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**GLOBAL PRODUCTION NETWORKS AND
SMALL AND MEDIUM ENTERPRISES (SMES):
A PUBLIC POLICY PERSPECTIVE ON THE
CHILEAN AGROFOOD SECTOR**

By

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A Doctoral Thesis

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Acknowledgments

To be honest, even though it has taken a long time to get to this point, doing a PhD has been a tremendous experience for me and now I cannot believe that I am almost reaching the end of this long and vital journey. I still remember when in Santiago – five years ago – I had a meeting with Jon Cloke (I had answered an email from Jon about a consultancy in the Latin American credit market that he was doing), and he said to me, ‘why don’t you do a PhD at Loughborough?’ Certainly, my decision was fast and in a relatively short time, there I was in the UK introducing myself to Ed Brown, my current supervisor. Although I had previously studied in the UK (I did my MSc there), I wanted to do a PhD covering various disciplines and with a broader view.

Oh! How I remember my first day in Loughborough, a typical January’s day, dragging my luggage, full of books, through the snow and rain looking for my lodgings (always it was new lodgings!!). I have always had problems with depression and melancholy, and was again alone in the UK.

So, my adored wife and my little daughter remained behind in Chile. How much I owe them! For the next four year, sometimes visiting the UK three times a year, I was presenting in conferences and at the same time working with my supervisor. In the UK, Ed Brown and Jon Cloke, through their help and friendship, as well as that of their families, always made my stays and the separation from my family that much more bearable. For this I will always be indebted to them. I also still remember when Catherine Duce (a Newcastle University geographer) said that I should study Human Geography... ‘it is more integral’. She was so kind to me in that period. Hence, my thanks to her and her family.

I have always been one to question and, besides, my life experience has given me the ‘fire’ for improving myself, learning, seeking to change things and, due to this, I am always trying to motivate to my students in Chile, encouraging them to work, to study abroad and to improve society from within – positive action rather than just empty words. This has always been my lemma.

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During this long period of working on my PhD, my lovely grandfather passed away (I was in Loughborough at the time) as well as my Aunt Hilda (my mum's sister), my mum having already passed away eight years ago. I still miss them every day and I owe them so much.

Finally I dedicate this thesis to my wonderful wife and my two little daughters for their love and understanding. These three beautiful women are my life and my source of inspiration.

List of Acronyms

ANAMURI	National Association of Rural and Indigenous Women
APORDE	African Program on Rethinking Development Economics
ASOEX	Exporters Association
BCG	Boston Consulting Group
CASEN	National Socioeconomic Characteristics Survey
CEDEM	Centre for Development Research for Women
CCV	Chilean Wine Corporation
CNIC	National Innovation Council for Competitiveness
CONICYT	National Council of Scientific Research and Technology
CORFO	Chilean Economic Development Agency
ECLAC/CEPAL	Economic Commission for Latin America and the Caribbean
EOI	Export-oriented industrialization
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign direct investment
FEDEFRUTA	Union Federation of Fruit Growers
FIC	Innovation Fund for Competitiveness
FIP	Fisheries Research Fund
FOGAPE	Warranty Fund for Small Entrepreneurs
FUCOA	Foundation Communications, Training and Culture of Agriculture
INIA	National Institute of Agricultural Research
INDAP	Institute of Farming Development
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GPN	Global Production Networks
GVC	Global Value Chains
IBD	Inflammatory bowel disease
IMF	International Monetary Fund
IRC	Industrial Reorganisation Corporation
ISI	Import-substituting Industrialization
ITT	International Telephone & Telegraph

MNCs	Multinational corporations
NGOs	Non-governmental organizations
OBM	Original brand name manufacturing
ODEPA	Office of Agricultural Studies and Policies
OECD	Organisation for Economic Co-operation and Development
OEM	Original equipment manufacturing
R&D	Research and Development
SENCE	National Service of Training and Employment
SMBA	Small and Medium Business Administration
SMEs	Small and medium enterprises
SOEs	State-owned enterprises
TPF	Total productivity factors
VAT	Value added tax
WB	World Bank
WC	Washington Consensus

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Abstract

This thesis addresses the conditions of SMEs and working conditions in the Chilean agrofood sector. Especially in an economy with a high degree of trade openness as Chilean economy. The current state of debate is that is more controversial the apparent success of Chilean agrofood sector due to the existence of these fault lines. The upgrading theories are mainly narrow minded and do not consider the weakest part of the production chains. It is required accordingly, a broader look to these problems such that embodies these problems. It is a research based mainly in an approach of political economy.

Within this context, this thesis explores the role of SMEs within the Chilean economy and, in particular, their participation within the Chilean economy's insertion into global agrofood production networks, with the aim of giving new insights into the debates over the role of industrial policy in developing countries (an economy based on natural resources). This research will contribute to developing recommendations for the use of public policy tools (rejuvenated industrial policy) in an effective way in relation to the development of SMEs in the agrofood sector. Also there is an urgent need for industrial policy to consider working conditions, training and the acquisition of skills in a much more explicit way, particularly in an economy that is heavily based on the exploitation of natural resources as in the Chilean case.

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Chapter One: Introduction

1.1 Economics and Economic Geography

I am originally an economist by academic background. I studied Economics in an undergraduate program at the Universidad de Chile, and then I did an MSc in Economics and Finance at the University of Birmingham (UK). Economics has always been a topic of great interest to me. However, I have always felt that Economics (particularly in its mainstream form), could be more involved and concerned with the real problems of people. Therefore, I felt in my views and social concepts that Economics did not entirely fit with the elements of the real world. Certainly, for example, orthodox economists have tended to underplay the distinction between development and economic growth; the most neoliberal perspectives tend to treat them (growth and development) as synonymous, or if not synonymous, then intimately connected in that economic growth is always said to inevitably drive development in the long term. In my opinion, the development concept has been extremely misused by different governments, and certainly the different definitions contain many intellectual holes.

Chile is the ‘poster child’ of an apparently successful example of economic growth. But the Chilean model has weaknesses at the core of its success (market concentration, limited power of trade unions, large inequality, and the lack of a development strategy that encompasses balanced regional development)

I have previously worked at the Central Bank of Chile and the Ministry of Finance. It was a great and worthy experience to understand the conflicts and dilemmas of economic policy. Economics in practice, however, I found was not precisely what the most conservative books described. On the contrary, it was a mix of forces, contradictions and interests that did not always see public welfare as a major concern. Accordingly, during my later trajectory as an academic, I have tried to add to the intellectual tools and analytical frameworks provided by my background in economics by exploring other concepts, topics and approaches, both via engagement with less

orthodox versions of economics and by crossing disciplinary boundaries. This has involved, for example, exploring the relevance of concepts such as inclusive development and regional/local development to the Chilean context, and delving into the comparative history of industrial policies (for example the different models employed in East Asia and Latin America). Over time this gave rise to a particular interest in the nature and dynamics of Small and Medium Enterprises (SMEs) and their potential contribution to national economic development, which was the basic question I decided that I wanted to study through my doctoral research.

Basing my doctoral studies within a different academic setting, that of economic geography, has allowed me to develop my ideas in relation to this theme through engagement with a whole range of concepts (space, territory, productive capacity, social inclusion and sustainability which have fed my curiosity as I have explored their relevance to the Chilean case. One thing I have gained from my engagement with geographers and heterodox views of social sciences in general (in economics, sociology, and anthropology, among others) has been a greater appreciation of the fact that there are so many social differences inside countries and among countries. If the value of human life is important, and social origin does not matter, then a quick glance at both global and Chilean circumstances suggests that something is wrong and the equal value of human life is not working in practice. In this context there is space for the development of a public policy which encompasses a grasp of the importance of geography in this wider sense. While I have been conducting my doctoral research, I have continued to work at the Universidad de Santiago de Chile (USACH) in the Faculty of Business and Administration where I have been developing a field of critical research focused on economic development and financial economics. In this context I have published in several areas: micro-credit, the agrofood sector and, in particular, numerous articles in the Chilean newspapers (where I am a regular columnist) related to heterodoxy, with emphasis on equity, economic development and social inclusion.

One other major influence upon my trajectory derived from my receipt of a scholarship from the French Development Agency and Ministry of Trade and Industry in 2011 to participate in an intensive workshop in South Africa, African Program on Rethinking Development Economics. It was about industrial policy and the challenges of reaching full employment in a country such as South Africa. This was an excellent opportunity to

debate with colleagues from Africa, China, and other Latin American countries about key public policy issues such as: market and state oriented industrial policies; the role of banks in the production process; the taxation of the mining sector; small and medium scale industrialization and strengthening SMEs and cooperatives; the labour intensity of different industrial strategies; the control of short term capital flows and direct foreign investment and selectivity. This experience created deep roots in my understanding of critical public policy debates within Development Studies and, most importantly, helped strengthen my understanding of history, economy, and sociological context, as tools in order to challenge the prevailing models of economic orthodoxy.

1.2 Aims of the Thesis

It is necessary to understand that the changes required in the agrofood sector, and in the Chilean economy in general, require policy reform such that regions and local governments can have more influence in the development strategy. I have taken a political economy approach to my thesis. It is set against the backdrop of the new Chilean government and the three pillars of i) social inequality, ii) education, and iii) regional inequality which are central to the new administration and to this research.

With regard to the specific objectives of the thesis, these were to examine the conditions of small and medium enterprises (small producers) in the agricultural export sector in Chile, particularly in the fruit and wine industries, and also to analyse the conditions under which workers operate in this sector. The research questions sought to understand underlying relations in the agrofood sector. The thesis is essentially a critique of traditional theories of ‘upgrading’ and the narrow and partial way in which they have been applied in Chile because they are not based on modern industrial policy. The upgrading process was purely economic and did not take into account the specific issues of SMEs and working conditions in the agrofood sector in Chile.

The focus of the research conducted for this thesis emerged out of the personal trajectory outlined in the previous section. Its main objective has been to examine the conditions of SMEs in the agrofood export sector in Chile and explore how a Chilean industrial policy, sensitive to the needs of the SME sector, might be designed that could

contribute towards the sustainable upgrading of the Chilean economy. In general terms, SMEs in Chile demonstrate relatively low productivity and seem to offer limited possibilities in terms of contributing towards the evolution of a more sophisticated economy that is more diversified and less concentrated. Nevertheless, SMEs in Chile are responsible for a high proportion of employment (Figure 5.6, Chapter Five). Thus, a strengthening of the sector and achievement of a more progressive insertion within the value chains articulating the Chilean economy with the global economy is clearly a socially desirable objective. However, it will be difficult for SMEs to upgrade in a sustainable way if these firms are unable to access skilled labour.

Nevertheless, the results of any upgrading strategy for the Chilean agroexport sector will depend greatly on the role played by public policy in nurturing the process. If industrial policy merely attempts to facilitate the operation of market forces, the current dynamics of the sector indicate the likely outcomes: abuse by large firms in their contracts with smaller producers and low productivity amongst the latter due to their inability to appropriate fair economic surpluses. Longer-term sustainable upgrading in the Chilean agrofood sector will require significant transformations in the labour market, not only in terms of increasing the skill levels of the workforce through training and good technical education, but also in recognising the need to respect and satisfy basic and minimum conditions in terms of social security, health, and fair contracts. Too often upgrading has had too narrow an economic definition: a modern and realistic industrial policy (the basic tenets of which will be explored in Chapter Two) should take into account these ‘missing threads’.

Chile has great strength in the agrofood sector. Geographic conditions of climate, temperature, etc., have been strongly amenable to the growth of the sector and over recent years, as shown in the following chapters. But behind this apparent success are hidden social fault lines. The growth of the sector has been built upon the expansion of temporary jobs without social insurance and without the proper training and upon the exploitation of large numbers of SMEs working in an environment with a lack of credit and insufficient degrees of associativeness and productive upgrading. This concept of upgrading is central to the thesis. As will be discussed at length in Chapter Two, upgrading should be understood as a multidimensional concept, i.e. it should not be limited to economic upgrading. A fuller definition is needed that also incorporates

social upgrading in which, for example, elements such as working conditions and respect for the environment must be considered. There is also an important spatial dynamic to these questions. The agrofood sector is located (in terms of its major production activities) outside the capital city Santiago. An approach to upgrading that involves the strengthening of SMEs in the sector (small farmers and their associations) will enable higher levels of employment in these regions, and should enhance the quality and working conditions of these positions. This is highly relevant in the context of on-going debate about the deconcentration of the Chilean economy, and its effects on productive diversification across the economy.

Drawing these inter-related interests together, the basic research questions which the thesis seeks to address are:

- a) Which forms of interventionism in terms of industrial policies (or related) are best suited to the development of the Chilean agrofood export industry?
- b) How can industrial upgrading be promoted in these natural resource-based sectors to the benefit of SMEs and employment quality?
- c) How can the working conditions of workers in the agrofood sector be best improved and in so doing, boost the social upgrading of the sector?

As preliminary information about it, I can point out that from the 1980s until now, Chile has shown, in the main, a type of industrial policy called ‘horizontal‘ (which focuses in correcting market failures). Also, during the presidency of Michele Bachelet (2006–2010), the government defined a policy of support for companies inside eight ‘clusters’ (mining, fruit, food processing, forestry, salmon, wine, tourism and financial services). A sort of ‘picking the winners’, but mainly in sectors connected with natural resources, and besides, these were already targeted by authority (This will be discussed in detail in Chapter Five). But the current conservative government has abandoned this policy and has taken the option of neutrality of incentives (this is explained in depth in Chapter Five).

1.3 Methodological Approach

In the development of this thesis I have explored the use of two major methodological approaches, Global Value Chains (GVC) and Global Production Networks (GPN) (these are discussed in detail and in depth in Chapter Four). Although GVC and GPN have a common foundation (networks and chains in a local–global perspective), there are differences between the two approaches. GVC focuses upon understanding the full range of activities involved in the making or producing of a product in order to estimate the potential impacts of participation in the distribution of economic surpluses. Value chain analyses can be applied to the production of both goods and services, and the chains analysed can be contained within a single geographical location or spread over wider areas. In my opinion, GVC analyses (Gereffi, 1994, p.96) have often been over-optimistic in respect to the opportunities for, and results of, upgrading processes within natural resource-based economies. For example, too often the appropriation of economic surpluses by firms in the export sector is presented as a natural trend caused by these firms looking to take advantage of market opportunities, rather than as a result of a whole range of inter-connected factors. In contrast, GPN has as their objective ‘to reveal the multi-actor and multi-scalar characteristics of transnational production systems through intersecting notions of power, value and embeddedness. In particular, attempts are made to connect with understandings of sub-national regional development and clustering dynamics (Coe et al, 2004, p.267). As such, the GPN approach is concerned with more than just economic variables and the relationships of firms and suppliers within a global value chain. GPN is also more global in its approach, and attempts to incorporate sensitivity towards territory and the actors within different spatial scales (state agencies, entrepreneurs, trade unions, research entities, NGOs) within its analysis. As explored in detail in Chapter Four, both approaches provide extremely helpful frameworks for exploring the prospects for more inclusive and sustainable development paths for natural resource-based economies such as the Chilean, however the different implications of the two approaches are quite significant. The conceptual framework of GVC tends to assume that lead firms create the conditions needed for the upgrading of SMEs (product upgrading, functional upgrading, etc.). It is not so concerned with the unequal relationships of exchange between large firms and SMEs and working conditions (Henderson et al, 2011, p.441).

The GPN perspective, in turn “accords a degree of relative autonomy to domestic firms, governments and other economic actors (e.g. trade unions) whose actions potentially have significant implications for the economic and social outcomes of the networks in the locations they incorporate” (Henderson et al, 2011, p.446). GPN addresses with an understanding of territoriality of production networks (how these are constituted by economic, social and political arrangements) therefore are central to the analysis of development at a local level. GPN embodies the dimensions of distribution of corporate power within these networks, the significance of labour in the processes of value creation and the institutional arrangements (trade unions, state agencies, NGOs) that influence the firm strategy in the particular locations (embeddedness) absorbed into the production chain. However, in countries whose economies are based on natural resources, GPN as theoretical framework must consider some adjustments in to understand the dynamic related to SMEs and working conditions of workforce related to the agrofood export sector.

1.4 Structure and Content of the Thesis

This final part of the chapter outlines the structure of the thesis and summarises the contents of the individual chapters.

Chapter Two: Industrial Policy in the Global South.

In this chapter I study industrial policy in depth, from its theoretical definitions to East Asian and Latin American practical experiences. The industrial policy applied to Latin America, especially in the 1960s, is analysed in terms of advantages and disadvantages. The difference between horizontal and vertical industrial policy and its implications in the institutional arrangements are highly relevant in understanding the attitude of governments and policy makers. It also discusses the importance of the territorial perspective to ensure that any industrial strategy is developed from the grassroots.

Chapter Three: Industrial Policy applied to SMEs

In this chapter I discuss the role of SMEs in the industrialization processes. I research different topics related to SMEs and I conclude with a more in depth view of SMEs and their linkages in the agrarian sector.

Chapter Four: Methodology

In this chapter I explain the methodology used in the research (mainly semi-structured interviews with key informants). Here, I also explain the main conceptual approach that is used in this thesis (Global Production Networks), an approach that emerged in 2002 (Henderson et al, 2011, p. 436), as well as explaining why I focused on SMEs and labour in my research.

Chapter Five: Industrial Policy Applied to Chile

In this chapter I analyse the evolution of industrial policy in Chile from the 1960s onwards. Also I study the role of state agencies and the role of SMEs in the Chilean economic context.

Chapter Six: Chilean Agricultural Sector

In this chapter I analyse the evolution of the agriculture sector from the 1960s up to the present. It encompasses the macroeconomic conditions of the agrarian sector as well as the participation of SMEs and labour. Also I discuss the decision of the conservative government to end the cluster policy.

Chapter Seven: Fruit Sector

In this chapter I analyse the Chilean fruit sector (fresh and processed fruit) focusing mainly on SMEs, working conditions and contractual relationships.

Chapter Eight: Wine Sector

In this chapter I analyse the Chilean wine industry. It encompasses the governance of this cluster, its history, and how it has developed in the last 30 years through export and innovation. Also I study the public-private efforts to develop and add value to the sector.

Chapter Nine: Conclusions

In this chapter I stress that the support to SMEs (and small growers) and the improvement in working conditions are the baseline from which should emerge a new industrial policy that overcomes typical market failures (insufficient access to credit, low levels of investment in Research and Development (R&D), etc.

Chapter Two: Industrial Policy in the Global South: Theoretical Context

2.1 Introduction

The discussion about how to achieve greater accelerated economic development within the countries of the Global South remains a major feature of debate within global academic and political forums. The concept of industrialization and how it might best be promoted is firmly back on the agenda of multilateral institutions and governments due to the fact that the previous policies promoted by the Washington Consensus (Williamson, 2009, p.1) do not appear to have worked properly. After more than a decade of application of these policies, their results have been poor in terms of creating a more diversified productive structure and they have also tended to worsen the distribution of income. The neoliberal views promoted under the Washington Consensus did not mention the concept of industrial policy in their recommendations for promoting economic growth; policy was instead much more focused on deregulating markets, privatization, and reducing the size and influence of the state within Latin American economies. Certainly, experience would now suggest that the liberalization of productive sectors and deregulation is not enough to create a more sustainable form of economic growth (Stiglitz, 2004, p.2). These uneven results have created renewed interest in rethinking industrialization and its role in future economic development strategies. A new framework for industrial policy (as a new paradigm) is required to face the challenges that globalization poses for countries of the Global South.

The views on how the state can act to support the industrialization of an economy are many and are not necessarily exclusive. These views encompass such approaches as: nationalization (or creating a state owned company); kick-starting a broader industrialization program via selecting and supporting those private companies which appear to present the best possibilities for spreading the spillovers towards the rest of the economy's productive structures (generating a structural change); or, as has been pursued strongly in some recent public policy initiatives, states can act to support the participation of SMEs along global value chains. However the concept of industrialization is too complex to summarise briefly. Discussions about industrialization have to address the nature of the desired industrialization, which

industries will be included within the industrialization process (i.e. which sectors will be targeted by the government) and the ways in which the pursuit of industrialization fits into the wider intentions of the state (this is related to whether the state has a developmental view of its role and whether it is prepared to allocate significant public resources to the industrialization objective).

The simplest neoliberal view is that a country should be able to make economic progress by exploiting its static comparative advantages (abundant land, cheap labour, etc.) and from there it can create industrial upgrading via limited public policies. The alternative structuralism view is that states should intervene to protect industrial markets ('infant industry') and achieve industrial upgrading¹ (the developmental point of view). Both of these economic strategies have costs and benefits in the short and long term, and there exists a variety of evidence at both country and industry levels as to their impacts which are discussed in the ensuing sections of this chapter. Before this, however, it is perhaps useful to provide some basic definitions of industrial policy (Agosin, 2008).

There are two main types of industrial policy. Horizontal Policy is applied across the industrial sector and is designed to correct market failures, for instance, the typical credit rationing that affects SMEs. SMEs do not have sufficient collateral, are undercapitalized, and although they account for a large percentage of employment in many economies, they do not get the necessary loans to develop and become sustainable overtime. A phenomenon called 'adverse selection' occurs, where in banks are afraid to self-select and restrict credit to this type of firm. This is called a 'market failure' because 'good SMEs projects' are not getting the right financing with the associated social cost this causes in terms of employment in the SMEs. Also 'information failure' is another market failure. Policy makers need to design public policies to tackle this problem (for example, state agencies can provide regular information on international market prices to small farmers and thus improve their position when negotiating contracts with large producers). This kind of policy (horizontal industrial policy) is the most common industrial policy ingredient within neoliberal economic strategies. Such

¹ Upgrading refers to the improvement of processes, products, or even the adoption of new business models such that it enhances the value added in the production process. So, the final product is a product of higher quality which in determined conditions should justify a better price in the markets.

policies are seen as neutral due to the fact that they do not favour any particular industrial sector, instead revolving around the identification of specific market failures which, according to the neoliberal perspective, must be corrected inside the system, without ‘altering the allocation of resources’ or the free operation of market forces.

Vertical Industrial Policy or Targeted Industrial Policy, on the other hand, is much broader in its scope and is applied under the assumption that the market, by itself, is slow and inefficient in developing new comparative advantages. The spillover effects from industrial activity are, in this view, not captured by market forces and government intervention is required to internalize the positive effects (spillovers) of this policy. For instance, when a government decides to favour a particular industry (via tariffs, subsidies, state investment in infrastructure, etc.) it does so because it believes that positive benefits from that activity exist but that they cannot be captured by the private sector in the short term. Within the logic of policy makers, the benefits from this type of intervention are for all actors, including an increase in taxation revenues in the medium term, thus strengthening the state’s ability to carry out other future projects. The essential question is whether the country possesses a strong enough institutional framework and the necessary resources to foster this type of policy. Vertical industrial policy is generally designed to develop sectors with productive linkages and so increase employment and human capital formation although one of the main weaknesses of these policies, to which we return below, is that they neglect the potential contribution of SMEs, whilst labour is considered almost as a variable of least relevance. At the same time, many Latin American economies, and certainly Chile, show a high concentration of economic activities in their capital cities and to a less extent in their other larger cities; hence there is also frequently a regional dimension to vertical industrial policy in order to attempt to boost economic development throughout the territories. For instance, the initiative to develop the salmon industry carried out jointly by the private sector and the state (mainly in the 1990s) was a form of targeted industry (vertical industrial policy), which had as its objective to create economic growth in the regions furthest from Santiago (Metropolitan Region).

In light of the current growth of interest in industrial policy described above, the intention of this chapter is to explore current thinking on the role of industrial policy within economic development (and how this relates to broader neoliberal and

developmental perspectives on the role of the state) and to evaluate the role of both horizontal and vertical approaches to industrial policy in the pursuit of a more diversified economy, as well as their implications for full employment, economic activity and industrial upgrading. Industrial upgrading will also be discussed in detail along with a comparison of the Asian and Latin American experiences in regard to the industrialization process.

2.2 States and Markets: the key contours of the debate over industrial policy

In the social sciences, the discussion about industrialization is an old one. In the early part of the twentieth century, the world economy collapsed (The Great Depression of 1929) to be followed by a surge of alternative new views on how to create economic growth. This intensified after the Second World War via a debate which can be divided in terms of economic policy between those countries that wanted to intervene directly to promote industrialization and those that believed that the establishment of a mainly free market would in itself act to improve the standard of their economies.

According to Wade (1990, p.8) the problems facing many developing countries in the 1950s were those of: low private savings, dependence on primary product exports, declining prices of exports in relation to imports, small internal markets, limited skills, few entrepreneurs adept at large scale organization, and pervasive underemployment. Within this context, the state was seen as not only responsible for maintaining the macroeconomic balance and the supply of public goods, but also for augmenting resources and transferring them to capital formation. During this period, therefore, for most countries the state was seen as the engine of economic development. The view was that when the market is left to operate alone, it generates less investment than is socially optimal, and in this context the state becomes an activist in the economic agenda.

Drawing upon these kinds of arguments, Latin America, from the 1930s until the 1970s, applied a strategy called ISI. It was a trade and economic policy that advocated replacing imports with domestic production. It was based on the premise that a country should attempt to reduce its foreign dependency through the local production of industrialized products. ISI was applied in many countries in Latin America (and

elsewhere), where it was implemented with the intention of helping countries to become more self-sufficient and less vulnerable by creating jobs and relying less on other nations. ISI was based primarily on the domestic market and worked by having the state lead economic development through nationalization, the subsidization of vital industries (including agriculture, power generation, etc.), increased taxation to fund these activities, and a highly protectionist trade policy which implied high tariffs. Thorp (1988, p.150) points out that ISI promoted the development of a great number of functions and instruments in the public sector. There emerged a new class of technocrat, with knowledge in economics, planning, management and engineering. They were relevant in the creation of new development and financial institutions (such as the development banks). Also there emerged with it a new industrial bourgeoisie.

But ISI was gradually abandoned by developing countries in the 1980s and 1990s due to disappointment with the results and its ability to respond to changing global circumstances (Palma, 2006, Ch.6). Palma argues further that the industrialization process benefitted only a small segment of the population (during and after ISI), creating social segregation. However, Palma also points out that the growth of Latin America rose annually by 4.2% between 1950 and 1981, but that the manufacturing sector delivered an unusually high growth of 6.5% during the same period.

ISI drew theoretically upon the works of Raúl Prebisch and was a major part of the economic strategies developed and promoted across the region by the Commission Economica para Latinoamerica y el Caribe (CEPAL), known as the Economic Commission for Latin America and the Caribbean (ECLAC) in English. CEPAL's recommendation of state-induced industrialization through governmental spending was influenced by Keynesian models as well as the infant industry arguments adopted by some highly industrialized countries, such as the United States, until the 1940s. ISI is also often associated with dependency theory, although the latter adopts a much broader sociological outlook which also addresses cultural elements thought to be linked with underdevelopment (Larrain, 2004, p. 26).

Kay (1989, p.37) explains that ECLAC supported this process of industrialization and recommended several tools and means, such as easy credit, infrastructural support, and favourable foreign exchange measures, but mainly through protectionism. Tariff

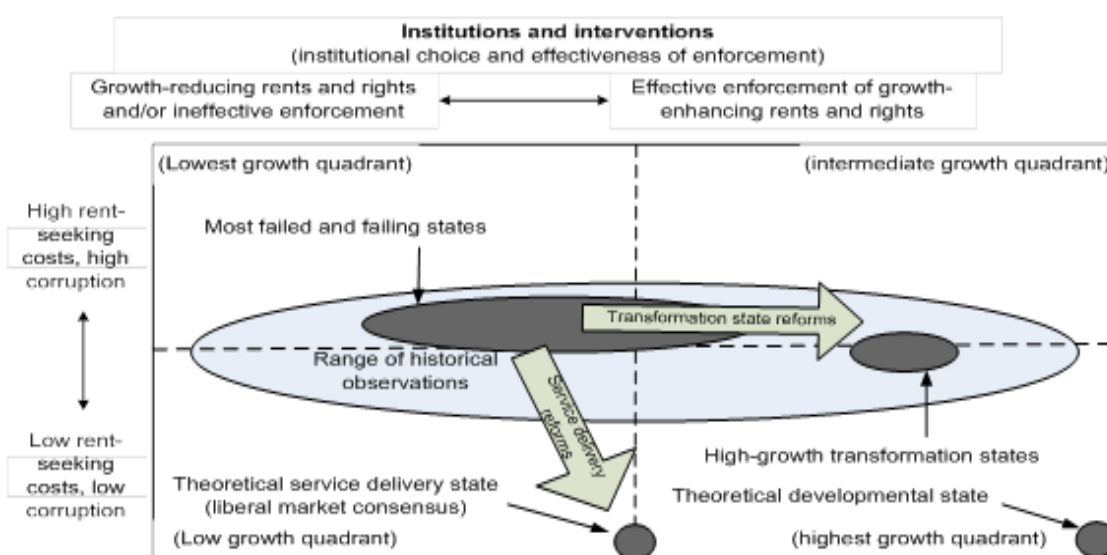
barriers were imposed or increased on all those industrial imports whose production was to be substituted. According to Kay (1989, p.38): “ECLAC hoped that ISI strategy would transform industry into the most dynamic sector and lead to a higher rate of economic growth than that achieved by the export sector”. It was hoped that the manufacturing sector was a relevant part of national income.

But from the 1960s, ISI began to be subjected to a growing critique from the political right and left (Palma, 2006, p.127). Critics pointed to the inability of the ISI strategy to either generate sufficient internal resources or foreign currency to carry out the industrialization process effectively. It was also argued that ISI required too much subsidization and ended up protecting inefficient industries which did not achieve international competitiveness. All of this meant that there were frequent foreign currency shortages and later, excessive foreign borrowing. The final straw for the model came during the 1980s debt crisis when the growing current account deficit reached a peak in 1981 which put excessive pressure on the policy of maintaining currencies which could stimulate the acquisition of capital goods, a major feature of ISI policy (Lustig, 1988, p.55). Other authors (Franko, Lin) have also pointed out the role of clientelism and the reliance on low levels of technological upgrading in limiting the development of economies of scale in the case of Latin American industrialization.

Here we begin to see the influence of neoliberal critiques of industrialization policy which argue that extensive government intervention within ISI strategies tended to create rent-seeking or political clientelism (Todaro, 1997, p. 86–87). This reflects the influence of ‘public-choice theory’, also known as the new political economy approach, which argues that government intervention is inherently problematic. In this view, politicians, bureaucrats, citizens and states act solely from a self-interested perspective. This means citizens (and institutions and businesses) use political influence to obtain special benefits called ‘rents’ from government policies (e.g. import licences or rationing foreign exchange). Bureaucrats, in this theory, use their positions to extract bribes from rent-seeking citizens and to operate protected businesses on the side. This perspective therefore implies that the best government is a minimal government. Interestingly, in the Asian context (Khan, 2000, p.121) the idea of rent-seeking has been seen in a different way (see Figure 2.1). In this approach, the rent seeking mechanism operates because of the logic of free market forces. In this context, the government is

seen as acting as an allocator of rents among different industries and sectors wanting industrialization and the possibility to absorb unemployment. The state protects sectors through high tariffs (infant industry), delivering licenses, promoting subsidies in credit and technological transference, etc. However, in turn, the state controls the results of these industries in terms of industrial value added and keeping ‘tension’ in this scheme.

Figure 2.1 Social transformations and the location of state failure.

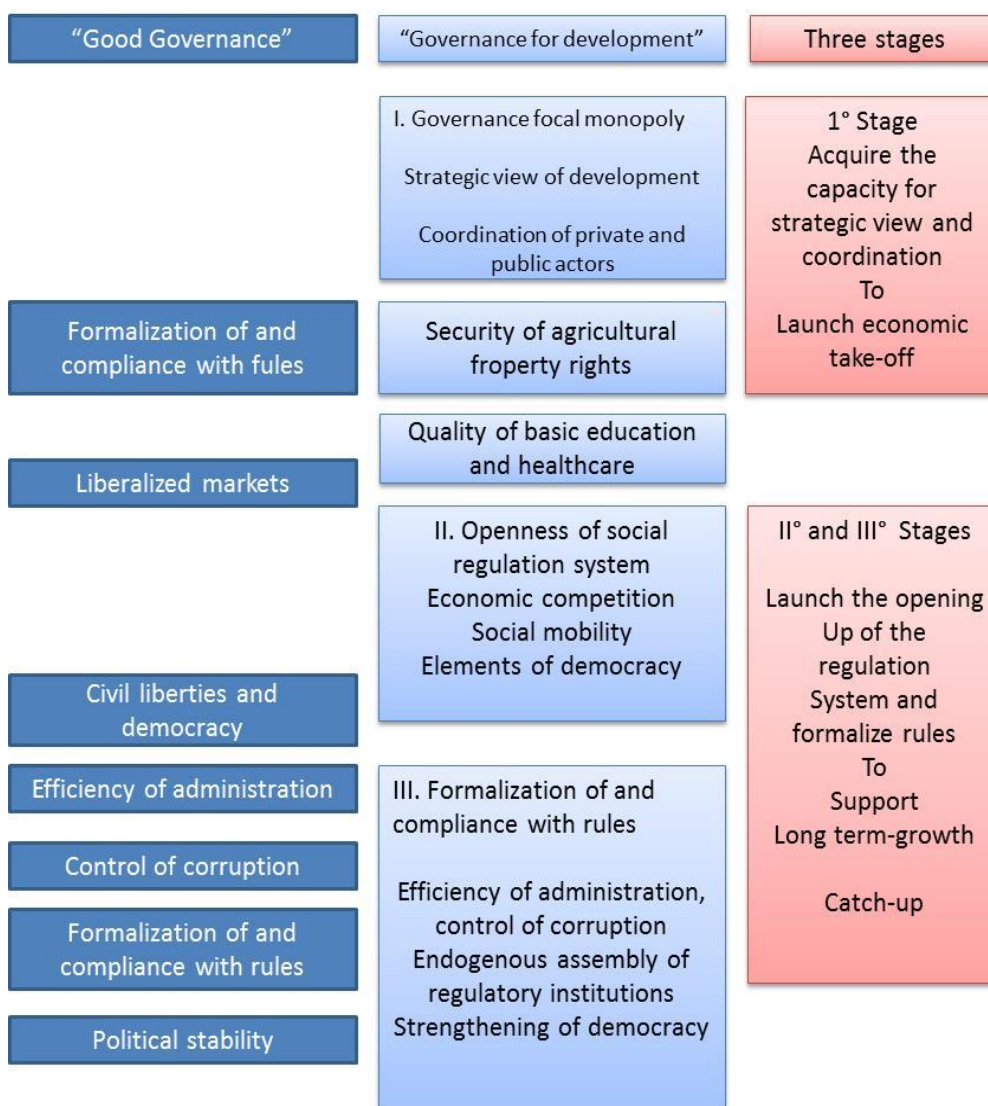


(Source: Khan, 2003, p 173)

The World Bank has been one of the chief architects of the evolving neoliberal perspective on industrialization. Its Code of Good Governance (Table 2.1), for example, points out what it sees as the determinants for sustainable economic growth which strongly reinforce the case for non-intervention in the economy. The application of the Washington Consensus since the onset of the debt crisis basically reduced the influence of industrial policies, establishing, at least in its own mind, neutrality in the allocation of resources. Also, at a financial level, neoliberal policies reduced the independence of monetary and exchange policies that might have been used to boost aggregate demand or induce a different pattern of productive structure. The World Bank’s code of good governance is open to critical analysis due to the fact that it assumes a homogenous world in which poor countries have the same characteristics as rich countries but are affected by factors that prevent them from catching up (corruption, lack of democracy,

state failures, market failures, etc.). Moreover, developing countries are structurally different in how their social regulation systems operate.

Table 2.1 Code of Good Governance



(Source: Meisel and Aoudia 2008, p.46)

Neostructuralism emerged post-ISI as an answer to these capitalist forces (Sunkel, 1993, p.2) and as an attempt at formulating an alternative to neoliberalism. Sunkel claims that that neostructuralism shares the basic structuralism tenet that the sources of underdevelopment in Latin America do not originate in policy-induced distortions (determined economic policies). Sunkel & Zuleta (1990, p.41) point out that

underdevelopment in Latin America is rooted in history and is structural and endogenous. Rosales (1988, p.19–36) claims that proof of this backwardness can be found in three crucial aspects of Latin America in the late 1980s:

- a) An internationalization specialization in products lacking dynamic potential. Agrarian products with scarce value added represent the majority of products of the export supply.
- b) The prevalence of an uncoordinated, vulnerable and highly heterogeneous production pattern that tends to concentrate technical progress and is incapable of fully and productively absorbing new entrants into the labour force. Large firms tend to exert too much bargaining power in contracts with SMEs and small growers in general, creating and maintaining a productive system without collective investments, and where the state does not play any role.
- c) The persistence of a growth pattern that excludes the vast majority from the fruits of progress. The neoliberal model has been unable to reduce poverty.

Accordingly, a new approach towards the industrial policy is required. It should be based on the analysis of disaggregated outcomes (not solely on growth), and also on the generation of employment and changes in the pattern of distribution of income (Stallings & Perez, 2000, p.7). The income would depend on level of skill, and that different jobs within firms would attract levels of pay that reflected the level of skill required objectively.

2.3 Links between the Lost Decade in Latin America and De-industrialization Policies

The Washington Consensus was a phrase coined by John Williamson to describe the recipe established in the 1980s by the International Monetary Fund (IMF) and the World Bank to develop a series of policies derived from the neoliberal perspective, as described above, to stimulate economic recovery and reconstruction following the onset of the debt crisis (chiefly in Latin America and Africa). The 1980s therefore saw a major change in the orientation of economic development strategies and hence attitudes towards industrial policy and it is often referred to as the lost development decade in Latin America (Ffrench Davis, 2003, p.1–3). This lost decade began with the Mexican

default in 1982, when Mexico declared that it could no longer meet its external debt payments with international agencies and other entities. Other countries threatened to follow. This was a result, amongst other factors, of the industrialized countries deciding, due to a range of economic problems, to increase interest rates which raised the cost of national borrowing in Latin America at a time of enhanced need and also caused capital flight. It led to the inevitable devaluation of Latin America's domestic currencies, together with significant increases in inflation rates.

The economic crisis that this generated (not just in Latin America) allowed the international financial institutions to significantly enhance their influence over the governments of the region that led to the emergence of a different approach towards economic development and industrialization which, as suggested above, was heavily influenced by the neoliberal ideas of the Washington Consensus (see Table 2.2). This created the basis of structural adjustment policies and reduced the ability of the state to generate an autonomous and national industrial policy to diversify their economies away from their dependence upon commodities and raw materials (Lustig, 1998, p.50). The need for foreign trade (in order to generate the resources to pay their external debt) increasingly led the Latin American economies towards specialization within economic activities determined by the comparative advantages promoted by the mainstream proponents of international trade (i.e. the commodities and raw materials referred to above). It created a growth without social counterbalances which was very dependent on international cycles. Devés (2004, p.116) reinforces the previous setting. He claims that in the modernisation proposal of neoliberalism, the recurrent topics were to reduce the size of state, decrease the public expenditure and mainly to exclude the state of the production of goods and services; the need of macroeconomic equilibriums, the insistence in comparative advantages, reduce tariffs and give security to the international capital. It reduces finally the capacity of the state to guide the economic process.

Table 2.2 Measures promoted by the Washington Consensus for the Global South

Fiscal discipline, involving a drastic reduction in budget deficits, the aim was to solve the large accumulated deficits that led to the crisis in the balance of payments and high inflation.
Reduced public spending, especially on social welfare. The Washington Consensus actually intended to redistribute spending to the promotion of economic growth and more targeted programmes for the poor, for example, from unjustified generalized subsidies to basic health care, education and infrastructure. ²
Improved tax collection based on the extension of indirect taxes, especially VAT. The aim was that the tax system should combine a broad tax base with moderate marginal rates.
Liberalization of the financial system and interest rates.
Maintenance of a competitive exchange rate.
External trade liberalization, by reducing tariffs and abolishing existing import barriers.
Provision of wide facilities/incentives to encourage foreign investment.
Privatization of public enterprises.
Strict enforcement of payment of the foreign debt.
Reinforced private property rights: protected by the legal system

(Source: Williamson, 2009)

These changes in approach reflected processes that had already been occurring within the economic approaches adopted by industrialised countries, led by the Thatcher and Reagan governments in the UK and the USA. The ensuing shift within the dominant approaches adopted within the international arena reflected the strong influence of richer countries over major international bodies such as the IMF and the World Bank and the way in which the crisis allowed these institutions to greatly enhance their influence over Southern countries due to the escalating debt problem. However, several

² In practice, these measures weakened the role of the state in meeting its objectives of redistribution and equity.

major questions arise in exploring the results of the application of these neoliberal policies in Latin America.

- a) Were those Latin American countries that followed the recommendations of the Washington Consensus able to solve some of the problems with previous strategies and embark upon a more sustainable industrialization process?
- b) Did the measures adopted actually accelerate the crisis? e.g., as a result of excessive deregulation in the markets.
- c) What is the relationship between the relative success of development in East Asia and the Washington Consensus recommendations?
- d) Would successful industrialising countries like South Korea have succeeded just by following these recommendations?

Certainly the term ‘industrial policy’ is missing in the recommendations of the Washington Consensus. There was such a level of distrust in the role of the state in the economies that any type of state intervention was considered out of place. With these policies, Latin American countries in the 1980s did not alter their productive patterns in a structurally significant way. Besides, the Washington Consensus did not take into account ethnic factors, distribution of income, infrastructure and inadequate networks (Moncayo, 2003, p.80). In other words, the Washington Consensus recommended a move towards a more free market economy without considering the historical and socio-economic-political context.

In fact, evidence shows that those countries that have, in the main, closely followed the Washington Consensus recommendations over the longest period of time do not tend to exhibit sustained economic growth patterns or improvements in the distribution of income and inequality. Chile, as a result of neoliberal policies during the Pinochet government, grew at a rate of 3.6 % between 1975 and 1994, and its export/GDP ratio was 38%. However, during the period of ISI between 1950 and 1980, the Chilean economy had grown at 3.7%, while between 1990 and 2002 it grew at 5%.

In comparison, Brazil and Mexico grew at 5% – 6% per annum in the period of ISI, while in the 1990s; their economies grew at 3% or less on average. In general, it appears that the larger Latin American economies did better in purely economic terms during

the ISI period, except Chile. Washington Consensus measures were applied under Pinochet's dictatorship before the 'official application' of Washington Consensus. From 1990 onwards, the democratic governments, at least, distanced themselves from the deepening of the neoliberal view on the economy and the results of economic growth in Chile were better in the 1990s due to the new equilibrium between the state and the market. Also, the ISI golden age was not so extraordinary for Chile (in terms of GDP growth) in comparison with the rest of the Latin American countries due to the fact that Chile has a small internal market and ISI in Latin America was mainly inward looking, which implied that small economies such as Chile did not have to take advantage of scale economies (see Table 2.3).

Table 2.3 Indicators of growth and trade balance performance for three different periods.

Country	Period	Years	Growth rate (%)	Import elasticity (%)	Export elasticity (%)	Change in productivity gap (%)
Argentina	IS golden Age	1950-1973	3.49	0.42	0.71	
	Pre-Reform	1974-1990	0.34	-3.1	14.29	0.84
	Post-Reform	1991-2003	1.81	2.66	3.81	0.91
Brazil	IS golden Age	1950-1973	7.2	0.8	0.78	
	Pre-Reform	1974-1990	4.07	-0.27	1.98	0.55
	Post-Reform	1991-2003	1.83	3.74	3.64	0.76
Chile	IS golden Age	1950-1973	3.64	1.45	0.6	
	Pre-Reform	1974-1990	1.63	-0.38	3.81	1.6
	Post-Reform	1991-2003	5.34	2.07	1.7	0.65
Colombia	IS golden Age	1950-1973	5.2	0.57	0.88	
	Pre-Reform	1974-1990	4.12	0.82	1.28	0.58
	Post-Reform	1991-2003	2.71	2.35	1.64	1.03
Mexico	IS golden Age	1950-1973	6.56	0.66	0.69	
	Pre-Reform	1974-1990	4.58	0.58	2.37	0.67
	Post-Reform	1991-2003	2.88	4.42	3.23	0.68
Peru	IS golden Age	1950-1973	5.12	1.19	0.99	
	Pre-Reform	1974-1990	0.75	-5.46	2.85	-0.92
	Post-Reform	1991-2003	3.74	1.87	2.19	0.78
Uruguay	IS golden Age	1950-1973	1.55	-0.12	-0.25	
	Pre-Reform	1974-1990	3.67	-0.14	4.23	1.33
	Post-Reform	1991-2003	1.03	3.44	3.02	0.77
Latin America	IS golden Age	1950-1973	3.04	0.58	0.74	
Weighted Average	Pre-Reform	1974-1990	3.12	0.58	2.42	0.43
	Post-Reform	1991-2003	2.45	3.64	3.31	0.74

The table reports average growth rates of income, elasticities of imports and exports. The change in productivity gap is the percentage change in productivity for the country relative to the same change in the international technological frontier.

