?

Freight forwarder	1
Export agent	2
Foreign importer	3
Foreign wholesaler	4
Retail chain	5
A party in your MNO	6

I am satisfied with the distribution channel of my products

Yes	1
No	2

How many years have you been part of this distribution chain?

0-5	1
6-10	2
11-15	3
16-20	4
20+	5

Which factors might cause your trade partners not to buy your products?

Poor quality	1
Unreliable logistics	2
Non-compliance with regulations	3
Other	4

Are you part of more than one distribution chain?

Yes	1
No	2

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
There is a strong degree of trust and cooperation in my distribution channel	1	2	3	4	5	6	7

SECTION 4: INNOVATION

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
Current market information is important	1	2	3	4	5	6	7
R&D is important for the SA floriculture industry	1	2	3	4	5	6	7
I undertake R&D for the advancement of my company	1	2	3	4	5	6	7
Innovation in the SA floriculture industry is important for its competitiveness	1	2	3	4	5	6	7
My firm undertakes innovation in order to gain competitiveness	1	2	3	4	5	6	7

How do you obtain market information? Via

Electronic databases and the Internet	1
The parties in your distribution channel	2
Government	3
SAFEC or other associations	4
Trade fairs	5
Personal contacts outside of your company	6
Published sources (e.g. books, annual reports, analyst reports etc.)	7

Do you adjust your production according to the market trends (e.g. produce pastel coloured flowers when pastel colours are in demand)? If yes, give an example.

Yes	1	
No	2	

Do you add value to your products (i.e. differentiate them) in order to give them a competitive advantage (e.g. the production of new varieties)? If yes, give an example.

Yes	1	
No	2	

Do you add value to your activities that you provide to buyers in order to enhance your competitiveness (e.g. provide certain types of packaging)? If yes, give an example.

Yes	1	
No	2	

Do you have a competitive advantage in terms of your:

Production processes	1
Products	2
Organisational functions	3
Distribution channel	4

Do you conduct research on your competitors' operations and products?

Yes	1
No	2

SECTION 5: GOVERNANCE

	Market	Parties involved in your distribution channel	You determine it yourself
Who or what determines the type of products that you produce?	1	2	3
Who or what determines the type of processes that you use in production?	1	2	3
Who or what determines the logistic arrangements (how much and when to export)	1	2	3

	All of the time	Most of the time	A good bit of the time	Some of the time	Hardly ever	Never
Do you export to the same party repeatedly?	1	2	3	4	5	6
Is the cost to switch trade partners low?	1	2	3	4	5	6
Do you supply your products according to the customers' specifications?	1	2	3	4	5	6
Do the importers/buyers monitor and control your production?	1	2	3	4	5	6
Are you and your trade partner dependent on each other?	1	2	3	4	5	6
Are you dependent on large buyers?	1	2	3	4	5	6
Are you vertically integrated into a chain (part of a MNO)?	1	2	3	4	5	6

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