(Source: ECLAC, 2005)

In its justification of its laissez-faire attitude towards industrial policy, the World Bank argues for incentive neutrality in regard to dedicating special resources to sectors and/or firms. This is the very essence of the 'neoliberal state'. As Coe et al. (2007, p.203) point out: "The economy in these neoliberal states is underpinned by a well-developed financial market and a flexible labour market. The role of the nation-state is to serve as the custodian of this system through complex sets of regulatory institutions and legislation".

2.4 Asian Experiences

The World Bank (1993) talks about the East Asian Industrialization 'miracle'. This 'miracle', it was argued, was a result of free market policies, respect for private property rights, the stimulation of private initiative and low distortions and interventions. This resulted in high levels of domestic saving, broad based human capital, good macroeconomic management and limited price distortions which provided the basis for growth. At the same time, careful policy interventions to accelerate growth produced very rapid growth. But this view is still controversial.

Nelson and Howard (1998, p.3) divide most growth theories about the Asian 'miracle' into two groups:

- a) 'Accumulation' theories stress the role of capital investments in moving these economies along their production functions. What lies behind the rapid development, according to this type of theory, is very high investment rates. If a nation makes the investments, development will follow.
- b) 'Assimilation' theories stress entrepreneurship, innovation, and the learning process these economies went through before they could master the new technologies they were adopting from more advanced industrial nations. These theories see investment in human and physical capital as an essential but far from sufficient part of assimilation. In addition, people must learn about, take the risk of operating, and come to master technologies and other practices new to the country, if not the world. The emphasis for assimilation theorists is on

innovation and learning, rather than on copying. If one does the same but does not innovate and learn, development does not follow in a sustained way.

However, other authors (Amsden, 1989, Khan & Blankenburg, 2009) have different explanations in regard to East Asian development. In the case of Khan, he discusses this rapid process of industrialization according to the rent-seeking management framework. Basically, according to Khan, existing rents in the economy were allocated to certain firms and then the authorities assessed and established targets of production, industrial value added, and exports. When the development of these countries is analysed, it can be observed how the state constantly changed the incentives (or disincentives) provided to individual firms and also over time reduced initial protection (infant industry). Overall, state policy tried to identify those firms that could adapt to the external market and compete ('picking the winners'). Another branch of the literature sees the development of East Asia as reflecting the influence of the 'Developmental State'. For example, from 1945 to 1987 South Korea was governed by right wing dictatorships which used the state to promote industrialization. Nonetheless, it is also necessary to acknowledge that in the 1960s in South Korea, the USA passed different laws to boost development of heavy industries. Thus, whilst the Korean state played a relevant role, it was embodied in a cold war context that facilitated massive involvement from the USA in terms of credit and financial resources.

Does, however, the experience of Asian nations which have undergone successful industrialization processes reflect the kind of state functions envisaged within neoliberal conceptualizations of the state? It is certainly true that the success of Taiwan, South Korea, Malaysia and Hong Kong was achieved by using an outward-oriented model driven by market incentives and a strong private sector. Nonetheless, the state, in different ways and in different circumstances, played a very important role in all of these transitions (Chang, 2002). According to James, Naya and Meier (1989, p.18–25), in the 1950s these economies, following the earlier example of Japan, started a process of industrialization similar to the Latin American process. However, whilst they adopted the ISI strategy initially, by 1960, recognising the self-limiting nature of ISI, many began shifting to a more export-oriented strategy with spectacular results. In these examples, however, it is also certainly the case that these strategies were supported by continued state intervention in support of particular sectors and trade policies which

exerted a profound influence on the patterns of industrialization and economic growth. According to Khan & Blankenburg (2009, p.338) even the World Bank has recognised the key role of the state within these experiences but has interpreted Asian successes as reflecting exceptional state capacities not replicable elsewhere. They point out that the reason for this success story was that this particular variant of industrial policy (vertical industrial policy carried out jointly with rent-seeking management) was compatible with internal power balances in each country that allowed the state to create incentives and compulsions in critical areas (picking the winners).

It is worth exploring a number of these examples in a little more detail. South Korea, once one of the poorest nations of Asia, transformed its economy comprehensively over a 40 year period. In analysing this phenomenon one cannot leave out the role played by its education system. So it was only through comprehensive state intervention in supporting the education sector and human capital formation that the successful industrialization was possible. The transformation of the educational system was deeply linked to the productive sector in order to transform the local economies (McKay, 2005, p.14).

The economy experienced a drastic shift from agriculture towards industry and services (Harvey, 2005, p.107). By 2006, only 8% of employment was in agriculture, while 26% was in industry and 66% in services. Over the same period, per capita GDP increased from less than 20% of the Organisation for Economic Co-operation and Development (OECD) average to almost 80% in 2007, the share of the labour force involved in agriculture declined from 66% in 1960 to 34% in 1980, while the manufacturing sector's share of GDP grew from 9% to 28% over the same period (see Table 2.4).

Table 2.4 Distribution of labour force by economic sector, 1960 and early 1980s (percentages)

Country	Agricultural		Industrial		Service	
	1960	1980s	1960	1980s	1960	1980s
Taiwan	56	19	11	41	33	40
Hong Kong	8	1	52	45	40	53
South Korea	66	34	9	28	25	38
Singapore	8	1	23	36	69	63
Middle-Income Oil Importers	60	44	16	21	24	35
Industrial Market Economies	18	6	38	38	44	56
Low-Income Economies	77	72	9	13	14	15

a. Taiwan data are from 1982; Hong Kong data from 1983; South Korea data from 1981; Singapore data from 1982. All data for the three World Bank grouping of nations are from 1980.

b. Industrial sector includes mining; manufacturing; construction and utilities.

(Source: World Bank, 1980 and 1982)

Table 2.5 also clearly shows the changing sectoral distribution of GDP in East Asian countries between 1950 and the present, which, in the case of South Korea and Taiwan, shows agriculture declining and manufacturing and services growing impressively. The situation of Hong Kong and Singapore is quite different to that of other countries and it might not reflect the typical forces leading to industrialization trends in other circumstances. The Agricultural sector in these countries has never been significant due to the lack of economies of scale, the lack of available land and relatively small populations.

Table 2.5 Changing sectoral distribution of GDP in East Asian EOI states, by period or selected years

	Agriculture	Industry	Service	Total
Taiwan				
1950–60	27.8	32.3	39.9	100
1960–70	20.6	41.5	37.9	100
1970–77	13	50.9	36.1	100
1978–82	8.4	45	46.6	100
Hong Kong				
1950–60	3.7	40.7	55.6	100
1960–70	2.9	48.4	48.7	100
1970–77	1.8	39	59.2	100
1982	Nil	28.6	71.4	100
South Korea				
1950–60	41.8	21.5	36.7	100
1960–70	34.6	30.7	34.7	100
1970–77	25.8	38.5	35.7	100
1982	16	39	45	100
Singapore				
1950–60	3.5	31.2	65.3	100
1960–70	2.9	36.1	61	100
1970–77	1.9	45.5	52.6	100
1982	Nil	38	62	100

Note: Unit of measurement is percentage distribution of gross domestic product by sector at current factor cost

(Source: World Bank, 1980, 1984)

The industrial strategy employed in the South Korean case was that of technological catching up led by large companies called chaebols, who were given various forms of protection and subsidies to allow them to engage in learning and so catch up with advanced countries (infant industry strategy). This reflected a rent-seeking management system coordinated by the state which depended critically on a balance of power between the chaebols and the state within which subsidies were withdrawn from

inefficient firms (Khan, 2003, p.185).As argued above, in contrast to the anti-state tendency of the good governance perspective of the World Bank, rent seeking management assumes that inefficiency must be managed by the state in terms of imposing pressure on the ‘winning’ sectors. This pressure includes setting export targets, ensuring industrial value added, creation of employment and the development of new economic sectors (diversification).The state allocates protection to the chosen companies (temporary or permanent high tariffs, subsidized credits) but if they do not achieve the required targets, they lose these benefits.

However, this process (rent-seeking management) is risky. Akkemik (2009, p.85) points out that during the industrialization drive in Korea (1973–1979), the promoted industries were those the government saw as necessary to increase the self-sufficiency of the country in basic inputs (e.g., iron, steel, petrochemicals) and in the technology-intensive sectors (e.g., shipbuilding, electronics, machinery and equipment). Selecting the most promising industries is, however, a risky process and there are examples of individual failures in other Asian countries, e.g., the nurturing of the automotive and aircraft industries in Indonesia and petrochemical and machinery industries in Malaysia.

But the Malaysian case has positive results despite these failures (1970–1990). Technology acquisition was accelerated by providing incentives for high-technology multinational companies to invest in the country and providing backward linkages to domestic producers. The incentives took the form of prioritized provision of infrastructure to suit the needs of foreign investors, as well as protecting them from redistributive pressures. The tax system met the needs of the population. So with these credible promises reduced uncertainty, and the multinationals produced goods of high technological quality. The Malaysian state ensured that domestic learning would take place by insisting on technology transfer to subcontractors and demanding local content (Malaysia offered a good platform to multinationals). The free-riding behaviour of multinationals was reduced due to the stability of internal political conditions (Akkemik, 2009, p.86–87).

There is then still a profound discussion about what sort of economic policies should be encouraged across the globe by nations seeking to catch up with the advanced economies. Although each country (Asia & Latin America) has its own characteristics,

the role of the state has been very active in most cases. The problem in itself is not the size of state. The underlying problem is what incentives the state is able to provide in order to create conditions for diversifying the productive structure, to create a sophisticated production supply, create new niche markets and support intensive processes in training and the creation of employment.

The discussion in this section has encompassed the concept of the developmental state (from nationalizations to joint ventures with multinationals), the neoliberal approach of comparative advantage (with the free market allocating resources), and the rent seeking management system (as in the mainly Asian case) as a form of allocating resources and protection for firms. However, the reasons for supporting determined industrial policy components are complex and it is necessary to analyse them, considering objectives, costs and benefits.

2.5 Why Industrial Policy?

Chang (2003, p.41) makes a really important (and controversial) point. He suggests that contrary to the official history of capitalism, the developed countries in the past used tariffs, subsidies, and other measures of intervention within their pursuit of industrialization. For instance, they used infant industry protection when they were trying to develop new industries (Krugman, 2006, p.48). However, as we have seen in the preceding sections of this chapter, the discourse from Northern countries and the international financial institutions in regard to the policies that should be pursued by Southern economies seeking to industrialize today places emphasis on diminishing the role of the state in the economy and reducing interventionism (avoiding sectoral policies) in order to allocate resources according to 'free market forces'.

Chang (2003, p.61) acknowledges three important justifications for industrial policy in Southeast Asian countries:

- a) The need to coordinate complementary investments in the presence of significant economies of scale and capital market imperfections
- b) The role that the state is able to play as the organizer of domestic firms into implicit cartels in their negotiations with foreign firms or governments

c) Policies to deal with learning externalities (e.g., subsidies for industrial training)

The most important goal of industrial policies is achieving sustained economic growth through industrialization. Therefore, there is an old belief based on past industrializations that heavy industries (manufacturing) are the leader industries which will boost growth. This process would cause an increase in labour demand by firms. So full employment is an objective of industrial policy which must be embedded into a macro-framework which encompasses numerous things from taxation and R&D expenditure to fiscal and monetary policy.

For the last couple of decades the idea of the developmental state, which could contribute directly to economic growth, has been laid to one side. There is, however, no acknowledgement that the path that was taken by Northern industrial economies to their current economic status originated precisely in the kind of policies they currently criticize. Finally, however, particularly after the subprime crisis, there has begun to be a breakdown within the Washington Consensus and the emergence of a vague post-Washington Consensus which addresses the problems of the old consensus mainly via theories of market imperfections (Fine, 2001, p.13).

In contrast to import substitution, however, this approach still tends to evolve towards an open economy industrial policy where the objective is to increase economic openness by enhancing flows of knowledge, foster productive innovation, and promoting non-traditional exports. It does, nonetheless, seem to represent a reasonable solution to the old schemes of industrialization in Latin America in the 1960s, and of those more free market economy schemes. According to the definitions of industrial policy and its variants outlined above, post-Washington-Consensus-influenced perspectives would probably be defined as horizontal industrial policy, designed to correct market failures (particularly asymmetries of information). It will depend greatly on the political will of policy makers in individual countries whether such approaches become more ambitious (perhaps, for example, selecting and protecting those sectors with the highest economic potential).

What is clear is that productivity growth is the key to enhancing the quality of life of a nation's citizens, as well as determining its ability to compete in global markets.

Economic development implies structural transformation, moving from low productivity activities towards high productivity activities, from simple agriculture and simple manufacturing to more modern manufacturing and agricultural processes. Industrialization, broadly speaking, has as its goal the increase of both labour productivity and economic activity as a whole. The types of policy can include measures (e.g. taxation incentives) designed to attract foreign investment, which can be relevant for specific sectors, as well as more general interventions oriented towards the promotion of exports. Both of these should be considered as part of industrial policy. A typical problem on the political agenda is how to protect certain industries, which are considered dynamic, with positive externalities (spillover effects).

Fajnzylber (1992, p.21-28) contributes to this debate claiming that for overcoming of syndrome of “empty box” (dichotomy between growth and equity), a productive transformation was required in order to significantly boost labour productivity, support international competitiveness based on technical progress, strengthen and widen the Latin-American entrepreneurial base, and develop relations of cooperation in the long term (with a strategic view) amongst government, entrepreneurs and workers.

UIHaque (2007, p.3), supporting the use of industrial policy, points out that government intervention becomes necessary when competition alone does not force firms to innovate and undertake productivity enhancing investments. The argument is that market forces alone do not provide enough information about the profitability of resources that do not exist (e.g. new skills or new technology). So the comparative advantage doctrine is of limited value in designing policy if the intention is to increase investment and human capital as well as knowledge. Rodrik (2007, p.27) notes: “whatever it is that serves as the driving force of economic development, it cannot be the forces of comparative advantage as conventionally understood”. The main criticism of the policy to limit state intervention to the correction of market failures is that it is a weak industrial policy. The emphasis upon correcting market failures leads to emphases upon the provision of education, infrastructure and risk capital as well as R&D funding. In this type of industrial policy there are not any direct market interventions by the state in terms, for example, of creating a state enterprise to develop and strengthen new niche markets or the selection of strategic sectors with high economic potential. Also the World Bank’s code of good governance, explored earlier, emphasizes the importance of

contracts and fulfilment of property rights. Whilst these elements are obviously important within any industrial strategy, the approach to policy making within the successful economies of East Asia was clearly much broader in its orientation. Overall, it would appear that the correction of market failures as an orientation for a 'sound industrial policy' is too limited and too optimistic.

However, elsewhere in the literature, Felipe (2010, p.69), for example, the term industrial policy is reserved for any type of selective intervention or government policy that attempts to alter the structure of production towards sectors that are expected to offer better prospects for economic growth. The term is used somewhat pejoratively by neoliberal commentators who view this type of intervention as degenerating into 'picking winners' (Khan & Jomo, 2000, p.95) where government officials decide what activities and sectors to promote with frequently spurious and politically motivated rationality.

Rodrik (2007, p.45), nevertheless, points out that even this type of more profound industrial policy is justified by the existence of market failures although these are not the typical market failures addressed by the traditional interventions of public policy. These market failures are highly uncertain due to their location and magnitude. One example comes from considering measures designed to address those coordination externalities that weaken the entrepreneurial drive to restructure and diversify low-income economies. Coordination efforts between the public and private sectors can bring positive effects to society in terms of investments which can be complementary and so obtain the minimum scales of production necessary to develop new businesses and new ventures. In other words, the state can be a strategic partner to the private sector reducing the risks faced by the private sector (technology transference, subsidies for location outside the big cities, state agencies promoting credit, etc.).

Clearly then successful industrial policy requires collaboration between the state and private sectors in order to identify and act upon areas where the country has comparative advantage. Nevertheless, the state also has to take into account broader issues such as the need to pursue full employment and balanced development together with the balance of activity between the regions and provinces, otherwise development can become concentrated, monopolistic and monopsonist.

Based on the previous points, Rodrik (2008, p.19) summarises what he sees as the basic elements required for an effective industrial policy:

- a) Place political leadership at the top
- b) Set up coordination and deliberation councils
- c) Set up mechanisms of transparency and accountability

Accordingly, Rodrik then sets out ten principle measures as a guide to industrial policy:

- a) Incentives should be provided for 'new activities'
- b) There should be clear benchmarks for success and failure
- c) There must be a built-in sunset clause. This means that inefficient firms will not be supported indefinitely
- d) Public support must target activities, not sectors
- e) Activities that are subsidized must have clear potential for providing spillovers and demonstration effects
- f) The authority for carrying out industrial policies must be vested in agencies with demonstrated competence
- g) The implementing agencies must be monitored closely by a principal with a clear stake in the outcomes and who has political authority at the highest level
- h) The agencies carrying out promotion must maintain channels of communication with the private sector
- i) Optimally, mistakes that result in 'picking the losers' will occur
- j) Promotional activities need to have the capacity to renew themselves, so that the cycle of discovery becomes an on-going one

From my point of view, the proposals of Rodrik are appropriate in general terms. However, he does not mention explicitly the need for an effective SMEs policy. How do SMEs fit into value chains and clusters? How do they get the upgrading to enhance processes and products? It is perhaps logical to assume that in the first stage, countries

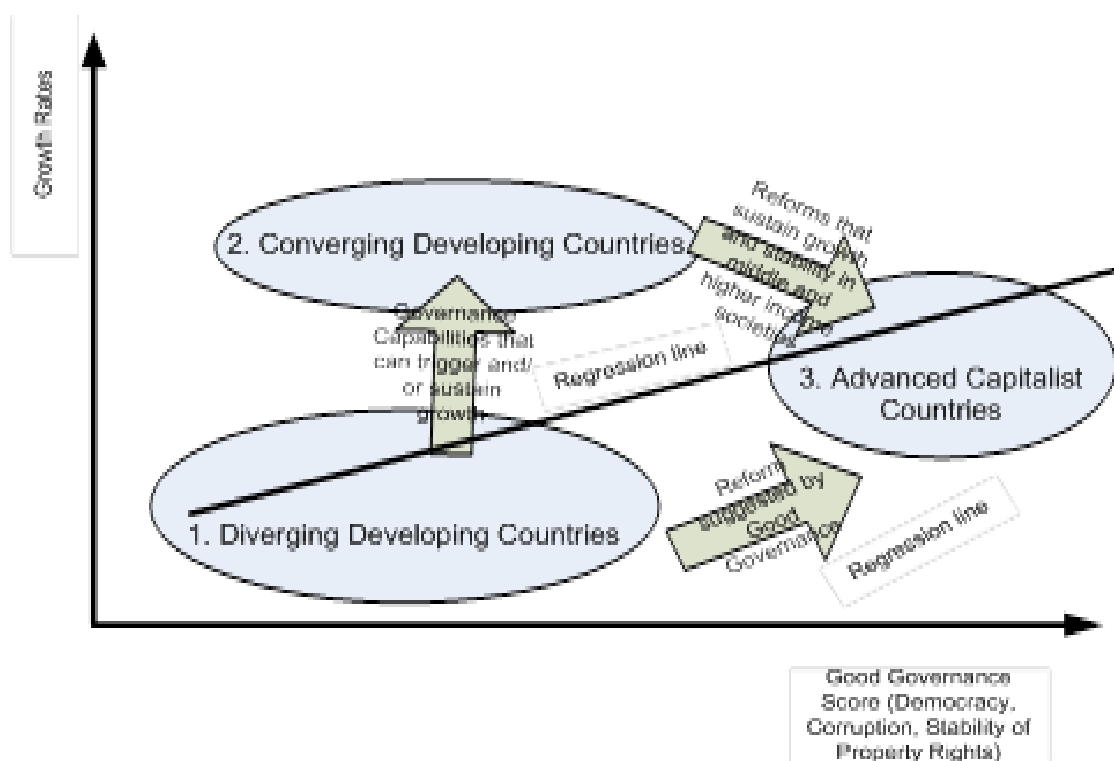
require large companies (as in the South Korean chaebols) operating in the chosen value chains and clusters in order to take advantage of faster economies of scale, better channels of distribution, better logistics, etc. Nevertheless, in order not to commit past mistakes, industrial policy principles should contain and add explicit exploration of the participation of SMEs across value chains and explicitly include sectoral interlinkages within them. In this way, the public funds allocated to promote industrial policies would not only be captured by large companies inside the chosen value chains and clusters. Further, SMEs are intensive in labour in comparison to large companies, which permit them to meet the objectives of full employment (or at least to reduce the gaps in relation to full employment).

Mention of the capture of industrial policy by large firms returns us to the questions of transparency, competition and corruption within industrial policy which were raised earlier in the Chapter Two.

One way of exploring this issue comes through the framework of ‘rent-seeking management’. This framework presents industrial policy as providing a way of dealing with rent seeking that is different to that promoted by competitive markets. Within this perspective there is an assumption that all economic agents and enterprises will seek an undue economic profit (monopolies, special protection, capture of the authority, etc.). In other words, rents are distributed on a non-competitive basis. This theory promotes the idea that the state can put rules and pressure on firms (professional bureaucratic rules, medium and long term targets of production, value added, employment creation etc.) so that the rent seeking of firms is managed by the state through a professional bureaucracy. This form of managing rent seeking is developed through contracts between the state and large firms in order that the latter meet their own growth objectives whilst also simultaneously fulfilling the requirements of public policy (high quality employment, determined ratio of exports, etc.). In this way, the state acts as a power balance protecting firms in chosen sectors (via special tariffs, credit, subsidies, allocation of tenders, etc.) but simultaneously, these companies (by a ‘special contract’ with the state) must upgrade processes, products, and develop the ability to export and exploit new market niches, etc. (Khan & Jomo, 2000, p.74). In other words, the state grants some benefits (mostly temporary) but it demands results (fulfilment of the targets) in terms of its national public policy.

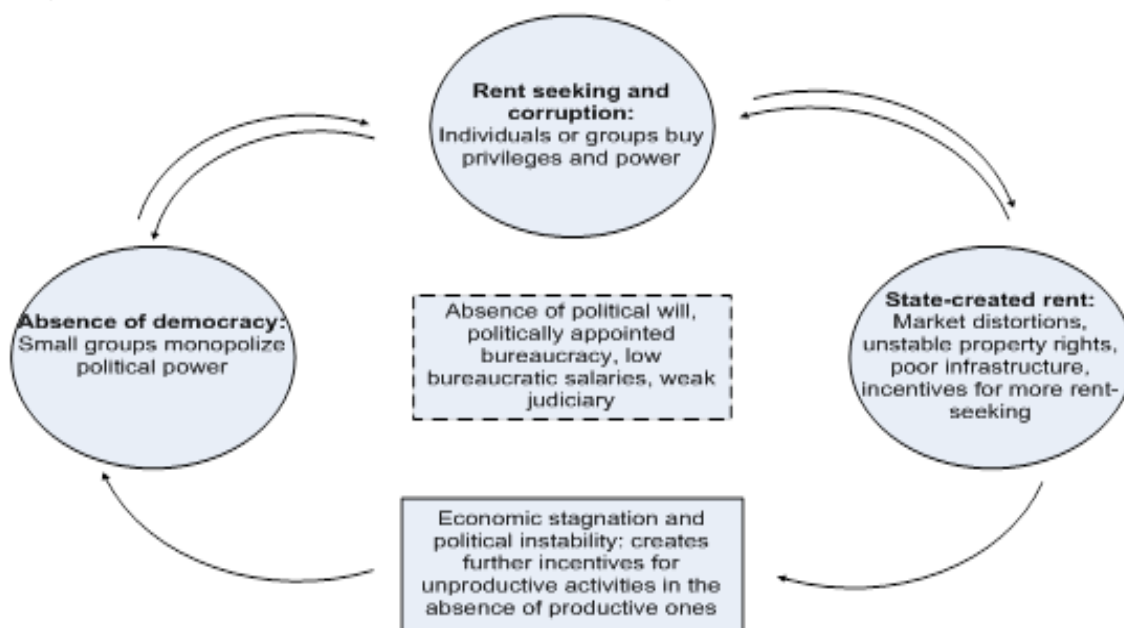
In Figure 2.1, Khan proposes that countries that follow the recommendations of good governance promoted by the World Bank and the Washington Consensus have low economic growth in comparison with those countries that challenge the productive status quo (especially those countries that have an active industrial policy as a targeted – picking the winners). Also in Figure 2.2 and Figure 2.3, the consequences of a lack of political leadership and its effects on economic stagnation are shown. Stagnation occurs, according to Khan, where the state creates rents through unstable property rights, market distortions, etc., without having a clear process of development in the long term. In Khan’s theory, it should be possible to manage these rents so that pressure is put on the productive sectors to unleash gains in productivity.

Figure 2.2 Governance characteristics of growth economies.



(Source: Khan, 2003)

Figure 2.3 State failure: The liberal-market consensus.



(Source: Khan, 2003)

2.6 Industrial Policy: Specific Issues

In the previous subsections, the main theories of industrial policy in regard to their conceptual perspectives and institutional dynamics were analysed. However, in order to be successful, industrial policy requires determined institutional arrangements that encompass numerous things from institutions that promote industrial activities (credit, technology, foreign direct investment) to sound practices that encourage productive diversification. In this section, I will mention and explain the major elements of an industrial policy (based on a review of the literature).

Competition policy:

Different countries, in their process of industrialization, have applied different instruments to promote industrial value added. They have selected specific sectors which they view as having particularly good growth potential, reducing the cost of credit and even controlling the exchange rate to promote exports and accelerate the industrialization phase. For instance, East Asian governments disciplined and controlled private firms through a variety of mechanisms. In Japan, after World War II, competition was highly regulated and largely replaced by cooperation between firms.

The new economies of Southeast Asia (except Taiwan) supported an oligopolistic market where the entry and the exit of firms were controlled centrally. Additionally, these firms were largely domestic. On the other hand, Taiwan strongly promoted an environment of competition of small and medium firms, although they were supported by the government through financial incentives. In order to get industrial upgrading, the Taiwanese government was committed to the limitation of large scale capital (Wade, 1990, p.270).

The Japanese Keiretsu (large industrial-financial conglomerates) dominated the markets in Japan through their close ties with the state bureaucracy although later, the government shifted from domestic protection for these firms to forcing them to become more competitive in international markets. In South Korea, as discussed above, industrialization strategies in the 1960s were promoted through the large Chaebol conglomerates although after 1980, there was significant liberalization, most markets were deregulated and a competition law was passed. Rent creation was a key driver of industrial policy in Asia, as analysed in the previous sections; however, it had dangers (industrial policy failures) as a result of 'capture'.

One of the major tools used by Japan and other Asian economies was foreign exchange allocation, through which governments had a powerful tool for managing industrial policy (export promotion, management of investment and production capacity). Another example of rent creation was the allocation of directed credits in South Korea, which were provided on the basis of realized exports and according to the export targets set by the government (Cho, 1996, p.220).

Trade policy:

The protection of infant industry was another strategy that was used widely in Asia (Krugman & Obstfeld, 2006, p.260). This protection was created through high external trade tariffs, which were then eased when an industry gained competitiveness. At the same time, tariffs remained lower for imported raw materials and intermediate inputs in an effort to support the industrialization process. The general belief was that this protection would allow export oriented industries to develop economies of scale and stimulate spillovers into other areas of the economy. As the government generated more

revenues for itself, as a result of this trade exchange, it could use these resources to support other interventions designed to create dynamic comparative advantages. Japan protected industries that were highly capital intensive (electronics, machinery, oil refining, etc.) until large scale liberalization in the 1960s, although some form of protection was kept for a long time. Korea and Taiwan also adopted export oriented market development policies. They initially protected their traditional industries (food and textiles) in the 1950s with high tariffs and an import substitution strategy. The Korean government supported labour intensive exports with financial and tax incentives. In turn, from the 1960s, Taiwan established export processing zones where foreign firms could export their entire output. Although both economies kept protection measures, they were quite open in terms of the volume of trade as a percentage of national income. According to James et al. (1989, p.48-49), when some industries reach a stage of maturity, they begin to compete in international markets pointing out that import substitution and export diversification can frequently take place simultaneously.

Financial sector policies:

Due to the fact that reaching industrial maturity in some sectors is a very long term process, financial policies are also important to support investments and the risks involved. Financial interventions, such as reducing the cost of credit to specific sectors, are an essential part of any industrial policy with the state either subsidizing or acting as a second floor banker, making access to credit easier. It is not possible to separate this financial issue from the industrialization process. It applied equally to Asian export-led industrialization strategies and to the Latin American ISI experience of the 1960s. The most important points are that industrial upgrading (either natural resource based, as in the Chilean case, or focused on manufacturing industry, as in most Asian countries) requires an appropriate financial framework, and capital controls (including taxation of portfolio or short-term capitals) need to be consistent with the goal of avoiding appreciation of domestic currency.

When an economy is faced with the fall of a key variable such as the exchange rate, the incentive for companies to upgrade is lessened, because they cannot appropriate the incremental benefits of their investment. This situation is common in many Latin American countries, which are mono-exporters, where one commodity makes up the

greater part of the total exports. When the price of this commodity rises, it tends to decrease the competitiveness of the rest of export sectors due to a connected fall in the exchange rate, reducing earnings and probably reducing employment in the tradable sector of the economy. The fall of the exchange rate occurs due to the fact that when the price of this commodity is augmented, it generates an excess of currencies in the domestic market. In the literature, this phenomenon is called 'Dutch disease' because, in 1960 the Dutch discovered natural gas in the North Sea, strongly appreciating the domestic currency and creating problems in the rest of the export sector. So, for instance, an industrial upgrade in the Agrofood sector requires a higher exchange rate (it is lower due to Dutch disease) and the option to increase the scale of the size of plant. In the 1960s, during the ISI period in Latin America, the role of high tariffs was to protect the internal markets so that the industrialization process could be focused on the domestic market (Lustig, 1998, p.42).

Discussions of the Latin American experience (Grebe, 1993; Perez & Primi, 2009) suggest that one of the reasons for the slow pace of industrialization under ISI was the high cost of importing capital goods (necessary to boost industrialization) which slowed and weakened the process. Whilst high tariffs were a basic concept for the protection of infant industry (in the initial stages it is seen as necessary to protect these new industries otherwise imports and international competition will destroy the new industrial base) they also induced inefficiencies in the industrialization process, because there were no economies of scale, a lack of advanced technology, and the countries were accustomed to frequent crises in the balance of payments. Exchange rate policy designed to reduce the costs of inputs and capital goods for the industrialization process also undermined export sectors, meaning that the attempt at accelerated industrialization in Latin America suffered from foreign exchange shortages which affected the region's ability to import the capital goods and equipment which the region was unable to produce itself at that stage of development.

The Asian financial crisis in 1997 stimulated significant criticism of the Asian model of industrial policy. The international financial institutions argued that excessive intervention by the governments of the region created the conditions for the crisis. Chang (2006, p.207) argues that the crisis was the result of uncoordinated and excessive investments by the private sector, financed by imprudent amounts of short-term foreign

debt (capital flows), which led to a rapid liberalization of the capital account of the payment balance. Thus, for example, the Korean government had previously controlled all the internal and, especially, the cross-border financial flows very tightly. There had been a slow process of financial liberalization, although it was very cautious. From 1993 onwards, liberalization began in a definitive way via interest rate deregulation, the abolishment of policy loans, the granting of more managerial autonomy to the banks, the reduction of entry barriers to financial activities, and mainly capital account liberalization.

The story is typical. A massive entry of capital creates conditions of exuberance in the stock of wealth of the economy. When this capital is biased towards the short term (portfolio), it will not contribute to the increase of foreign direct investment (FDI), which is longer term and more stable in regard to the inflow of currencies. This short-term capital will be invested in the stock exchange, bonds of the Central Bank, and, in general, liquid assets that are easily sold. Going even further, short-term capital will create conditions of liquidity which will permit the increase of internal domestic expenditure beyond the structural conditions of the economy (widening the expenditure–GDP gap). This will accelerate the rate of growth of imports, worsen the deficit in the current account and, simultaneously, reduce the currencies held by the Central Bank. When, finally the Central Bank has so little currency in its reserves, that the credit rating of the economy declines, there is no alternative but to devalue the domestic currency to reduce imports and increase exports.

The devaluation of the domestic currency occurs jointly with an increase in the inflation rate and this allows space for tight monetary and fiscal policy. It also permits the adoption of typical measures recommended by the IMF (Structural Adjustment) to relieve the financial crisis. In the case of South Korea (1997) and in Chile in 1982, the crisis began when the capital account was deregulated and a massive process of financial liberalization was undertaken. This liberalization of capital inflows towards the domestic economies raises the credit for speculative activities which do not necessarily mean productive activities. In other words, it reduces the credit available for SMEs and limits the possibilities for developing policies designed to boost the industrial sector. The deregulation of the financial sector does not create the conditions to carry out an active or even weak industrial policy. What is clear, therefore, is that effective

industrial policy in the context of capital flows creating macroeconomic instability, requires stable financial arrangements (institutions, clear regulation) to foster the process of productive development (Cimoli et al., 2009, p.3).

Consistency between Industrial Policies and Macro policies:

The success of industrial policy is also dependent upon the broader macroeconomic policies in place within the economy and the level of consistency between the two. From the neoliberal point of view, for example, the development of East Asia was due to a macroeconomic context of low inflation, which later permitted the increase in investment. According to Chang (2003, p.50), however, this point of view is a very misleading interpretation. Chang argues that Japan and South Korea pursued a type of 'pro-investment macroeconomic policy', which resulted in considerable inflation. For example, South Korea in the 1960s and 1970s had inflation rates close to 20%, not very different from the inflation rates in Latin America during the same period. In this case, the South Korean government repressed consumption to release resources for investment; for example, heavy taxes were applied to luxury consumer goods. Controls were particularly strict when consumption involved foreign exchange expenditure. The neoclassical view about South Korea's economic strategy is that in the 1950s, by which time South Korea was beginning to exhaust its initial ISI strategy, the use of multiple exchange rates and discretionary quantitative trade restrictions (rather than universal tariffs) had allowed inefficient firms to export and survive. In 1965 the economic strategy was effectively changed from inward looking to outward looking, or export-led growth.

The reforms involved were:

- a) The introduction of a unified, realistic exchange rate regime
- b) Trade liberalization, involving cuts in tariffs and the abolishing of most of the quantitative restrictions
- c) A substantial increase in real interest rates.

The neoclassical argument is that the stabilization measures plus the dismantling of existing control measures (trade, interest rates and foreign exchange) created a more

market-oriented economy, which eased the work of entrepreneurs seeking the efficient utilization of resources, which are embodied in labour intensive industrial exports.

However, there are counter-explanations to this neoclassical view. Chang (2006, p.65) points out that tariffs were still generally high even after 'liberalization' and the state bureaucracy had the right to impose 'emergency tariffs'. Also prohibitive taxes were often used to ban the importation of luxury consumer goods. State support for import substitution also continued into this period with, for example, subsidized credits for domestic production and for the purchasers of specialised machinery. In regard to foreign exchange, there was also currency rationing which, in practical terms, was an obstacle to importing goods. Chang's point is that, whilst the reforms of 1965 introduced a new focus on market incentives, the fast economic growth of South Korea during this period is not explained by these reforms alone. The state still strongly guided the markets in terms of selecting and protecting specific industries and creating appropriate conditions for these chosen industries to carry out an industrial upgrade.

FDI policy:

Industrial Policy is also not isolated from policies concerning foreign direct investment. If laissez-faire policies are applied to investment in terms of not directing the flows of investment, only a weak industrial policy can be developed. Furthermore, within industrial policy there has frequently been a strong interest in setting subsidies and reducing tariffs in order to attract foreign investments in areas which present a high potential for economic growth. Since the 1980s, the role of TNCs (Transnational Corporations) and FDI have been given a lot of importance in industrial policy. Previously, FDI had not always been looked upon in a favourable light. There were concerns about:

- a) Transfer pricing: cross-border pricing which does not reflect the real value of transactions, which is used to move profits toward countries with lower taxes (taxation arbitrage). Also TNCs artificially increase costs to reduce taxes
- b) Restrictive clauses: restrictions imposed by TNCs on exports by their subsidiaries
- c) Crowding out of domestic investors in the domestic capital market

- d) Excessive royalty charges on technology or brand licensing
- e) Monopolistic practices
- f) Retardation of local technological development

One of the key discussions concerning the relationship between industrial policy and FDI relates to the relationship between levels of FDI and trade openness. The neoclassical view suggests that only openness provides a guarantee of higher foreign direct investment but this view does not deal with the quality of investments and in which sectors they are invested (the neutrality principle). Also, contrary to conventional neoclassical wisdom, many East and South East Asian countries have had restrictive policies towards FDI. Only Malaysia and Hong Kong have had liberal attitudes towards the involvement of TNCs. Singapore also sought to attract TNCs, but the government deliberately directed investment toward its priority areas, such as infrastructure, education, training and investment incentives. There is a big debate in the literature about the role of TNCs and FDI within industrialization in the Global South. However, it appears that the most successful cases of economic development in the twentieth century occurred in countries where FDI was strategically restricted and heavily controlled in terms of entry, ownership, technology transfer, and local content requirements (Japan, South Korea, Taiwan and Finland) (Akkemik, 2009, p.22). In the case of South Korea, as discussed above, rapid industrialization began from a very low base. It meant that the South Korean government was not willing to accept the investment of foreign companies without receiving benefits for its economy (joint ventures, training, endogenous growth).

Generally, during the infant industry protection stage, most South East Asian economies (except Japan) started with the assembly of simple consumer products (low level of knowledge). This simple economic structure is what the neoliberal strategy would have recommended and current policy would certainly not have sought to challenge this current productive structure. Later, during the transition to a knowledge economy, technology creation became more important. During the 1980s, there was rapid growth in the production and export of technology-intensive manufactures in South Korea, Singapore and Taiwan. In the 1990s, these countries shifted a part of their productive resources to new products in information technologies (complex software,

semiconductors, telecommunications, etc.). This was facilitated by state incentives that encouraged productive diversification and the development of new niche markets (Chang, 2006, p.29).

Industrial Upgrading and International Trade:

In the 1950s, developing countries participated in international trade largely through the exchange of exported primary products for the importation of manufactured goods. This pattern of specialization expanded national exports but it can be seen as ‘immiserizing growth’³ due to the worsening of the terms of trade of these primary products vis-à-vis manufactured goods, and the impact of this on national income levels over time as the prices of processed products rise while primary products decline. This phenomenon is due to oversupply combined with low elasticity of international demand for primary products (Franko, 1999, p.51). For decades, therefore, those devising and implementing economic development strategies have sought to find the most appropriate ways of switching production towards products with greater value added (processed or manufacturing). Success in this endeavour will, it is argued, allow enhancement of the living standards of the population over the medium term. Globally, there is a great fragmentation of production across countries and regions. A growing number of countries are specialising in manufacturing at different levels of industrial processing. This pattern of specialization poses many of the same problems as those facing primary producers. The manufacturing sector is being affected by low entry barriers, oversupply and decreasing terms of trade, leading to some of the segments of these markets actually being ‘commodified’. This means that the products are not different enough and have the same characteristics. The levels of competition therefore are high (Franko, 1999, p.55). Within this context, there are several agents (firms and countries) suffering from the same immiserizing growth due to this pattern of specialization. The search for industrial upgrading is, therefore, the search for mechanisms and strategies for transiting from dependence upon the commodity segments of the market (primary and manufacturing goods) in order to escape the problems of declining terms of trade (Amighini, 2006).

³ Immiserizing growth: exports grow in quantity and overall value, but the individual price of the exports does not go up.

According to Amighini (2006, p.221), industrial upgrading can be attained by:

- a) Shifting production to other non-commodified segments within the same market (this shift is called vertical process integration). In the primary sector, this type of upgrading refers to vertically integrating into intermediate and final processing activities, which are usually among the highest value-added stages of production. In the manufacturing sector, this type of upgrading means a shift from lower to higher value-added activities. The latter do not necessarily correspond to higher degrees of industrial processing (i.e. design and marketing capture higher margins than industrial processing in the case of many manufactures).
- b) De-commodifying the products in which a country is specialized. That is, countries and firms should be able to create entry barriers to the markets they specialize in and so increase product differentiation. This can be achieved through diversifying existing products with respect to their characteristics (horizontal product differentiation), or through diversification with respect to their quality (vertical product differentiation). In primary products, vertical product differentiation permits the capture of higher margins because the products contain premium characteristics. Horizontal product differentiation permits the production of new varieties of the same unprocessed commodities. Besides, new products require technological learning and this creates entry barriers.

This would suggest (Amighini, 2006, p.223) that a country upgrades in a sector when two conditions are fulfilled:

- a) it produces a higher-value product than its competitors, and
- b) it competes in international markets, without losing market share.

Any increase in export earnings that results solely from a rise in market share without an increase in unit value should not be considered product upgrading. It is not upgrading because it is not related to any innovation and improvement in a market segment and

because it could lead to an immiserising type of growth if increasing exports create downward pressures on prices.

According to Palma (2009, p.212), and referring to the previous idea, the capacity to upgrade export supply is characterized by the following conditions:

- a) Growth is a product-specific phenomenon.
- b) The capacity of exports to generate and sustain (trade induced) GDP growth is related not only to the volume but also to the composition of exports.
- c) The capacity of an economy to continuously shift resources towards more growth-enhancing export activities is related to the effectiveness of the state in implementing appropriate trade and industrial policies: this effectiveness is associated not only with the ability to create rents but, much more importantly, its capacity to compel the corporate sector to invest in productive capacity diversification. These forces are continuously shifting resources towards products that would help to supply upgrade along the so-called learning curve, and adapt a country's export productive capacity to demand.
- d) Regional dynamics have played a significant role in growth, export diversification and gains from specialization due to the specific type of leadership that Japan has exerted in East Asia.

In Palma's analysis one can distinguish clearly that upgrading relates not only to growth in volume of exports but also to the composition of these exports. Also it is about how to create incentives for firms so that they invest in new sectors. If, in certain industries of the export sector, growth is based on systematic price reduction (unfavourable trade terms), this will not create industrial upgrading. This cannot be classified as industrial upgrading and provides no opportunities for workers and others involved in the productive chain to capture higher surpluses.

Localizing Industrial Policy:

The final area of industrial policy which I want to touch upon here concerns the ways in which industrial policy relates to the relative economic development of regions and the

exercise of regional economic policy. Most economists research into industrial policy at a national level, although they take into account regions and economic sectors as units of analysis. Economic geographers, however, have a much more direct interest in the local and regional dimensions of economies and have, for example, focused their analyses upon the inter-relationships between regional and local factors (territories), global commodity chains (and global production networks) and the territorial dimensions regarding how the surplus is distributed along these chains (Bellandi & Di Tomaso, 2006, p.342).

According to this view, the processes of industrial development in a territorial context relate to the interplay between two different units of analysis: the industry, with its organization and territorial characteristics, and the locality, with its socioeconomic characteristics and evolutionary processes.

Industry as a concept includes (Bellandi & Di Tomaso, 2006, p.342)

- a) A generic industry: a set of productive activities with common technological and market characteristics, shared by key producers (entrepreneurs, managers, skilled workers and technicians, service providers), without necessarily a common territorial basis.
- b) A generic cluster: the agglomeration of a set of productive entities and organizations, operating within a field of economic activity, extending to related activities and explaining the sectoral specialization of the locality where the cluster is located
- c) A local production system: a cluster with systemic characteristics, where specialized firms run complementary activities and the producers are locally organized by market and non-market mechanisms.

The locality includes:

- a) the territory under a specific form of local government
- b) a locality with a socioeconomic identity, corresponding to a set of towns, villages, rural areas near to one another
- c) A locality of industry: a locality characterized in social and economic terms.

The previous sections have demonstrated the many facets of industrial policy and illustrated many of the arguments used by those supporting their application. What is clear, however, is that it is necessary to take into account the socio-economic characteristics of regions and localities before embarking upon any strategy for industrial upgrade. This sensitivity to territory is crucial in the design of industrial policy regardless of whether the industry is natural resource-based or knowledge-intensive. In the case of South Korea and Taiwan, for example, there were stringent local content rules creating support industries, protection of local suppliers and subcontracting promotion within the territories experiencing rapid industrial growth (Lall, 2006, p.86). This was meant to promote local capabilities in the territory and it was consistent with the concept of endogenous development. The implications for Latin America are clear. An industrial policy that does not take into account the specifics of regions and territories will not deliver balanced and sustainable economic development that can help correct the regional imbalances in opportunities for labour as well as the economic space for SMEs,

2.7 Different Perspectives on the Role of the State in Industrialization.

Drawing upon the preceding discussions, we can identify some basic divisions in the literature over the fundamental intentions of industrial policy and industrial upgrading in particular. In the discussions explored in the previous sections, upgrading is typically limited to upgrading production. According to Puppim de Oliveira (2008, p.3), one way to upgrade firms and clusters in developing countries is linking them with global chains and markets, especially in developed markets. Nevertheless, the traditional view of upgrading (a narrowly economic view) poses some problems. Certainly upgrading means improvements in the production or economic sphere and upgrading in SME clusters would allow these firms to have better processes or products. Nevertheless,

upgrading as currently articulated pays little attention to labour, social and environmental conditions. As well as bringing economic benefits, upgrading can also cause pollution, lay off workers and squeeze salaries. Therefore, one of the main criticisms of this traditional view of upgrading is that it does not take into account these negative dimensions. To contribute towards sustainable development, social upgrading that embodies all these dimensions is required. However, to date, even the developmental dynamic has largely not been able to deliver an answer to this challenge in most Latin American economies. Therefore, any new industrial policy (that can take us beyond the limitations of the post-Washington Consensus) will need to, through state institutions, reflect these weaknesses and explicitly include the conditions of workers (salaries, social rights and training) as well as respect for the environment in its objectives. It should also include affirmative action to strengthen the SME sector in terms of the allocation of state resources (credit, technology transfer, etc.). In the next chapters, I will discuss the characteristics and conditions of workers and SMEs in the agrofood sector, and I will also point out that there are some ‘missing links’ in the traditional view of industrial policy in this new area.

Traditionally, industrial upgrading can be understood as those processes which add industrial value to the supply of existing resources. Basically, in this view, the current comparative advantages of any economy are the baseline from which to enhance economic growth. In other words, it is necessary to use existing resources to generate industrialization. In the modern version of this perspective, neoliberal commentators promote the role of a facilitating state which creates the conditions for the private sector to exploit these comparative advantages. Such perspectives do not think of big leaps forward: in this neoliberal logic, a rapid and accelerated transformation and industrial upgrading is unthinkable. On the other hand, the developmental view argues that the state can help the private sector to exploit the current comparative advantages in a more active way, for example by selecting sectors and industries with a higher presence of positive externalities (employment, technology, economies of scale, etc.).

As discussed in Section 2.2, in Latin America the ISI strategy was adopted in the 1950s to seek an industrial development that would reduce dependency on the more advanced countries. The ISI strategy tried to attain a form of development that was autonomous from the centre core (that is, the industrialized countries). It also had deep roots in

structuralism theories which held that the disequilibrium experienced in Latin American economies originated from the unequal distribution of land within most countries. As it was argued, the ISI strategy had led to higher agriculture prices (raising the domestic inflation rate across the region) due to the inability of the farms to achieve higher productivity (recognition of this led to the initiation of agrarian reform processes across Latin America in the 1960s). However, Kay (2002, p.1087) remarks on a missing thread; it is the relation between agrarian reform and industrialisation. He claims that East Asia overtook Latin America, in spite of the fact that Latin America started its process of industrialisation several decades earlier. In his analysis, the agrarian reform in South Korea and Taiwan were carried out before that any significant industrialisation (while agrarian reforms in Latin America happened after that industrialisation had been established, with the exception of Mexico). Also, the landlord class in South Korea and Taiwan was swept from power, while in Latin America, the landlords retained power and influence during the first stage of the industrialisation process, and so were able to block or delay any reform of the land tenure system. In order to explain the superior performance of these Asian countries, Kay adds to this set of factors the ability of the state in South Korea and Taiwan, to design and implement strategies and policies conducive to development (transforming the land tenure system and agrarian social relations, while Latin America was immersed in a polarised and entrenched class structure).

Under ISI, Latin American countries increased tariffs to avoid external competition in order to protect national industry and the internal market. However, this led to constraints in the availability of capital for intermediate goods imports, which were necessary in this first stage of industrialization. The Latin American economies did not have enough technological experience to initiate this ISI process without foreign technological experience. The scarcity of capital, as well as the traditional problems in the balance of payments (insufficient currencies) led to what has been interpreted as the poor performance of these policies (Lustig, 1998). Nevertheless, when the results of economic growth in Latin America are analysed, what is clear is that ISI-focused industrialization created more accelerated economic growth in the ISI golden age (1950–1973) than was achieved in the 1980s. Although most Latin American countries returned to more sustained economic growth during the 1990s with far more externally-oriented approaches, it appears to have been the incorporation of China and India into

the global economy (which boosted commodity prices) which underlies this success rather than any successful Latin American industrialization strategy (French Davis, 2008, p.419). Basically, the point is that in the period during which the state played a far stronger role in planning and directing the economy in Latin America, economic growth levels were relatively high, although it must be recognised that specific elements of the strategy also brought other disequilibrium such as high inflation rates, and it focused too much on the small internal markets.

Returning to our earlier discussion about the role of specific tools of industrial policy, the ISI strategy involved the use of multiple tools – tariffs, state support to industrial processes, control of exchange rates, interest rates and others – which were not always compatible and not necessarily aligned. For example, while high tariffs protected the domestic economy (local producers and entrepreneurs) to stimulate local employment, simultaneously this same high tariff created problems of foreign exchange scarcity and affected the balance of payments. Also the high tariffs made the importation of capital goods, which were crucial for a sustained industrial process, far too expensive.

Many Latin American countries also tried to initiate accelerated processes of industrialization through the development of State-Owned Enterprises (SOEs). These initiatives tended to emerge when the protection of domestic industry (through trade policy, the implicit subsidy of a low exchange rate and the availability of cheap credit) had not been sufficient to create the sort of new industries in which governments were interested (Reyes & Sawyer, 2011, p.154). Brazil in the 1970s, for example, attempted to develop computer and aerospace industries using SOEs without the participation of the private sector. The development of SOEs also reflected the view in some cases that natural resources are the patrimony of the local population which raises complex political questions about the exploitation of these resources even by domestic firms. Many countries in Latin America chose to develop their natural resources using SOEs. In some cases, such as the copper industry in Chile and the oil industry in Brazil, SOEs have been extremely successful.

Meanwhile in East Asia in the 1960s, as explored in depth in sections 2.2 and 2.4, some countries began a process of industrialization orientated to the external market through Export-Oriented Industrialization (EOI). With this approach, they accelerated their

growth path through manufacturing goods and non-traditional exports. The size of external markets permitted rapid growth through economies of scale. And the economies of scope (share a significant fixed cost) originated in foreign investment policy due to restrictions on governments investing in their countries. The Asian countries used discretionary foreign investment policies, enabling the participation of local firms. For instance, in the case of Taiwan, there was a screening of FDI and the entry of multinational corporations (MNCs) was discouraged where local firms were strong. Local technology diffusion was also encouraged. In the case of South Korea, FDI was not encouraged, unless necessary for technology access or access to export markets, although joint ventures and licensing were encouraged. In both cases, there were stringent rules of national content in order to support local companies (Hernandez, 2004, p.15) so, in this way, growth became endogenous. However, by itself, this was not enough. It was necessary for local firms to participate actively in this process. It was also necessary to put in place special institutional arrangements that maximized opportunities for local firms and labour. Analysis of the results of this development strategy show that this region of the world (South Korea, Taiwan, Singapore and Hong Kong) reached high levels of per capita income, high educational attainment, record levels of saving and investment and less inequality in the distribution of income. This export boom satisfied the needs of the USA and European markets in terms of highly profitable massive consumption goods (apparel, footwear, toys and sports goods) that were supplied via buyer-driven commodity chains (Gereffi, 2001, p.26), (See Table 2.6).

Table 2.6 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 and Development; Production	Design; Marketing
Barriers to Entry	Economies of Scale	Economies of Scope
Economic Sectors	Consumer Durables; Intermediate and Capital Goods	Consumer Non Durables
Typical Industries	Cars, Computers, Aircraft	Apparel; Footwears, Toys
Ownership of Manufacturing firms	Transnational Firms	Local Firms, mainly in developing countries
Main Network Links	Investment-Based	Trade-Based
Predominant Network Structure	Vertical	Horizontal

(Source: Gereffi, 1994)

Looking at the apparel export boom of East Asian Countries during the 1970s and 1980s, Japan in the 1950s and 1960s, and China in the 1990s, these countries supplied a wide range of consumption goods (apparel) through the dynamics of buyer-driven commodity chains. The key idea in the East Asian countries was to move from assembling imported inputs to a more domestically integrated and higher value-added form known as full-package supply or original equipment manufacturing (OEM) (Gereffi, 1994, p.22). Some firms in East Asia and Japan established a scheme named Original Brand Name Manufacturing (OBM), linking their production expertise with design and sale of their own branded merchandise in domestic and international markets. The apparel industry dominates a form of industrial subcontracting in which manufacturers, who provided the parts for simple assembly, came to dominate. The OEM model is a form of commercial subcontracting in which the linkage between the buyer (i.e. big retailers) and the seller (i.e. one Asian firm producing a full package supply, domestic manufacturer) allows for a better degree of local learning about upstream and downstream segments of the apparel chain. OEM or full package supply contributes to the forging of an innovative entrepreneurial capability that involves the

coordination of complex production, trade and financial networks and accelerates industrial upgrading (Kim & Lee, 1994, p.292).

Across all of these examples, it is clear to see the central importance of the state. In the ISI national strategy, the role of the state is much more interventionist than in the EOI strategy. In the ISI strategy, the state is involved in production and actively uses an industrial policy (export-promotion schemes, joint ventures with domestic partners as a requirement for accessing the internal market, etc.). Also, as part of this industrial policy, tariffs were used to avoid external competition and discretionally to favour certain industrial sectors. In turn, in the EOI strategy, governments are mainly facilitators creating the conditions for sustained economic growth and they are not directly involved in production. In OEM strategies, the role of the state has been important in terms of shaping the relationships between the local firms (typically SMEs) and the large buyers overseas. There will be more gains for society (higher levels of employment, long term relationships in contracts between SMEs and the big buyers, technological learning and appropriation of rents across the chain remaining mostly in the domestic economy) if the state can assist firms in moving from simple assembly towards a more complex industrial organization. In both cases, governments create the broader conditions through which industrialization strategies can prosper through investment in the physical infrastructure required for an intensive export path (communication networks and transportation), subsidies for raw materials, lower customs duties for imported inputs that are used in export production (equivalent to a tax reduction), special and devoted financial institutions to satisfy the niche of SMEs through state guarantees, etc.

For our purposes in discussing industrial upgrading, however, the important thing is that all of these strategies are not static; the state has to grasp the different stages through which chosen industrial strategies must pass and decide how it can best encourage domestic firms to reach the next stage. As Gereffi (2002, p.22) argues:

Countries are connected to global commodity chains through the goods and services they supply in the world economy. These trade linkages can be explained under the following scheme of five major export roles:

- a) Primary product exports, including processed 'industrial commodities' and non-traditional agricultural exports.
- b) The export-oriented assembly of traditional manufactured goods, such as apparel and electronic items, using imported components.
- c) The production of components, such as for automobiles and computers, for export in relatively advanced countries, using substantial local inputs.
- d) OEM in which contractors make goods to be sold under another company's brand name.
- e) OBM in which manufacturers make goods for export and sell them under their own label.

It is important to note that industrial upgrading (moving to the next stage) must not be seen from a static point of view. The East Asian countries have moved through each of these five export roles, although now they are focusing on supply manufacturing, OEM and OBM, while Latin America and South Asia are involved mainly in the first three roles. The role of the state is fundamental in industrial upgrading. For instance, East Asian countries (Hong Kong, South Korea, Taiwan and Singapore) moved rapidly from the assembly phase of export (utilizing export processing zones located near major ports) to a more generalized system of incentives that applied to all export oriented factories in their economies. Another example is China which in the last 20 years has seen a radical change in its productive structures. Market openness has transformed production patterns, but openness is not enough. Within its productive structure, there is a clear trend in exports towards products with higher value added. Resource-based manufacturing has fallen sharply, decreasing its share in total exports by 30% between 1985 and 2000. This industrial upgrading has been achieved via the state-sanctioned introduction and learning of specific new technologies, the creation of defined economic zones free of taxes and duties, the establishment of a local environment willing to accept higher entrepreneurship and a real opportunity for local communities to be able to absorb new technologies and new forms of learning. In a certain way, China has been following the steps of its Asian neighbours, adapting its economy to the big global buyer-driven commodity chains, and simultaneously, its economy is raising its technological levels, via integration into producer-driven global commodity chains, specialising in certain products of scale massive (Gereffi, 2002, p.26)

2.8 The Rediscovery of Industrial Policy. The Rethinking of the Neoliberal Position – The Post-Washington Consensus and the Current Contours of Industrial Policy.

After the ‘lost decade’ in Latin America in the 1990s, the Washington Consensus emerged as a perfect recipe for Latin American countries due to debt crisis. The almost unique application of private property rights, private initiative, devaluing the role of the state in society, the reduction of public expenditure as well as inflation control were the characteristic elements of this new consensus. But the so-called Total Productivity Factors (TPF) were only growing in most Asian countries, while in Latin America, renewed economic growth was basically influenced by the high price of commodities. This created a discussion about which type of industrial policy it was necessary to apply. According to Stiglitz (2004, p.2), there was a failure in understanding economic structures within developing countries focusing on too narrow a set of objectives and on too limited a set of instruments.

Most recommendations of the Washington Consensus were limited, narrow and, despite their claims, contrary to the measures that had been taken by East Asian countries, which were broader and more interventionist. The Washington Consensus was too concerned with the efficiency of exchanges, and let the political system moderate the distributional effects of these exchanges. In the light of the failures of the Washington Consensus, a new post-Washington Consensus has emerged that seeks to find a role for both the market and the state. Stiglitz (2004, p.3) points out that there is no theoretical underpinning to the belief that in the early stages of development, markets by themselves will lead to efficient outcomes. Central to the new post-Washington Consensus are the importance of national systems of innovation, limiting the freedom of capital flows and the idea that these need to be governed when necessary, local and territorial development, the development of SMEs, improving the contexts of credit and technological transference and, hence, launching a new industrial policy.

In contrast to traditional import substitution, a modern industrial policy is an open industrial economic policy with the objective of increasing economic openness by enhancing flows of knowledge and fostering productive innovation, and promoting non-traditional exports. However, the role of the state is important for the coordination of

investment efforts and for avoiding coordination failures to insure long term stability and to incorporate all the relevant actors (trade unions, entrepreneurs, local politicians). Also there are contradictory views with regard to the state of development in the previous century. This developmental concept was applied in the twentieth century and was more related to large entrepreneurial conglomerates (state owned and private companies). After serious and large financial crises in the last few years, there is an apparent reawakening of the Western nations (Kyung Sup, Weiss & Fine, 2012, p.3) for developmental measures although quite what the concept means today is certainly open to debate (in fact, the same authors point out that the World Bank itself is posing “a need to rethink development”. The excessive financialisation of economies is creating the conditions for posing a new debate over national development policy within which the discussion of industrial policy takes a central role.

One general theme that has emerged from this chapter is that generally the literature has neglected analysis of the participation of SMEs in industrial policies. Another missing element has been a focus on the working conditions of labour, particularly if the industrial strategy is based on natural resources (natural endowment) or in the creation of new niche markets (picking new industrial sectors). In Latin America, any industrial policy must take into account the working conditions of labour in the agrofood sector, which, in the majority of cases, is not good. Certainly, any attempt to accelerate industrial upgrading in the region must tackle this problem. The next chapter builds on the broad discussions elaborated here by focussing much more directly on debates surrounding the application of industrial policy towards SMEs.

Chapter Three: Industrial Policy Applied to SMEs

3.1 Introduction

Traditional industrial policies that focused on heavy industries, large firms and monopolies have seen their importance diminish over recent years. As discussed in the previous chapter, these policies ranged from the Import-Substituting Industrialization (ISI) experience in Latin America to export-oriented industrialization in East Asia. The ISI experience was based on the dynamic growth of large firms. Thus the contribution of SMEs to this industrial dynamic was neglected, with only larger firms seen as capable of creating good work positions and producing goods of high value added. The experience in East Asia, however, was much more heterogeneous with regard to this relationship between industrial strategy and the size of firms. While South Korea focussed on large firms (chaebols) through the policy of picking the winners, Taiwan was much more focused on SMEs via an intensive subcontracting process. Although both (South Korea and Taiwan) applied stringent rules of local content, the promotion of large enterprises in Taiwan was absent, while in South Korea it was the leitmotiv of industrial strategy (Hernandez, 2004).

As we shall see in relation to Chile in the chapters that follow, economic policy under the neoliberal framework that followed the ISI period has continued to pay scant attention to the needs of SMEs in Latin America. The excessive openness of economies, the abuse of dominant power (monopoly), and the rigidities so typical in large conglomerates, affect the development of SMEs. Also the ability of growing in a sustained way is weakened by this unequal relationship with large conglomerates. So while larger firms can take advantage of horizontal industrial strategies, by SMEs cannot.

Over more recent years, recognition of the limitations of the Washington Consensus recommendations in developing countries has, as explored in the previous chapter, led to a revival of interest in industrial policy and more direct state intervention within economic development strategies as articulated through the post-Washington Consensus (Onis & Senses, 2003, p.2). One aspect of this has involved questioning the neoliberal reluctance to intervene directly within the economy in support of SMEs, and there is a

growing acceptance of the need for any new industrial policy to prioritise the strengthening of the SME sector, local innovation and territorial economic development (Moguillansky, 2013).

Industrial policy, however, as explored in detail in the previous chapter, has far too often been conceived too narrowly. Much that is written on the topic seems to relate only to the manufacturing sector (for example, neglecting the contribution of the agricultural sector to the upgrading of the economy as a whole) and is overly in its orientation neglecting, for example, the ways in which relations between large producers and SMEs are governed, or questions over skills acquisition and training in enhancing productivity. In addition, the articulation of national industrial strategies has frequently been far too top-down in its approach, and has not allowed the participation of the breadth of social/economic sectors (including SMEs, trade unions etc. as well as the larger-scale private sector lobby groups) within the debate over the direction of economic policy or wider development strategies. This also connects back to the discussions in the previous chapter over the ability of the state to direct investment in open and transparent ways and to involve the full range of interest groups and stakeholders within discussions over the direction of economic policy, public spending etc. in ways which were certainly not characteristic of state-directed strategies during the earlier ISI period.

It is also important to point out that industrial policy should not seek industrialization and economic growth at any cost as was the case under the laissez-faire neoliberal perspective. A longer-term industrial policy should also prioritise the type of industrialization that is being pursued, the desired relationship with external investment and the overall structure of industrialization. Turok (In Dicken, 2007, p.438), for example, presents a distinction between dependent and developmental industrial structures (see Table 3.1). Clearly, for those advocating industrial upgrading and the development of a more nuanced approach to industrial policy, this is better served via pursuit of a more ‘developmental’ industrial structure, reflecting cooperative relationships with external investors (for example, via joint investments) and greater possibilities for industrial upgrading and enhanced value added within industrial production processes. Besides, the developmental structure contains characteristics such as the transfer of technology and expertise from investors, which strengthen local firms.

Also the emphasis is on longer term contracts (enhanced trust) and in the creation of high value added. In contrast, the dependent structure reflects industrial strategies where local linkages are not complex (conventional subcontracting) and tend to be focused in assembly operations, which mean low skilled jobs.

Table 3.1 Dependent and Developmental Linkages Structures.

Attribute	Dependent Structure	Developmental Structure
Form of local linkages	Unequal trade relationships Conventional subcontracting Emphasis on cost-saving	Collaborative, mutual learning Basis in technology and trust Emphasis on value added
Duration and nature of local linkages	Short-term contracts	Long term partnerships
Degree of local embeddedness of inward investors	Weakly embedded Branch plants restricted to final assembly operations	Deeply embedded High level of investment in decentralized multifunctional operations
Benefits to local firms	Markets for local firms to make standard, low technology components Subcontracting restricts independent growth	Markets for local firms to develop and produce their own products Transfer of technology and expertise from inward investor strengthens local firms
Prospects for the local economy	Vulnerable to external forces and 'distant' corporate decision-making	Self-sustaining growth through cumulative expansion of linked firms
Quality of jobs created	Predominantly low-skilled, low-paid jobs May be high level of temporary and casual employment	Diverse, including high-skilled, high-income employment

(Source: Turok in Dicken, 2007).

An effective long-term industrial strategy should, therefore, seek to enhance this more developmental structure by, for example, adopting measures that can encourage foreign firms to establish networks and cooperate with local firms. This will help local firms to develop new skills and productive capacities that they previously did not have. On the other hand, if industrialization strategies are pursued within a more neoliberal environment (reflecting dependent rather than developmental linkages), then the

industrial sector will be more vulnerable to international crisis and negative external forces. Due to their precariousness, firms in these circumstances tend to employ low skilled labour in low paid jobs, and make no effort to invest in their workforce and they utilise a high level of temporary employment. This is part of what has been labelled the ‘race to the bottom’ (Puppim de Oliveira, 2008, p.2).

Under these kinds of conditions, globalization frequently represents enhanced competition rather than opportunities for small firms, whose weak position within global value chains can mean that trade liberalization, can exacerbate the already poor business conditions they face, with the consequent impacts upon profitability and downward pressures on already low wage levels. As the system is price-competitive and there are low tariffs and non-existent trade barriers, liberalization frequently means that high quality imports and/or much more cheaply produced imports begin to dominate market share, creating serious problems for local SMEs, ranging from bankruptcy, salary reductions and a tendency towards the production of goods and services with low levels of innovation and value added. Ostensibly, in its more neoliberal form, industrial policy is presented as a discovery process, where public and private agents learn about costs, opportunities and externalities and devise solutions. Here, the role of the state is weak and it only deals with market failures and other imperfections.

This thesis is written from a perspective that sees the role of SMEs as absolutely crucial to the evolution of a successful and more balanced industrial policy and yet they have frequently been overlooked within discussions relating to industrial strategies. SMEs are present in all economies; they are major employers and make a significant contribution to the creation of value (Fan, 2003, p.1–2). However, in a neoliberal dominated environment which has not given rise to active policies in support of SMEs, in most cases their potential contribution to sustainable industrialization strategies remains far from realized. Clearly, any rejuvenated industrial policy needs to take SMEs seriously. Concentration on the SME sector allows policy makers to find a combined way of addressing two great challenges: 1) action in favour of SMEs assist in the process of deconcentrating and democratising markets, and 2) it also provides great returns on investment via the competitive thrust and innovation capacity frequently to be found amongst these sorts of firms. But the current low rates of innovation amongst SMEs reflect the precariousness of their market position, exploitative relationships with larger

contractors and their lack of access to credit, state support structures, etc.) (IDB, 2010, p.245). In addition, SME-friendly industrial policy can act as a lever for regional development as well as contributing to an effective decentralization, helping promote economic development in less developed areas.

Despite the growing calls for SMEs to be taken more seriously in discussions of industrial policy, there is also certainly a strand in the literature which raises considerable doubts concerning the potential of SMEs to play any kind of major role in promoting economic development (Castel-Branco, 2003, p.1). This literature argues that small firms are inefficient, do not take advantage of economies of scale and do not allow for the possibility of large-scale industrialization. They go on to argue that policies which focus on SMEs are limited since they do not promote the big firms able to sustain the challenges of internationalization and competitiveness in the new global economy.

Within this context, this chapter outlines the major debates over the role of SMEs in the rebirth of industrial policy, before then going on to look at the ways in which SMEs have been treated within the literature on Global Production Networks and cluster policy. Firstly, however, we turn to the different definitions of SMEs and the ways in which they have been characterized in the literature.

3.2 Characterization of SMEs

The role of SMEs in the development of a country is diverse and their analysis involves important linkages between economic and social development agendas.

Leaving aside the productive contribution of these types of firms, the definition or characterization of SMEs remains a surprisingly controversial subject in most countries (Deakins & Freel, 1978). In general, SMEs are defined or grouped according to their total sales, their number of employees, or some other variable of scale. Although, in general, the use of definitions of a quantitative or statistical character has grown, this could lead to an erroneous understanding of the type of companies considered under the SME label. In fact, the classification criteria can require fine tuning even when dealing

with regions within the same country. For example, a small company in an important city cannot necessarily be equated to small companies from smaller cities or even companies from rural areas. In any case, a statistical definition always has an arbitrary element. For example, in the USA a company is considered an SME when it has less than 1,000 employees, while in Holland this figure drops to less than 50 employees. In the case of the United Kingdom, SME definitions vary depending on the productive sector in which the company is involved. The European Community, to avoid such confusion, adopted the following definitions in terms of employees: micro companies – between 0 and 9 employees; small companies – between 10 and 99 employees, medium companies – between 100 and 499 employees (Deakins & Freel, 2006).

In response to the limitations of some of these quantitative measures, Griffiths and Wall (2001, p.76) present a more qualitative definition of SMEs which includes aspects such as:

- a) A SME has a low market share.
- b) A SME is run by its owner or owners and, in general, it is not managed through structure of complex administration.
- c) A SME is independent in the sense that it does not belong to a big company or conglomerate.

The intensive process of subcontracting in globalised economies, however, creates some problems in the definition of what an SME is. For instance, a firm that subcontracts all its production to small firms would be described as an SME according to Griffiths and Wall's definition.

3.3 Basic Definitions of SMEs

As argued above, SMEs have played a major role in the economic development of a number of East Asian countries. Japan, Taiwan and South Korea (the latter to a lesser extent) are all examples of where SMEs have contributed significantly to the growth rate of exports. For example, in Japan, 60% of industrial exports correspond to SMEs while in Taiwan it is 80% (Bradford & Branson, 1987, p.15). In South Korea, these

companies contribute 60% to the value added of exports (Peng, 1994, p.1). In general, it appears that countries that gave a prominent role to SMEs within their early industrialization processes (for example, up until the 1980s) have tended to demonstrate better patterns of income distribution (once their first periods of industrialization came to a close in the 1980s) in comparison to countries with similar economic trajectories that did not pay so much attention to their SME sectors. The case of Taiwan is paradigmatic; the development of its economy was largely based on small and medium companies (Chou, 1995) and it is also remarkable that among the more developed economies Taiwan has the best distributive equality profile (Berry, 1995, p.2).

However, there is also a conceptual problem with defining what proportion of exports are produced by SMEs, given that frequently much of the exporting by SMEs is done indirectly through subcontracting relationships with other manufacturing firms and trading firms. This has certainly been the case in South Korea. SMEs involvement in subcontracting relationships has been a major factor in the transformation of the national economy. Nugent & Yhee (2001, p.4–6), for example, state that by 1995 electronics had become the most important export sector followed closely by textiles. Other rapidly growing exports were chemicals, primary metals, and metal products and machinery. Going back further, in the late 1960s, electronics, chemicals, and machinery exports were essentially non-existent. These transformations stemmed from new priorities of the South Korean government which allowed for greater synergy between South Korean SMEs and the large chaebols which had been the major beneficiaries of earlier phases of the government's industrial policy.

The situation in Europe is also one where there has been a major role for SMEs in productive activity. The *Mittelstand* (SMEs), for example, is responsible for 41% of the total sales of the German economy, as well as employing up to 70% of the labour force. The partner-legal structure (a sole proprietorship framework where the owner bears all the risks) of the *Mittelstand* provides up to 27% of the total number of companies, while the rest are companies with the legal structure of limited responsibility. An excellent aspect to consider is that 80% of German vocational training is provided through the 'system of apprentices' (Günterberg & Kayser, 2004, p.5). This is vital as the *Mittelstand* produces goods to order or on a small scale (non-massive) and therefore needs skilled and productive labour. Compared with larger companies, SMEs are less

intensive in their use of capital. In the case of the United Kingdom there exist varied instruments of public policy to support the financing of SMEs. SMEs can apply for grants or soft loans allocated by governmental agencies (regional selective assistance). These small-scale schemes have been established in impoverished areas in which it is more difficult to raise capital for new entrepreneurs. The birth of companies in these localities is considered riskier which, as a result, leads to the charging of higher interest rates on credit from the formal banking system for companies originating in these areas.

3.4 Different Policy Approaches to SMEs

The policies towards and experiences of SMEs vary in each country and region of the world. In the case of Latin America and East Asia, although both regions grow at different rates (and even though there is much heterogeneity), there are some common patterns but also historical and socio-political differences. There are today, however, several common trends that are affecting the ways in which SMEs are viewed across the world. These include the global acceleration of trade, the recomposition of foreign direct investment and the development of new productive systems which are causing firms to establish new types of expansion strategies. Also products are being differentiated more and more by firms to meet the demands of consumers. This implies more flexible production systems. The large and vertically integrated firm of the mass production system has been replaced by a more decentralised firm, which allows more autonomy and responsibility to the lower levels of hierarchy and organizes a network with its suppliers and clients. The participation of SMEs within these industrial structures occurs when there is a deconcentration in certain segments and market niches, and on the other hand, where large companies cannot produce and control the entire economic surplus created. In these circumstances, there has been a clear trend towards the subcontracting of production and services to SMEs within certain industries (Bianchi et al 2006), not least due to their ability to adapt to quick changes in demand. In particular this has affected manufacturing sectors such as footwear, textiles, clothing, tiles, furniture and spectacle manufacturing. The main strengths of SMEs are that they are rooted in local production systems (industrial districts) and frequently work in clusters. The literature shows that SME networks can take several forms (Asheim, 1994)

from simple agglomerations of similar firms in a non-cooperative framework to industrial districts of varied structure (this issue is discussed in more detail below).

Drawing together the strands of the argument so far, it is clear that whilst there is broad agreement about what SMEs are, specific definitions vary from place to place. Although the concept of SMEs apparently may not be so different, there exist characteristics and distinct patterns in terms of their development. This development depends on the institutional structure of each country as well as the specific dynamics of capitalism.

3.5. Regional Characterizations of SMEs and Policy Frameworks in Latin America and Asia

As I have argued in the earlier sections of this chapter, SMEs contribute significantly to the overall levels of economic growth and to the creation of employment in most countries. However, the overall performance and dynamics of the SME sector will depend on the national institutional framework as well as the capabilities displayed in these types of firms (including such factors as financing, organizational frameworks, innovation and niche markets).

3.5.1 Latin America

According to Llisterri & Garcia (2008, p.2) SMEs in Latin America have three distinct characteristics in comparison to those in OECD countries. First, productivity gaps between SMEs and large companies are more pronounced than in advanced countries making it difficult for them to establish commercial relations. Therefore, there is no long term commitment between them. Secondly, as a direct result of the first characteristic, Latin American SMEs are more isolated, less specialized and find it more difficult to join global value chains. Last, but not least, companies in general and SMEs in particular have a higher degree of informality in Latin America. With respect to the innovation frameworks in which SMEs are embedded, most Latin American countries are below the OECD average for expenditure on R&D (less than 1% of GDP). This situation does not appear to have changed particularly significantly over recent years. ECLAC conducted a long-term study of the performance of SMEs in Latin America

over the past 20 years of market liberalization (Bianchi et al, 2006, p.386) which showed that, on the whole, SMEs were neither winners nor losers from the changes initiated in the 1980s and continuing into the 1990s.

The important issue is the quality and opportunity to access support tools (see Table 3.2). The types of tools utilised can include financial subsidies, tax breaks, information provision and consultancy, and training. The use of each depends upon the state's capabilities and upon the longer-term objectives defined by governments. Macro-institutional arrangements are extremely relevant in order to enhance these programs for SMEs. The institutional arrangements determine the sustainability of SMEs in the medium term; it could be a neutral scheme (neutral incentives) or an affirmative scheme in favour of SMEs recognizing the market concentration and how the SMEs should exist in these frameworks. One of the most important issues is access to credit, where SMEs across the region demonstrate considerable variance in their access to and use of a variety of different financial services/products as outlined for selected countries in Table 3.3.

Table 3.2 Review of support policies for SMEs in selected Latin American countries.

Objectives/Tools	Financial subsidies	Tax breaks	Information & consultancy	Training
Start-up new enterprises	B,M	M	B,M,P	B,P
Development of subcontracting	M,Ch	M	A,M,Ch,P	M,P
Export support	A,B,Ch,CA,Co	--	A,B,Ch,CA,P,Co	A,B,Ch,P,Co
Development of financial activities	A,B	--	B	--
Employment support	B	A,B	B,P	A,B,P
Professional training & education development	M,CA	--	B,M,CA,P	A,B,M,CA,P,Co
Technology upgrading	A,B,Ch,CA,Co, M,P	B,Co	A,B,Ch,CA,Co,M, P	A,B,Co,P,CA

Note: A: Argentina; B: Brasil; M: Mexico; Ch: Chile; P: Peru; Co: Colombia; CA: Central America (Guatemala, Nicaragua, Honduras, El Salvador only)

(Source: Bianchi et al, 2006)

Table 3.3 Financing products used by SMEs

Financing products	Percentage of SMEs					
	Argentina	Colombia	Chile	Mexico	Peru	Venezuela
		40.5				
Term loans			38.7			2.8
Short-terms loans					40.0	
Working capital loans			23.4		6.5	7.5
Medium-long term loans						
Investment loans						
Term loans with fixed asset guarantee	4.4		18.8	2.7		0.3
Loans supported by public programs	2.7		8.1			0.3
Lines of credit	25.7	29.4	75.1	29.8	18.0	
Overdrafts	28.8			4.3	20.6	0.7
Check/Document discounting	35.4	2.7	5.1	1.4	10.1	3.4
Leasing	4.3	8.9	12.6	1.2	5.9	0.3
Factoring	1.9	1.8	7.5	1.1	1.7	0.3
Foreign trade financing	2.9	5.6	13.2	2.0	5.2	3.0
Credit card		13.9			11.2	
Letter of credit	2.1	1.0	14.6	1.5	7.8	0.3
None	30.8	29.8	13.2	64.9	29.1	51.3

(Source: De la Torre, Martinez & Schmukler, 2008, p 2289.)

3.5.2 Asia

Asian governments in contrast to their Latin American counter parts have long recognized the contribution made by SMEs to the economy. However, in the beginning they were just considered as one of the tools to help reduce poverty instead of as firms with determined competitive advantages (Bianchi et al, 2006). Policy towards SMEs in Asia was thus initially focused on low skilled workers because of the focus on high

intensity labour. Over time, however, the dynamic of industrial development allowed a move towards more complex firms and these had to have better qualified workers.

For instance, in the case of South Korea in 1995, special laws were approved for moving towards a more regionally balanced economy and part of this was devoted to measures designed to help foster local SMEs. The Ministry of Trade, Industry and Energy, jointly with several institutes, has been working to create a favourable environment in which to provide assistance in technology, finance and manpower training for SMEs. In February 1996, the Small and Medium Business Administration (SMBA) was founded to strengthen support for SMEs in South Korea (5,000 SMEs are assisted with technological issues annually) (Gregory, Harvie & Lee, 2002, p.3).

In the case of India, a new Ministry of Small Scale Industries & Agro and Rural Industries was created in 1999. It encompassed industrial upgrading, financial issues, networking, information sharing and assistance for domestic marketing. Meanwhile, the financial needs of the SMEs were to be met by the formation of the Small Industries Development Bank of India belonging to the central government (Bianchi et al, 2006, p.390). China, in turn, formed the so called 'small policy for state-owned firms'. Through this policy, 80% of the state-owned SMEs changed their ownership status through corporatization, shareholding or private management. In 2002, China approved the SME Promotion Law. This saw the creation of special funds for SMEs, as well as the setting up of a credit rating system (Bianchi et al, 2006, p.390).

The situation of SMEs in Asia is clearly very different to that of Latin America. The contribution of SMEs is very important across the region since these firms make up 80–90% of all enterprises, providing in the case of South Korea, for instance, 87% of total employment GASME (2013). However, there are some distinctive national characteristics. In South Korea, the share of employment in manufacturing SMEs rose from 46% (1975) to 69% (1997) despite South Korea's economy being heavily dominated by the chaebols described in the previous chapter.

In turn, the preponderance of SMEs in Taiwan is very important (Hall & Harvie, 2003, p.6). In the case of the new industrialized economies (China, Indonesia, Thailand, etc.) in Asia, the results in terms of equity and value added are positive (Hira, 2007, p.51).

Clearly, SMEs have been embraced within national industrial strategies in quite different ways across Asia. While the promotion of SMEs with strong technological content has been a central part of Taiwan’s industrial strategy for a considerable time, South Korea stands out as an example of a significant shift in focus towards the SME sector following the Asian financial crisis when the chaebols or large conglomerates were no longer placed at the centre of economic strategy.

A controversial issue is the ability of SMEs to face macro-financial crises, or recessions. The literature points out that in periods of macroeconomic volatility, SMEs frequently have more flexibility to make adjustments to changing circumstances (in terms of their use of labour and capital) than large firms which produce more standardized outputs. However, it is also true that SMEs face more financial pressures when interest rates rise, which can damage them in a structural way. Table 3.4 shows that during the financial crisis, East Asian firms were asymmetrically affected. SMEs showed a lower capacity utilization level after the financial crisis in comparison with large firms, suggesting that the recovery of capital levels would be weaker.

Table 3.4 Impact of the 1997 financial crisis on East Asian firms.

Country	Capacity utilization level after crisis		Share of firms with fewer workers after crisis	
	SMEs	Large	SMEs	Large
Indonesia	51	63	54	45
Malaysia	64	73	29	40
Philippines	76	79	50	50
Republic of Korea	71	77	61	80
Thailand	57	67	56	45

(Source: Bianchi et al., 2006)

Overall, it is clear that even during the period of neoliberal dominance of development debates, Asian governments were developing strong policies designed to facilitate the growth of the SME sector, a trend which has continued, and indeed been strengthened, during the post-Washington Consensus era. Table 3.5 below outlines the approaches

taken towards the SME sector by selected Asian countries (China, South Korea, India and Thailand), their objectives and the tools utilised to comply with these objectives. Key elements of support include: access to export markets, the development of subcontracting, training of the labour force and assistance for the start-up of new firms. Clearly the evolution of these policies supports the view that SMEs need support to compete in local and international markets, confirming that those countries which have seen the most successful expansion in their SME sectors have done so via deliberate interventionary measures and targeted allocation of resources rather than more general horizontal measures supporting the economy as a whole.

Table 3.5 Policies in favour of small and medium-sized enterprises in some selected Asian countries in 2000.

Objectives	Financial subsidies	Tax breaks	Information and consultancy	Training	Other
Start-up new enterprises	In, Chi, Kor	In, Chi	In, Chi	In, Chi, Ind, Thai, Kor	
Development of subcontracting	In, Chi, Thai	Chi, Thai	In, Thai	In, Thai, Ind	
Export support	In, Chi, Kor	In, Chi, Kor	In, Chi, Kor	In	
Development of financial activities	In, Chi, Kor, Thai		In, Chi		
Employment support	In		In	In	
Development of education and profess. Training	In, Thai, Ind, Kor	In, Thai, Kor	In	In, Ind, Thai, Kor	In

Note: In=India; Kor=Korea; Ind=Indonesia; Thai=Thailand; Chi=China.

(Source: Bianchi et al., 2006)

3.6 The Sectoral Dimension of SMEs Upgrading

In Chapter Two the concept of upgrading and its implications for the debates about industrial policy was defined. Here we go on to explore this issue in more depth in

relation to the nature and characteristics of SMEs. Pietrobelli & Rabelotti (2006, p.10) define the concept of upgrading (a theme that is very popular in the specialized literature) as “making better products, making them more efficiently or moving into more skilled activities”. Basically, this would be a measure undertaken to increase the value added realized through the production process in which the SME is involved. The impact of collective efficiency and patterns of governance on the capacity of SMEs to upgrade may differ considerably across sectors. Collective efficiency relates to the potential for the agglomeration of firms into clusters, and, through determined public policies, to boost the competitiveness of the firms involved within those clusters. Individual economic sectors differ in terms of their technological complexity and therefore in the modes of innovation and upgrading available. For instance, in some sectors, vertical relations with suppliers of inputs may be the source of product improvement and process upgrading, as in the case of traditional manufacturing. However, in other sectors, upgrading can be fed by technology users, organizations such as universities, or the firms themselves with software or agro-industrial products (Von Hippel, 1988, p.5).

In general, in traditional manufacturing, knowledge is tacit (learning by doing) and therefore upgrading depends strongly on the intensity of positive externalities and cooperation among local actors (firms, research centres, technology and quality diffusion centres). Accordingly, upgrading requires a form of collective efficiency in the traditional manufacturing sector. In other sectors, however, where products are more complex or perhaps in the case of larger natural resource-based firms, technology is more codified and access to external sources of knowledge (research laboratories located in developed countries, for example) becomes more critical for upgrading. Hence, within those Latin American economies abundant in natural resources and commodities, a clear state intervention that promotes more codified technology through special policies is necessary (for example, to raise the rate of R&D, encourage the creation of clusters, etc.). (Pietrobelli et al., 2006, p.51)

It is interesting that in the Chilean case, upgrading tends to have come mainly from innovation in natural resource-based sectors and tacit knowledge has not played a particularly important role. Rather, the work that is developed in research centres and laboratories, which are partly funded by the state, has been more important (Pietrobelli

& Rabelotti, 2006, p.10). Here the role of public policy is essential. For instance, solutions for the crisis in the Chilean salmon farming industry, caused by the ISA⁴ virus, came from research centres within the country's own universities.

Another important issue is the role of large companies in promoting upgrading via their relations with suppliers in different sectors. These companies are more likely to be more involved and interested in upgrading their suppliers if the technology required is mainly tacit and requires intense interaction. In traditional manufacturing sectors, firms with low technological value added (low technological complexity) are likely to be included in global value chains. This infers strict supervision over the work of suppliers and direct support becomes a necessary condition for global buyers who want to reduce the risk of non-compliance by their providers. In this context, more than just tacit knowledge is required. In the case of more complex products, the opposite is true. Technology is codified and the technological complexity requires firms to have internal technological capabilities in order to be subcontracted (Pavitt, 1984, p.343).

Pietrobelli & Rabelotti (1986, p.16) identified the characteristics of Latin America's industrial structure at that time. The following key results were found:

- a) R&D activities are very low in domestic and foreign firms
- b) Domestic inter-sectoral linkages have been displaced by trade liberalization
- c) University-industry linkages appear to be relatively weak

Almost 30 years later, some of these characteristics remain. For instance, R&D expenditure is still low, and mostly funded by the state (IDB, 2010). In most OECD countries, the opposite is true. In other words, the private sector provides the major contribution to R&D expenditure.

Innovation and SMEs

In the 1960s there existed the belief that national economies required large firms to lever a sustained economic growth. Industrialization would only be achieved through

⁴ ISA: infectious salmon anemia

large firms and large conglomerates. The Austrian economist Joseph Schumpeter (1934) originally questioned this perspective arguing that “an exceptional creative process led by independent entrepreneurs would lead to the introduction of new products in a radical way and to the creation of new firms, defying the established companies and changing the market structure”. But later, Schumpeter developed a radically opposing view, arguing that “the monopolistic companies generate a bigger innovation chain because there are advantages, although they are not confined to the competitive level of the company, essentially they are materialised at the monopolistic level”. He further argued that “the large scale establishment has come to be the most powerful engine in economic progress and in particular of the long run expansion of total output” (Bannock 1981, p.36).

Drawing upon these sorts of ideas, British economic policy of the 1950s and 60s was organised through the Industrial Reorganisation Corporation (IRC) around the encouragement of larger companies so as to be competitive in the global markets. Thus, it was argued that the cost of R&D benefited from economies of scale and lower unit costs of production. Even in the 1970s, the UK government encouraged mergers and acquisitions through financial assistance to stimulate modernization, efficiency and expansion (Griffiths & Wall, 2001, p.79). By the 1980s, however, interest had already begun to focus on the innovative capacity of SMEs and there was increasing evidence that many mergers and acquisitions had their origins in the capture of established markets (there was no relevant ‘creation of value’, as the traditional conservative view points out). Hannah & Kay (1978, p.125) found that the concentration that occurred in the UK between 1957 and 1973 was not the result of internal growth, but the result of the process of mergers and acquisitions. By the 1990s there was growing evidence of the importance of SMEs within the innovation process. For instance, the Centre for Business Research at Cambridge University (UK) examined the rate of innovation in the sense of new product creation between 1990-1995. They concluded that 20% of the SMEs in the sample study produced original new products at the industrial level (Cosh, Hughes & Woods, 1996, p.23).

The objectives of public policies of support to SMEs are to reach higher rates of economic growth and alleviate poverty (Ayyagary et al., 2007, p.415). But these have specific objectives as the creation of employment, higher productivity and

competitiveness, higher credit access and least entry barriers. However, aspects of political economy as political cycle, lobby of large firms as well as institutional issues determine if these firms will survive in the long term. Certainly the programs based on solve market failures are relevant (this is the spirit of post-Washington Consensus, closer to a horizontal industrial policy), but there are issues related to scale of firms, unequal bargaining power as well as the existence of a legal framework that guarantees affirmative action in favour of smaller firms.

So, patterns of concentration discourage SMEs from undertaking innovations due to unequal relationships with large firms (in the contracts), therefore the trend of market concentration is contrary to a healthy SME structure.

3.7 Specific Issues in SMEs

In this section, the discussion moves on to consider a range of more specific issues affecting SMEs in Latin America: the relationship of SMEs with financing, the role of SMEs within industrial clusters and environmental issues. What follows tends to reflect upon the broad conditions facing SMEs in Latin America, reflecting their shared characteristics and contexts (economies based on abundant natural resources), and the way in which they are affected by similar forces and challenges. It is recognised, of course, that the specific dynamics and issues will differ between the individual countries within Latin America.

3.7.1 SMEs and Financing Problems

Although there is a wide variety of characteristics that define Latin American SMEs, in general they can be characterized as exhibiting antiquated forms of technology and techniques of production, as well as inadequate organizational structures. A particularly crucial characteristic of Latin American SMEs is derived from credit rationing and the market failures that SMEs face as a result of insufficient collateral or real guarantees for lenders. These problems are accentuated by asymmetries of information. The banks cannot identify client quality with certainty and, as a result of this; they cannot assess the ability of potential clients to make payments (Rivas, 2004, p.28). Banks obviously

see SME clients as embodying greater risks to which they respond with higher interest rates, reflecting the higher levels of risk. This leads to a smaller credit supply for the SME sector and to higher interest rates (credit rationing). This financial load affects the financial structure of SMEs, weakening their working capital and, at the same time, producing a phenomenon of underinvestment in their levels of fixed assets. This prevents them from reaching an optimal scale of operation. At the same time, it causes a bias in the banks which focus on the analysis of real guarantees rather than on the analysis of projected cash flows (Carbo et al., 2008, p.5).

Table 3.3 shows that fewer SMEs use financing products than deposits and savings products. Around 40% of SMEs use term loans in Colombia and short-term loans in Chile. Lines of credit are also frequently used, with 75% of SMEs using them in Chile, while in other countries the percentages are substantially lower. Interestingly, the use of loans supported by public programmes or guarantees is low. The highest usage of public programmes is observed in Chile, where 8% of SMEs report using them and where the Warranty Fund for Small Entrepreneurs (FOGAPE) is regarded as successful (De la Torre et al., 2008, p.39). In Argentina, only 3% of the sampled SMEs use public programs or guarantees. Venezuela has the lowest overall fraction of SMEs using any type of financing products, while Chile has the highest. However, the proportion of SMEs not using financing products at all is significant, ranging from 13% in Chile to 51% in Venezuela and 65% in Mexico. Credit access for the SME sector is clearly an important issue to take into consideration in the evolution of any effective industrial policy.

3.7.2 SMEs Embedded in Industrial Clusters (Clustering Policy)

There exists rich empirical evidence about the location of SMEs within clusters (Pietrobelli et al., 2006; Mognillansky, 2013). When SMEs are located in clusters they are able to overcome many of the main constraints facing them. These include a lack of skilled labour and poor access to technology, inputs, market information, credit and external services. However, too much of the literature perhaps over-emphasizes local sources of competitiveness, for instance intra-cluster vertical and horizontal relationships that generate collective efficiency, and neglects the growing importance of

external linkages (Pietrobelli & Rabelotti, 2006). According to Fisher & Reuber (2000, p.45), the main characteristic of the involvement of SMEs in clusters is the predominance of SMEs within such networks. There are more small firms involved in clusters than in other parts of the economy (although of course larger firms are also an integral part of Clusters). Inter-firm collaboration and competition plays a key role in the success of clusters and their impacts upon participating firms. If there is a high density of inter-firm linkages, including horizontal linkages (between competing firms) and vertical linkages (between suppliers, manufacturers and distributors), the final result will be stronger SMEs. Collaboration among firms facilitates collective action and collective learning.

Public policies also play an important role in encouraging SMEs to participate in clusters. As mentioned previously, there are clear benefits for SMEs from being grouped and operating within clusters. This goes beyond the typical rationale of correcting market failures and improving institutional frameworks. Clusters can be formal (defined by the state and embedded in the national innovation systems) or informal (as in the case of Silicon Valley in the USA).

Neoliberal perspectives tend to suggest that successful clusters emerge and are shaped by free market forces alone but competition by itself does not guarantee the formation of clusters and in the literature there are several examples of government interventions that have enhanced potential clusters: the building of public-private partnerships, incentives for networking, the modernization of local administrations, and the modernization of the judiciary system, etc. (Examples of clusters include the furniture industry in northern Italy, the salmon industry in Chile and fresh fruit in Santa Catarina, Brazil (Pietrobelli & Rabelotti, 2006)).

There are biases because firms believe they may not appropriate the benefits of cooperation (short termism view) and knowledge-sharing. For instance, many European countries present a complex scenario in the relationship between the state and clusters. In the majority of these countries there is state funding for national and regional clusters as well as to correct the typical problems of credit rationing, infrastructure and expenditure on R&D. The component 'commodities' and natural resources base is still

important in the production of value chains of Latin America. Therefore, these challenges will pose opportunities for SMEs and the private sector in general.

3.7.3 Carbon Footprint

Building upon our earlier discussions of the impacts of the global restructuring of many of the markets that SMEs are involved in, we now explore a related phenomenon that is having a growing influence upon a range of international markets – international concerns regarding environmental issues and the transition to a low carbon future. This section first lays out some of the features of the rapidly evolving global debate over these issues before moving on to consider their implications for the SME sector.

The concern about how to build a low carbon economy is increasingly affecting all markets and territories (World Economic Forum, 2012, p.6). There exist initiatives in many countries in regard to this issue. For example, in the UK some supermarket chains like Tesco have announced their willingness to create and promote the use of labels that indicate the carbon footprint of products that they sell. However, Tesco finally abandoned this policy due to the administrative load (Vaughan, 2012).

The USA also appears to be moving in this direction: the idea is being discussed that from 2020, imported products from countries that do not have emission reduction obligations comparable to the U.S. commitments would be obliged to pay compensation (Arnold & Porter, 2007, p.1). In Chile there are clear policy recommendations in respect to climate change at the level of government agencies (for example, Fundacion Chile). This institution recommends that Chilean companies face climate change and has several programmes linked with industry to create capabilities of the recognition of this problem, and so in the medium term take advantage of the mitigation efforts (Fundacion para la Innovacion Agraria, 2010, p.96). Also the association of Chilean entrepreneurs has expressed concerns about climate change and is working towards building a low carbon economy in order to maintain the competitiveness of their industries (CLG Chile, 2012, p.3).

Much of the discussion is focused around reducing the carbon footprint of production processes. This refers to the amount of carbon dioxide (CO₂) issued during the life cycle of a product along the production chain, sometimes also including the retrieval and removal of carbon at the end of the cycle. The scope of the carbon footprint generally includes direct emissions, such as fuel used in production and product distribution, but when it comes to indirect emissions (such as those related to electricity used by the facility, inputs, wastes, employee business flights, transportation and consumer use) there are wide variations. What is clear, however, is that all enterprises will have to meet the requirements of reducing CO₂ emissions through production methods that are less intensive in their use of CO₂. The state should therefore have a clear role in the energy definition of public policy to signal to entrepreneurs the correct incentives so that they carry out the appropriate industrial adjustments in their enterprises (Stern, 2006, p.2).

But as the economy moves in a low-carbon direction, there will be opportunities as well as challenges. For example, new employment opportunities and the development of businesses in new areas such as low carbon technologies will accompany the disappearance of more carbon intensive industries and practices. This will lead, in the medium term, to a more competitive economy. The new regulations and higher standards in developed countries in terms of product and process design will enable a wave of innovation in local industries.

So, for example, the Chilean export sector must accelerate its carbon footprint traceability in order to remain competitive in markets where the issue of climate change is a factor that affects consumer choice. Sustainability is not just a cost or barrier to overcome; it will be an opportunity to create new products, differentiate them, and certainly open new markets and expand the horizons of industries. All these activities, which at first appear to be reducing energy use, imply an even deeper change. Chile must improve its R&D ratio, which is currently at 0.5% of GDP (2010, National Survey of R&D) by encouraging a greater proportion of private sector expenditure. This will encourage innovation in different fields and in different geographical locations. There are already public and private agencies specializing in promoting the industrial change that these new requirements are imposing globally. At the same time, sustainability activities conducted through Corporate Responsibility will increasingly include social

components of sustainability: this means that large firms must ensure adequate conditions for SMEs through the supply chain, ensuring that SMEs can pay adequate wages, are profitable and are able to adopt production processes with low environmental impact, among others. (Matten & Moon, 2008, p.404)

Also, the financing of the 'green economy' (Swanson & Ziegelhoefer, 2011, p.3) will become a major issue of public policy in the years to come. In most cases, companies will need long term finance to reorganise their production processes and initiate the necessary changes to achieve the required savings in energy, and at the same time, remain competitive. The banks will have to be persuaded of the long term benefits of this new paradigm. Most firms will probably face economic losses during the initial period of industrial reorganisation as a result of the development of new rules and laws, and also from market pressures. However, to the extent that these changes will be materialised in terms of carbon footprint traceability, new machines, new technologies, etc., public funding will also be necessary. This might guide market forces via direct interventions (subsidies, tax incentives, technological transference, etc.). Also public policy might carry out in better conditions with more state collaterals to the private banks and so they do an assessment of risks and benefits of new business models in this new step.

Although climate change is not a political priority in Chile (Claro, 2008), the pressure of large firms on local suppliers will impose challenges and investment will be required to maintain the competitiveness of local industries. It also means that the analysis of credit risk in the banking sector will need to be adjusted to these new realities and paradigms or the economy will miss out on the evolution of new businesses with great potential and with the capacity to create new employment. From the state's perspective, aiding this transition will mean future benefits as companies adjust to this new scenario, keeping their capacity to generate employment.

With regard to the role of SMEs and the innovation that must occur and seep into all areas of the economy, a key aspect is the spread of skills corresponding to this new paradigm. A learning-based public policy focused on SMEs and the requirements for low carbon innovation, imposed by changing international priorities, will be crucial in carrying out this ambitious industrial structure adjustment. There is also a need not only

for SMEs to be trained in these areas but also for government planners and strategists to develop the skills to understand the importance and dynamic of SMEs and their constraints, opportunities and future challenges. SMEs are disadvantaged by their size, but have the advantage of flexibility and quick adaptation to these market changes.

3.8 The Role of Public Policy towards SMEs

From our discussion thus far in this chapter it is clear that there is increasing recognition across the international development community that SMEs with a high turnover and strong adaptability can play a major role in accelerating economic development and removing regional and sector imbalances in the economy. It is also recognized that they often tend to employ poor and low-income workers and are sometimes the only source of employment in poor regions and rural areas (Fan, 2003). Nevertheless, SMEs face problems that are not only associated with their size and lack of resources, but also with their inability to obtain an efficient management structure and their lack of close links with other firms of similar size. In general, there exists a low level of cooperation with other enterprises, weak national support institutions and frequently a regulatory environment that is biased against smaller-sized business. Under globalization, given these conditions, the SME sector cannot properly adjust, bringing negative social consequences for society.

Accordingly, given the specific difficulties faced by SMEs, the rationale behind the renewed drive towards state intervention in support of SMEs is based on recognition that:

- a) Market failures cause biases against SMEs.
- b) Small size creates cost disadvantages to SMEs (weak bargaining power).
- c) SMEs are limited in capability development.

Market failures derive from asymmetric information on SME borrowers and imperfect competition in the credit market. Also SMEs face higher costs for R&D and training, together with their inability to appropriate the full benefits of an optimum size of investment. This causes under-investment for technology transfer and training. Being of

small size, SMEs lack economies of scale and cannot compete under equal conditions with larger firms; this raises transaction costs for SMEs and limits their ability to take advantage of advantageous opportunities. Other factors affecting the ability of SMEs to grasp opportunities include the fact that SMEs usually lack management capacity and cannot afford costly support services (financial, legal, training resources).

Within this context, the role of the public sector could be to relieve the regulatory burden facing SMEs (such as reducing the financial costs of creating a company), to improve access to finance (strengthening financial institutions to serve small clients) and to support business development services (to help build SMEs competitiveness). Other initiatives have included programs of public procurement for SMEs, through which the state attempts to stimulate and stabilize these enterprises.

Clearly, the issues differ from sector to sector and have been responded to in very different ways from country to country over time. In the next section, the discussion focuses down to address the role of SMEs within discussions over upgrading in the agricultural sector before moving on in the following chapter to explain the specific empirical focus of the thesis on the fruit growing, fruit processing and wine producing sectors in Chile.

3.9 The Role of SMEs in the Agricultural Sector

In general terms, SMEs in the agricultural sector of most Southern economies differ from larger growers, not only in terms of area planted or produced, but also in terms of the presence of fixed capital equipment (such as storage and processing plants), management practices (self-managed versus professional management) and the use of labour. Large entrepreneurs frequently undertake agricultural production as a secondary activity to other activities (banking, transport, construction). Medium-sized growers are fully dedicated to their farms, which in Chile tend to focus almost exclusively on fruit crops. Smaller growers range from well-qualified growers, with the means to eventually increase the size of their business, to those who remain focused on lower value crops with only minimal investment in higher value commodities (Pietrobelli & Rabellotti, 2006, p.1-25).

In the Chilean context, it is necessary to point out that small growers have found themselves increasingly marginalised within some markets as a result of global restructuring. The agrarian issue cannot be left to the working of free market forces; the active participation of state is required (Kay, 1995, p.80). This phenomenon affects many fruit markets in different Southern countries. In the global value chain literature (which was addressed in the previous chapter), it is argued that in buyer-driven value chains, like fresh fruit, the final buyer is the actor who drives the decision making in the chain, deciding what needs to be produced, how it should be produced, and by whom (Humphrey & Schmitz, 1996). Gomes (2006, p.80) points out that SMEs will often be squeezed out of the market because they are unable to meet the buyer's requirements for quality, volume and continuity of supply. Further, SMEs present high transaction costs for buyers in their interactions with and monitoring of their suppliers. Given these constraints, support for SMEs needs to focus on influencing their relationship with buyers (especially large growers) via government support or intervention and encouraging interaction with other agents such as local input growers and consultants. As Gomes (2006, p.75) points out, those SMEs that have managed to gain or retain a foothold in these high value markets have done so through involvement in public-private research partnerships, subcontracting relations with large growers-exporters, and increased interaction with local input suppliers and consultants who have served as sources of technical assistance and innovation.

Producing fresh fruit has become a more demanding and problematic activity for SMEs even within domestic markets. The restructuring of the food retail sector has meant a rapid increase in the market share of supermarkets attracting, even in Latin America, a higher presence of multinationals such as Carrefour and Walmart, etc. This restructuring has been accompanied by an increase in buyer-driven standards as large retailers seek to differentiate their products on the basis of quality and consumer safety, generating an additional source of profits (Reardon & Berdegue, 2002, p.15). This means that not only do SMEs face growing entry barriers to fresh fruit markets due to the high investment needed to meet the required standards and volumes (Coe et al, 2008, p. 304), but also their low volume of production means that they cannot take advantage of economies of scale, and their limited production and marketing knowledge, as well as their insecure access to post-harvest and transport services, cause further problems.

This product differentiation has led buyers to shift gradually from demanding product standards to imposing a series of process standards as well. The concern of buyers is not only the product itself but also the production process and its impact on food safety, labour and the environment (Pietrobelli et al., 2006, p.281). The rising competition in the fresh fruit industry and the need to impose these standards has changed the relationship between growers and buyers. The retailers are moving from intermediary relationships to more direct forms of procurement. These alternative strategies include formal and informal contracts made directly with growers and the establishment by retailers of their own distribution centres. These practices allow the supermarkets to closely monitor quality, safety norms and standards. This process means that growers must upgrade their products, or some characteristics of them, and sell at competitive prices. It also implies that growers need to meet the demand for 'better fruit', more varieties, and improved production processes, post-harvesting technologies, packaging and labelling specifications, as well as increasingly acceptable environmental and working conditions (Gomes, 2006, p.71).

Any attempt to develop a more effective industrial upgrading strategy for the agricultural sector in Latin America must be situated in the context of these challenges. The relationships between state agencies, small and large-scale growers and other stakeholders and intermediaries differ from country to country but most countries have seen some attempts made by the state to promote industrial upgrading in the sector, whilst the production structure also suggests the potential for collective action among growers although the reality is, of course, extremely variable reflecting the variety of inter-firm relations across the region. Clearly the potential for cluster-wide upgrading is strongly influenced by the various levels at which the larger firms and grower associations collaborate (or fail to collaborate), especially in terms of establishing ties with public sector agencies that could facilitate the upgrading process. This section continues by exploring some of the issues facing agricultural SMEs embedded within clusters.

a) Resilience through Joint Action in Upgrading

As argued above, recent years have seen a lot of pressure towards upgrading within global agricultural markets from buyer-driven demands that have resulted from the restructuring of the global food retail markets. Global buyers are likely to engage with their suppliers in efforts to upgrade, actively supplying information and monitoring the recommended innovations. But, according to Gomes (2006, p.71), this does not always hold for the value chains of agricultural products, in which retailers are not concerned with backward or forward integration, and prefer to allocate the risks of food procurement and quality maintenance to other actors in the chain (Humphrey & Schmitz, 1996, p.1869). The intermediaries in these chains relay market information onto their suppliers, but they are less likely to engage in supporting the actual process of upgrading if the productive relationship is directly between the buyer and the producer. These circumstances imply that the growers must acquire the knowledge and skills to upgrade themselves.

b) Public – Private Partnerships in Agricultural Research

Generally in these circumstances, SME growers have asked for support from the public sector to keep or accelerate their competitiveness. In order to meet new norms and standards, they have had to try and gain access to or involvement in adaptive research on new varieties of products and crops, specific improvements in farming practices and biological control of pests and pathogens. Where these research goals share public good characteristics, state support means that when one grower develops something through these mechanisms, it is then available to the rest of the growers (Gomes, 2006, p.91). Given the uncertainty associated with research and the need for economies of scale, it is clear that the only way that SMEs will be able to gain access to and involvement with such research is through the state-sponsored programmes which have been initiated in some countries.

Sectoral associations are another important part of upgrading strategies and have frequently worked closely with governments towards these aims. SMEs benefit when they are subcontracted by larger growers who transfer the knowledge and skills obtained through these partnerships to their suppliers.

However, in the specialised literature analysing this type of cluster (Damiani, 2008, p.65), the unequal bargaining power between large growers and small growers is not often mentioned. Many large growers buy production from small and independent growers but they frequently establish contractual arrangements in which all the risk fundamentally remains in the hands of SME growers. These risks include the impacts of changing climatic conditions, foreign exchange rate movements, as well as abuses in the pricing set by different quality. Interestingly, in the latter case, the subcontracting process is more complex. In one form of subcontracting, a large firm buys a relevant percentage of an SME's production for export. This has benefits and disadvantages for the SME. The SME gets access to a predictable and stable buyer which permits the continuity of production. In this way the SME can keep a low fraction of spare capacity (SMEs normally have a high utilization rate of productive infrastructure), which means less capital cost and less operating leverage. Certainly, this contributes to the avoidance of bankruptcy and economic losses. The second subcontracting form is the disintegration of any part of the value chain, allowing the participation of SMEs across value chains. Deconcentration of the value chain, allowing more firms to participate in the total economic surpluses, is socially desirable. It will depend on the efforts of public policies to promote SMEs in the value chains. This could be in marketing services, transport and consultant services specialising in agriculture so all the knowledge and skills of large growers pass on to the SMEs.

In overall terms it is interesting to note that the upgrading of large growers generally has a positive effect on the whole value chain. The spillover effects (technology, efficient processes, knowledge, and innovation) are leaked throughout the value chain. This relays a signal of improvement to the firms interacting with it, which can lead to the industrial upgrade of smaller firms, although the extent of this obviously depends upon the types of relationships established between the different sized firms.

c) Benefiting from Contractual Ties with Grower-Exporters

SMEs can also benefit from participating in sub-contractual arrangements with large grower-exporters. But fair contracts and legal protection in favour of SMEs are required to avoid large firms benefitting from frequent changes to the contract conditions.

Contractual arrangements between larger and smaller growers can be both beneficial and detrimental to the latter depending upon how they are formulated, regulated and negotiated. Where there are no clear rules and transparency then there can be abuse of market power, worsening conditions for the SMEs, etc. but if there are clear and transparent relationships between contractors, it can increase overall competitiveness, enable larger growers to expand their production volumes by subcontracting, while reducing unit costs by relaying the risks and excess labour costs to their SMEs suppliers (Gertler et al., 2000, p.688). SMEs, in turn, benefit from these relationships by receiving clear production standards, input packages equivalent to those which large firms themselves use with grace periods extending to the harvest season, and technical assistance towards production. Contractual ties with larger growers can thus enable SMEs to participate in more demanding markets (SMEs tend to initially access niche markets of low quality).

However, in the agricultural sector, not all SMEs have benefited from these ties in the same way. Large firms use a variety of contracts. The best of these are annual contracts that are inclusive of inputs, technical assistance, soil analysis, harvesting, and transportation, processing and marketing, with a minimum assured base price. These contracts hold clear benefits for SMEs whilst the large growers gain in terms of responsiveness to their demands for volume, quality or a specific variety. Also, it is possible that many SMEs have used these contract ties with larger firms as a step for establishing direct ties with buyers themselves. Gomes (2006, p.71) points out, for example, that this was done by an association of medium-sized enterprises in Rio Grande do Norte (Brazil) that switched from subcontracting to direct sales (this was due to improvements in the quality of the melons they produced).

d) Private Linkages in the Agricultural Sector

Social milieu is important for innovation in the agricultural sector. Growers continually interact and relay information amongst themselves about the technologies of production, cheaper processes and so on. They meet in associations, in seminars, in workshops and with state agencies. According to Gomes (2006, p.71), there are two drivers of innovation when agriculture expands: input suppliers and consultants. The expansion of fruit production, for example, has led to a growing number of agricultural input stores

and investments from national and multinational agricultural input suppliers (a growing trend in Latin America and Chile). It has also meant that besides selling agricultural inputs and implements, stores serve as providers of technical assistance and, occasionally, financial support. As discussed above, most countries have state agencies which help facilitate SME access to land, credit, inputs and agricultural research. A clear example of the promotion of SMEs was seen in the state of Santa Catarina in Brazil. The state established an experimental station easily accessible to SMEs. Gomes (2006, p.75) argues that locating the experimental station in the same area meant state researchers could focus on improved production technologies for the specific needs of the local region and of direct relevance to local SMEs. This proximity facilitates the interaction between researchers and growers, creating formal and informal networks.

Over the course of the last two chapters we have explored the contours of the debate over the role of industrial policy in economic development strategies, with a particular comparative focus on the Latin American and East Asian historical contexts and upon the role of SMEs within industrial upgrading strategies in natural resource-dominated economies. The following chapter goes on to specify the research questions addressed within the thesis in more depth, present the major methodological frameworks adopted, and outline the major techniques utilised in the collection and analysis of the data gathered through the research.

Chapter Four: Research Questions and Methodology

4.1 Introduction

The previous two chapters of the thesis outlined the major debates over the role of industrial policy in the Global South and discussed the role of SMEs in the process of economic development. The concept of upgrading was introduced and then related more specifically to SMEs, firstly in general terms and then more specifically in relation to the agrarian sector. This also encompasses the working conditions of the labour in the agrofood sector in Chile (as baseline to any upgrading in the agrofood sector).

In this chapter, I will explain the methodology, outline the main research questions in more detail and present the main framework for my research. In the following sections, therefore, I first lay out the conceptual grounding of the thesis, before then moving on to specify the research objectives, and finally outline and discuss the methodologies employed and the reasons behind the choices made.

4.2 Conceptual Approaches

The main conceptual approach that is used within this thesis is that of GPN, an approach that emerged in 2002 (Henderson et al, 2011, p. 436) in an attempt to address some of the shortcomings of the GVC approach. As explained in Chapter One, both GVC and GPN explore the processes of creation of economic value in different industries through the analysis of networks and chains of actors in a local-global perspective, although there are differences between the two perspectives. The GVC, according to Gereffi (1994, p.100) assigns value to the full range of activities that firms and workers engage in to bring a product from its conception to its end use and beyond. This includes activities such as design, production, marketing, distribution and support to the final consumer. The activities that comprise a value chain can be contained within a single firm or divided among different firms. Value chain activities can produce goods or services, and can be contained within a single geographical location or spread over

wider areas. The governance of individual chains can be defined in conceptual terms as buyer driven or producer driven.⁵

In contrast, the objective of the GPN approach is “to reveal the multi-actor and multi-scalar characteristics of transnational production systems through intersecting notions of power, value and embeddedness. In particular, attempts are made to connect with understandings of sub-national regional development and clustering dynamics” (Coe et al., 2008, p.275).

The GPN approach is thus clearly about more than just economic variables or the inter-relationships between firms and suppliers within a global value chain. It also encompasses a concern for territory, and the actors that participate within particular multi-scalar locations (national, regional and local state agencies, entrepreneurs, trade unions, research entities, NGOs). Certainly, GPN is concerned with the firm as a unit of analysis but it is also concerned with the distribution of power, with the analysis of institutional arrangements and how global economic forces are mediated via specific regional and local agencies. In this sense, the GPN approach allows us to explore the dynamics and tendencies within economic clusters, for example, in a much more flexible and effective way, recognising that clusters can be formal or informal, that they can be (or may not be) supported by public policies (this will be analysed in depth for the Latin American case in Chapter Five).

Both the GPN and GVC approaches are concerned with understanding the social and developmental dynamics of modern capitalism in the local-global spaces where economic transactions (buying and selling) occur. More specifically, both approaches acknowledge that governance structures and their related spatial power asymmetries (whether expressed as chains or networks) have a major impact on the possibilities for the industrial upgrading of any individual firm, as well as the related regional development of the places they interconnect. Of course, the outcome will also depend on the strategies of lead firms with which the SMEs interact, their suppliers and other

⁵ **Buyer-driven GVC.** They tend to have low barriers to entry. Producers are bound to the decisions of buyers through the functions of design and marketing, notably when retailing and brand names are concerned. The most significant sectors concern agriculture, garments, footwear and toys.

Producer-driven GVC. They tend to have high barriers of entry as many commodity chains require capital/technology intensive production and economies of scale, such as in the automobile and aeronautical industries. G. Gereffi (2001) *Shifting Governance Structures in Global Commodity Chains*,

actors. Nevertheless, whilst GVC and GPN share a common foundation (networks and chains in a local-global perspective), there are important differences. The GPN approach considers the influence of local and regional institutions in shaping the economic landscape as a fundamental component of its approach, whilst the GVC approach, certainly in most of its forms, tends not to connect much with local actors and is more focused on sectoral economic development and the success/failure of individual firms in a competitive scheme. In contrast, the GPN approach is more interested in the dynamics of local territories. As such, the GPN approach is closer in its foundations to the realities of clustering activities because it not only incorporates an analysis of inter-firm alliances, but also public-private partnerships, such as relationships between firms and civil society organizations such as environmental protection groups and trade unions. In other words, GPN is in many senses an extension of GVC in that it analyses and emphasizes place and region as specific factors that influence global market integration processes.

The adoption of GPN as the major conceptual approach for the research reflects my transition from economist to economic geographer. Pure economics in the neoclassical framework is insufficient to explain and address these complex problems in the productive sectors. . My background as an economist was mainly neoclassical having studied during the Pinochet era but was enriched over time by an understanding of Keynesian, Marxist and structuralist theoretical contributions.

GPN as an approach is more diverse and complex because it encompasses the role of state agencies, NGOs and trade unions as well as territorial embeddedness, and even the possible influence of the culture of determined entrepreneurs as well as their contacts and networks. At the beginning of my research, I thought that the problems in the Chilean agrofood sector, particularly those related to the participation of SMEs and the improvement of labour conditions were mainly problems associated with market failures (better functioning of credit markets, contractual arrangements, etc.) which required a 'pure market' solution. However, while I was carrying out my research, I became aware that an approach detecting market failures was not the answer. At this point I started to explore the GVC and GPN approaches. Initially, GVC attracted my curiosity. The upgrading proposed by Gereffi et al. (2011, p.22), especially in the agrarian sector, seems very reasonable. However, when the conditions of SME farmers

and the conditions of labour in the Chilean agrofood sector are analysed, the GVC proposals do not appear to work properly. Accordingly, Coe (2013, p.273) points out that GPNs are systems of embodied labour as they are interlinked systems of firms. Labour would be in this context part of the 'value producer' and therefore the social upgrading (in a broad sense; not only economic upgrading) cannot be achieved until the labour force enjoy improved working conditions.

In contrast, Barrientos et al. (2011, p.319), in their research on the Moroccan garment industry; claim that firm upgrading does not necessarily lead to improvements for workers. Milberg & Winkler (2011, p.1) remark there has been less analysis of what upgrading means for living standards (wages, work conditions, economic rights, economic security and gender equality).

The need to incorporate in the debate the problems of agency (firms are not the only relevant part in the GPN; also the workers with the dimension of power, place, livelihood and networks) has created the conditions to an evolution of GPN from their origins. Coe & Hess (2012, p.7) point out that GPN has come a long way. They claim that GPN has evolved in response to theoretical and empirical challenges including working conditions and their relationship in the upgrading of SMEs. It is in relation to this point that the idea of GPN, as a theory, is more complete, because it includes all elements that are necessary to understand the distribution of power in the process of analysing and observing the behaviour of firms in their local-global interaction. Also the new challenges in relation to upgrading and its impact on labour, have created conditions in order to that GPN has evolved at the light of these new debates.

GPN, therefore, as a conceptual approach in the Global South presents more complexity in its application. At its core are various underlying issues such as the significance of labour and the processes of value creation, as well as the networks of firms involved in R&D, and also the technological upgrading of firms into chains (Henderson et al., 2011, p.447). What is clear, however, it is that in many markets (e.g. agrarian markets in Latin America) upgrading will not be achieved effectively merely through better connections to information technology (globalization as a driver of firms) or even through more expenditure on R&D. As has been pointed out in the literature (Barrientos, 2007; Knorringer & Pegler, 2006), the GPN approach has tended to underplay the significance of working conditions and the social components of upgrading strategies. Within

industries such as the agrofood sector, where the low cost of labour has frequently been utilised as a major part of comparative advantage, any effective upgrading process has to focus on addressing the working conditions of labour. Accordingly, the GPN approach needs to integrate labour more effectively as an essential input for the upgrading process and adopt a definition of upgrading that escapes its frequently narrowly economic orientation to encompass not only the firms and their linkages, but also the social upgrading of the sector focussing upon labour, working conditions and SMEs and their relation to overly-concentrated markets. The next section develops some of these themes in relation to the application of the GPN approach to the study of the Chilean agrofood sector attempted within this research.

4.3 Applying the GPN Approach to the Chilean Case: SMEs and Labour as the Focus of Research

In economies that are as highly concentrated such as the Chilean economy, which demonstrates a very unequal distribution of income with a Gini coefficient of 52.1 (World Bank, 2009), the relevance of SMEs to developmental and social objectives is clear and vital. However, the mainstream neoclassical economic view tends to consider all firms in equal terms - competitive markets and price signals are presented as the key elements affecting decisions taken to invest, produce, distribute and sell and hire (or not) workers. This view, however, does not take into account the differential bargaining power of the various actors involved within specific industries and the global production networks within which they are situated.

Within this context this thesis is particularly concerned with the role of SMEs within the Chilean economy and in particular within the agrofood sector. SMEs participate in the sector by directly producing goods (grapes, fruit, and wines) but also as ancillary industries and producer services (pesticides, agronomists, consulting, transport, etc.). In general, though, Chilean SMEs in this sector today constitute a relatively small proportion of the total production of most commodities, where production is dominated by larger firms which, whilst they employ relatively large numbers of workers, tend to provide jobs that are temporary, low skilled, not very well paid and certainly of low

productivity (for more detail see Chapter Six). This situation reflects the general pattern of increasing concentration within the Chilean economy which intensified during Pinochet's dictatorship. Large firms in the Chilean agrofood sector represent a high percentage of total exports while SMEs, in many cases, are under pressure due to abusive contracts (especially when they sell their production to these large firms). At the same time, the evolutionary pressure of international markets (particularly in the case of buyer driven value chains) has created a sustained upgrading in some sectors, particularly in the wine industry (see Chapter Eight), with consequent impacts for SMEs seeking to enter or engage with these markets. The conceptual framework of GVC frequently presumes that lead firms will exert pressure on smaller firms to improve standards (e.g. quality requirements, certifications, etc.) and through this; SMEs will have to upgrade (functional, processes, products, etc.). However, the degree to which this actually occurs in practice will critically depend on the market power of larger firms and how it is used in their transactions with SMEs.

As argued in Chapter Three, in most economies SMEs constitute a crucial part of total employment – this arises from the fact that smaller firms are not capital intensive, hence a strong and active SME sector tends to reduce the overall levels of unemployment. Clearly reality is more complex than this and much depends upon the structure and dynamics of an individual economy and the particular set of global production networks within which its economic activities are situated. As such, I am particularly interested in the ways in which Chilean SMEs within the agrofood sector are integrated into specific global production networks and how they negotiate their participation and their relationships with larger firms. Part of this relates to individual firms attempts to appropriate greater value from their activity by enhancing their overall business model, marketing planning, distribution systems and sources of financing, etc. So, from the point of view of the GPN perspective, it is possible to emphasize the key issues of the contribution of public policies to the success of SMEs. Methodologically, the GPN perspective directs attention to the distribution of corporate power within those networks, how these networks of firms are organized regionally and globally, the significance of labour, the role of key institutions and other stakeholders (government, trade unions, NGOs) and the implications of all these for technological upgrading and value creation within the chains. At the same time, the agrofood sector (which will be discussed in detail in chapters five to eight) presents a social scenario where the

emerging concern to redefine upgrading within the GPN approach in ways which encompass a broader social focus (Milberg & Winkler, 2011, p.2), as outlined in the previous section, takes on particular significance. Within this context, economic upgrading without social upgrading would remain a shallow and somewhat hollow concept, divorced from any meaningful connection to the struggles to articulate a more sustainable development path for the country. As such, the thesis seeks to make a substantive contribution to addressing some of the limitations of the GPN approach, reinforcing its analytical categories and so delivering better recommendations in the agrofood industry and in other sectors.

Whilst the major focus of the thesis revolves around the role of SMEs within the economic upgrading of the Chilean agrofood sector, addressing this issue in its full breadth (i.e. understanding upgrading in its wider social sense) also involves attaining a detailed understanding of the broader dynamics of the sector, particularly in relation to labour issues. In chapters two and three it was argued, in general terms, that labour and working conditions have been somewhat neglected (or minimized in relevance and contribution), especially in economies based on natural resources. Here we go on to explore this issue in more depth in relation to how a rejuvenated industrial policy might address labour issues within such economies.

Workforce training and development initiatives for the formal and informal sectors are often overlooked as vehicles for providing expanded employment opportunities and improved income generation potential in Southern economies (Stamm, 2008, p.24). Chile, for example, has great potential for further expansion and upgrading of its agrofood sector, as well as using it to enhance living standards and income levels more effectively, but it needs to train its workforce properly. In basic terms, there is a need to map each industry (fruit, wine, etc.) in terms of the type of skills and individuals (abilities, qualifications etc.) required in order to transform and strengthen the industry (particularly in terms of embracing new market opportunities, engaging in industrial upgrading and enhancing the capture of added value). This can help to assess where there may be gaps in terms of the need for a specialized workforce and in what areas. The education system, in its regional and national configuration, should be able to fill these gaps if it is well designed.

This sounds obvious but in many countries the economy does not seem to function in this way. If the workforce does not have the skills required by employers and no system is in place to generate those skills, then the economy cannot diversify its productive structure, firms cannot innovate in a sustainable way and they cannot increase their productivity. As a result, the rate of technical innovation in the economy declines and in general terms, the ability of the economy to enhance its quality is reduced and profits begin to rely more strongly on reducing costs and merely increasing, rather than enhancing, production. In these circumstances, the upgrading of the skills of the workforce becomes of far less interest to business owners (and the governments that support them) since they see their economic viability as based upon their ability to sustain high profits through keeping wages low and output high. Such circumstances, as in Chile, tend to create employment structures that are low quality and unstable which can exacerbate poverty and informality.

Clearly, however, this relationship –no upgrading of products/no upgrading of the skills of the workforce/low salaries/high profits – cannot be maintained indefinitely. Competition in local and international markets will eventually challenge the business classes to upgrade their products, suggesting that even in these circumstances there is a strong need to plan for the evolution of a more skilled workforce (Amighini, 2006, p.222). However, the process of developing a more skilled workforce is a complex process. This is an issue which was already discussed in Chapter Three in a preliminary form.

Sometimes, firms themselves detect gaps (needs in the value chains in which they operate) and they contribute to the training of the workforce in specific activities (frequently through associations). This is clearly an area where there is an important need for private and public sector cooperation. The demand for a skilled workforce must be satisfied by a supply that delivers these skills. This can be achieved through a training system, which must carefully consider how it will be financed, the skills to be attained and what incentives are offered to employers and employees to participate. The benefits of matching skills and work is to have a better qualified workforce that can help add value to industrial processes and facilitate the emergence of upgraded products, These will earn a better price, which should mean higher salaries in the more highly skilled workforce. However, again, the decision over who offers this training

(private sector, public sector or a private-public alliance) is not simple. Also, the participation of trade unions in the concentrated Chilean export supply should play a relevant role in terms of how the economic surpluses are distributed within individual industries. Finally, the role of public policy (as in the theory of GPN) to accommodate the needs of a skilled workforce is a highly relevant issue.

Finally, there are also of course connections back to the need for effective policies towards SMEs. SMEs cannot upgrade in a sustainable way if these firms cannot access skilled labour. When it is not provided by the education system, the SMEs will have to organize to overcome this challenge (collective investment) or involve themselves in collaborative sectoral initiatives involving larger producers. This solution has already been adopted by large firms, especially in the mining sector.

Drawing these inter-related interests together, the basic research questions which the thesis seeks to address are:

- a) Which forms of interventionism in terms of industrial policies (or related) are best suited to the sustainable development of the Chilean agrofood export industry?
- b) How can industrial upgrading be promoted in these natural resource-based sectors to the benefit of SMEs?
- c) How can the working conditions of workers in the agrofood sector be best improved so that they boost the social upgrading of the sector?

To answer these research questions requires the bringing together of the following more specific objectives

- a) Determination of the ways in which SMEs operating in the agrofood sector are currently integrated into existing Global Production Networks.
- b) Determination of the levels of clustering (and the impacts of Chilean clustering policy) in the agrofood industry.
- c) Exploration of the effectiveness of current public policies promoting industrial upgrading in the agrofood sector and the potential role of alternative policies

- d) Determination of the potential role of a policy targeting the growth of SMEs in the medium- to long-term upgrading of the sector
- e) Exploration of the ways in which labour, particularly seasonal workers, could benefit from the social and economic upgrading of the sector.

Sub-Sectoral Focus: The Chilean Fruit and Wine Sectors

The agrofood sector which forms the focus of research for this thesis is an important sector in the Chilean economy, representing approximately 3% of GDP (Statistics National Institute, 2008). This sector (which is included in the Manufacturing Sector in the National Statistical Accounts) cannot, however, be analysed without considering its interactions with the fresh fruit sector (which is included in the Agriculture Sector in the National Statistical Accounts). In the fruit sector as a whole (fresh fruit and agrofood sectors), there is potential for SME growers to sell directly to external markets and also to sell to third parties (big companies operating as traders in the fruits market). Farm work in Chile represents about 12% of total employment, but it increases up to approximately 22% if the linkages to agricultural production are considered (the linkages of agriculture to manufacturing, especially in agrofood activities). Chilean agriculture is one of the most open to international trade in the world. In terms of its contribution to exports, in 2011 the agricultural and forestry sector, including primary and industrial products, generated 15% of the value of the country's exports (Central Bank of Chile, 2012). The contribution of ancillary industries, which indirectly create a permanent stream of work positions, is also highly important. Another important element is the fact that the agrofood sector is spatially located outside the capital city (Santiago) contributing to decentralization and helping local communities to develop their own economic strategies. However, to improve the quality, variety and, in general, new processes of higher industrial value in the sector will require the transformation of public policies in support of SMEs that might address the uneven bargaining powers that exist in this industry (between large-scale producers-traders and SMEs).

In the case of Chile, the most important commodities within the agrofood sector are the fruit, wine, and salmon sub-sectors which each demonstrate different levels of value added and within which SMEs participate to different extent.

The fruit and wine sectors were chosen as the focus for the research because of the importance of both commodities to the Chilean economy, the different types of relationships between large and small producers that they embody, and the different types of relationships they have with the global production networks within which they are situated.

Pulling together the threads of the argument so far, the major motivating factor for this research is to explore the potential for a rejuvenated industrial policy to play a role in re-orienting the Chilean economy away from what has until now been characterized by ‘immiserizing growth’⁶. Successive Chilean governments have failed to develop strong policies that could really stimulate industrial upgrading. The only exceptions have been a number of horizontal industrial policies (e.g. state collaterals to mitigate the credit rationing to SMEs), mainly aimed at correcting perceived market failures. Interestingly, there have been some attempts to define a cluster policy but these have been controversial from a number of different points of view and the current conservative government has actually abandoned this policy (see in-depth discussions in Chapter Five). What is clear is that the natural-resource-led economic strategy which has dominated the Chilean economy for the past few decades is reaching its limit and there is an urgent need to progress towards a more knowledge-based economy with higher value added.

In order to address these general goals, the thesis focuses its attention upon the agrofood sector (and the fresh fruit and wine sectors in particular), exploring how the current structure and dynamics of the sector affect the possibilities for improving the conditions and skill levels of the sector’s workforce. At the same time, the research will investigate the degree to which the extraordinary growth of this sector over the past 20 years has created benefits for the SMEs (farmers and non-farmers) active in the industry or whether it has simply led to higher levels of concentration. On the basis of this analysis, the thesis will also explore the changing nature of Chilean producers participation within the global agrofood production networks and the prospects for nurturing more active participation of SMEs within these networks. Alongside this, drawing upon the

⁶ Immiserizing growth is a theoretical situation first proposed by Bhagwati, in 1958, where economic growth could result in a country being worse off than it was before the growth occurred. If, for example, growth is heavily export biased, it might lead to a fall in the terms of trade of the exporting country.

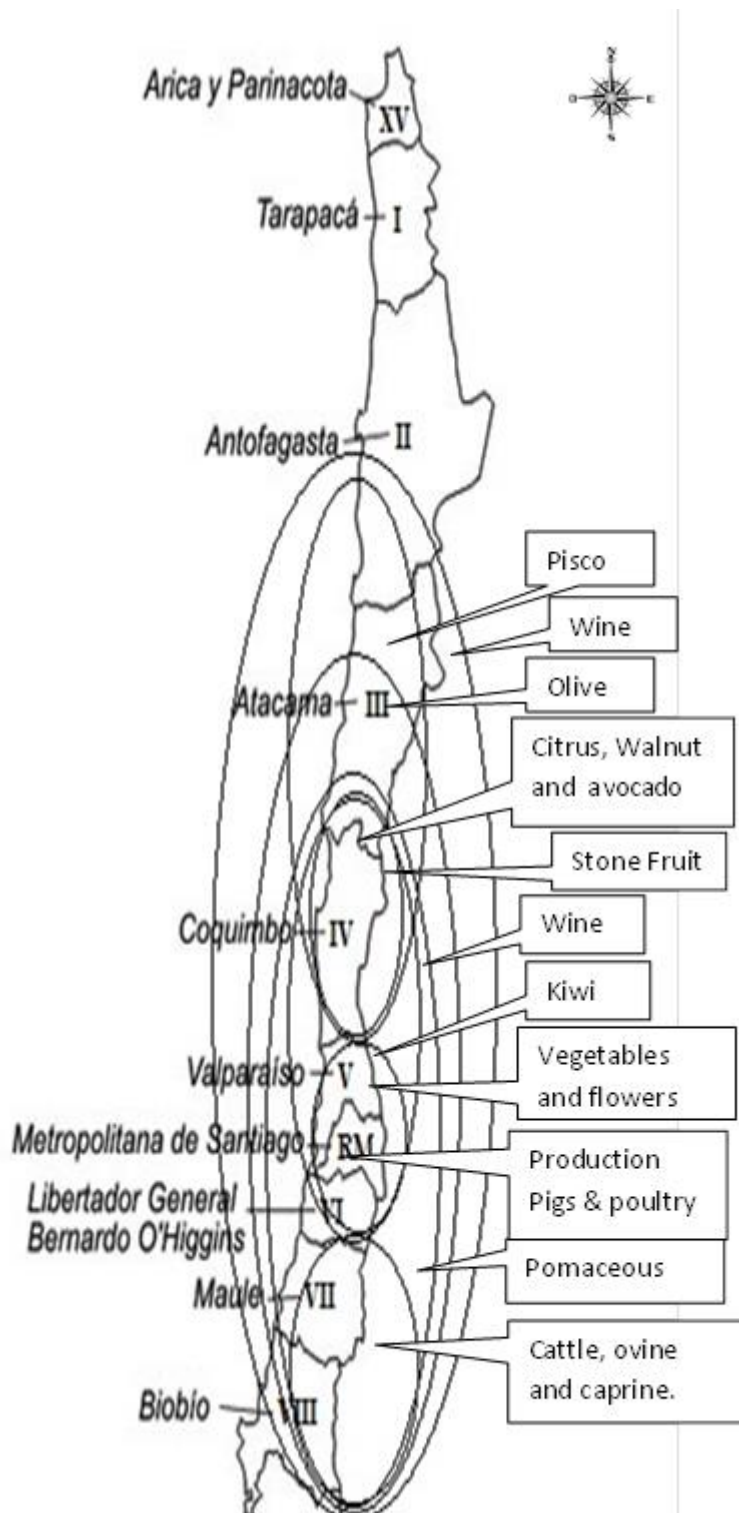
GPN approach, the research will also explore and assess the various ways (both direct and indirect) in which the Chilean government, at a variety of different spatial scales, has sought to promote workforce skills acquisition, improvements in conditions of service etc. as well as the deconcentration and decentralization of economic activity.

Beyond the intellectual intention of contributing to better understanding of the nature of the Chilean economy's insertion into global agrofood production networks and the role of SMEs within those networks, the aim of the thesis is also to give new insights into the debates over the role of industrial policy within economic development policies in the Chilean context and to develop recommendations for the use of public policy tools in an effective way in relation to the development of SMEs in the agrofood sector, as well as to provide specific recommendations to the SME sector itself.

In central Chile, farming activity is led by fruit cultivation, the most relevant being the production of grapes for fresh consumption and for wine. Meanwhile, apples and pears (pomes) are grown in central-south Chile and are sold both fresh and processed. The livestock has in this area low level of development, observing dairy cattle, sheep and goats, aimed at domestic consumption. However, there is a development of intensive livestock, mainly in the pig and poultry industry. Finally, there is also export of vegetables, while production of flowers is an emerging activity.

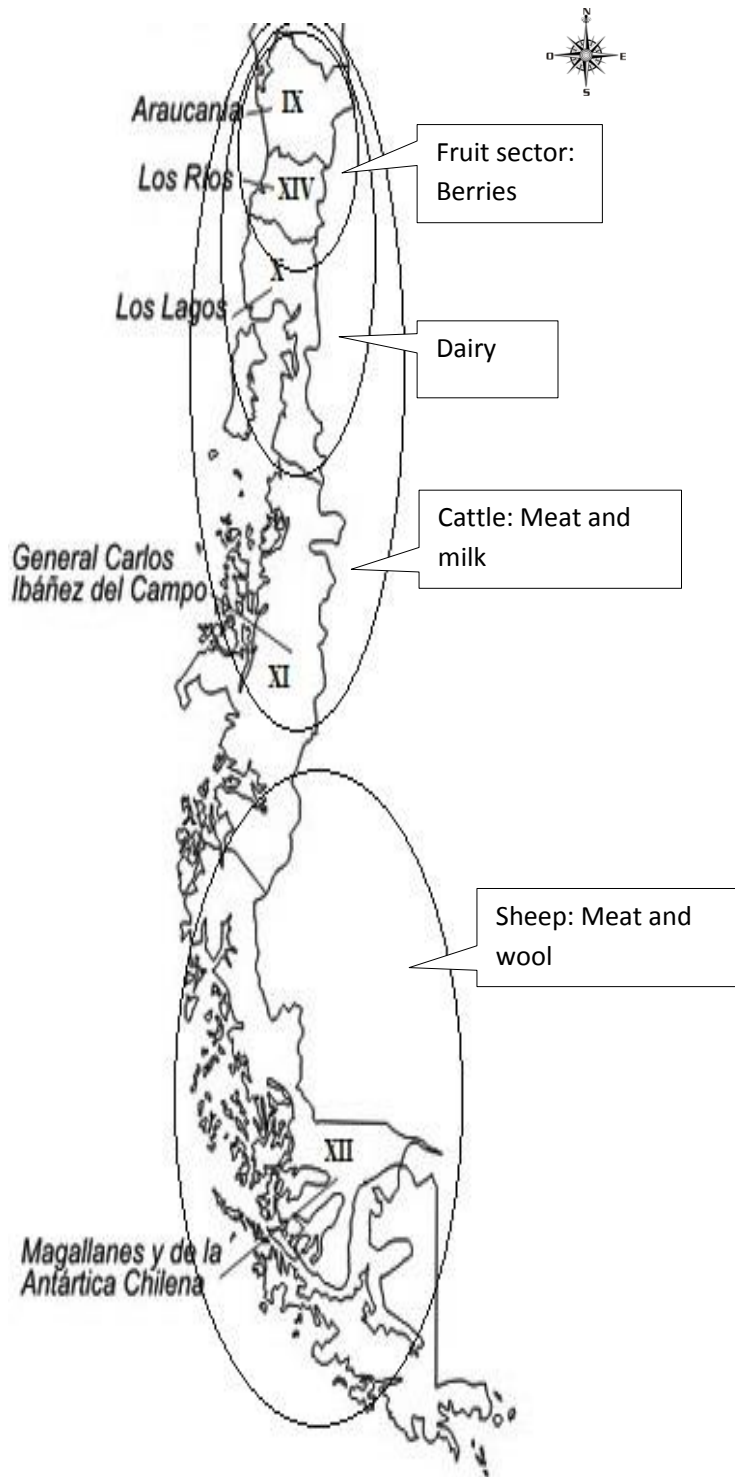
In the south, agricultural production is mainly focussed on livestock oriented to domestic consumption. Milk production is concentrated in the tenth region, where an extensive system is used, and in the ninth region where production is semi-intensive. Beef is produced mostly in the south of the ninth region where higher rainfall ensures better yields in the prairie. Sheep production is concentrated in the twelfth region, where the wool and meat is directed to the external market. The fruit in this area is developed primarily through the cultivation of berries (blueberry and raspberry) positioning Chile as the leading exporter of berries in the southern hemisphere and the second largest exporter of raspberries (See Figure 4.1).

Figure 4.1 National Map - Agricultural Exports.



Note: Pisco: Alcoholic Drink performed based on grape distillate.

Stone Fruit: Examples of stone fruits are peaches, plums, and cherries.



(Source: Fundación Sol, 2008)

4.4 Methodology

4.4.1 Introduction

In pursuit of the research objectives outlined over the preceding pages, the research drew upon a combination of research techniques, incorporating a range of forms of primary and secondary research. This research was carried out over a long period of field work in Chile. As part of my evolution from an economist to a human geographer, I moved from an initial intention to focus on a strongly quantitative analysis of the sector, to base the primary data collection for the thesis around a series of interviews with key stakeholders, including policy makers, officials, trade union representatives as the most effective way of fully addressing the goals of the research. Of course, the thesis uses quantitative data, but complex situations and motivations are hidden behind the bald statistics and careful combination of methods is required to identify these. Data collection involved interviews, observations and documentary analysis which provided both quantitative and qualitative data.

4.4.2 Quantitative and Qualitative Research Methods

This section explores the strengths and weaknesses of both quantitative and qualitative approaches to research and explains why a combination of both was utilised for this research. Quantitative research is guided by the positivist paradigm based on the notion that objectivity is key, and that the observed data are reliable. Quantitative analysis is often presented as value free (Hossain, 2011, p.145). As such, it can be described as an objective search for singular truths that rely on hypothesis testing and the analysis of statistical relationships between variables and is frequently large-scale in its application (O'Leary, 2004, p.99). On the other hand, qualitative research is based on the constructivist paradigm, which accepts multiple realities through the in-depth study of a small number of cases. According to Hossain (2011, p.144), qualitative research is more concerned with the knowledge, attitudes, beliefs and fears of people than attempting to find causal relationships between variables. O'Leary (2004, p. 100) points out that qualitative methods attempt to explain findings in terms of different social contexts. Table 4.1 presents a generalised comparison of the strengths and weaknesses of the two approaches.

Table 4.1 The Strengths and Weaknesses of Qualitative and Quantitative Research.
Qualitative Versus Quantitative Research

Criteria	Qualitative Research	Quantitative Research
Purpose	To understand and interpret social interactions	To test hypotheses, look at cause and effect & make predictions
Group Studied	Smaller and not randomly selected	Larger and randomly selected
Variables	Study of the whole, not variables	Specific variables studied
Type of Data Collected	Words, images or objects	Numbers and statistics
Form of Data Collected	Qualitative data such as open-ended responses, interviews, participant observations, field notes & reflections	Quantitative data based on precise measurements using structured & validated data-collection instruments
Type of Data Analysis	Identify patterns, features and themes	Identify statistical relationships
Objectivity and Subjectivity	Subjectivity is expected	Objectivity is critical
Role of Researcher	Researchers and their biases may be known to participants in the study and participant characteristics may be known to the researcher	Researchers and their biases are not known to participants in the study and participant characteristics are deliberately hidden from the researcher (double blind studies)
Results	Particular or specialized findings which are less generalizable	Generalizable findings that can be applied to other populations
Scientific Method	Exploratory or bottom-up: the researcher generates a new hypothesis and theory from the data collected	Confirmatory or top-down: the researcher tests the hypothesis and theory with the data
View of Human Behaviours	Dynamic, situational, social and personal	Regular and predictable
Most Common Research Objectives	Explore, discover, and construct	Describe, explain, and predict
Focus	Wide-angle lens; examines the breadth and depth of the phenomena	Narrow-angle lens; tests a specific hypothesis
Nature of Observation	Study behaviour in a natural environment	Study behaviour under controlled conditions; isolate causal effects
Nature of Reality	Multiple realities; subjective	Single reality; objective
Final Report	Narrative report with contextual description and direct quotations from research participants	Statistical report with correlations, comparisons of means and statistical significance of findings

(Source: Johnson & Christensen, 2008)

In order to address the research questions outlined previously, a mix of both qualitative and quantitative methods was required. The qualitative data, mainly from semi-structured interviews (see Appendix 2 for sample interview schedules) complemented the use of quantitative data to illustrate broader trends and provided triangulation. Triangulation refers to the use of more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings (Bryman, 2013).

Data triangulation can help in validating the claims that might arise from an initial study (Olsen, 2004, p.2). The mixing of methodologies, e.g. mixing the use of survey data with interviews, is a profound form of triangulation (a rich interaction of quantitative and qualitative analysis). There should not be a contradiction between these two modes of analysis, but rather that it is a joint action to shed light on any chosen social research topic. Also, methodological pluralism is the basis for any research founded in triangulation data (qualitative and quantitative model) which is intrinsic to the triangulation data. In my research, my position has been to use both models (quantitative and qualitative) as they contribute to a deep understanding of the object of study. In the interviews I link the perceptions and subjectivities of the interviewees, with my initial judgments. Also, analysing the quantitative data, I found certain coherences and systematic links in the construction of problem to research.

4.4.3 Primary Data Collection

The purpose of the primary data collection (interviews) was to understand in as much detail as possible the industrial dynamics of the sector (for example, contractual relationships, vertical integration and disintegration, etc.) as experienced and understood by the different stakeholders. Each interview lasted on average 90 minutes and was recorded digitally.

The sample (interviewees) used was a by purposive one (non-random) (Partiff, 2005, p.97). In some cases, it happened to be difficult to access some interviewees (especially government officials) due to my work as a newspaper columnist on economic policy in Chile. I tend to suspect that some potential interviewees (especially government officials) were afraid of public scrutiny and did not want to be interviewed.

The interviewees were selected (in spite of access constraints to some interviewees) considering the broadest social interactions of agrofood sectors: small growers, peasants, entrepreneurs, government officials and academics. Once I read all the interviews, began to analyse the common patterns. In the coding process, emerged themes that were approximately identified in the theoretical chapters, such as poor working conditions in the agrofood sector, SMEs and their unequal bargaining power and issues of social sustainability of this model of development. As new themes, there emerged the conflict between different wine producers and their views about the future development of this industry, and the need of having more specialised state agencies in regions that oversee the contracts and protect SMEs (small growers) and control and regulate the poor working conditions. So, the quotes emerged as key points of this discussion and are not necessarily representative of all interviewees.

Finally, I translated the quotes from Spanish into English in the writing-up process. However, it is necessary to add that some interviews were answered in English.

Semi-structured interviews allowed me to get to know, in depth, the aspirations, desires and expectations of each interviewee. Interviews with those working in state institutions also give an opportunity to explore the motivations underlying the creation of policies and to gain an understanding of responses to those policies from the different actors within the sector and a sense of how the costs and gains from industrial upgrading in the sector are distributed and contested.

With regard to statistical analysis, a high number of proper answers are required in order to carry out statistical tests and to be able to measure it in a correct way. Due to nature of my research, more embodied in a social context, and besides, each informant (interviewee) is different in terms of their hierarchy (workers, entrepreneurs, policy makers, academics, etc.); I considered that the use of questionnaires was not appropriate.

Interviews allow for the examination of feelings, aspirations, experience and opinions that questionnaires cannot capture (Valentine, 2005). Questionnaires, on the other hand, are standardised, and are not so directly tailored to individual circumstances. Generally with statistical methods, if there are numerical data, the results might be analysed in this

context (Valentine, 2005, p.210). Interviews can be conducted in many different forms, ranging from structured, semi-structured and unstructured (see definitions below). Fundamentally, an interview is a conversation with purpose. It is sensitive, and people-oriented, allowing interviewees to construct their own accounts of their experiences. It allows the research to be more open and flexible and for issues to be explored in more depth. Positivists (more related to quantitative methodology) criticise in depth interviews claiming that interviewers bias the answers or that interviewers cannot be objective. However, evidence (Tashakkori et al, 2002) suggests that there is no such thing as objectivity in social science research. During the last decades emerged the qualitative methodology with a worldview related to constructivism, and opposite to the called methodological order (quantitative). As already explained above, both methods were merged in a variant called data triangulation. It is triangulating information from different data sources (quantitative and qualitative data).

In the field work I will attempt to prove that many choices are related directly or indirectly to political economy decision making. From my research, I realized that each group puts pressure on the state in terms of satisfying its needs and demands, especially the large firms in the agrofood complex. The method of semi-structured interviews eased this understanding (see table 4.2).

Table 4.2 Defining the types of interviews

A structured interview: is described as a set or series of pre-established questions with a limited set of response categories for gathering precise data of a codeable nature for explaining behaviours within pre-established categories (Fontana & Frey, 1994, p.364)
Unstructured interviews: these are where the direction of the questioning is determined by the nature of the conversation.
A semi-structured interview is where the investigator takes responsibility for the topics and issues for the interview while leaving open the exact way that the question will be asked. This is suitable for understanding the complex behaviour of people in a given social setting and limiting any prior categorization of research investigation (Fontana & Frey, 1994, p.366)

For my research in the Chilean agrofood sector, semi-structured interviews with strategically important informants was the most appropriate method because this allowed for a better understanding of the dynamics of political economy within this sector and to access the perspectives of the various forces present in the agrofood complex (policy-makers, trade unions, large export companies, SMEs, academics). The semi-structured interviews (from here onwards referred to as the interviews) can be divided between those conducted at the national and sectoral level. The national level interviews conducted included top officials in ministries, representatives of other nationally-focused organizations and institutions, and professors in Chilean Universities.

The sectoral level interviews included small farmers and other SMEs, workers, and NGOs. The interviewees were drawn from these different sectors in order to reflect the different views and perspectives about the development of upgrading within the economy more generally but also specifically within the fruit and wine industries. The interviews were carried out according to a pre-determined timetable. Initially, interviews were sought with key national stakeholders regarding the broad thrust of the Chilean government's industrial policy and attitudes towards SMEs and labour conditions, with a particular focus on the agrofood sector. These were followed up by interviews with representatives from the two case study industries at both regional and national levels.

In order to achieve this, I set out to interview the following groups of stakeholders and the various stakeholder groups brought different perspectives on the issue. In general terms:

- a) The interviews with academics were conducted to provide an enhancement of my general understanding of the context.
- b) The interviews with government officials and other nationally-based organizations were intended to help in deepening my understanding of the process of policy development in the sector.

- c) The interviews with entrepreneurs and members of SME organizations were focused around understanding the needs and perspectives of the private sector itself.
- d) The interviews with the representatives of the financial sector were conducted to better understand its relationships with SMEs in terms of banking facilities and access to credit.
- e) Interviews with workers and NGOs at the local level were highly relevant in prioritizing the problems that face small farmers, SMEs and labour in the agrofood sector. Interviews took 90 minutes in average.

4.4.4 Data Analysis

The data interpretation and analysis process began shortly after all the interviews had been transcribed, numbered, named and dated. The interviews sources will be kept anonymous in the thesis (see Appendix I for my interview summary). This was carried out through the technique known as open coding. It is a systematic method which creates a path for the researcher to familiarise themselves with their research materials by building up interpretations through a series of stages (Crang, 2005). Open coding is a preliminary stage of analysis which involves a meticulous sifting through interview transcripts, that is, one sentence at a time whilst also interpreting the meaning of each sentence and what each interviewee is trying to say. So, open coding refers to the initial phase of the coding process in the grounded theory approach to qualitative research (generating theory from data). It is an initial stage of data analysis open coding because the process is analysed as ‘opening up’ of the text in order to uncover ideas and meanings it holds (Given, 2008). The process of open coding begins with the collection of raw data (e.g. interviews, field notes, art, reports and diaries). The intent of open coding is to break down the data into segments in order to interpret them. Along these lines, after reading the transcripts several times, with key words and sentences being marked and ideas related to the topics in the material developed alongside, it then became possible to identify specific and relevant themes (or codes) from the interview texts. With these relevant themes, I structured the chapters of the thesis.

Once that the data were analysed, the unfair contracts between large export firms and small farmers, the poor working conditions in the agrofood sector, and the lack of political will by state to oversee these contracts (lack of regulation and control) emerged as main themes (in general terms).

4.4.5 Ethical issues: Positionality and Reflexivity

The field work entailed a number of practical and ethical challenges. Some interviews were difficult to obtain, especially in some government agencies. My overall impression is that they do not want not submit to public scrutiny. Also I think in the case of unions and small businesses, they were eager to tell their problems, and certainly required and requested the intervention of public policy for solving many of their problems. In this aspect, obtaining the interviews from them was relatively easier.

In all cases, interviewees were informed with respect to the development of this thesis and that their opinions got through semi-structured interview were important to structure the contents and the major concepts.

But the subjectivity can be present in a research of these characteristics. As Sultana (2007) has argued, knowledge is produced within the context of our inter-subjectivities and the place we occupy at that moment. Sultana further argues that knowledge is always partial and representations of knowledge produced through field research are developed through power relations that the researcher needs to recognize in seeking to undertake ethical research. Knowledge is produced through the research process and it contains within it broader social relations that locates the researcher and their respondents in different locations. Thus, it is important to acknowledge that the research findings of this thesis are both partial and interpretive. In fact, entrepreneurs and government officials were much more careful in their words. In contrast, SMEs entrepreneurs and workers were more talkative and direct in their answers. The dimension of power was embedded into the interview which poses that the findings there are that analyse them with caution. Even my previous experience as an economist and now as a geographer, made me transform in an insider person. I did not come from the apparent objectivity of the world. I had my own concepts, judgements and

preconceptions with regard to a lot of these themes. But how my objectives are to attempt to find a more balanced economic development (across the Chilean regions), I had to be sufficiently critical and open to categorize the answers of the respondents.

Participant in Workshops

In relation to primary data, I attended several academic workshops in Europe and Latin America). Participation in these workshops, presenting my own theoretical and empirical findings, contributed so much to improving the quality and openness of my research. In this period, I presented some working papers about the dynamics of the agrofood sector and SMEs in Chile. It allowed me to contrast my theoretical foundations with other international experiences (South Africa and South Korea). It made it possible for me to identify some gaps which covered with specialized literature. On the other hand, the participation in SMEs workshops organized by government agencies as well as by large–medium sized businesses associations allowed a better sectoral understanding of their needs and demands.

Secondary Sources

The research also drew upon a wide range of secondary sources. This included a wide coverage of published material relating to the agrofood sector and industrial policy, as well as materials on the economic history of my country over the last 60 years and also the economic history of Asian countries. This was very relevant in terms of deriving a framework for the research which was not only concerned with the total and average output of the industries.

Also in terms of secondary data, the web pages of entrepreneurial associations as well as trade unions and the government (Central Bank, Ministry of Agriculture, and National Institute of Statistics) were analysed, in detail as were those of trade unions, NGOs and associations of small businesses. The use of online sources (magazines, journals, etc.) was very important to complement the interviews (primary data) in the context of qualitative research combined with some quantitative aspects. In general, the validity of secondary sources were checked by means of the interviews.

4.4.6 Methodological Overview: Concluding Thoughts

This triangulation of data sources produced a rich understanding of the key economic mechanisms and processes operating within the agrofood sector in Chile. The interviews, in particular, enabled me to contextualize my detailed understanding of the Chilean agrofood export framework by reflecting the multiple and, in some cases, conflicting perspectives of the various actors in the sector and the inter-relationships between them and the historical explanations that underlie the distribution of surplus and power relations in the sector.

In this research I have drawn upon key elements of economics, economic geography, sociology, development studies and history. I am convinced that an interdisciplinary approach is crucial to understanding the processes of economic change and their impact. As suggested above, I have drawn heavily on the Global Production Networks approach, not least because I am interested in the significance of local and territorial space in understanding how specific regions connect to the wider global economy and how this affects prospects for endogenous growth. At the same time, I also recognise the importance of the GVC approach which has afforded important insights into these issues.

Chapter Five: Industrial Policy Applied to Chile.

5.1 Introduction

Drawing upon the broader discussions of industrial policy outlined in chapters two and three, this chapter reflects upon the nature of industrial policy applied to Chile. The evolution of Chilean industrial policy related to the shifting development strategies employed within the Chilean economy over the decades and, in particular, to the high dependency upon copper in the export sector. In addition, the high concentration of ownership in many Chilean industries has posed challenges to the evolution of a new industrial policy framework in the country. This chapter considers both broad historical trends and patterns and more recent developments in the past decade or so and the expectations and assumptions which they embody. Interestingly, over recent years there has been great interest in Chile in exploring a new industrial policy that is more focused on SMEs. These perspectives have moved beyond a concept of industrialization based on heavy industry to embrace a more flexible framework, which attempts to connect with innovation streams, and seeks to build flexibility within the Chilean economy. The major challenge to a new industrial policy is how to use public policy to achieve natural resource-based industrial upgrading particularly by encouraging the broad participation of SMEs. Any policy should consider working conditions and the promotion of training within the workforce in every process of industrialization. Accordingly, upgrading must be socially sustainable and not only concerned with narrow economic conditions.

5.2 History of Industrial Policy in Chile

Chilean industrial policy before the Pinochet Dictatorship

As outlined briefly in Chapter Two, the history of industrial policy in Chile and Latin America has been somewhat controversial. In the 1960s, it was the state that led industrialization (a vertical approach, which was similar to the type of industrialization chosen in Asia, where the state selected those sectors with high economic potential). Chile was then one of the first countries globally to undergo the neoliberal transition towards a more free market economy approach following the onset of the Pinochet

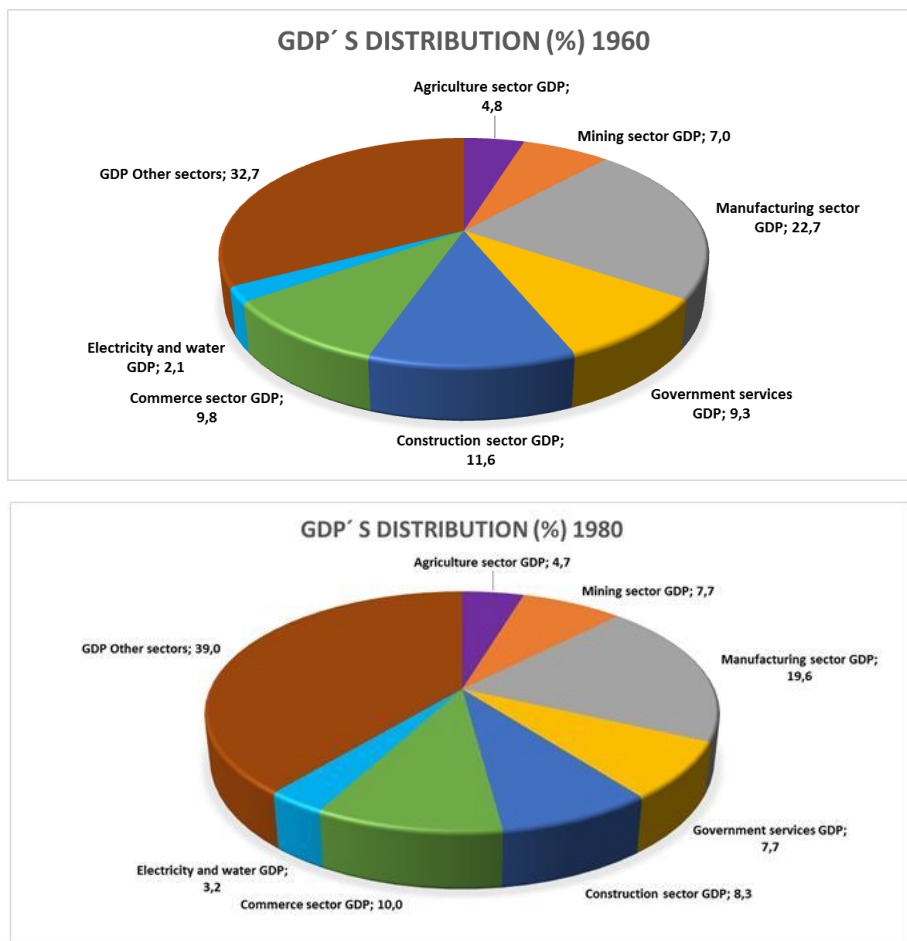
dictatorship in 1973 and the development strategy became more horizontal, with the role of the state limited to attempting to address areas of market failure (e.g. lack of credit access). Since then, in terms of the relationship between large and small firms, the objective has generally been to allow some forms of state assistance to small firms, mainly through subsidies and other similar tools, but without affecting the nature of the markets. However, there continues to be considerable debate in Chile around which are the most effective instruments for creating productive diversification (in domestic markets as well as exports) as well as how best to confront the most important challenges that face the Chilean economy and its industrial sector in particular (e.g. the non-diversified nature of the Chilean economy and market failures). Some, for example, argue “for the deployment of stronger sectoral policies with a focus on SMEs” (Academic, research interview conducted in August 2012). On the other hand, others, such as Hernan Cheyre, Chief of the Chilean Economic Development Agency in 2012, the main state agency of productive promotion, maintain that market forces should dictate the distribution of resources and that public policy should solve only market failures (credit constraint, insufficient investment in R&D, etc.).

Chile has experimented with a wide range of policies for productive development. From 1938 to 1970 policy was driven by a vision anchored in import substitution, and state enterprises were seen as the engine of development that supported the creation of a dynamic private sector. Industrial policy during this stage was led by CORFO, a state agency founded in 1939 as a holding company for public enterprises. Protectionism, directed credit allocation and state entrepreneurial activism intensified further from the 1950s and continued to drive policy until 1973 (when Allende’s government was overthrown). During the final years of this period, many of the largest companies were nationalized including those operating in the all-important copper mining (these were partially foreign owned) and banking sectors (Meller, 1996, p.58–61).

The shift to the market-led model resulted in radical changes. For example, Figure 5.1 demonstrates a fall in the share of manufacturing within overall GDP from 22.7% to 19.6% between 1960 and 1980 which largely reflects the impact of the measures taken at the beginning of the Pinochet dictatorship (at the beginning of his government, Pinochet reduced tariff rates from 100% to 20% on average). The dismantling of the

state's industrialization framework and a focus on trade via exploitation of the comparative advantages of the Chilean economy were the leitmotifs of the government of that period.

Figure 5.1 Economic sectors in GDP in 1960 and 1980.



(Source: EHClíoLab, 2010)

Chilean industrial policy under the Pinochet Dictatorship

After the military coup in 1973, while the market-led model downplayed the direct interventionary role of the state within the activity of production, the state sector has remained a crucial ingredient in Chile's efforts to build an export-led economy during the Pinochet years and beyond. Thus, although neoliberals certainly imposed their free-market ideas, especially in the financial sector, the restructuring of the economy was

also led by a hidden government development policy. According to Cypher (2003), “while Chile is nearly always portrayed as a neoliberal success story, the reality is that Chile's transformation was not neoliberal at its core – that is, within the system of production”.

This is not to say that Pinochet's government did not pursue deregulation policies. State owned enterprises and banks were privatized and the mining sector was opened to domestic and foreign private capital. However, Codelco, the largest state enterprise responsible for the exploitation of copper resources and responsible for a large percentage of social expenditure, was not privatized, affecting the desire of neoliberal views. Certainly the Pinochet's government kept such a powerful element of the economy under their control (despite the neoliberal views of privatise). The economy was also opened up to competition from imports (first gradually and then more rapidly and radically), financial markets were liberalized and the financial balance of payments account was opened (banks could ask for loans from abroad). Many of these reforms were completed in 1979, although privatization was largely completed between 1982 and 1984 (Haindl, 2008, p.133–136).

The performance of the Chilean economy during this period has been much lauded by the proponents of neoliberal economic approaches but the economic success needs to be assessed quite carefully. For example, by 1989 Chile had not yet reached the levels of income per capita that it had enjoyed in 1970 (Ffrench-Davis, 2008, p.43). At the same time, it should be noted that many of the economic successes of the military dictatorship can be related to policies that cannot be considered simply free market in their orientation. For example, the visible hand of the state (and not only free market forces) was the driving force behind the success of the Chilean forestry sector (Portilla, 2000, p.16), which it supported with heavy subsidies for forestation and reforestation, with the provision of credit at preferential rates. In addition, traditional universities initiated forestry programmes that produced new technicians to support this new industry. Since the enactment of Decree Law 701 in 1974, the forestry sector of the economy has not stopped growing and now encompasses a wide set of products (raw and sawn wood, some wood products, pulp and paper) (Ffrench-Davis, 2003, p.235). The industry that has evolved so rapidly is, however, highly concentrated in terms of ownership.

Unfortunately, more sophisticated forestry related industry (furniture, machinery, etc.) has not developed possibly due to the absence of a specific industrial policy. According to Moguillansky (2013, p.27) the result has been the creation of an international value network, with a small set of world class in all the segments of the chain but the territories where it is located. These territories are characterized by employment of low quality level, poorly developed SMEs, the exclusion of local communities and high levels of poverty. The characteristic of the sector is an exclusive growth, based on expansion rather than innovation.

During the military government, one of the most important drivers for the evolution of industrial policy was the establishment of Fundacion Chile (FCH). This institution was formed in 1976 as part of an agreement between the Government and ITT Corporation (International Telephone & Telegraph). FCH was created as a private non-profit institution in which the Government and ITT (and its successors) respectively hold 50 per cent of the equity. The initial capital was US\$50 million. At first, this institution had a strong political orientation towards the reduction of unemployment and accelerated growth in poorer regions, for example. Gradually, its activity was directed towards the development of production, fulfilling a role that sought to minimise important market failures in the emergence of new economic activity. Fundacion Chile has developed a role in scanning the global universe of production in order to find products and services that can be produced competitively in Chile. A second role is the coordination of the public and private actors whose participation is necessary for projects to succeed.

The military government also favoured other productive development policies involving interventions within markets but these were more horizontal in form. In other words, no attempt was made to identify and promote specific sectors but rather policies were designed to correct market failures that were seen as impediments to private investment in all sectors, particularly amongst SMEs. For example, PROCHILE was established in 1974 by the Ministry of Foreign Affairs to assist potential exporters to penetrate foreign markets, an activity with strong economies of scale and large fixed costs. In 1976, the National Training and Employment Service (SENCE) began to certify firms to participate in the provision of training facilities, and the state began to grant subsidies to firms for the training of their workforce with a ceiling of one per cent of payroll wages

(Paredes & Riveros, 1994). In recognition of their vulnerability and relative technological and managerial backwardness, support to SMEs was also an objective of economic policy during the 1970s and 1980s. The Technical Cooperation Service (SERCOTEC), which existed before the dictatorship and is still active today, is responsible for delivering technical assistance to these companies and administers financial support of various kinds. Another important programme launched in the mid-1980s but abandoned in 2003 as a result of the Uruguay Round agreements on trade negotiations) was the so-called 'simplified drawback'. This instrument represented a type of export subsidy. In simple terms, the mechanism was a relatively inexpensive tool to contribute to export growth (it was a custom tax refund for exporters) (Haindl, 2008, p.133).

Industrial Policy Following the Return of Democracy

Since the return to democracy, the country has continued to strengthen horizontal industrial policies. Thus, CORFO (founded in 1934), whilst it is an organization that promotes access to long-term financial resources and technological innovation throughout the Chilean economy, has increasingly emphasized support for SMEs through programmes to encourage partnerships, technological improvement and management. This activity takes place via a second-tier agency, where provision of financial resources is provided by CORFO but the implementation of programmes is carried out by the banking sector (in the case of the granting of credits). During this period, however, Chile has also begun to embrace more vertical industrial policies and has made efforts to adapt horizontal instruments in support of specific sectors or clusters. CORFO's activities, for example, have expanded into attracting foreign investment into specific technologically advanced sectors and it has also funded efforts to encourage innovation within specific sectors. These trends centralized in a special programme called 'Innova Chile'. The conceptual framework for this new policy approach was laid out in the white papers of the National Innovation Council for Competitiveness (CNIC) which was established in 2006 (CNIC 2007 & 2008).

The so called ‘Concertacion’ (centre-left coalition), which governed from 1990 to 2010, developed a much broader and active concept of industrial policy. Their approach included the strengthening of horizontal industrial policies (credit, R&D, etc.) and some targeted industries (as salmon industry). During the Bachelet government (2006–2010), eight clusters were defined (mining, forestry, salmon, fruit, processing fruit, wine sector, tourism and financial services) as key sectors for the evolution of the national economy. This strategy was supported by the CNIC that sought to predict the drivers of future economic growth and so start to diversify the economy’s structure in pre-selected directions. However, despite increased delivery of resources to SMEs, there was no discussion of ways of addressing the unequal bargaining power in the agrofood sector, especially between small growers and large export firms. However, the current conservative government under Piñera (2010–2013) has not shown an interest in these kinds of clustering policies and has instead supported SMEs in more general terms, whether they are involved in clusters or not. In other words, the conservative government halted the cluster policy in terms of the use of public policy in the allocation of resources.

Overall, despite the recent reversal of the clustering strategy, it can be said that productive development policy in Chile following the return of democracy has gradually moved in a more interventionist direction that explicitly recognizes the role the state can play in supporting vertical industrial policy towards sectors and clusters that have comparative advantages or have demonstrated potential. However, much remains to be done in converting this more interventionist strategy into a real vehicle for profound upgrading of the Chilean economy and the pursuit of a longer-term more sustainable development pathway. It could be argued that the authorities are moving in the right direction but the steps are still timid and often lacking the coordination necessary for success. Thus, the economy continues to show signs of backwardness and inflexibility. For example, production and exports have remained highly concentrated throughout this period. In fact, Chile has a level of export concentration, which is characteristic of countries with considerably lower income levels. The likely cause of this situation is the technological heterogeneity of Chilean production. Further, despite the deepening that the financial sector has experienced since the 1980s (deregulation of credit access allowing entry to non-financial actors) and the efforts of the authorities to

democratize access to financing in the last two decades, funding for business investments without collateral and with no credit history is still very poor (French Davis, 2010).

A Senior Economist (research interview conducted in January 2013) points out that:

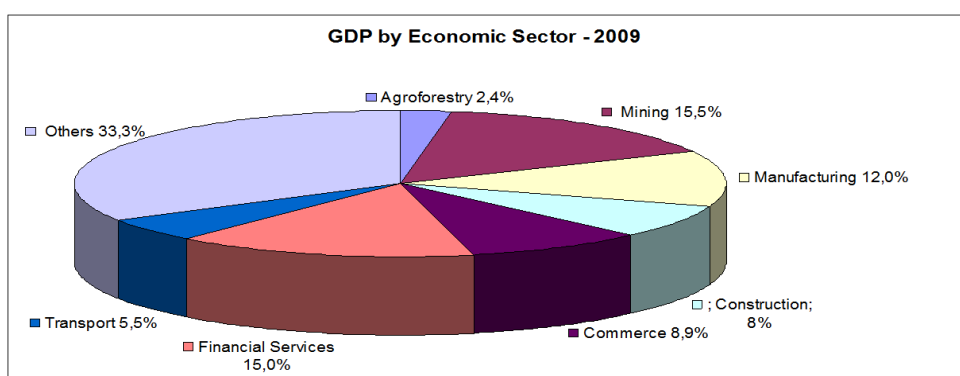
“An industrial policy that is focused on adding value to the export sector may be beneficial in reducing the country’s vulnerability to commodity price fluctuations”

Also he claims that should take into account the geography of country as baseline”. It is an issue that it has come facing the Chilean economy in the last decades. There exist negative externalities created by the non-existence of an industrial policy aimed at reducing the dependency of the country production sectors.

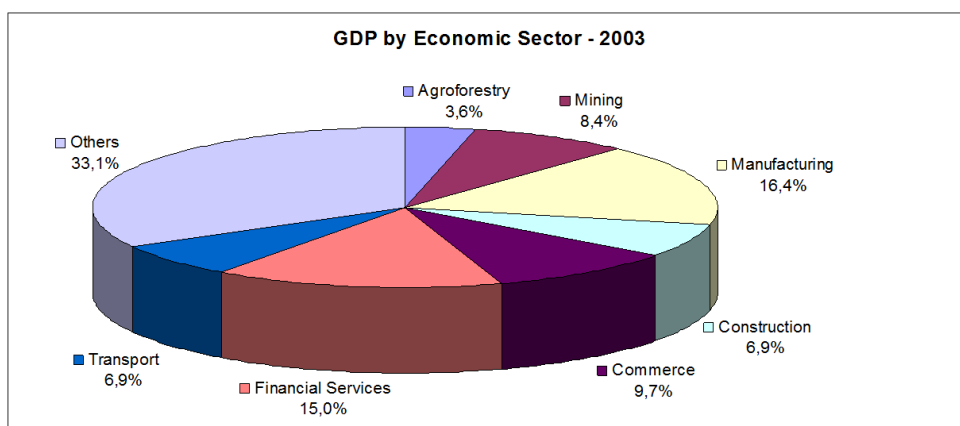
Perhaps the central problem in the Chilean economy is the lack of diversification of its productive apparatus. In a small and open country such as Chile, a true indicator of this assertion is export structure and performance. Despite pronouncements regarding the diversification and modernization of the Chilean economy by the authorities over the past 20 years, exports are still dominated by products with a low degree of product processing (above all in the case of copper). Clearly, this tendency has been exacerbated over recent years due to strong price increases experienced by copper. As shown in Figure 5.2, the participation of manufacturing fell from 16% to 12% of GDP between 2003 and 2009. In turn, the Mining sector has raised its share from 8% to 16% of GDP over the same period. The agro-forestry sector also diminished its share in the economy over the same period. This trend has been caused by the high commodity price, the so-called ‘Dutch disease’. In this case, it is the international price of copper which has created competitiveness problems for the rest of the export sector. Although the foreign exchange rate is not the only variable that measures competitiveness, it is a relevant variable as a signal for resource allocation between tradable and non-tradable goods. This problem (the enormous influence of copper in the export sector) is reflected in the composition of Chilean exports. The only sector which has grown as a percentage of total exports over this period is copper while agro-forestry and manufacturing have

decreased in relative terms. Also, on the other hand and in comparison with the ISI period, globalisation has reduced the capacity for manoeuvre through the development of national policies (Gwynne & Kay, 1999, p.7). The constraints imposed by the new global scheme have hindered industrialisation processes. The option to develop a solid industrial policy has been reduced for a country like Chile which is embedded in many free trade agreements.

Figure 5.2 Structure of the Chilean Economy 2003–2009.



(Source: Central Bank of Chile, 2010)



(Source: Central Bank of Chile, 2010)

5.3 The Role of 'CORFO' in Supporting Upgrading and SMEs

As was mentioned in the previous section, CORFO has played a key role in the different phases of Chilean economic history since its foundation. In the 1960s, during the ISI strategy period, CORFO had an active role in the generation of strategic state owned enterprises, as well as providing support for medium- and long- term private investment. With the arrival of Salvador Allende's government in 1970, CORFO assumed responsibility for the nationalization of a strategic set of industries. Later, during the Pinochet dictatorship, CORFO administered privatization functions, consistent with market openness and market reforms. Finally, with the return of democratic government, there came a further change of strategic approach and CORFO became oriented towards supporting the transformation of the export model and promoting technological innovation. From the 1990s onwards, CORFO has focused specifically on defining policy towards SMEs. In order to make best use of CORFO's budget, a model of intervention was designed that operated through a scheme of networks and alliances with state and market intermediaries, which would act on the market (by making rules clear and transparent) to multiply CORFO's efforts. The approach was called "the model of three floors". CORFO's role was to frame policies, criteria and norms from the third floor, transferring resources to the private intermediary actors of the second floor, who in turn would allocate these resources to the clients firms for the hiring of entrepreneurial services.

Whatever their cause, these changing circumstances put pressure on CORFO to develop new policies, at the same time as the new realities of the global economy began to strengthen engagement with a new development strategy that would go beyond the typical measures of free market policies. Accordingly, over recent years CORFO has developed capabilities in organising public-private partnerships, coordinating agencies such as the Ministry of Finance, PROCHILE and the Foreign Investment Committee; promoting the consultancy market; stimulating financial intermediation; and, in general, establishing incentive mechanisms that operate through the market to correct market failures, either at national, territorial or sectoral levels. In this framework, CORFO's support programmes were structured around four offices (Muñoz, 2009, p.50):

- a) Financial Intermediation: manages different credit lines, financial subsidies, leasing and venture capital thorough the credit market.
- b) Promotion: oriented to support the management of SMEs to raise their productivity, quality and entrepreneurial capabilities.
- c) Investment and Development: its activity revolves around attracting foreign investments in high technology sectors. It is focused around four areas: new services of global industries, the attraction of high impact investments in the clusters based on natural resources, industrial investments in non-conventional renewable energy and investments in regional market niches with international competitive potential.
- d) INNOVACHILE⁷: this is an office that works with companies already located in Chile and seeks to promote entrepreneurial activities and the creation of new ideas in business, innovation, diffusion, technological transfer and the improvement of the general environment for innovation.

These CORFO support programmes cut across the economic clusters which were defined as priorities by the CNIC. It is to this system that our discussion now turns.

5.4 The National Innovation System for Competitiveness

It is clear that innovation should be understood, not only as the creation of new products, but also as the adaptation of products and technologies from the global economy to Chilean conditions. In many ways, Chile's economy lags behind other comparable economies in terms of technological development. Chilean companies have generally been unable to stimulate the national economy to produce the more advanced goods and services produced by other countries with similar comparative advantages in terms of natural resources. In other words, the process of adding value to traditional

⁷INNOVACHILE: Innovation Office belonging to CORFO. It promotes actions to be developed by CORFO in innovation, entrepreneurship, innovation and technology transfer. Among its objectives is to support the development of businesses that generate high economic and social impact and promote the values of innovation.

exports, or moving towards goods and services with greater inputs of knowledge, has been slow and, in general, Chilean businesses have not seized opportunities to expand or transform their comparative advantages. More resources for innovation and human capital formation, increased government support and a better understanding of business-government relationships are required to improve innovation and competitiveness.

Innovation is vital to accelerate economic growth and allow SMEs to compete in markets which demonstrate such concentration. Firms require incentives and a creative environment to innovate in ways that improve their processes and products. The weakness of innovation in Chile is reinforced by looking at spending on R&D, which is 0.7% as a percentage of GDP (2012). This ratio is quite similar to that in countries with similar levels of income and, in fact, it is positively correlated with GDP income per capita compared with other countries. The difference is that R&D in Chile comprises basic research conducted by universities (with state support) or state-run technological institutes. Chile is particularly weak in regard to innovation within companies. Of total R&D, only 45 per cent is undertaken by companies (World Bank, 2012) compared to between 60 and 75 per cent in developed countries. It is important for a country like Chile to invest in research at the enterprise level which explores existing global production capabilities and how particular products or procedures can be adapted so that they can be used in the economic and geographic environment of Chile (Agosin, 2008, p.3).

Recent studies clearly show the weakness in innovation at the enterprise level in Chile. According to Agosin (2008, p10), firms in the copper, pulp and paper and information technology sectors invest minimum amounts of resources in R&D in proportion to their gross income. In mining, this may be because the Chilean subsidiaries of large multinational companies rely on the innovation efforts of their headquarters or subsidiaries in other parts of the world. It is also surprising that this tendency also holds true in the forestry industry and paper mills, which are mostly domestically owned. It may be that Chilean enterprises engaged in exploiting natural resources, whether public or private, are prevented from going beyond the basic production of commodities by a characteristic 'rentier mentality' as described in an OECD report in 2007. (Innovation was discussed previously in Chapter Two).

According to the OECD, innovation is one of the keys to improved prosperity and successful incorporation into the OECD. Chile needs to boost innovation if it is to achieve high and sustainable growth while further reducing poverty and persistent income inequality. The OECD report also suggests that improving Chile's education system should be a priority, as the lack of skilled human resources is a major constraint for Chile's social and economic development. It also points out that the vast majority of SMEs are not engaged in R&D or innovation (OECD, 2007). Even in manufacturing, private sector investment in innovation is low in Chile and does not result in a significant increase in productivity. It is clear, therefore, that innovation is not the main source of competitiveness of Chilean firms, and that they tend to operate in areas that do not require innovation to remain competitive.

In 2006 the CNIC was created by presidential decree. The CNIC has become the lead agency for policy innovation and competitiveness in the country and coordinates the activities of agencies such as CORFO. There are two main bodies within the CNIC that run the innovation policy and finance related activities: funding programmes for innovation, which were grouped into INNOVACHILE (as a special committee administered by CORFO) and the National Council of Scientific Research and Technology (CONICYT). CORFO is part of the Ministry of Economy and CONICYT is part of the Ministry of Education. The basic distinction between CORFO and CONICYT is, on paper, that the latter institution finances the supply of knowledge from universities and research institutes while the former funds the demand for innovation by companies. Both CORFO and CONICYT receive resources from the state budget and the so-called 'royalty' from the mining sector, which is an additional tax on mining based on the value of production. These funds are deposited in The Innovation Fund for Competitiveness (FIC), which distributes them according to guidelines from CNIC. However, the distribution of these resources has been slow, despite the high level of resources available from five years of royalty taxes in the mining sector (Agosin, 2008, p.20).

The FIC is managing increasingly significant resources. During the year of its creation (2006), the budget was U.S. \$89 million, a figure that had increased to U.S. \$178 million in 2009. Funds administered by the FIC are delivered to the existing innovation

institutions to distribute, of which the most important are CONICYT and CORFO. The rest are distributed to funds belonging to various ministries, such as the Agricultural Research Fund (FIA), the Fisheries Research Fund (FIP), the Millennium Science Initiative (Ministry of Planning) and regional innovation funds. The resources delivered by the FIC have become vital to the functioning of the agencies involved in the national innovation system and provide about 50% of the funding of the INNOVACHILE programme, whilst about 30% of the funding of CORFO and CONICYT is provided by this means. So far, much of the funding for innovation in Chile has been short or medium term, usually no more than three years. It is also rare for the funds allocated to a project to exceed one million dollars. This is true for the projects financed by CORFO as well as those funded by CONICYT. This situation has been changing in recent years with the introduction of a number of new funds by CONICYT (Ministry of Economics of Chile, 2011).

5.5 General Description of Chilean Cluster Policy

As mentioned previously, Bachelet's centre-left coalition government defined a series of clusters through which to drive the transformation and growth of the Chilean economy. These clusters were identified from work conducted jointly by CNIC jointly and the Boston Consulting Group (BCG) in 2007 and 2008. Through this strategy, CNIC proposed to diversify Chilean production and move significantly towards a more knowledge-oriented economy by empowering clusters from some already emerging sectors (mostly related to natural resources), as well as some new sectors which were viewed as having high potential for economic development.

The CNIC and BCG investigation assessed more than 100 sectors which they viewed as having high growth potential. From this list, 33 of what were seen as the most promising sectors for Chile's medium and long term growth (in relation to the effort required to capture this potential) were identified. All of these sectors have high growth potential, but resources are not unlimited. It was, therefore, necessary to identify and prioritize the 11 sectors that were placed at the top of the list, taking into account both their estimated direct impact on growth, as well as their potential to dynamize the rest of the economy through the encouragement of clustering and the development of linkages

to other sectors. Of the 11 sectors that were identified as best combining potential for growth and linkages, the Executive Committee of the Council identified 8 sectors (for details see below) where they proposed to develop a deep work as a 'selective bet' in the framework of the National Innovation Strategy.

Importantly, they emphasized that the choice of these eight sectors did not mean that the other 25 sectors or the overall performance of the economy did not matter. On the contrary, the Council's proposal was to allocate incremental resources in a selective form. Moreover, according to the Council, many of the initiatives they intended to pursue in support of the chosen sectors such as the development of human capital, strengthening scientific research and even institutional, regulatory and infrastructural factors, would also benefit the whole economy.

The clusters defined by the authority were (Fuentes, 2007):

- a) Fruit cultivation
- b) Copper Mining
- c) Offshoring (Services)
- d) Financial Services
- e) Aquaculture
- f) Processed food
- g) Aviculture
- h) Tourism

For each of these clusters, CNIC intended to initiate a cross-cutting policy involving both the public and private sectors. Within each cluster, key stakeholders were involved in designing several objectives that would be achieved through a cohesive work plan in the medium and longer term. Central to these objectives, amongst most clusters, was increasing of the value and volume of exports. The key objectives of the various clusters and their dynamics are listed in Table 5.1.

Table 5.1 Brief description of Clusters.

Food Cluster	<p>This cluster gathers together 5 sectors of agrofood activity. The objectives were measured in export growth</p> <ul style="list-style-type: none"> a) Fruit: 3.150 US\$ million to 2014 b) Processed foods: 10% annual increase by 2017. The starting point was the US\$ 1,500 million exported in 2008. c) Wine: 1.800 US\$ million to 2014 d) Poultry and Pigs e) Red Meats
Mining Cluster	<p>Initially the target of this cluster was to increase exports from between 20% to 30% to reach US\$ 7 billion by 2012. However, the objectives were later widened to encompass developing suppliers of world class significance and to promoting the innovation capability, associativeness and human capital of Chilean companies in the sector.</p>
Aquaculture	<p>Considering the potential market and the competitive advantages of Chilean production in this area, the goal was set of achieving export levels of US\$ 4.6 billion by 2015. The strategy agreed that the main challenges facing the sector are diversification of species, innovation and development, amongst others.</p>
Tourism	<p>Focused on companies that carry out activities linked to ‘special interest’ tourism. Key challenges identified included enhancing human capital, digital connectedness, international promotion, sustainable management and strengthening local demand.</p>
Global Services	<p>The objective of this cluster was for it to become the main driver of Chilean development. Its goal was to reach at least US\$ 1 billion in exports of services and generate 35,000 new jobs</p>

(Source: CORFO, 2008)

The challenge in Chile is how to generate an active industrial policy that encompasses the traditional focus on natural resources but also spreads towards other productive sectors. According to Hausmann (2012), Chile faces the problems of middle income

countries; it has a strong primary export basis, but has not been able to develop its industrial sectors. He points out that Chile has great wealth in agriculture, forestry, fishing and mining, but that countries that are economically similar to or richer than Chile (e.g. Australia, New Zealand, Norway, Canada), have higher per capita natural resource exports, five times the level of non-primary exports, and ten times the level of service-sector exports in Chile. All of these countries support the use of active policies to diversify the productive basis but in the case of Chile, economic policy has been markedly neutral with no attempt to consider specific sectoral needs (there is no recognition that different industries might work in different ways and have different needs). Hausman also criticizes the current conservative government which ended the cluster policy in 2012.

What all of this means is that, despite having had an increase in trade terms over the last few years (fuelled by improved copper prices due to China's growth), on average, Chile's economic growth has decreased over time (by 3.8% between 1999 and 2010. Source: Central Bank of Chile, 2012). Clearly the country depends too much on copper, a non-renewable resource, and the rest of the economy is not generating the foundations for the industries that will allow for the maintenance of long term economic growth.

In the next section, I will show how Chile can fit into these debates about clustering.

5.6 Debating the End of the Cluster Policy

As explained above, the cluster policy was developed by CNIC. The advantage of this is that it is not dependent upon the government in power, but it is, rather, an independent entity that advises the state. Therefore, it is in principle able to adopt a longer-term perspective in its prioritization of particular economic sectors than would be the case if they were simply selected by the government in power. It was certainly not shared by the administration of President Piñera who came to power in 2010. His administration argued that the state does not have sufficient information to make these types of choices and that as a result, public resources will be captured by weak and inefficient sectors. According to one interviewee (Academic, March 2013), this is the reason why the

Piñera government has gradually abandoned the clustering policy and argues that the state cannot be seen to favour particular economic sectors in this way.

However, as argued above, the grounds for the state to engage in selective sectoral support within the economy are very strong due to the need for minimal critical masses in infrastructure, human capital and other inputs.

Given the great uncertainty, specificity and minimal scale of smaller firms, individual firms will only rarely be willing to assume all the costs of their whole development. In fact, the Chilean strategy of abandoning clustering policy appears to be going in the opposite direction to countries such as New Zealand, Finland, Australia, South Korea, and even the USA. In truth, even in the currently successful sectors of the Chilean economy, such as fruit, tourism, and salmon, it was the state that began the investment to develop more favourable conditions for the original expansion of these sectors, so the so-called 'neutrality of incentives' is controversial.

The implications of the ending of the clustering policy are profound. According to an official of the Ministry of Agriculture, the end of the cluster policy in the fruit sector created some problems because it had helped to develop new fruit varieties in a science park, but now due to the lack of incentives (funding, R&D) the science park will be discontinued (Agrarian Analyst, research interview conducted in June 2012). Despite the clear arguments outlined above about the need for a strong clustering policy in Chile, it is also important to look at the dynamics of the Chilean clustering policy under Bachelet in a slightly more critical way. For example, it should be noted that the cluster policy as proposed by the BCG and fostered by the CNIC was a partial policy because it was only targeted already existing agglomerations of enterprises. In other words, it attempted to maximize the static comparative advantages of the Chilean economy. It contained no deeper recommendations about the need for determining and developing new niche markets, creating new products with higher value added and breaking with the gradualism of static comparative advantages. Although the baseline should be the abundant natural resources that the economy possesses, this is not an obstacle to the developing of a more sophisticated and complex productive structure.

Similarly, the BCG report makes no mention of the need to promote better working conditions amongst the chosen sectors, especially in the agrarian sector where there is a

high percentage of temporary and migrant workers. The report touches on relatively few of the relevant issues relating to the role of SMEs in the chosen sectors. There are a lot of recommendations about improving credit access, information access and market failures but there is no mention of the excessive market power exercised by large companies over the SMEs within individual sectors (discussed in more general terms in chapters three and four). There is, for example, no discussion of the role that state agencies could play in overseeing contracts, i.e. making the contracting process more transparent and fairer.

From the point of view of public policy, it is clearly better to have the kind of productive development strategy suggested by the cluster policy, though the form in which it attempted to shape the contours of the economic geography of Chile did not go far enough in recognizing the particularities of different subsectors. A fuller and more appropriate industrial development strategy for Chile would need to encompass topics such as: the health of workers, migration, working conditions, targeted training through state agencies and measures to strengthen the position of SMEs inside the value chains in which they operate (through affirmative measures that allow them to overcome constraints and deal with the unequal bargaining power reflected in unfair contracts, for example). The process of innovation for SMEs is costly when they cannot appropriate the full benefits of their efforts for a fair price because of the loss of part of their profits due to disadvantageous contracts which they have no alternative but to sign up to).

In the next section, the analysis moves on to focus more specifically on to the position of SMEs in the Chilean context, highlighting their contribution to innovation, employment and total sales, as well as the evolution of specific public policies to promote the sustainability of these firms in the long term within a concentrated economy such as Chile's.

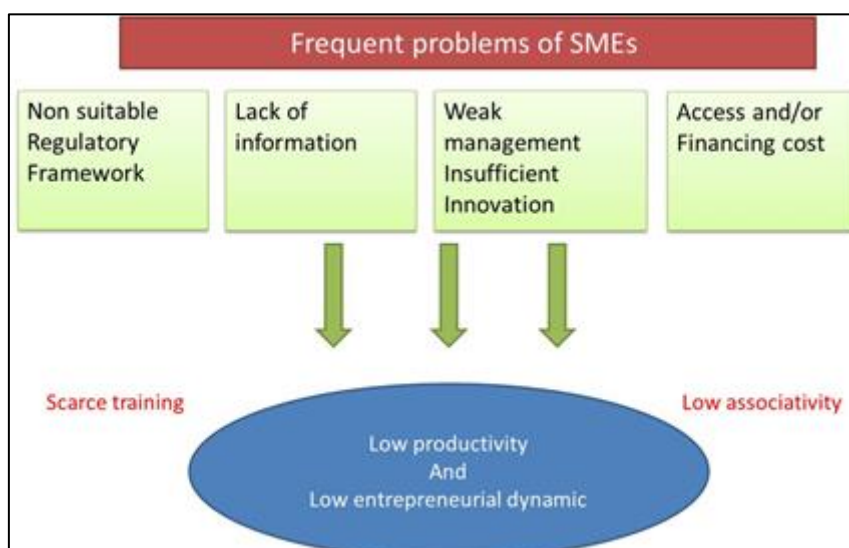
5.7 SMEs in the Chilean Economic Context

In Chapter Three, SMEs in Latin America were characterized in general terms. It was argued that SMEs in this region are more isolated, less specialized and find it more difficult to join global value chains. With respect to the innovation frameworks in which

SMEs are embedded, most Latin American countries are below the OECD average for expenditure on R&D (less than 1% of GDP). Across the region, SMEs were shown to represent 96% of the total number of firms, whilst their contribution to GDP is only around 20%. It is important to point out, however, that in an economy such as Chile's, SMEs are also very heterogeneous, with firms ranging from the formal and technological in orientation to firms that are highly informal and very limited in their use of technology and/or modern business practices.

Figure 5.3 summarises the circumstances facing SMEs. What is clear from this is that the regulatory framework in which SMEs operate can play an essential role in strengthening this type of firm (reduction in taxation, requirements of local content, etc.). In other words, the legal framework should recognise that these firms cannot compete in markets on equal terms with big firms. The lack of access to information is another variable that negatively affects the performance of SMEs, affecting their ability to discriminate market opportunities, employ effective management practices and even their ability to take advantage of taxation reduction and subsidies delivered by the state.

Figure 5.3 Descriptions of SMEs



(Source: Ministry of Economy, 2010)

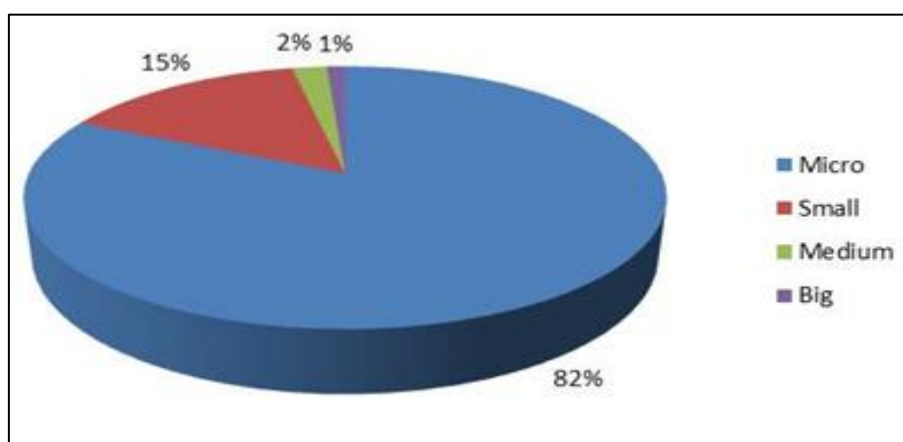
In 2010 the Chilean Ministry of the Economy carried out its first longitudinal survey. For firm size definitions see Table 5.2. As shown in Figure 5.4, 82% of enterprises are categorized as micro-firms, while only 1% of enterprises are described as large firms. Figure 5.5 shows that big firms account for 40% of total employment, while the remainder account for 60%. Meanwhile, as shown in Figure 5.6, large firms are responsible for 81% of total sales, while the micro-, small- and medium-sized firms together contribute just 19%. The data reveal the pattern of concentration and the low productivity of smaller firms in comparison with large firms.

Table 5.2 Classifications of Firms

Description of SMEs
When speak of SMEs, it is:
<ul style="list-style-type: none"> a) Micro firms, annual sales less than 100,000 US\$. b) Small firms, annual sales of 100,000 US\$ to 1 million US\$. c) Medium firms, annual sales 1 to 4 million US\$
Formal enterprises in Chile in the 2010, working 723,000.

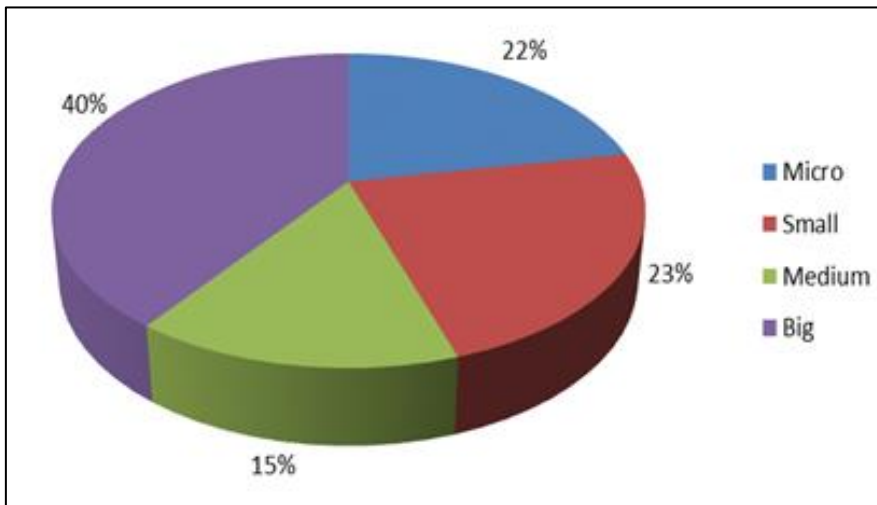
(Source: Ministry of Economy, 2010)

Figure 5.4 Number of firms: distribution by size.



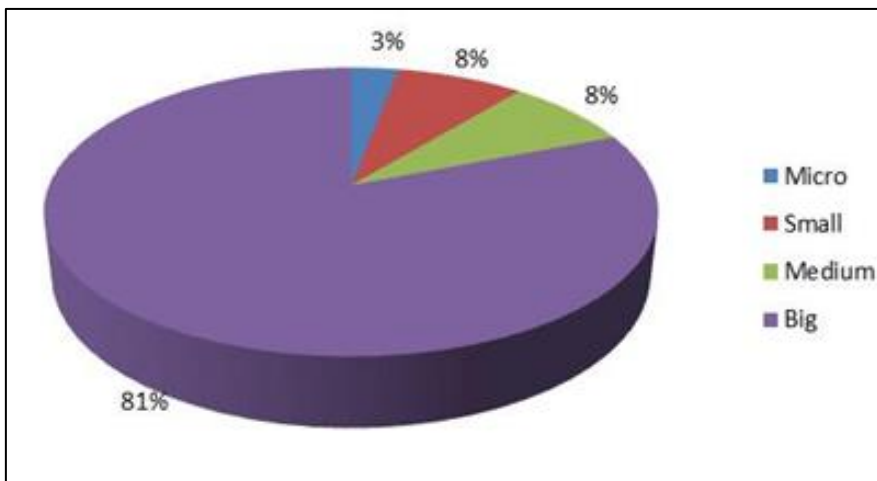
(Source: Ministry of Economy, 2010)

Figure 5.5 Employment: Distribution by SMEs.



(Source: Ministry of Economy, 2010)

Figure 5.6 Sales Distribution by Size of Firm.

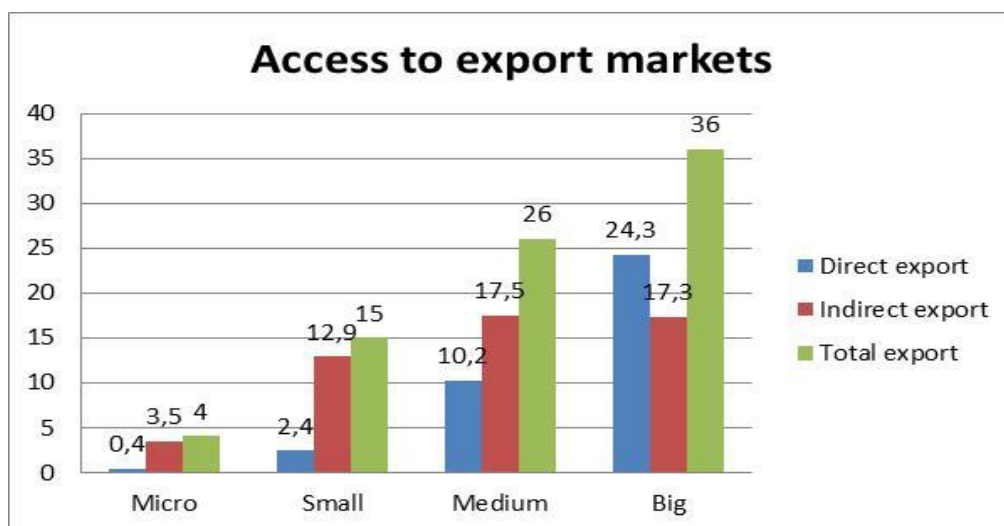


(Source: Ministry of Economy, 2010)

Inequality between micro-firms and SMEs and large enterprises is particularly marked in the pattern of exports (Figure 5.7). Only 4% of micro-firms engage in export activities, while 36% of large firms export (directly as well as indirectly). Although there are private and public initiatives such as trade fairs, assistance to attend international events funded partly by the state, etc. to promote direct exports from micro and SME firms specifically (i.e. excluding large traders and firms), it remains difficult

for many firms to export directly and therefore to generate profits in such a highly concentrated economic environment.

Figure 5.7 Percentages of Export Firms by Size



(Source: Ministry of Economy, 2010)

The low productivity evidenced in SMEs may reflect their limited power to negotiate resulting in unfair contracts (see more specific discussions on this in the chapters which follow). For instance, a small farmer (Research interview conducted in March 2013) complains about the contracts with large firms. She points out that:

“With the export firms one signs a contract for the quantity of grapes that one must deliver and you take the responsibility until the grapes reach their destination. The contract does not assure us a value per box, it is a blind contract”.

When contracts are biased, unfair (as in the example above which is a common characteristic in this agrofood structure), in favour of the large firms, it discourages the smaller sized firms from investing in the development or upgrading of their businesses, due to the fact that they cannot appropriate the rents corresponding to their risk and investment. This also suggests the dominance of a shorter term perspective firms. The larger companies can cause problems for SMEs payment delays, demanding too high quality standards without providing technical assistance and/or transferring the risks

from new production practices etc. Passing on the requirements for example for new sustainability criteria to their suppliers rather than addressing them themselves.

In the same vein, an academic (March 2013) points out that:

“State and public policies should support more the SMEs, in order to materialize new businesses; it means co-finance in higher proportion these commercial missions”.

There exists therefore the belief at several levels that the sustainable development of SMEs requires a special effort in public policies. These policies should encompass several key points including financing, innovation, regulation of contracts, promotion of associativeness, among others.

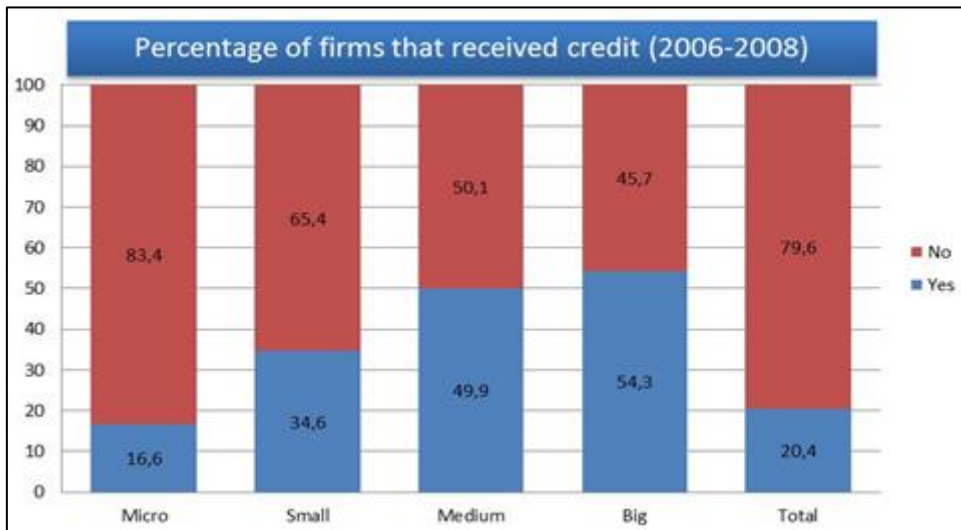
The Ministry of the Economy longitudinal study also explored credit financing amongst SMEs, the results of which are presented in Table 5.3, and Figures 5.8 and 5.9. The figures clearly demonstrate the pattern of credit constraint facing Chilean SMEs. For instance, only 17% of micro-firms in the period 2006–2008, received any credit, while in the large firm category the proportion was 54%. This is related not only to the lack of collateral of SMEs and a lack of formal management practices but it is also the result of a weak public policy towards SMEs.

Table 5.3 Access to Credit for Businesses of Different Sizes.

Description of SMEs	
Business with credit (20%)	Business without credit (80%)
a) 60% have used working capital, 35% for investment and 5% for refinancing. b) 87% of all firms that got credit received it from the banks, 83% of micro-firms and 94% of big firms. c) 90% do not have overdue payments on credits.	a) 84% have not asked for credit, do not need it. b) 12% applied for credit but were refused. c) Main reasons for refusing credit: <ul style="list-style-type: none"> • Problem with credit history 34% • Lack of collateral 23% • Insufficient repayment capacity 20%

(Source: Ministry of Economy, 2010)

Figure 5.8 Credit financing.



(Source: Ministry of Economy, 2010)

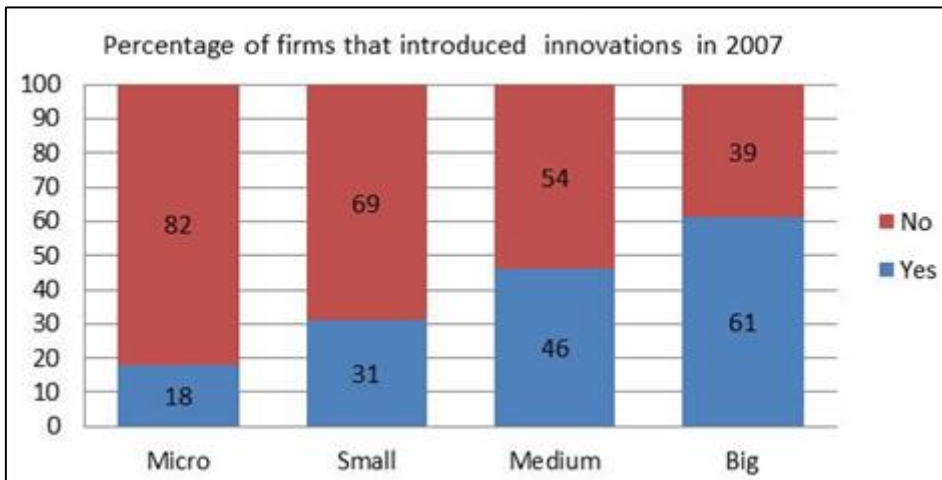
As argued previously, the overall innovation rate in the Chilean economy is low and this is because public policies have not addressed this problem.

Other countries have been more successful in diversifying their productive structures (particularly in becoming less dependent on raw materials) and adding value to products and services, especially in the supply of exports. This has resulted from public policies that have been problems of low rates of innovation and levels of research and development.

In Chile there appears to be a weakness in the connection between enterprises and universities (Academic, Research interview conducted in August 2012), which reduces the likelihood of industrial upgrading; differentiation and finding new niche markets.

Figure 5.9 shows that small and medium firms carry out less innovation (18%) than big firms (68%). This reflects the contractual arrangements between different types of firms with larger firms having greater bargaining power (length of contracts, prices, discounts, etc.) which generally discourages SMEs from carrying out innovations. In other words, the contractual situation accentuates the problems that SMEs face already – lack of credit, poor levels of skills/training, poor access to information, etc.

Figure 5.9 Innovation



(Source: Ministry of Economy, 2010)

In terms of access to markets, table 5.4 shows that those companies with the greatest economic dependence on a main client (where one client buys at least 30% of their total sales) are to be found in the mining sector (74%), agriculture (58%) and construction (47%).

Table 5.4 Access to Markets

Percentage of companies that have at least one client that buys more than 30% of their total selling's by size of companies 2008

	Micro	Small	Medium	Big	Total
Si	24,6%	39,5%	38,7%	35%	27,2
No	75,4%	60,5%	61,3%	65%	72,8%
Total	100%	100%	100%	100%	100%

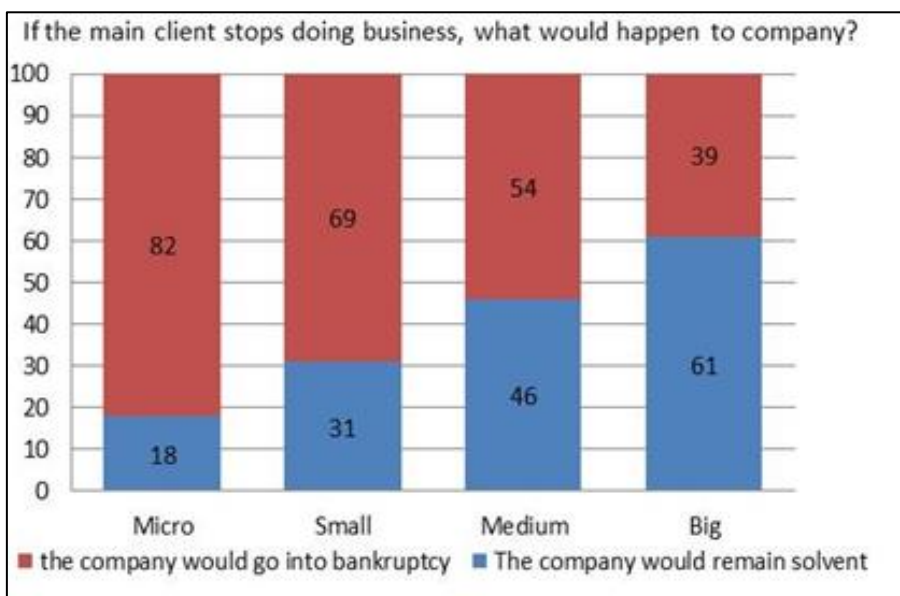
By economic sector, those with greatest economic dependence on their main client:

- Mines: 74%
- Agriculture: 58%
- Construction: 47%
- Transport: 46%

(Source: Ministry of Economy, 2010)

Should those main clients withdraw, approximately 40% of all firms (from micro to big firms) could face bankruptcy (Figure 5.10). This reflects the high dependency and relatively weak diversification of the Chilean economy.

Figure 5.10 Access to Markets



(Source: Ministry of Economy, 2010)

Concluding thoughts:

This chapter describes some of the key features of Chilean industrial policy. The ISI (Imports substitution industrialization) strategy applied in the 1960s was based on adding value to industrial activities (mainly manufacturing). The state played a leadership role, promoting the structural changes that were necessary for industrialization. Due to the fact that the prices of Latin America's main raw material exports were low in the 1960s (there was a relatively low external demand (Palma, 2003, p.133)), the Latin American economies including Chile focused on the internal market to carry out the industrialization process during this period. However, the frequent crises in balance of payments (scarcity of currency) as well as the limited internal market were both bottle necks to this process. At the same time, what is clear is that the concept of SMEs (and their importance to the overall economy) in that period was absolutely neglected and only large scale industrialization processes were

considered and prioritised. With the arrival of Pinochet's dictatorship, the industrial framework was removed and minimized. The new authorities, influenced by free market theories, took several measures to impose their ideological direction. Pinochet deregulated the economy and significantly decreased trade tariffs, destroying local industries and the unemployment increased but that they recovered again in the medium to long run. Excessive attention was focused on exploiting the comparative advantages of the Chilean economy and orientating the economy towards international trade.

Although the aggregate economic figures for this period show some successes, for example the increasing volume of exports, the lack of supervision and control has generated a complex process in the Chilean agrarian sector. The new trade openness allowed the entry of foreign companies which created some sustainability problems for SMEs operating in the agrarian sector (small farmers and firms located in ancillary industries). Also working conditions in the agrarian sector began to come under pressure due to reduction of the bargaining power of the trade unions during the dictatorship. Accordingly, Kay (2002, p.480–481) points out that the benefits were concentrated largely in the hands of capitalist fruit farmers and agro-industries. The fruit export boom encouraged land concentration as capitalist entrepreneurs bought land from peasant farmers (mainly parceleros) who generally did not have the capital to shift from crop cultivation to fruit farming.

Kay also claims that the rapid development of non-traditional agrarian exports was based on the exploitation of cheap labour, especially female seasonal workers because they could be paid less than male seasonal workers. Moreover, it occurred in a context of social fragmentation and weakening of trade unions.

However, despite the free market ideology, it is clear that during the dictatorship, the state directly promoted some industrial sectors which were already strongly concentrated (e.g. through subsidies to forestry activities). With the arrival of democratic governments in the 1990s, there was awareness that a more active industrial policy was required. The search for solutions to market failures (such as credit constraints to SMEs and insufficient R&D) was intensified under the democratic government and a strengthened horizontal industrial policy to tackle the market failures

was adopted (although a free market policy continued to exist in terms of the allocation of resources).

During the last government of the centre-left coalition (Bachelet's government) we saw how greater consciousness of the necessity of productive diversification. Bachelet asked the BCG to carry out a study in order to define those sectors with the most potential for expansion in order to group them into so-called clusters. The objective of the cluster policy was to direct public policy and public funds towards the firms embedded in these clusters which were mainly based on natural resources. The strategy was based on an optimistic view about the process of creation of value added in the sectors oriented to exports. The BCG report did not make any reference to the unequal bargaining power in the Chilean agriculture sector between SMEs and large firms. Neither did it mention the poor working conditions of resident and temporary workers in the Chilean agrofood sector. At the same time, the proposals put forward by BCG were extremely light in their engagement with development theories; they consisted of a step-by-step evolution towards the sophistication of current export supply, but did not make any reference to the development of new productive sectors or new industries.

Finally, the current conservative government decided to halt this cluster policy. The clusters continue working, but there is no affirmative action in terms of allocation of public resources. The most concerning aspects of the decision to end cluster policy are that the strategy had been developed and agreed upon by many relevant actors (universities, state agencies, the private sector, scientists, among others) and it had been initiated as a long-term public policy the fruits of which would only become apparent over time. However, the policy was not given sufficient time to analyse in perspective its results.

The focus of the thesis now turns more directly towards the agricultural sector in view of its weight in the Chilean economy and in the sectors identified as potential clusters for future development. The next chapter considers the evolution of policy and the position of SMEs within this specific context.

Chapter Six: SMEs and Industrial Policy Toward Chile's Agricultural Sector

6.1 Introduction

Previous chapters defined the conceptual approaches framing the research and outlined the methodology adopted for addressing the research questions. In this chapter, the conceptual frameworks, based on GPN, are used to examine in depth the current situation and future perspectives relating to the evolution of industrial policy towards the Chilean agrofood sector and the place of SMEs within this.

A detailed discussion of the evolution of industrial policy in Chile and in particular that relating to the SMEs sector was presented in Chapter Five. One of the most challenging issues for the current neoliberal model in Chile is the need for (and possibility of) an industrial upgrading process based on natural resources. Generally, the words 'industrial' and 'industrial policy' is applied to high-tech products, software, products with a high profile in design, etc. as produced in South East Asian countries. However, the Chilean economy remains very dependent on raw materials and natural resources (mining, agriculture, salmon, etc.). The most important issue, therefore, is whether a country such as Chile, with its natural endowments (and with its current economic structure and institutional arrangements) is able to take steps towards reaching the more advanced stages of economic development.

In earlier chapters I have argued that to achieve sustained and extended industrial upgrading in the Chilean economy, there needs to be much greater participation of SMEs within the productive structure. In the context of the GPN framework, it is clear that local skills embedded in territories can contribute substantially to this industrial upgrading (Moguillansky, 2013, p.20). Unfortunately, in the current top-down model of development in Chile, the role of SMEs is secondary.

As explained in Chapter Two, however, the impact of globalization, increased international competition, and the consequent need for new approaches to developing local economies and enhancing the quality and quantity of employment opportunities, as

well as pressure from new consumer preferences and higher international quality standards, have led firms and state agencies across Latin America to rethink the nature of economic growth and entrepreneurial strategies. The result has been the articulation of a new version of industrial policy, similar to that applied in Latin America in the 1960s.

In the new scenario, however, it will not be possible to increase tariffs or close the economy to boost the development of the domestic market. The conditions are different and in this new context:

“it would seem that the most sustainable strategy for the evolution of an effective industrial policy lies in attempting to re-draw the economic-social map of Chile so that it encourages SMEs in the agrofood sector and improves the distribution of economic surplus within the economy, avoiding the concentration of wealth” (NGO Director, research interview conducted in July 2012).

This revised version of industrial policy would seek industrial upgrading by enhancing productivity, improving the quality of products, creating new products and promoting new processes and new forms of organization. As argued in the previous chapter, however, such initiatives are extremely complicated to pursue within the Chilean context where, for example, the high levels of ownership concentration in the agrofood sector result in poor conditions for SME growers and limit their future sustainability

This chapter builds on the general discussions advanced surrounding these themes in the previous chapter by focussing in depth on the Chilean agriculture sector. As pointed out in previous chapters, the Chilean economy has grown significantly over the last 20 years (4–5% per year) but the economy continues to be highly dependent on the evolution of the price of copper on the international markets. The manufacturing sector (traditional industry) is medium to low quality and in comparison with Asian countries, the value added is low. Therefore, as recognised by its prioritisation within the clustering policy of the Bachelet administration (as discussed in Chapter Five), one potential development strategy for Chile is to sophisticate its agrarian sector in terms of the processing of fruits, the introduction of new varieties and so on, such that Chilean export supply improves in its range and quality. At the same time, however, any such

strategy will have to look in detail at the conditions of SMEs (local producers as well as the ancillary industry) operating in the agrofood sector (by analysing in depth the kind of contracts involved in their relationships with large firms, their access to research and development, etc.) and the working conditions of labour. No industrial policy focused on SMEs will be successful if the working conditions of labourers in the agrofood sector are not protected nor strictly regulated by state agencies. According to the farm workers trade union leader (research interview conducted in March 2013):

“Without this protection and regulation, the success of the efforts of workers to achieve the necessary upgrading will be limited.

The chapter begins with the history of the agricultural sector (up to the present) remarking on the different stages that this sector has been through. Then the participation of SMEs growers and labour in the agrofood sector, as well as the macroeconomic context in which the agricultural sector is embodied, is analysed. Subsequently, I introduce the discussion about how an economy such as Chile's, rich in natural resources, can be upgraded. I discuss here the proposals of the National Council for Competitiveness and the definition of clusters policy. I look at the culture of the agrarian sector and how some of these cultural practices could be obstacles to the productive modernization of the sector. Finally I will apply the GPN as a conceptual framework to understand development in this economic sector.

6.2 The History of the Agricultural Sector: From 1960s Onwards

The Period prior to Pinochet's Dictatorship

During the 1960s, Chile, in common with the majority of Latin American countries, applied a series of agrarian reforms to address problems associated with the concentrated patterns of land ownership and the low productivity of many large farms (Henriquez, 1987, p.61). This reflected the view expressed in much structuralist theory of the time, that there could be no sustainable industrialization process without implementing ambitious agrarian reforms to help improve productivity in this sector. The rationale behind this was that farm activities needed to be made more efficient

through a process of the division of ownership of land and the allocation of a sizeable fraction of this land to the peasant population. This process would also liberate labour from the farm sector towards industrial activities and would increase production, helping also to reduce inflation in the economy (inflationary pressures were a structural phenomenon, according to this perspective, which could be mitigated with this reform). According to Kay (2004, p.232) the intentions of this broad agrarian reform movement in Latin America were not realized. He argues that the design and implementation of measures were often flawed, and he also highlights the political opposition of the landlords to reforms. Kay also discusses more successful agrarian reform processes in South Korea and Taiwan, which he argues were key to their successful economic development. Although land reform in these cases caused temporal dislocations in agricultural production, it initiated a highly productive system once peasants were provided with capital, fertilizer and other inputs to pursue more scientific farming (Amsden, 2003, p.37). In the Chilean case, the objectives of the agrarian reform were to redistribute agricultural lands to improve the situation of the peasants without land and also to increase the productivity of the sector (Henriquez, 1987, p.1).

Pinochet's Dictatorship

After the coup d'état in 1973, the priorities of Chilean economic policy changed, and the increasing shift to neoliberal policies led to the privatization of the sector and signalled the ending of the land reform process. At the same time, Chile privatized the land of indigenous communities. Some expropriated land was returned to former owners, but most was subdivided and sold as parcelas (small farms). There is some controversy in the literature about the success of these parceleros (small scale farmers) (Kay, 1997, p.81). The parceleros did not have enough training or resources to finance the operation of their farms, which made it difficult to expand production levels and many ended up selling them. Those landowners who had had their land returned to them as part of the agrarian counter reform also sold their land which, together with the failing parceleros, contributed to the creation of a land market and created a more flexible and competitive agrarian structure (Kay, 1997, p.82). However, the objective of the agrarian counter reform was primarily political, seeking to destroy the peasants associations. It prioritised agricultural exports which were promoted by the state and developmental policies which established the institutional, commercial and agro-

industrial infrastructure in order to support the expansion of the fruit growing sector. The emerging land market and the shift toward agricultural exports consolidated the neoliberal strategy in the agrarian sector (Bengoa, 2013, p.5).

Between 1974 and 1998, concurrent with these structural reforms, the Chilean economy and agricultural sector were also affected by economic policy reforms and trade opening. As explained in the previous chapter, the end of ISI-focused state-led industrialization strategies during this period meant the adoption of an outward looking strategy, in which, according to the neoliberal perspective, trade liberalization would benefit the Chilean agricultural sector. The strategy implied actively diminishing industrialization efforts (manufacturing), whilst taking advantage of the comparative advantages that neoliberal policy makers saw as embodied within the Chilean economy. The agrarian sector would take advantage of the opportunities inherent in international markets. The strategy clearly had some successes. According to Haindl (2008, p.136) the reduction of tariffs to 10% in 1977, created a new structure in Chilean foreign trade: “In 1973, copper represented 80.1% of the total value of exports, but by 1980, this figure had fallen to 45.7%. This meant there was greater diversification of products in the export basket” This new export orientation within the agrarian sector was strongly supported by the state through development policies which established the institutional, commercial and agro-industry infrastructure to promote agrofood exports. At the same time, however, this outward looking strategy created tensions in the rural world as small farmers generally did not have the capabilities or access to assistance to enable them to grasp the export opportunities (Bengoa, 2013, p.13). In fact, the state does not have the suitable capabilities to articulate this likely greater role of local governments in the production chains and networks. According to a farm trade union leader (research interview conducted in March 2013):

“There exists the risk of clientelism and political capture of resources. Therefore, any new role for local governments must be accompanied by the insertion of technical capabilities together with an adequate budget such that they can carry out productive activities”.

Liberalization put significant pressure on rural livelihoods, modifying agrarian production patterns as well as the patterns of rural social structure. A new wave of

transnational agro-industrial capitalists emerged who have been able to take advantage of and benefit from this market liberalization. At the same time, the peasant and small farmer sectors could not meet the financial, organisational and technological requirements to take advantage of these opportunities. However, Schejtman (1996, p.8) points out that some smallholders have been able to participate in new forms of agribusiness contract farming that have emerged during the neoliberal era, via the production of agro-industrial commodities for export or for high income domestic urban consumers. Kay (2002, p.487) also claims that the peasants who have established contract farming agreements have substantially improved yields, particularly of flowers, seeds and bulbs. However, Kay remarks that agrofood is not a panacea and there have been many abuses to the detriment of the peasantry.

Generally, the contract relations governing these types of arrangements tend to be extremely unequal and the state has not shown an interest in regulating these contracts. The situation has been made worse by a general lack of associativeness amongst Chilean farmers. According to an independent agrarian analyst (research interview conducted in June 2012):

“If they were more willing to act together, they could negotiate better conditions, and have a larger share in the economic surplus”

Until the 1970s, the production of processed fruit and vegetables in Chile was mainly oriented towards the domestic market. However, from 1982, exports of these products began to grow, due to the high real exchange rates (the international crisis of 1982 dried up Latin American capital) and the consolidation of measures promoting the liberalization of international trade (French Davis, 2003, p.239). The development of some areas of processing within the industry was itself influenced by the growth of fruit exports, as increasing volumes of discards from the export of fresh fruit provided a considerable amount of raw material at low cost. In addition, after the sharp fall in GDP following the 1982 financial crisis, there was a gradual process of economic recovery that allowed the favourable evolution of domestic demand for food products. In this period of market liberalization, international market fluctuations were attenuated by the use of a price band mechanism to make economic conditions more predictable for exporters. Non-traditional exports were promoted and the installation of irrigation

systems was subsidized (OECD, 2008, p.60). During this period, the Chilean state did not itself develop a direct productive agribusiness in the sector but it introduced a number of general policies that had significant effects in some agro-industrial subsectors which will be explained in the next section.

In the neoliberal strategy of Pinochet's government, interaction with the external sector was highly relevant. In 1974, a massive reduction of tariffs (from an average of 94% to 35%) promoted the development of the export sector as inputs became cheaper (French Davis, 2008, p.118). This strategy was accompanied by a reduction in the power of trade unions which meant that the economy could take advantage of cheap labour, a key factor in the expansion of the export sector and agrofood in particular.

The first measure in the external issue taken by military government was in 1974 exemption to the Value Added Tax (VAT) by exports and recovery of paid taxes by incorporated inputs into export process. This tool was designed to avoid the double taxation of final products or the 'export of taxes' (French Davis, 2008, p.117). It mainly benefited large firms.

In addition, several mechanisms implemented by the state to support the export sector were of some importance in the development of agribusiness in Chile during this period. The first was the simplified refund policy for non-traditional exports, enacted by Law 18,480 of December 1985. This provided a mechanism to recover import duties for raw materials and inputs, and was aimed in particular at small and medium exporters who were unable to meet the administrative costs involved (Haindl, 2008, p. 148). All export commodities with an annual value of less than US\$2.5 million for the financial year 1983–1984 were defined as non-traditional exports; with the intention of stimulating the production of these less well established types of export. Later the mechanism was modified by a gradual reduction in benefits. Since production of most agro-industrial exports began during the 1980s, the initial expansion of the sector was favoured significantly by this simple reimbursement mechanism (Haindl, 2008, p.150).

Another mechanism that benefited the export business and that has been used extensively by the agribusiness sector was the system of deferred payment of customs duties on imports of capital goods stipulated in Law 18,634 of 1987. This system

allowed different tariffs on duties for periods of up to seven years, converting the payments into debt that was subject to a market interest rate set by the Central Bank. As such, it was not, strictly speaking, a subsidy. The same law also gave the buyers of capital goods manufactured in Chile a tax credit equal to 73% of the existing customs duty, applied on the invoice value of the capital goods. The aim of this law was to promote technological innovation through transference of productive investment thereby encouraging the purchase of capital goods (both imported and domestic). This mechanism has been used extensively, for example in the import of tanks, machinery and refrigeration equipment for the wine industry, encouraging its modernization (Portilla, 2000, p.23).

The third area of state activity is the remarkable export promotion that has been undertaken by PROCHILE, although this has mainly benefited the larger companies involved in the export sector. This body, under the Ministry of Foreign Affairs, has, as explained in the previous chapter, supported the export sector via international advocacy, co-financed trade missions and the exploration of products, preparation of promotional material, participation in seminars and international fairs, and promotion sales points, amongst others. In addition to providing monetary support to co-finance activities, PROCHILE has conducted significant organizational work and provided contacts in external markets to Chilean companies.

From Democracy Onwards

Since 1990, whilst the essential features of the model have been maintained, the issue of equity has also been promoted more strongly as a necessary condition for development. Sectoral policy postulates the strengthening of the rural world and increasingly recognizes the heterogeneity of productive agents (rural subsistence, small and medium farmers, and large exporters). Policy towards small agricultural producers has had the explicit purpose of supporting their integration into markets, with tools that encourage partnerships. Nevertheless, with an industrial organization characterised by medium to high levels of concentration, despite neoliberal policies which promised to level the playing field, the agents that have benefited most from the pro-export policy framework have been the large fruit exporters, the forestry sector, some agribusiness subsectors (sugar, barley, milk, rice), the wine companies, the meat industry, and producers of

juices, pasta, dried and frozen fruit (Bengoa, 2013, p.14). On the other hand, Valdes & Foster (2005, p.46) claim that agriculture in Chile has positive externalities (poverty reduction, increase in employment and in rural income) and emphasize the relevance of the composition of output (agrofood is more connected with dynamic growth) in these positive aspects. However, they acknowledge that it has not benefited all sectors in the same way. They point out that there are subsectors that have not adapted to this new scheme, and are at risk of losing the cultural memory connected with small growers operating on a small scale.

In contrast to the claims made by the proponents of liberalization without constraints, the openness and structural change experienced in the agricultural sector has generated a process of further concentration and exclusion in Chile over recent decades. Productive agents have had to align, forcibly, according to their abilities and resource flexibilities, generating distinct dynamics with sub-regional imbalances in sectors and agents.

Accordingly, Murray (2002, p.431) claims that new democratic governments (from 1990s onwards) have represented to some extent a continuity of the policy of Pinochet's government due to that they have not changed the excessive focus on macroeconomic equilibrium, in the dynamism of the export sector and have continued focusing on the role of integration into global agricultural markets.

In this context, the OECD Report (2008) points out that, whereas the incomes of agricultural households have increased, small scale farmers have seen little change in their farm incomes, which reflect the underdeveloped pattern in this sector. Current levels of rural poverty are still high. This situation reflects the imbalances created and the contrast between productive progress, where modern productive units are often surrounded by people living in conditions of marginalization, and backwardness. Such is the complex challenge of equity and development. A strategy for more inclusive agricultural development is to diversify the sources of income both within and outside agriculture.

As explained in the previous chapter, industrial policy in Chile has certainly not followed this logic. Instead, the mainstream approach has been to enhance competitiveness in general terms, helping firms to reduce costs, etc. However, the result

is that state agencies have no role in directing the growth of the economy towards specific sectors, counteracting the excessive bargaining power of large companies or explicitly promoting the development of SMEs. Successive governments have continued to focus their economic development strategy around generalised support for the agricultural sector (in line with the non-interventionary perspective with the argument that further agricultural expansion should not necessarily involve significant increases in state spending) in the overly idealistic hope that the expansion of agriculture will help raise wages and improve the conditions of workers in the agricultural sector (Bengoa, 2013, p.3). However, there has been some acknowledgement that the stronger application of R&D to Chilean agriculture would facilitate the development of new products (e.g. new varieties of fruits) with new markets, but the resources allocated to these kinds of activity remain very limited (as explained in the previous chapter, Chile spends only 0.7% of its GDP on R&D while in OECD countries this ratio is approximately 2%; Source: World Bank, 2013).

In order to increase diversification and sustainability in the agricultural sector in the context of competitiveness and horizontal industrial policy (the facilitating state), the OECD recommends (OECD 2008, p.21):

- a) Investment in human capital
- b) Investment in infrastructure and R&D
- c) Credit
- d) Labour market reforms
- e) Cash transfers (possibly conditional)
- f) Regional policies
- g) Development of producer associations and land policies.

The government is over-optimistic in thinking that its strategy will sort out the problems in the Chilean agrofood sector, in particular as the cluster policy has been abandoned. The cluster policies (were developed under the previous government with support from the scientific national community, the political system and entrepreneur associations). The clusters had the potential to encourage regional development. According to Moguillansky (2013, p.25), the cluster policies had focused on two aspects: institutional (State), and organizational (cluster). In the state activities, one can mention the

strengthening of local governance or hiring highly qualified experts to organize a participatory definition of the agenda of the cluster. With respect to organizational support, it includes the coordination and financing of investment in basic infrastructure, attracting investment, support for management and administration of the cluster, training and business consultancy, basic industrial technology and technological innovation as well as organizational, environmental and social development, logistics, and marketing, market research and export.

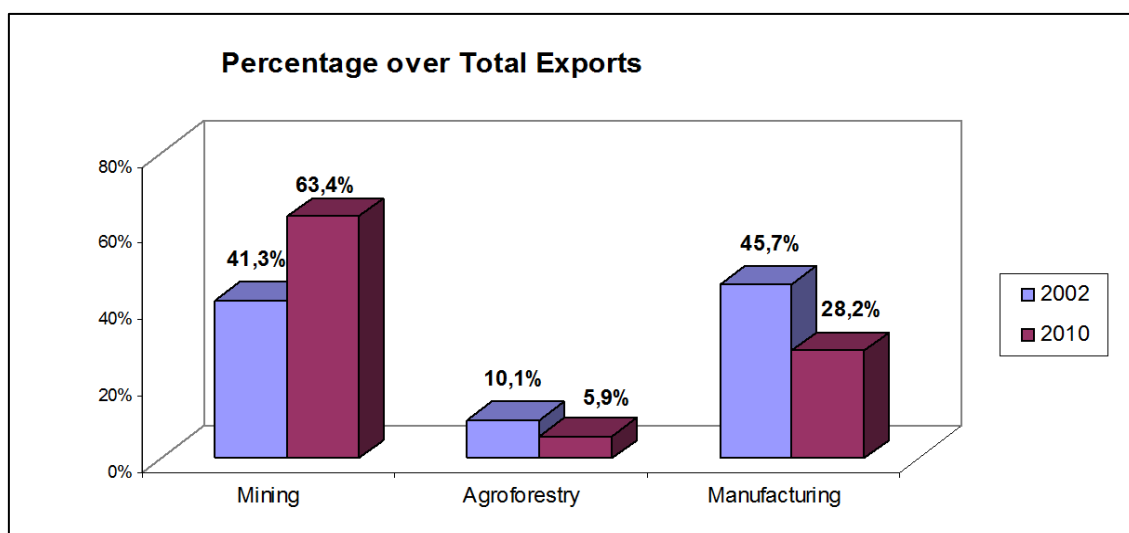
6.3 Institutionality in the Agricultural Sector

The broad variety of climate and soil diversity in Chile has made the development of a large set of productive chains possible, among which fruit-growing, timber, wood pulp production, dairy farming, meat livestock and viticulture, stand out. Taking into account the high level of linkage, as well as job creation and value added driven by agriculture beyond its own activity, several studies (Dirven, 2002, p.1) suggest that by including these networks, agricultural GDP, which fluctuates around 4 to 5% of the country's GDP, is actually responsible for more than three times this level of economic activity, reaching up to 10-15% of GDP when linkages to the manufacturing process are included. Agricultural GDP measured in this way incorporates: primary and industrial activities of meat manufacturing, marine products, canned food, oils, milk, flour milling, bakery, sugar, wine, beer, alcohol and liqueurs, non-alcoholic beverages, various food products and the manufacturing of tobacco products.

Accordingly, De Ferranti et al (2005, p.8) agree also that the contribution of agriculture to GDP is much more relevant. In estimating the contribution to GDP, it is necessary also to include productive linkages with the manufacturing sector. By using the traditional definition of "rural" which equates rural workers and territories with agricultural economic activities, a bias is created in the estimation of the size of the rural sector in the economy. This has important implications for public policy. Hence, it is necessary to recognise the role of productive diversification and regional productive linkages (the interregional spillover effects are not clearly taken into account by the policy makers).

Farm work in Chile represents about 12% of total employment (Statistics National Institute, 2006), but it rises to approximately 22% if the wider set of activities related to agricultural production are considered (the linkages of agriculture to manufacturing, especially in agrofood activities). Chilean agriculture is one of the most open to international trade in the world. In terms of its contribution to exports, the agricultural and forestry sectors, including primary and industrial products, generated 15% of the country's total exports by value (Figure 6.1) in 2011. Clearly these levels differ in different parts of the country (with levels unsurprisingly higher outside of Santiago). For example, employment created by agriculture (including its downstream productive linkages with the manufacturing sector) represents more than 40% of total employment in four regions of the country (OCDE, 2008). The small- and medium-sized agrofood firms have a relevant contribution, but the Metropolitan Area (Greater Santiago) and the large companies exert a grouping force which does not contribute to the embeddedness of productivity activities in the regions.

Figure 6.1 The Changing Structure of Chilean Exports.

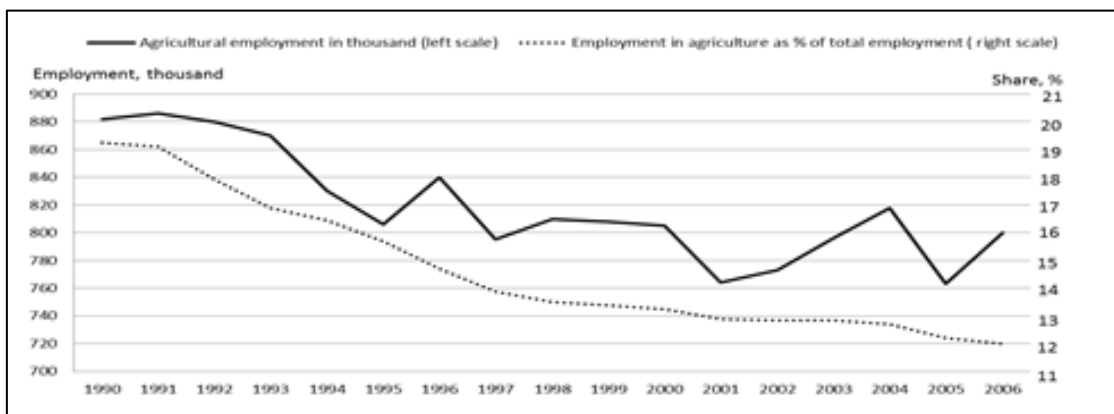


(Source: Central Bank of Chile, 2012)

Figure 6.2 shows that employment in Chilean agriculture fell from 20% of total employment in 1990 to 11% in 2006. This is related to the modernization of the sector through the introduction of machinery and technology, which implies higher productivity but less employment. The mainstream neoliberal view frequently lauds

Chile's success in sharply reducing poverty⁸ over the past two decades (Haindl, 2008, p.89). It fell from 40% at the end of the 1980s to a level of just 20% in 2000 (World Bank, 2012). Such analyses often stress the role of 'outstanding' macroeconomic management, trade openness, free trade agreements, and substantive reduction of tariffs in this transformation, and frequently stress the role of the agricultural sector in these successes through its contribution to the rapid growth of exports, the provision of employment and the added value created in the expansion of processed agro-industrial goods etc.

Figure 6.2 Evolution of employment in Chilean agriculture, 1990–2006.



(Source: ODEPA, 2007)

Exports of these commodities are highly prominent in total export levels reflecting the orientation to the external market and the apparent success of the Chilean model of agriculture. Nevertheless, there remain questions about the sustainability of this model of industrial development, its impact on the long-term growth prospects of the economy, the types of jobs it creates (the conditions of employment in this sector are controversial due to low levels of training and poor working conditions (Kay, 2002, p.464), the fairness of relations between the different productive actors in the sector, and the impact that these factors have upon the prospects for upgrading and enhancing value added in the sector. In particular, as stressed in more general terms in the previous chapter, the contractual conditions between small farmers and large transnational exporters are in

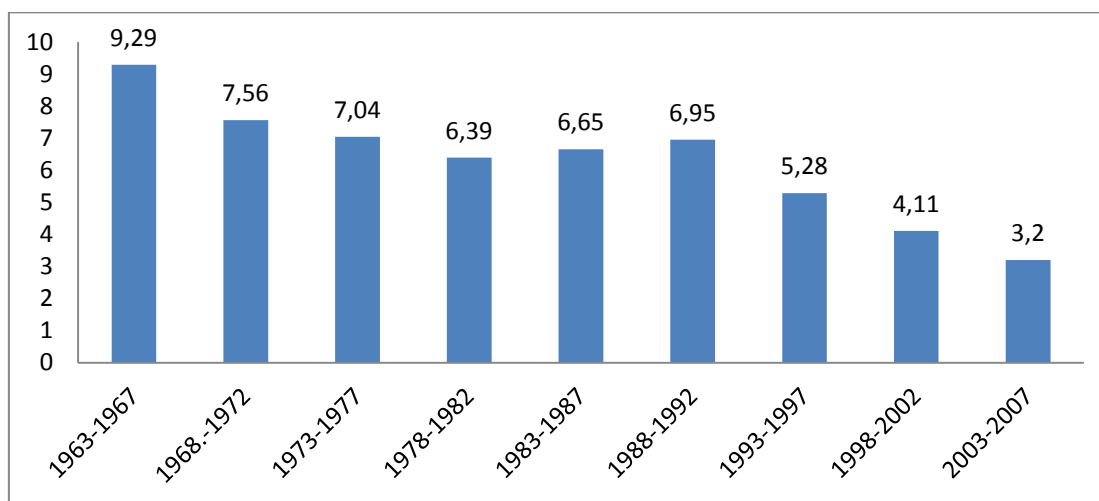
⁸ In this kind of analysis, poverty is measured in absolute terms. The threshold in this case is approximately US\$ 140 per capita a month.

many cases disadvantageous for the former and the transference of risk in contracts where the state does not play any role is also concerning (Murray, 1997, p.43).

Despite the frequent references to Chile's agricultural success story, the reality of the situation is somewhat more complex. As argued in the previous chapter, all Chilean export sectors have suffered the consequences of the copper boom (which has reached levels as high as 60% of total exports) which has created the conditions for the so called 'Dutch disease'. This refers to the decreasing of profitability amongst the rest of the productive sectors as a result of the domestic appreciation of the exchange rate (Meller, 2013, p.47)

As shown in Figure 6.3, the agro-forestry sector has systematically reduced its participation in GDP over time. In 1973–1977, it represented 7.04% of GDP, falling to 6.95% in 1988–1992, and the figure continued to reduce after 2000, falling to 3.2% of GDP in 2003–2007 (Statistics National Institute, 2008). Similar falls affected the manufacturing sector. It should be pointed out, however, that these trends do not only relate to falls in the exchange rate but also to broader productivity issues. In fact, Chile is ranked thirtieth out of 142 countries in the Ranking of World Competitiveness (GCI, 2012). However, it is in approximately one hundredth places against the variable "Innovation and Quality of Education". In Chapter Two, it was suggested that education and training of the workforce had impacts upon the prospects for both upgrading and industrialization. The poor results in this ranking reflect the low productivity of the Chilean economy and the lack of a strategic view of market development, in particular the development of new market niches in order to reduce dependency on the unstable business cycles of raw material production.

Figure 6.3 Percentage share of the agro-forestry sector GDP in national GDP (By Five-Year Cuts)



(Source: Statistics National Institute, 2008).

With regard to the destination of total exports, Chile has been successful in diversifying its portfolio. Approximately 26% goes to the USA, Asia and Europe, whilst 18% goes to other Latin American countries.

However, this growth and diversification has been achieved by an explicit policy of non-intervention in markets. As discussed in Chapter Five, a great part of Chile's 'success' has been achieved through keeping prices low rather than improving quality or enhancing the level of processing. It is based on the maintenance of a political and legal system where workers have limited bargaining power, trade unions are weak, and small farmers are unable to negotiate better prices for their products. The stable macroeconomic framework for export promotion has been pointed out as one of the main sources of the Chilean 'miracle'. However, several state institutions have also played a major role in this success, in including the following of particular importance in the agricultural sector:

- a) SAG (The Agriculture and Livestock Service) which has sought to improve the country's phytosanitary conditions and hence its ability to meet increasingly strict international standards in export markets within this sector (OECD, 2008, p.74)

- b) Fundacion Chile which has provided R&D and venture capital for the development of niche export crops such as blueberries (OECD, 2008, p.74)
- c) CORFO which has sponsored the development of some important producer associations (e.g. in the wine industry) (OECD, 2008, p.74)
- d) PROCHILE (a private-public entity) which has successfully promoted Chilean exports in new and existing international markets. Its activities are considered to have had a significant effect on Chile's exports of food and wine (OECD, 2008, p.74).
- e) INDAP: Institute of Agrarian Development which has been the governmental agency in charge of providing financial services for the development of small-scale agriculture (OECD, 2008, p.77).

However, whilst these state institutions have had some success in helping to develop and diversify Chile's agricultural export production, there are a variety of criticisms that can be made of the overall approach that has been developed towards the sector, particularly in relation to improving of the conditions of SMEs and facilitating upgrading of the sector and its longer-term sustainability. Low educational attainment, for example, which implies low levels of human capital, is a major problem in the sector evidenced in a lack of critical mass of technicians, which means in the long term a dependency on maintaining rather than innovating patterns of production. In order for small farmers to become more productive and have greater commercial viability they need help to develop more entrepreneurial skills and better management techniques, although their position will always be disadvantaged if the nature of contracts in the agribusiness sector remains unchanged.

6.3.1 Exchange Rate Policy

The exchange rate policy has always been an issue of concern, especially for large firms. They claim that the Central Bank and Government should put pressure on the exchange rate so that it is attractive and profitable for the development of the export sector. However, such interventions are open to question.

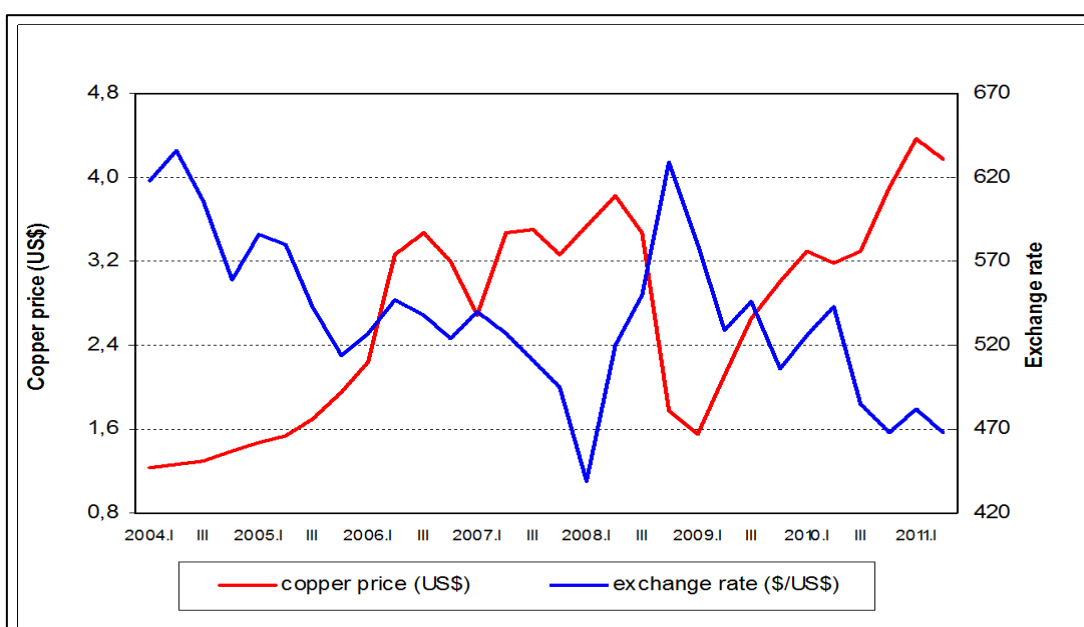
One really controversial issue is the strategy adopted by the Central Bank of Chile of intervening in the domestic market by buying dollars on a massive scale. It is common to hear the leaders of large producer associations and the powerful export companies complaining about the high value of the dollar and demanding that the Central Bank intervenes in the domestic dollar market (Castañeda, 2012). The typical argument of those supporting such demands is that a low real exchange rate does not help the competitiveness of the export sector as a whole and that the government should intervene by buying dollars to increase the real exchange rate, thereby supposedly increasing the profitability of investments in the tradable sector and thus benefiting the export sector.

Whilst these arguments make financial sense on their own terms, they suffer from two limitations: 1) the groups calling for such interventions associate competitiveness only with the exchange rate, forgetting that the economy has the symptoms of ‘Dutch disease’ (Figure 6.4) due to high copper prices (stemming from the demand induced by China’s economic growth) as discussed in the previous chapter, and 2) when the Central Bank boosts the exchange rate, the benefits are not transmitted to all actors equally. For example, small farmers in the agribusiness production networks do not tend to export directly but sell their production to the big traders and they are therefore unable to appropriate any of the benefits of the exchange rate movements because of their weak bargaining power.

It is worth exploring the question of exchange rate policy in a little more detail since it has been one of the main vehicles of economic policy employed by the Chilean state and has had profound implications for the dynamics of Chilean agriculture. Given the significance of copper to the Chilean economy (Figure 6.4), a relatively high permanent price for copper would hinder the diversification of production, resulting in lower economic growth in the absence of policies to encourage a high real exchange rate. However, for most neoliberal economists and entrepreneurs, exchange rate policy needs to operate in the opposite direction to encourage exports via direct intervention by the Central Bank to increase the value of the dollar in the domestic market. In several of the interviews with SMEs and large firms in the agrofood sector carried out for this research, the variable exchange rate was raised in a systematic way. According to these managers and owners, the strong appreciation of the Chilean peso has been one of the

most important problems faced by the industry. The relatively low exchange rate resulting from the influence of copper in total exports has, they argue, severely impacted on the profitability of this sector. Other problems, such as the lack of a skilled workforce, weak innovation processes, etc, are mentioned in the interviews, but according to the interviewees, they are not as important as the exchange rate which, in their opinion, is the main obstacle to the development of the agrofood sector in Chile.

Figure 6.4 Inverse Relationship between copper price and nominal exchange rate.



(Source: Central Bank of Chile. 2012)

It is necessary to point out that in relation to this issue (the appreciation of exchange rate); the government has applied the so called “rule of structural fiscal surpluses”. The objective of this rule is to help the Chilean state save a high percentage of the foreign exchange earnings created by the copper sector. Currently, these are invested in what is known as the ‘Sovereign Funds’ and are equivalent to about 8% of Chilean GDP. This mechanism of public saving allows the agriculture sector has an exchange rate not so low, so no affecting the productivity of the sector.

A higher real dollar value in the Chilean economy would, according to the rule of structural fiscal surpluses, allocate resources more efficiently, reducing the relative

importance of the mining sector in the economy and improving the competitiveness of the agricultural sector. However, the dominant neoliberal economic policy perspective has promoted a view that only neutral incentives should be used to achieve this objective, except what the authority in a neoliberal sense can do to achieve a high real exchange rate. This includes the control of wages, decreased public expenditure, labour market flexibility, etc., although in reality, these are not neutral policies.

The interesting thing here, in the context of these on-going debates, is to analyse real exchange rates in the different sectors. Of most relevance is the competitiveness of the agriculture sector. On doing this, we find that the non-copper sectors of the economy (agribusiness, fruits and others) have been affected by the ‘Dutch disease’. This derives from the fact that the price of copper has increased by 350% over the last decade (Statistics National Institute, Chile, 2012) which, as argued in the previous chapter, reflects the expansion in demand following the opening up of China to global trade and its rapid industrialization. The resulting high copper price has caused undesirable effects in the Chilean economy, by maintaining the appreciation of domestic currency, thus affecting the variable dollar, one of the key dimensions of export competitiveness. The importance of innovation across the export sector, the quality of labour, and the quality and pertinence of the educational system are even more important in this context.

In relation to this, an NGO Director (research interview conducted in July 2012) points out:

“The low growth rate for the majority of agricultural and industrial exports, together with the huge investment in mining and construction, means that there is limited diversification in the export basket. As long as this is the case, the idea of moving toward higher value added in the export sector is no more than a dream”.

Earlier in this section I mentioned that the level of the real exchange rate (real dollar) is only one dimension of export competitiveness. Certainly, trade liberalization in the 1980s following the economic crisis of the late 1970s facilitated a high real exchange rate that boosted exports, especially for large business groups (there were tax incentives and specific state grants to achieve that goal as discussed in previous sections). At the same time, trade liberalization enhanced the efficiency gains of the economy but made

patterns of income distribution worse. Haindl (2008, p.132–136,) refers to the years of strong export development and a high real exchange rate as the ‘golden years’ of the Chilean economy. This is a commonly held view among many neoliberal economists. In the absence of a high real exchange rate, the neoliberal view suggests that Chile will continue as a mining country and squander the abundant comparative advantages enjoyed by the economy. Their argument is that reduction of public expenditure is one of the pillars of achieving a higher real exchange rate (there would be less pressure on non-tradable goods). They also argue for other microeconomic measures in relation to labour markets, especially greater flexibility in hiring and firing. However, there is no long-term perspective to such a position and it does little to build a more sustainable economic strategy. There is, for example, no discussion of the need for levels of taxation consistent with ensuring the supply of trained labour or enhancing the quality of education which, as we have argued above, is crucial for the evolution of a more sophisticated medium-term export supply.

The current conservative government has, as I explained in the previous chapter, decided to end the cluster policy promoted by the previous government (Bachelet’s centre-left government) and the allocation of resources to firms embedded in these clusters. The end of this selective policy of support towards clusters puts more pressure on the exchange rate, which is now almost the only measure that is being used to actively boost the competitiveness of the export supply. A higher dollar (and higher real exchange rate) is a necessary condition to add value in the export sector and thus appropriate the revenues of investment risk but a high real exchange rate is not an industrial policy. The previous chapter concluded with a strong call for a more ambitious industrial policy that might offer the prospect of real industrial upgrading and a more sustainable future for the country. Chilean public revenues need to be transformed into the public goods (quality in education, the training of labour etc.) that are required to refocus the Chilean economy around higher quality goods and a more sophisticated export sector. A necessary, although insufficient, element of this would involve the re-establishment of the principles underlying the cluster policy for focusing public policy around the grasping of new export market niches and the establishment of a specialized state agency to ensure transparency of contracts in the agro-industrial world (between exporters and small producers, and between producers) in order to generate a more equitable distribution of economic surplus. However, rather than

addressing these kinds of issues regarding the potential wider transformation of the Chilean economy, the major focus of the current neoliberal Chilean administration has been on developing agriculture so that the nation becomes a real ‘food power’, and so reduces the concentration of export production on copper. The following section explores this new strategic direction in more detail.

6.4 Chile Potencia Alimentaria (Chile Food Power)

One of the hopes of the neoliberal technocracy is that Chile becomes a global ‘food power’. This is one of the new paradigms for development in the Chilean agricultural sector. The strategy is based on the signing of new free trade agreements, support for a modern and dynamic agrarian policy and, according to the government, the ability of the export sector to exploit these opportunities. The government has declared its intention to move from the export of primary commodities towards exports with higher value added, based on products of higher value (classifying food by quality, for example) (Ministry of Agriculture, 2006). However, the same government policies do not address the structural limitations of the current productive framework (and there is no evidence of any recognition of the need for a vertical industrial policy). The strategy constitutes a reaction to the changes that have occurred within global agricultural markets due to increased regulation of quality and safety in agrarian markets in Northern countries. This has meant the introduction of new protocols and practices in agriculture, which are aimed not only at the production of safer food, but also the homogenization of productive processes under strict quality rules. The government’s perspective is that this context can be used to formulate a competitiveness strategy (competitive advantage) in the evolution of Chile’s export sector.

According to Rojas et al. (2007, p.1), “the new development paradigm for the Chilean agricultural sector is to become a world-wide agricultural food power”. They suggest that the Ministry of Agriculture’s strategy may also have a positive effect on the nutrition and health of consumers, hence the relevance of coordination of the different agents in agricultural and food chains involved in the promotion of fruit and vegetable consumption as well as food safety.

Through this new direction for Chilean agriculture, which is entitled Chile Potencia Alimentaria, the Government intends to achieve a number of basic goals: promote production and health, take advantage of and enhance free trade agreements, strengthen the integration of agricultural SMEs, develop a powerful external image of the country and use it to open doors to foreign markets, promote science, technology and innovation, develop human resources and implement communication strategies connected with the sector.

The efforts to strengthen the country's image have been funded by PROCHILE. At the same time, producers, exporters and all types of actor involved in the agrarian business initiated joint activities to promote Chile as a food power in international business meetings. So the Government has set the goal of transforming the country into a major international food power, which distributes its products worldwide and is placed among the top ten global food exporters (Ministerio de Agricultura,2012). To achieve these aims will mean a great increase in the production and export of healthier products (vegetables, fruits and fish). There are, however, serious questions about how sustainable this strategy will be and, in particular, what its impacts on food security are likely to be. The Food and Agriculture Organization of the United Nations (FAO) defines food security as “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their daily energy needs and food preferences for a healthy and active life” (FAO, 2006).The evidence shows that Chile does not give enough weight to this issue. The country does not produce much of the basic food that it consumes and does not have a clear policy to encourage domestic production. It has created a model for importing cheap food that does not support domestic agriculture and the rural world. This is reflected, for example, in the number of dairy farmers who have been declared bankrupt because they were unable to compete with the prices (often subsidized) of imported food. Hence Chile is dangerously dependent on imported food. At the same time, the price of food is critical to levels of poverty (Janssen, 2012).

The official information that comes from government and state agencies often exaggerates the benefits to Chile of increasing agrarian exports and exports in general. Nonetheless, in recent years, as a result of bio-fuel policies applied in developed

countries, the international price of food has been rising (FAO, p.2). It has made the basic consumer basket more expensive. Unfortunately, this increases the levels of poverty and creates illnesses and so the population will not have a food safety network. Also the conditions of workers on the farms, that will help the government to achieve their food power objective, are not even close to representing a social equilibrium (especially in relation to the conditions of seasonal workers). The high degree of informality, the lack of written contracts, as well as the existence of some intermediaries that do not fulfil agreed payments, social security and others, as well as the scarce degree of control by state authorities of these practices, pose a serious challenge to the concept of 'Chile Food Power'

The issue of the participation of SMEs growers in the agrofood sector is extremely important. To become a 'Food Power' (Potencia Alimentaria), it is necessary to reduce the negative effects of the concentration of ownership in the agrofood sector and to take into account the working conditions of the workforce in the agricultural sector.

6.5 Participation of SME Growers in the Agrofood Sector

The OECD Report 2008 points out that the Chilean agricultural sector has benefited from a sound macroeconomic environment (relatively low inflation, fiscal surpluses, relatively high real exchange rate), and that the agricultural sector has not received more protection than other sectors. It is necessary to clarify that after 2008, with the rapid growth of China, the price of copper increased substantially creating problems of competitiveness in other export sectors. Gwynne & Kay (1997, p.3) stress that in spite of this improved macroeconomic environment, only some parts of Chilean agriculture have benefited. They claim that Chilean agriculture still remains a "contested space"; in other words, this process of modernisation and export orientation has not benefited equally the rural labour force, the agrarian regions and some landholding groups.

But this openness has been reflected in the reduction of tariffs (levels are currently at 6% and they are set to reduce to zero in 2014 under the current conservative government's tax reform project) and in the varied network of free trade agreements

signed during the democratic period which have gradually transformed the Chilean economy into the most open economy in the world. In certain ways, this degree of openness weakens the industrial sector and improves conditions for the big entrepreneurial groups that operate in agriculture. By reducing tariffs, the economy begins to specialize mainly in static comparative advantages (commodities and raw materials), which are the foundations for commodity trading in the international markets.

However, this openness without counterbalance has been placing considerable pressure on rural communities, highlighting divisions between those groups of small farmers who have viability in commercial terms, and those destined to subsistence. The OECD Report 2008 makes this point, which is consistent with the view expressed by some officials of National Institute of Agricultural Research (INDAP) in the research interviews, as outlined in the following quote:

“Payments to improve small farmers’ commercial viability need to be based on a realistic assessment of who is potentially competitive within the sector, and to target that constituency. For future generations, that group is likely to be a minority of smallholders. For the majority, the main requirements are for non-agricultural policies that help them diversify their incomes and find better paid jobs outside the sector. In most cases, the ultimate aim should be to transform the poorer family farm into a structure in which the farm operation may be retained, but family members (sons and daughters) develop the opportunities to obtain higher paid skilled employment”.

Also it is often mentioned that a form of solving the problems of small farmers is to establish ‘contract farming’ in the Chilean agriculture. These problems are associated with excessive bargaining power of large firms, what generate several problems to small farmers. They don’t receive a fair price (there exists uncertainty about final price) and besides don’t have incentives to carry out innovations that bring as a result a better product (Da Silva, 2005, p.19).

Accordingly, 'contract farming' has recently risen to prominence in the development literature because of the potential benefits that may result from sound contractual practices in agricultural production. (Pultrone, 2012, p.263).

“So, the 'contract farming' as a mechanism to coordinate linkages between farmers and agribusiness, may improve farmer's access to national and international markets and help to increase income in rural areas. From the perspective of agribusiness companies working in production, processing and marketing of farm products, contract farming may ensure a steady supply of agricultural products compliant with the agreed quality requirements, as well as the reduction of administrative costs. The potential advantages that come from sound contractual practices may be fostered by an adequate legal framework that supports the parties in the correct implementation of contracts”.

According to Minot (1986, p.11), 'contract farming' can be classified in three kinds:

- a) Market specification contract: the transaction between growers and buyers is agreed on terms of what to be produced (product and quality attributes) and what are the commitments for future sale (timing, location and price).
- b) Resource providing contract: this modality adds the provision of farming inputs to the farmer contract type. Beyond specifying what to produce and what conditions are, in-kind credit is offered via the provision of key inputs, often with cost recovery upon farm product delivery.
- c) Production management contracts: farmers agree to follow precise technological guidance on how to produce.

In case of small farmers in Chile, there exists 'contract farming' based mainly in market specifications, but with weak legal compliance. There is no a legal framework clearly established to solve disputes between small farmers and agribusiness firms.

For instance, a Small Farmer (research interview conducted in April 2013) claims that:

“I worked with three firms with three firms. One of the firms stills owes me money and another paid me just 4,000 US\$ after the settlement where even export firm charged him the ‘meals’ (he claims that he never knew this place). Also the export firm charged him the transport of agrarian products to its export firm”.

In the practice, there is a weak legal contract which does not have legal validity. Therefore the ‘contract farming’ requires at least the oversight of state agencies. In this context, Pultrones (2012, p.281) points out that:

“A sound legal framework governing contract farming may promote fair contract negotiations and guide farmers and buyers to a more successful implementation of agricultural contracts. Depending on country, this legal framework may consist of a set of norms from sources such as international law, domestic codes, specific legislation, and soft law. Strengthening regulatory frameworks on contract farming helps to protect farmers from potential abuses of power by their buyers. Conversely, incomplete or inadequate legal frameworks may expose farmers to situations where they have to accept abusive clauses and ‘take-it-or-leave-it’ contracts from their buyers or unclear and ambiguous contractual clauses with hidden risks”.

In the Chilean case, the regulatory bodies do not consider special laws and rules to promote in an effective way the ‘contract farming’. An Agrarian Analyst (research interview conducted in June 2012) points out that:

“There is a lack of political will to regulate in a more strict form the transactions under the ‘contract farming’ modality”.

In this context, Berdegué et al (2008, p.18) claim that a strategy to promote small and medium family agriculture enterprises oriented to new national markets should have the following objectives:

- a) To promote an environment that allows broadly based investment and growth, through effective services, investments and institutions with characteristics of public good (sanitary protection, systems of innovation, transport links and communications, agrarian and manufacturing good practices, certifications and quality standards for the national markets, and irrigation).
- b) To develop and modernise the national markets to face new challenges from consumers
- c) To strength the capabilities of small and medium agriculture enterprises to take advantage of this more favourable environment through greater access to effective financial services, training, technical assistance and producer organisations.

According to the OECD Report 2008 and state agencies such as INDAP, the government's efforts in relation to the agricultural sector should be focused upon those small farmers that already have commercial viability. However, this point of view is controversial and it does not recognize that poverty at the subsistence level is derived from a multinational model of natural resource exploitation, in which the conditions of credit, technical assistance, length of payments, as well as the design of the relationship of small farmers with large firms, are established by the unequal bargaining power inherent in the model. In view of INDAP's limited budget, there are two policy options here: (1) they devote resources to both groups, or (2) they focus their resources on small farmers with commercial viability and the capability of upgrading to satisfy the requirements of the agribusiness complex. Also, Gwynne & Kay (1997, p.12) claims that small growers ("peasantry"), because of their inability to scale up in commercial terms, should orientate towards productive reconversion ("productive transformation"). This could be market led or mediated by the state; although the latter is better able to strengthen peasant agriculture (in the context of subsistence farming).

It is also important to note that whilst the conditions of labour in this sector are heterogeneous, in general these conditions do not reflect the public information of 'Chile Food Power' (it is over-optimistic). So, the final objective of this public program should be that the skill levels of these workers are raised so that they can find better jobs in the agribusiness sector or elsewhere. The growth of the primary agricultural sector (as

envisioned in Chile Food Power) can achieve high rates of employment, but these are likely to be temporary, cyclical, badly paid, and with limited value added.

According to Murray (1997, p.2–53), the low productivity of Chilean small holders is not related to their small scale, as the mainstream view often suggests. He argues that the process of transnationalization of agricultural activities has meant that farms are increasingly dedicated to producing goods valued in the international markets and that the large companies have exercised dominant power against the small farmers. This affects conditions not only of these small farmers, but also of temporary workers in the larger farms. Murray points out that many rural localities have been unable to participate in the ‘success of exports’. From a neoliberal perspective, the limitations discussed here represent the ‘price of development’ for the agriculture sector. Although Murray is referring to the initial stages of export openness, it is clear that after 20 years, some of these conditions still prevail (Wilson & Caro, 2010, p.9). For example, a Small Farmer (research interview conducted in April 2013), a smallholder in the region of Monte Patria, Coquimbo, North of Chile, pointed out:

“I am particularly critical of the contractual relationships between small farmers and the large exporting firms. In some cases, contracts only stipulate that farmers must deliver the fruit, but do not set out prices and other conditions”.

When agricultural and forestry operations are analysed by type (Table 6.1), it is clear that the majority of farms are run by individual producers. However, corporate and publicly owned farms have been increasing their total share of land. Thus, the number of publicly owned farms reduced by almost half (from 717 to 379 farms) between 1997 and 2007, but the area of land held by these farms increased by 228%, while the area of land held by individual producers reduced by 15%. These data demonstrate a strong pattern of concentration in the agricultural sector with negative implications for small farmers, and wider impacts on living conditions in rural sectors. This further increases the importance of establishing mechanisms whereby state agencies can establish more balanced rules and constrain the uneven bargaining power of the large companies.

Table 6.1 Number and area of agricultural and forestry operations by types, 1997 and 2007.

	Number of farms			Area (ha)			Average size (ha)		
	1997	2007	%Change	1997	2007	%Change	1997	2007	%Change
Individual producers	282,204	242,211	-14.2	13,020,124	11,095,218	-14.8	46	46	-0.7
Associated producers	25,802	26,743	3.6	3,520,965	1,903,980	-45.9	136	71	-47.8
Corporate farms	7,523	10,604	41	6,282,145	9,117,808	45.1	835	860	3
Publicly owner farms	717	379	-47.1	1,904,041	6,248,179	228.2	2,656	16,486	520.8
Indigenous and ancient communities	276	439	59.1	1,775,089	2,110,172	18.9	6,431	4,807	-25.3
total	316,522	280,376	-11.4	26,502,364	30,475,357	15	84	109	29.8

1. Associated producers are farms associations without legal contracts and communal producers.
2. Corporate farms are limited companies and other societies with legal contracts.

(Source: ODEPA, 2007)

A well trained workforce is a determining factor in developing a dynamic innovation system. The adoption of new technologies, methods and knowledge is highly correlated with education levels (IDB, 2010, p.45). In the case of Chile, workers in the agriculture sector are generally unskilled. There is considerable heterogeneity in the type of training programmes offered. The low level of agrarian education is the result of the poor quality of basic and secondary education offered in schools in rural areas (see Table 6.2), some of which are ‘unidocentes’, schools where one teacher covers all subjects and levels in a single class. As one business leader noted, all of this creates long term problems for the productivity of Chile’s agrarian workers (Research interview conducted in March 2013).

Table 6.2 Comparison between agrarian and non-agrarian workforce, 1992 – 2006.

	Agrarian		Non Agrarian	
	1992	2006	1992	2006
Average income (US\$ of each year)	183	346	364	687
Literacy rate (%)	90.4	93	98.7	99.2
Years of schooling	6.9	8.2	10.9	12
Completing Secondary School (%)	14.7	27.1	54.7	70.1
Receiving training in the previous year (%)	N/A	9.2	N/A	19.5
With access to mobile (phone) (%)	N/A	57.5	N/A	75.4
With access to computer (%)	N/A	12.1	N/A	48.7
With access to internet (%)	N/A	9.1	N/A	42.5

(Source: Modrego et al., 2009)

NA: not available.

Table 6.3 indicates that most agricultural/agrarian workers are employed in small- and medium-sized firms (48% and 33% respectively), whereas only 19% of the agricultural/agrarian workforce is employed in large firms. It should be noted that small, medium and large firms make up only 16% of firms in the agricultural sector and 84% of firms are described as micro-firms. Micro-firms tend to be self-employed agrarian workers and they are generally only educated to primary level. Of trained workers in the agrarian sector, 45% have completed or partially completed only primary education, while this is true of only 13% across the economy as a whole. Only 11% of agrarian workers have higher technical diplomas, compared with 24% in the economy as a whole (FUCOA/ODEPA, 2011). With regard to the qualification of employers in the agrarian industry, small farms are managed by their owners, whereas 73% of medium sized firms have a hired manager. The level of qualifications of the workforce at all levels is extremely relevant to increasing the sophistication of the productive supply, and so

realising deeper linkages along the value chains. This encompasses not only the production of final goods, but also the complementary services and goods offered by the ancillary industries. Educational attainment in rural areas is a long-term issue which will require considerable time and effort to achieve meaningful improvements but it is an important component of any longer-term strategy for inclusive and sustainable industrial upgrading within the Chilean economy. At the same time, there are considerable opportunities to work with the existing SME sector to provide targeted training and skills development as explored in more general terms in the previous chapter (these issues are returned to relation to the fruit and wine sectors in the two empirical chapters which follow).

Table 6.3 Distribution of agrarian employees by size of firms.

Size of Firm	Number of Agrarian Employees	% Firms	% Agrarian Workforce
Micro	0	84	0
Small	1-9	15	48
Medium	10-40	0.9	33
Large	>50	0.1	19
Total		100%	100%

(Source: FUCOA/ODEPA, 2011)

6.6 Upgrading in a Natural Resource Intensive Economy: the National Council for Competitiveness and the End of the Cluster Policy.

The previous chapter spent considerable time discussing the political choice of the current government in ending the Cluster Policy which had been initiated under the Bachelet government. As explained there, this was a high consensus policy that had incorporated the private sector, public sector, university communities and, in general, everyone connected to the productive environment. The government, jointly with the Boston Consulting Group, who carried out the consulting work, defined eight Clusters that were seen as being able to lead economic expansion in the future (in summary these clusters were: agrofood, fresh fruits, wood, salmon, wine, tourism, mining and services).

Although the cluster policy did not lead to a substantial increase in new market niches, it was a positive step forward because it attempted to focus the efforts of public policies. However, as explained in the previous chapter, following the election of the conservative government of President Piñera, CORFO decided to end the cluster policy. According to Cheyre, CORFO's vice president (Rios, 2011), the main objective of the government is to support entrepreneurship and innovation in Chile and government policy seeks to establish Chile as a regional pole in these matters. He claims that the current government does not support the ex-ante selectivity of clusters because markets are dynamic and it is necessary to adapt to circumstances. He adds that they are not against clusters, but rather that they are open to the idea of delivering resources to all kinds of enterprises, whether within clusters or outside of them. He argues that this is the only difference in policy between Piñera's administration and that of the previous government.

Previously, the state agency INNOVACHILE (which is part of CORFO) was organised into subgerencias for each of the clusters. By definition, Cheyre explains, the subgerencias supported innovation activities that lay within the clusters. He goes on to explain that under the new government, support for innovation is no longer centralized in CORFO, but works across ministries. He continues:

“The support that CORFO wants to deliver is not a subsidy to favour a determined firm which wants to internalize a benefit. What CORFO is interested in is delivering subsidies to correct coordination or market failures, or when there exists the need to provide something with public good characteristics that help to reduce these market failures. This is supporting the clusters in the sense of building bridges to generate a network that boosts the entire value chain”. (Cheyre, 2011)

It is clear that there is no political will in CORFO to implement either a true industrial policy or a process of ‘picking the winners’ with new niche markets. This ostensibly means the maintenance of the status quo in the productive sectors, which assumes that the market is working relatively well. The incentive neutrality promoted by the current government creates conditions in which the state’s regulatory capability does not play any role in the ordering of the economy. This means, of course, that it is very unlikely that CORFO will develop a coordinated approach to issues such as contracts or oversee promotion of the role of SMEs. CORFO’s position is clearly that of pursuing horizontal incentives (to correct market failures) and the removal of vertical industrial selectivity. Neutrality in the allocation of resources is the rule.

Analysing the issues related to the end of the cluster policy in Chile, we can draw the following conclusions:

- a) The official end of CORFO’s policy of supporting clusters is not the end of Chilean clusters themselves, but they have been weakened by it;
- b) The refusal to apply vertical selectivity strengthens the tendency toward the concentration of economic activity within natural resources in the Chilean economy, with almost no chance of niche expansion into more industrialized production with more value added (although there are, of course, exceptions);
- c) Countries that have not followed the World Bank’s code of good governance (neutrality of incentives and free market policies without a clear development strategy), such as some Asian states, have successfully improved productivity.

Unlike Chile, they do not apply neutrality options in the distribution of resources;

- d) Followers of Asian models, however, tend to forget that Chile's trade openness and high resistance to the implementation of capital controls would impede an East Asian-style industrial policy in Chile, leaving the country confined to a quasi-industrial policy that corrects only market failures.

CORFO explicitly justifies its move away from a clustering policy by saying that the state should not have a role in 'picking winners' in economic development (i.e. estimating the sectors with the greatest potential ex ante) (Various interviews of Hernan Cheyre, Chief of CORFO – 2012-2013). According to the principle of neutrality of incentives which underlies CORFO's new position under the conservative government, it is important for the state to guard against the capture of public resources by particular interest groups. Nevertheless, the risk of this new policy is that Chile does not orientate investment towards those sectors with higher growth potential and greater productive linkages (and those with quality employment, and higher productivity), that is, towards those sectors which could constitute a new production frontier. As a result, Chile runs the risk of being left behind as a loser in the emerging global scenario of greater industrial competition and global technological transformation.

6.5 Objectives of and constraints on public policy in the agriculture sector

Drawing upon the current challenges that the agricultural sector poses, and establishing the objectives of public policy in the agrarian sector (established by the centre-left government), I will carry out a critical analysis of these proposals. Accordingly, in the following paragraph, I lay out the main objectives and tools of the Agricultural Sector (See table 6.4) (ODEPA, 2012) and then I will do a critical analysis:

Objectives of Public Policy in the Agrarian Sector 2000 - 2010

As it is possible to observe, the policy makers in the year 2000 were already concerned about issues such as social sustainability, a high concern for the participation of SMEs and by improving the quality of life of rural population.

- a) Get a profitable agriculture and open a competition framework
- b) Full use of potential and opportunities in terms of environmental, economic and social sustainability
- c) Inclusion of small and medium firms
- d) Dynamic agricultural sector development
- e) Improve quality of life of workers and rural population

Table 6.4 Sectoral policy: Instruments and tools.

Confidence and safety for agrarian producers	Market Development	Improving productivity of natural resources	Development of the competitiveness	Clean Agriculture - Quality Agriculture
Agrarian insurance	External markets	Program for recovery of degraded soils	Promotion of Associativeness	National commission on good agricultural practices
Price Band	Permanent committee on enquiries with the private sector	Irrigation promotion act	Integration of organizations by categories (Commissions national by industry)	Modernization of the inspection
Distortion Committee (safeguards, rights duties, antidumping)	Opening of new markets (commercial and healthcare)	Development of forest plantations	Development of other forms of association	Traceability Systems
New tools: agricultural and forestry products stock exchanges, income stabilization system for	Agricultural Attaché	Improvement of plant and animal health	Fund to strengthen the technical capacity of unions and organizations	National Policy on Pesticides
	Fund for the Promotion of Agricultural Exports	Economic recovery and protection of genetic resources	Participation in advisory bodies (Programs / Services of Agriculture Ministry)	System of Environmental Impact Assessment
	Domestic markets			
	Rules and regulations			
	Promotion of contract farming			
	Information systems market			
	Gathering and processing capabilities to levels of Producers			

(Source: OECD, 2008)

Despite the intention of addressing several of the weaknesses (low exchange rate, low expenditure in R&D, lack of credit, etc.) that have been highlighted in this chapter, the series of interviews conducted for this research with key stakeholders in the sector reveal a series of major concerns about the current dynamics of Chilean agriculture. Several of those interviewed confirmed what was suggested in the previous chapter, that

there is a debilitating lack of control of the contracts between large export companies and small firms in terms of the state abdicating its responsibility to monitor contracts and working conditions. The over-riding concentration of economic policy upon increasing the supply of exports is a trend which reduces the space for public policies, ignores the dilemmas facing small and medium firms (and their interactions with larger firms) and limits measures designed to enable the sustainable development of smallholder agriculture. The commitments of successive governments toward the progressive development of the agricultural sector (such as those embedded within the objectives of the public policy document discussed above) appear in reality to be no more than good intentions. As expressed by one of those interviewed (June 2012, an Agronomist):

“The political powers of large exporters (the majority of whom are transnational) do not allow a fairer relationship with small farmers. The only thing that the authorities can do is to inform the small farmers about the evolution of international prices of products that they sell to large exporters, and so try to get better conditions and prices for these smallholders”.

It is clear, from my research fieldwork, that there is no political will to change this disequilibrium in contracts in the Chilean agricultural sector. Specifically, the conditions for small farmers remain largely unchanged. Current policies do nothing to strengthen the position of small firms, which continue to transfer a high part of their economic surplus to large firms. Successive governments have failed to improve innovation streams or the availability of skilled labour. These conclusions about the conditions for small firms within the production networks for agricultural products are clearly reflected in the interview material which will be developed in depth in the Chapter Seven.

These production networks in the agricultural sector are currently governed by market forces and public policy makes very little impact on these transactions. According to an agrarian analyst (research interview conducted in June 2012), some small farmers complain that almost 60% of the final price that their products fetch in the market is taken by the large export companies who contract them via a one year-contract consignment agreement. These companies provide packing, stickers, pre-refrigeration,

and traceability services and they also provide the international networking and distribution channels needed to get the produce to the final destination markets. The small farmers consider the price charged for these services to be excessive and there is no legal support available for these small entrepreneurs to challenge the relations with the large companies if they wish to gain access to the export markets.

Some of these issues have been analysed by Warwick Murray (1997, p.50) in his long-running work on the sector. He points out that the structural transformation in the rural Chilean countryside has affected the situation of small growers. Before 1990, each small farmer converted most of their local production for export. This was the result of the arrival of multinationals to this sector. However, from 1990 onwards, the sector has been characterised by an increasing squeeze on small growers which has resulted in high levels of debt, the sale of land and re-concentration in the ownership of reformed land. In other words, the monopsonic power exerted by large export companies puts pressure on small growers to keep the prices of the agrarian goods they sell low. This does not create the conditions for sustainable development and reduces the incentive for these small growers to innovate. This situation will be analysed in detail in respect of the fruit and wine sectors in the next two chapters.

In the next section, I will analyse the role of INDAP in terms of promoting, with public resources, productive partnerships between small growers and large firms.

6.7 Role of INDAP and Analysis of the Productive Partnerships Program

INDAP is a state agency which is responsible for agricultural development in Chile. It forms part of the Ministry of Agriculture. Recently there have been a series of controversies relating to the focus and forms of the operation of INDAP which are highly relevant to our discussions in this chapter. Traditionally, INDAP has concentrated its efforts on the 80,000 farmers who own at least 12 hectares of land. Recently, however, INDAP has been devoting more and more of its efforts and resources to supporting the subsistence sector. According to an agrarian analyst (Research interview conducted in June 2012), this redistribution social policy should be

the responsibility of social ministries. There are 265,000 farms of less than 12 hectares, which include farms belonging to subsistence farmers, as well as some 80,000 producers who were given their land during the period of agrarian reform (INDAP, 2012). Apey & Barril (2006, p.41) claim that a socio-productive dualism exists in small-scale Chilean agriculture. Differences between small firms and subsistence agriculture are reflected in social and productive features. Although small firms and subsistence farmers account for two thirds of the total number of farms (30% and 37% respectively), their productive contribution is very low.

INDAP is Chile's main agricultural credit institution with a US\$ 419 million budget (almost half of the budget of the Ministry of Agriculture) (Chilean Government, Budget, 2012). One third of this amount is allocated for credit and another third for subsidy. Of the remaining third, 20% goes to support the institution and 80% for technical assistance and productive promotion (INDAP, 2012)

Since the election of the Conservative government in 2010, the tendency has been for INDAP to support subsistence farmers. With this new approach, INDAP now targets its activity at improving the circumstances of vulnerable groups, increasingly abandoning any work amongst those who have productive capacity. One element of INDAP's work targeting the more productive small farmers, has been the subsidization of training for their dealings with large companies through the 'Alianzas Productivas' (Productive Partnerships Programme) which has sought to empower small farmers to produce quality goods for large companies. According to some observers, this is essentially a form of subsidy for the large companies involved (e.g. Walmart, Nestle, etc.). This programme was established in 2007 with the objective of complementing the other market development tools employed by INDAP. The initiative seeks to create a more confident relationship between the small farmers and the large agrarian companies, addressing the weaknesses of the former in terms of the technologies of production, management and logistics, and the management of costs, which together have acted as constraints to increasing production.

The programme seeks to achieve two principal objectives:

- a) To deliver technical assistance to those producers oriented towards market requirements, and, more importantly,
- b) To create direct distribution channels without intermediaries.

The specific objectives are to:

- a) Create links between the companies and the small farmers
- b) Generate business opportunities by the articulation of demand and supply
- c) Increase the quality and the hygiene standards of the products produced by the small farmers to ensure that they meet the increasing demands of the international marketplace
- d) Deliver opportune investments to improve the efficiency and competitiveness of the small farmers.

According to official government figures, there are 4,500 small farmers (called ‘users’) involved in this programme, and the government wants to reach a total of 10,000 users by 2014. There are 63 companies participating in 85 productive partnerships. The programme advertises that it is seeking companies who are interested in working with the small farmers interested in production for the domestic market, in order to provide themselves with quality products and establish long term partnerships that can contribute towards the development of the localities where they operate, get traceability for their products, and increase the productivity of small farmers. They also mention that the programme will help diminish the informal market and contribute towards social equity. At first sight, this programme might seem to encompass a good number of the elements for an improved relationship between Chile’s agricultural SMEs and the larger companies which dominate the sector and address several of the issues raised during the course of this chapter. The next part of this section explores the degree to which this is really the case.

The optimistic view of this program, shared by the government and some of those interviewed for this research, can be illustrated via some of the flyers produced in the Ministry of Agriculture’s marketing campaign for the programme. The flyers contain a

series of statements of support and personal experiences from the larger companies involved in the programme. Some examples are included in Table 6.5.

Table 6.5 Statements of support from participants in the Alianzas Productivas programme.

<p>Miguel Lara (Fruit buyer for Walmart)</p>	<p>This alliance is good business for everyone. It pays more to the farmer, they deliver a good product to us at a lower cost because it is zonal, which allows us to sell it at a lower price.</p>
<p>Ruben Mendez (In charge of Productive Alliances for ALIFRUT S.A.)</p>	<p>They no longer see us as rivals in the business. Now they see us as entities that work in a complementary manner.</p>
<p>Cristian Matetic (General Manager, Agricola Hacienda Canteras)</p>	<p>The efficiency of the programme is reflected in the fact that poverty is decreasing in this country. Capable people with wishes of entrepreneurial aspirations can, with the help of the government and private companies, integrate into a productive chain and create value.</p>

(Source: INDAP, 2012)

However, some observers are very critical of this optimistic view, particularly with regard to the use of public resources. The main question is whether these resources are being well spent in relation to social needs. Firstly, there is an issue with the coverage of the scheme which currently reaches only 4,000 farmers per year out of at least 60,000 smallholders in this sector. Secondly, in the past, small producers received direct payments of US\$ 360 for annual technical assistance. Now, through the Productive Partnerships scheme, each producer receives US\$1,600 but this is paid to the large private companies including LIDER, SOPROLE, WALMART, etc. Furthermore, many of these large firms are not actually buying from the small producers but only delivering

technical assistance. According to an Agrarian Analyst (research interview conducted in June 2012):

“Chile must be the only country in the world that pays Walmart with public resources in order to deliver technical assistance to small producers and carry out extension activities. The other point of view is that the owners of these large firms make particularly good use of state resources in reducing or mitigating the technological risks facing their suppliers because they themselves will, in consequence, gain from access to a better product at a lower cost due to the subsidization provided by INDAP.”

This particular form of alliance between large firms and small farmers has its roots in the conservative government’s neoliberal view of the agriculture sector. The rationale is that small farmers will benefit from upgrading as a result of the higher quality requirements of the large firms. However, in practical terms, this upgrading is achieved using state resources which appear to contradict the government’s views on non-intervention and the efficient use of public resources.

In the next section I will analyse, in general terms, the cultural factors that affect the development of the agrarian sector and how these can be a barrier to accelerated development.

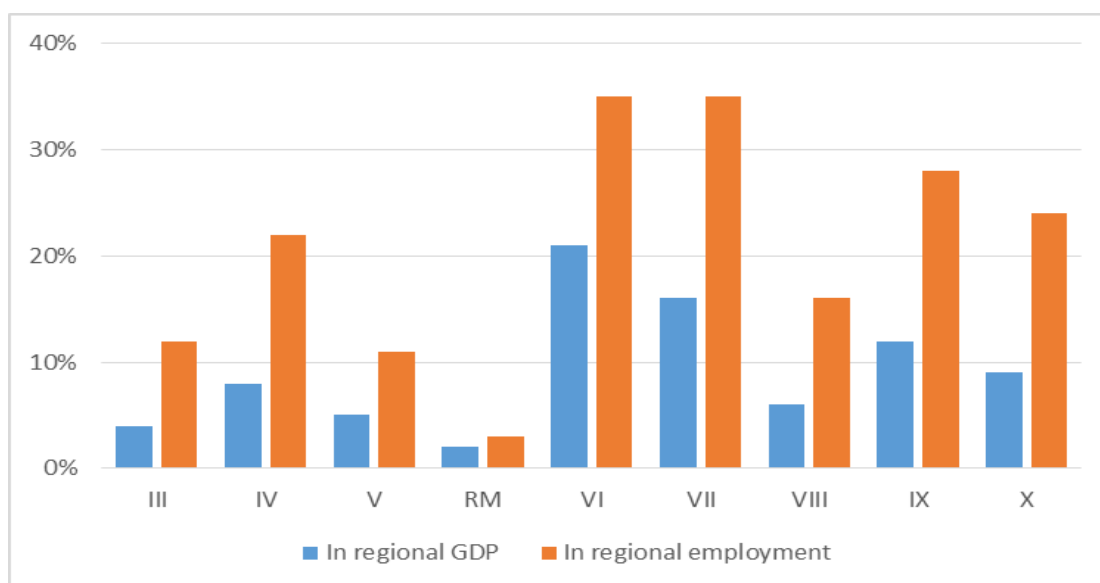
6.8 Culture and Social Conditions in the Agriculture Sector.

In order to understand the issues affecting the agricultural sector, it is necessary to take into account the culture of this sector. Generally speaking, the agricultural sector is very conservative in its beliefs and values. Research interviews with large farmers frequently revealed that they continue to hold extremely patronising views of the labour force and its characteristics despite the recent modernization and growth of the sector. In spite of the potentially beneficial impacts of schemes like ‘Alianzas Productivas’, the growth of the sector has been based around deregulation of contracts and working conditions and weakening of the position of SMEs in the farm sector (Agrarian Analyst, Research interview conducted in June 2012).

The current boom in mining and construction in the Chilean economy is creating a shortage of labour in the agricultural sector (Business leader, Research interview conducted in 2012). This has given rise to frequent calls from representatives of medium and large enterprises to deregulate the limit of 15% on the hiring of foreign farm workers to address the labour shortage. However, they have not considered that increased wages might attract more Chilean workers to the agricultural sector. The rates of poverty and indigence in agrarian regions remain amongst the highest in the country compared to the national average which suggests that the salaries received by farm workers and also the incomes of small-scale farmers are not sufficient to overcome poverty. Although levels of poverty have been falling among agricultural and non-agricultural households (OECD, 2008, p.115), the highest rates of poverty and extreme poverty are found in the agricultural regions (from region IV to region X) (Ministerio de Planificación, 2007). Six of the seven regions with poverty rates above the national average are agricultural regions: Bío Bío, Araucanía, Los Rios, Maule, Coquimbo, and Valparaiso. Of the 1,050,000 people living in poverty, 62% live in the agricultural regions. Rates of poverty and extreme poverty are 50% higher in the agricultural regions than in other regions (SNA, 2013).

As shown in Figure 6.5, agriculture accounts for a high proportion of total employment in Chile. In some southern regions (VI and VII), it represents 35% of total employment, despite the limited contribution of agriculture to GDP in those regions. As a result, public policies for agriculture can have an enormous impact.

Figure 6.5 Agricultural GDP and Employment



(Source: Central Bank of Chile & Statistics National Institute, 2013)

The salaries of those working in the sector are frequently insufficient for households to cross the national poverty line (calculated according to the ability to purchase the amount of calories equivalent to a basic food basket, currently estimated at US\$140 monthly per head). Families with two children or more are automatically below the poverty line because the minimum wage is approximately US\$400 a month (\$193.000 Chilean pesos). This connects back to the earlier discussion of the ways in which the large export companies and traders are putting pressure on the Central Bank to raise the nominal and real exchange rate, a change which would further negatively affect the income of the lower classes (although there would be some compensation from the increased levels of employment of those same workers as a result of the boost to the agricultural export sector that such a policy would provide). The higher the exchange rate, the lower the level of family income because of the increase in the cost of imported goods.

The conservative government recently considered some measures to improve the conditions of workers in Chile, for example, discussion of a new statute for temporary workers (in practice, this means modifying the national Labour Code). This legal project seeks to improve the rights of workers for example, to ensure the rights of temporary farm workers and the division of daily work when it is necessary. The government is

also considering subsidizing temporary workers. They are on short term contracts, and do not have the same employment rights and they are not eligible for income support/welfare benefits. The new statute for temporary workers would represent a change to the traditional culture of the agrarian sector by recognizing the important role they play in production and the need to improve their working conditions and respect their rights. This should be a starting point from which to improve the overall conditions of the labour force in the agriculture sector. But a union leader (Research interview conducted in March 2013) does not consider that the terms of the original statute are appropriate. She thinks that it is more advantageous to the entrepreneurs than to temporary workers. She points out:

“That this statute weakens the trade unions due to that the contract could be negotiated directly between the entrepreneur and the worker without a trade union presence to negotiate on behalf of the workers as a whole”.

Currently a new statute for temporary workers is under discussion that will offer workers more flexibility with cost charged on temporary works (instability in the job, illnesses, precariousness), seek to deliver more guarantees and social rights, jointly with potentiate the trade unions, to these workers.

But in this same context of flexibility, the over-riding logic of a largely neutral (i.e. with little interference in markets via public policy) development strategy undermines the positive effects of some of the measures described in this chapter and their potential for driving a transition towards a more sustainable and inclusive pattern of development. This is illustrated by the fact that levels of poverty and precariousness have risen in some regions. The most recent National Socioeconomic Characteristics Survey (CASEN) showed that in the regions where the agribusiness export sector is concentrated, (VI, VII, VIII and IX regions) poverty levels are higher than the national average.

The evidence suggests that the reduction in poverty in all of the regions where the major fruit and agribusiness multinationals are based is less than in the rest of country where other industries (services, mining and construction) dominate. Interviews with

representatives of firms in the agrofood sector reveal a view that innovation is reflected in better marketing campaigns and improved technology, but very few suggest that the quality and skill level of the workforce is a decisive variable in their priorities for innovation. This reflects a short term perspective amongst entrepreneurs in the agrofood sector and a lack of interest in enhancing productivity in a broader sense (although it is necessary to be prudent and not to generalize too much from this material).

Much of the discussion in this chapter has been quite general and focused on generalized indicators such as employment and poverty levels. What is clear is that improving opportunities for employment is a necessary but insufficient condition for creating and sustaining a balanced and inclusive model of development. Even authors (Moguillansky & Peres) who focus on territorial theory (endogenous growth) point out that a cluster policy featuring all of the elements discussed within previous chapters would not be sufficient of itself because it would be imposed from the top down with little participation from local communities. A NGO Director (Research interview conducted in July 2012) points out that:

“It is necessary to strengthen agriculture on a small scale to make it more sustainable in the long term. Also it is necessary take into account the productive characteristics of the local territories”.

Accordingly, a new industrial policy should consider the dimension of space, territory (and social fragmentation) such that it contributes to a higher density of SMEs across regions, jointly tackling poor working conditions.

6.8.1 Culture in the Agriculture Sector

Culture is not a separate axis of development, but rather the referential axis that unifies and invigorates the other dimensions of development. This holistic view has its foundations in a broad definition of growth which is not focused only on economic conditions. Without that broader definition, development is not socially sustainable in the long run. Therefore growth (in a broad sense) must be accompanied by a change in the economic and social framework. Accordingly, in addition to raising people’s living

levels, Todaro (1996, p.18) defines development, “as creating conditions conducive to the growth of people’s self-esteem through the establishment of social, political, and economic systems and institutions that promote human dignity and respect”.

But the entrepreneurial culture in the agricultural sector is extremely conservative and is rooted within a static view of development. Consequently, for development to be sustainable, it is essential to address culture as a factor in achieving a more inclusive society. Accordingly, Haroon Akram-Lohdi et al. (2007, p.391) claim that if agrarian policies are intended partly to reform these unequal conditions (exclusionary, economically inefficient, culturally alienating and politically disempowering), these policies would be not taking into account land-based social relationships in a broad sense. Culture is therefore a relevant dimension of development and is correlated with the power structures prevailing in society that are reproduced in the agrofood sector.

Growth through a deregulated agrarian market where dominant large companies establish their objectives without any consideration of the interests of small farmers and workers is unstable from the social point of view (Murray, 1997, p.43). It affects the living conditions of rural communities negatively, imposing the culture of the elite on small communities. Besides, with the current approach (growth and employment focused on external markets) the reduction of poverty is slow in the agricultural sector, with many workers being paid at levels below the national poverty line. These conditions (growth that concentrates ownership in the agrofood sector) reproduce the values of the elite in the agriculture sector lagging the development of the weakest actors (small farmers and labour). A trade union leader (Research interview conducted in March 2013) points out that:

“The agrarian entrepreneurs are entrenched in an old fashioned view of the sector. The public policies should be responsible for the work in first place. Also these should encourage the networks to have more negotiating power. A critical point is that the consumers punish the products that do not have fair conditions to their labour”.

Although the culture in the agriculture sector in general is old fashioned and backwards, external pressure from international markets is growing for fuller integration of workers

into a modern system of agriculture. Currently, the openness of many attractive markets to Chilean exports depends on firms meeting important social conditions (minimising damage to the environment, traceability, fair conditions for workers, etc.).

6.8.2 Social Conditions of the Workforce in the Agriculture Sector

Another major issue affecting the sector is the process of externalization (the increasing proportion of temporary workers) which is creating serious imbalances in the industry (Wilson & Caro, 2010, p.9). The trade unions representing the interests of temporary workers complain about the growing informality which has resulted from the influence of the so called *contratistas* (contractors) in the sector. According to a trade union leader (Research interview conducted in March 2013), the conditions of temporary workers are poor and worsening and are not consistent with the development and upgrading of the agrofood sector. He claims that:

“In recent months, we have witnessed massive layoffs of permanent workers in agricultural enterprises. Their compensations were sometimes paid and with this the group of temporary workers was increased. The market economy model works with a high demand for labour, as most workers offers employment, and so this lowers the wage. Undoubtedly, the temporary worker is still treated in a discretionary and abusive way by his occasional employer. Nonetheless, clear rules have been issued with respect to these jobs, but they are not being followed. The temporary workers are afraid to demand their rights, and accept what is offered, because they could lose their jobs. Here the full week is not paid and almost all the jobs are by piece work rates (*faena*). Most employers don't offer written work contracts, leaving the workers without protection (health, insurance). The vast majority of workers are temporary and within this group are women, who, in some companies, are most of the workforce. Today the ‘peasant union movement’ is sitting in round tables with employers and the government. We want to be true partners in the discussion and dialogue on the rights of all workers in our industry, employees and small farmers. On the other hand, we are starting to discuss possible regulations under a ‘Temporary Workers Statute’ and we must be called to give our points of view”.

But, on the other hand, Barrientos (2005, p.78) claims that there are differences in the stability of employment of female temporary workers depending on the size of the firm. She points out that in large firms, conditions are better for female workers, and they have longer contracts, whereas the women working in small firms (small producers and small exporters) have less stable and more flexible conditions of employment (“labour market segmentation in fruit”).

As argued throughout this chapter, the working conditions in the Chilean Agrofood sector need to improve substantially. The development of the industry has been enormous in recent decades, but all the efforts of upgrading (processes, firms, and products) and the pressure in relation to the introduction of certifications (more regulation), run the risk of being rendered meaningless without a strategy to tackle workforce issues. It may be that the example of changes in other sectors such as the mining and commercial sectors (Business leader, Research interview conducted in March 2012) will finally put real pressure on the agrofood sector to improve its own working conditions. Also a farm trade union leader (Research interview conducted in March 2013) points out that:

“We got funding from Holland for a project in CSR; and although we did not believe in it, we did it in order to that they convinced that the working conditions are very bad”.

The bottom line is that social organisations do not believe that these efforts are sufficient to improve poor working conditions. It is possible to conclude the authority carried out a few efforts to tackle this problem.

In the same vein, Peppelenbos (2005, p.187) argues that the Chilean agrofood sector has reproduced the archaic “hacienda” concept (patron-client scheme) which relies on interpersonal trust and paternalistic leadership rather than formal planning and control. This system of values and beliefs in the Chilean agriculture context lags a more modern development of small growers as the problems and solutions are defined by the patron. It also affects working conditions.

6.9 Conclusions

To summarize, we began by tracing development in the Chilean government under Pinochet, especially in the forestry sector, although this was largely to the benefit of the large firms. At the same time, Pinochet dramatically weakened the bargaining power of trade unions throughout the economy on the one hand, while he created the agency PROCHILE dedicated to promoting Chilean exports abroad on the other. From the 1990s onwards, the Chilean economy began to increase the export of non-copper products. This was based around the expansion of production of a number of different products such as fruits, processed fruits, wine, and new products elaborated in the agrofood export complex (although copper continued to form a large portion of the export basket). However, the conditions of SMEs operating in this sector have not been good. The government has operated a timid horizontal industrial policy focused on addressing market failures such as solving the lack of credit available to SMEs and the insufficient levels of innovation. In general, its policies have been oriented around non-intervention within the free-market. The insufficient associativeness of SMEs and the lack of explicit promotional policies from the state have culminated in weak industrial development in this sector despite the overall growth in levels of activity.

Within the chapter there has been a particular focus upon the unequal bargaining power of SMEs in relation to large export companies which has resulted in an unfair contractual system with conditions which do not favour small firms. Generally, the mainstream neoliberal position argues that this reflects the inability of SMEs to take advantage of the economies of scale available to the larger firms but the issues identified in this chapter also suggest the importance of the lack of state agencies in agriculturally-focused regions that might promote fairer relationships among the large firms and small growers. The GPN approach, in this case, has helped in identifying these gaps. Recommendations will be given in the next two chapters in terms of GPN's governance.

The chapter has also illustrated how labour conditions in the workforce have become a secondary concern in the agrofood sector. The dynamic economic growth of other sectors of the economy (copper, construction, commerce) with better working conditions has meant a migration from rural activities to the cities. This has opened the discussion on relaxation of the regulations on importing labour from other Latin-

American countries to substitute for the lack of local labour in the agrofood sector. Most entrepreneurs (even SME entrepreneurs) support this measure to fill the positions in their companies.

At the same time, the conservative government has recently attempted to pass a law tackling the conditions of temporary workers. Although this does not signify greater bargaining power, it is a step forward in the acknowledgement of workers' rights in the agrofood complex, especially those of temporary workers. Also here the GPN, as governance of local development, can help to understand these gaps and suggest tools to counterbalance the power of firms.

The state agencies with responsibility for the agrarian sector have played their part in addressing the challenges facing the sector but it has been far from sufficient. Further recognition of the asymmetries described in this chapter is required and public policy must give more direction to the sector. The industrial upgrading of the sector must be broader and not only from the economic point of view. This means that it must be a social upgrading so that the complex realities of SMEs and working conditions are not hidden behind the aggregate figures (as has been the case in respect of Chile Potencia Alimentaria). It is also necessary to look at each geographical region and analyse its productive potentialities and create region-specific conditions for balanced development that embraces the challenges facing local SMEs and promotes fair conditions for the workers in those production networks.

Chapter Seven: Analysis of the Fruit Sector.

7.1 General Productive Structure of the Fruit and Agro-fruit Sectors

Current Description of the Sector

Firstly, it is necessary to point out the complexity of defining the fruit cultivation sector in Chile. Fundamentally, it encompasses two main productive activities:

- a) Primary production, encompassing fruit production and packaging, including for export, and
- b) Agro-fruit production involving the processing of fruit commodities (dehydration, freezing, canning, etc.).

As explored in the previous chapter, the Chilean fruit sector has frequently been pointed to as evidence for the success of the application of free market theories to the real world. This alleged success is relative and, as demonstrated in the ensuing sections of this chapter, the accompanying costs of this success have been assumed asymmetrically by the different actors involved in the sector. It is true, however, that the fruit sector is extremely significant to the Chilean economy, hence the importance of understanding the trends, forces and outputs determining economic activity in this sector.

The fruit sector in Chile is very important in terms of production, exports and employment generation. This industry makes an important contribution to the economy of the country, which in 2011 reached 1.46% of GDP and 31.9% of the overall contribution of agriculture and forestry to GDP. According to a number of studies carried out in the sector, it is estimated that this contribution would be closer to 2.6% of national GDP if the set of linked activities (upstream and downstream goods and services, such as agrochemical products, seeds, transportation, refrigeration and exports, among others) was included (Fundación Sol, 2008, p.40). The industry in Chile involves 13,800 producers, 300 fruit nurseries, over 60 processing companies, 385 refrigeration chambers, 100 packing stations and more than 1,000 satellite packing stations in orchards (Sector Frutícola en Chile, 2008, p.4) The export sector includes

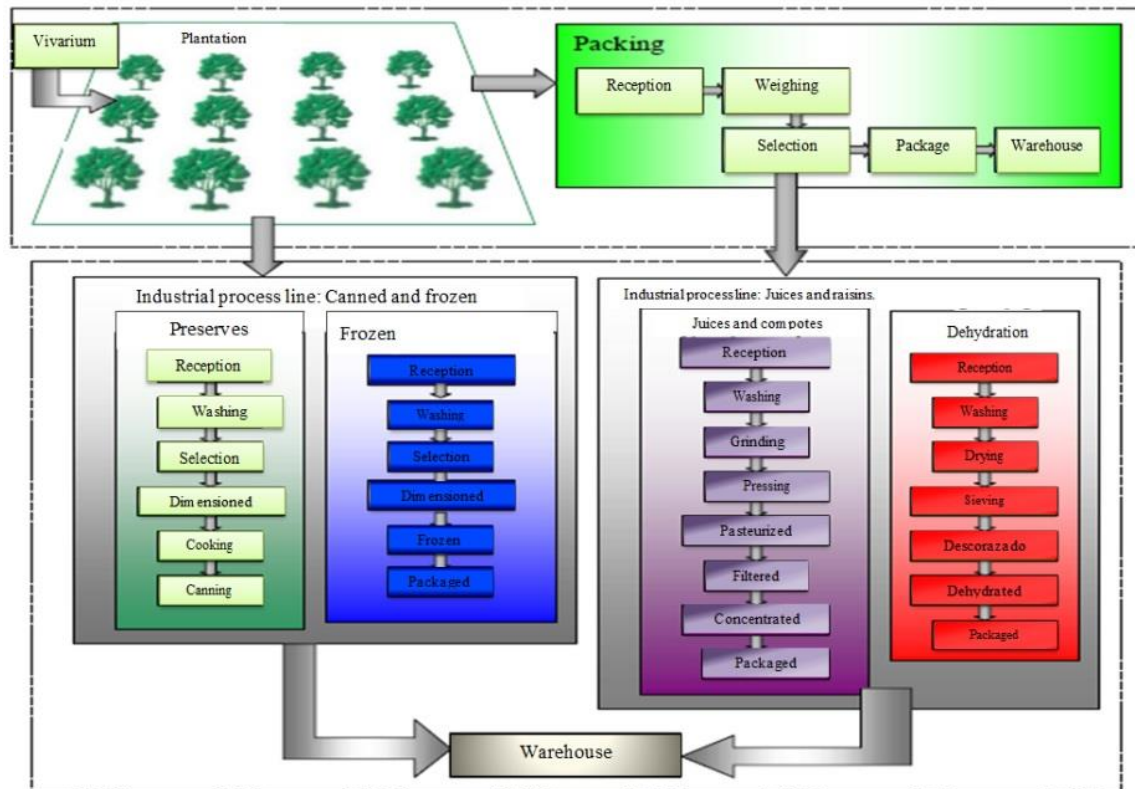
7,800 producers and 518 exporting companies. Over the last few seasons, the industry has generated approximately 450,000 direct jobs (180,000 permanent and 270,000 seasonal) and, through indirect employment in goods and services, employment for a million people at least, in total about 1.5 million jobs (Sector Frutícola en Chile, 2008, p. 3).

This chapter provides a critical analysis of the participation of SMEs and working conditions in the fruit sector. In Chapter Six, issues related to small farmers and their position in the production networks, and the conditions of labour in the agrofood sector were discussed. Small farmers even in the local areas where they develop their activities, do not share information about international prices of the products, about input costs, and mainly do not work in networks. When considering the working conditions in the case of fruit sector we find that most positions are temporary, precarious and weakly regulated by state agencies.

Characteristics of the Production Process in the Fruit Export Sector

The majority of Chilean fruit exports have their origin in the fruit farms located between the III and X regions of Chile. Primary production stages are carried out on the farms, starting with the management of orchards and ending in the harvest. At this point, the 'Packing' process is integrated, which aims to select the best fruit, pack it and then send it directly for shipment, to the 'finished product' warehouses, or to agribusinesses (see Figure 7.1).

Figure 7.1 Diagram of Fruit Processing



(Source: Fundación Sol, 2008)

The fruit export firms, depending on the size of the company, will either own the necessary equipment for the harvest period, or will hire it for the season. Similarly, the workforce can be classified as being employed on undefined or seasonal contracts, either directly with the company or through a subcontractor, to carry out the necessary farm activities during the harvest period.

The company may have orchards, storage sheds or an entire farm devoted to the production of fresh fruit, or it may produce fruit specifically for further processing (Agrofood). Some companies may produce fruit for more than one purpose. The requirements in terms of things like fruit species, variety and quality, and the growing and harvesting processes, vary depending on whether the company is producing fresh fruit or fruit for processing. In some cases, companies decide at the outset whether they will produce fresh fruit or fruit for processing and they may choose specific varieties for that purpose. In other cases, following the choices of the management of production, depending on the orientation of the business. Decisions are also taken at the time of the

main harvest, when some fruits which do not meet the required standard in terms of size or maturity may be left on the plant for later use. Similarly, after the harvest, not all the fruit initially intended for export will in fact be exported; some fruit that does not meet quality criteria may be used for agro-industrial processing (Fundacion Sol, 2008, p.15). For example, pomegranates or grapes, have to be sold fresh so fruit that does not meet the standard for export is sent to the agrofood industry for the manufacture of juice or to be canned or dehydrated.

There are also plantations whose sole purpose is to supply particular agro-industries. This is the case with numerous plum plantations where the complete harvest is intended for dehydration. Another example is the ‘canning peach’ where the harvest is sent in its entirety to be canned. Most fruit species, therefore, have multiple purposes. When there is an industrial purpose, the fruit can provide the raw material for several products. If we take the case of some fruits, for example, we find that they can be exported fresh. Another option is for the crop to go directly for freezing. In both cases, the fruit must meet a number of requirements including those of ripeness and size, otherwise it is selected for the manufacture of pulp for frozen or concentrates, or as raw material for the preparation of jams or preserves.

Table 7.1 outlines the total land area devoted to fruit cultivation in Chile from 1979 up to 2004. The area of land devoted to growing blueberries and raspberries shows the highest rate of annual growth over this period (20.6 and 8.9% respectively). However, in terms of contribution in the agrofood sector, fresh grapes is the leader with a participation in 2010 of 10.6%, 1.307 million dollars), followed of fresh apples of 5.1% (624 million dollars), and blueberries with a 2.5% (308 million dollars). (ODEPA, 2012, p.98)

Table 7.1 Fruit growing in Chile: main species – evolution of the surface (hectares)

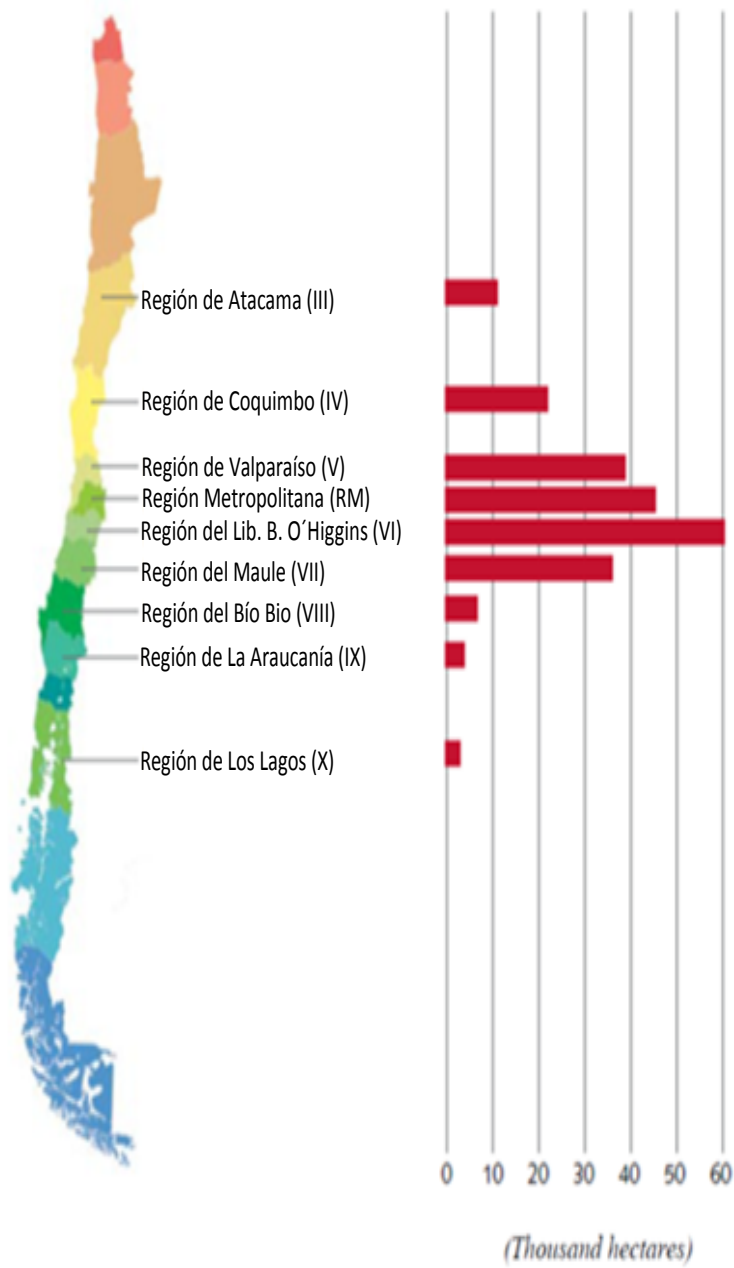
Species	1979	1989	2004	Annual growth rate 1989–2004 %
Cherry	1,530	3,500	7,200	4.9
Avocado	5,950	8,210	24,000	7.4
Table Grapes	11,800	47,040	48,500	0.2
Citrus fruit	11,600	12,460	16,680	2.0
Lemons	6,350	6,025	7,000	1.0
Oranges	5,200	6,100	7,800	1.7
Tangerines	50	335	1,880	12.2
Kiwi fruit	-	12,260	6,640	-4.0
Pomaceous	17,220	38,685	44,015	0.9
Apples	14,420	23,260	36,095	3.0
Pear	2,800	15,425	7,920	-4.3
Plums	3,400	9,550	14,460	2.8
Japanese plum	1,600	5,500	8,485	2.9
European plum	1,800	4,050	5,975	2.6
Peaches and nectarines	12,150	16,750	20,068	1.2
Peaches	7,500	10,150	13,168	1.8
Nectarines	4,650	6,600	6,900	0.3
Apricots	1,500	2,000	2,400	1.2
Minor species	3,050	7,215	16,522	5.7
Blueberries	-	150	2,500	20.6
Raspberries	1,500	1,800	6,500	8.9
Nuts and olive trees	11,300	13,730	21,430	3.0
Other fruit trees **	1,500	4,050	7,522	4.2
Total Fruit Trees plants	79,500	171,400	221,915	1.7

(Source: ODEPA 2006)

** Including strawberries, cactus fruit, custard apples, quince and others.

The 70% of total land area dedicated to fruit production is concentrated in the V, VI, VII regions and Metropolitan Area (Santiago) where the climate is temperate (Figure 7.2). The most impressive increase is seen in the IX and X regions (in the South of Chile). The main products of fruit cultivation sector in these regions are grapes, apples, plums and peaches.

Figure 7.2 Total land area planted with fruit trees in Chile by region.



(Source: ODEPA-CIREN, 2007)

Evolution and Development of Fruit Exports

The growth of the fruit sector, especially non-traditional fruits (berries in general) has been dramatic. From 1975 until 2011, the growth rate has been 10% per year (Central Bank of Chile, 2012). As explained in the previous chapter, the impetus for this expansion came from the deregulation policies applied in Chile under the Military Government. The opening of trade under the Pinochet dictatorship in 1975 provided an incentive for producers to take advantage of static comparative advantages and so encouraged economic expansion under a traditional export development model, based mainly on commodities, with a concomitant gradual decline in the viability of agricultural activity aimed at the domestic market. These comparative advantages were the climate (temperate and Mediterranean in Central Chile, where the most important production of fruits and agrofood is localised), cheap labour, stability in institutional arrangements and also the counter-seasonality of production with respect to the major markets in the northern hemisphere. According to this view, the state played a minimal role in the success of the strategy and it was the unleashing of market forces that allowed for the evolution of a productive environment that could work for everyone.

Also, it has been remarked, in this optimistic view, that Chilean agro-fruit businesses were successful due to the Chilean government's adoption of a planned strategy of internationalization (Silva, 1999, p.7). In Chapter Six it was discussed that this strategy is based on full trade openness, a simplified refund policy to nontraditional exports and activities organized around its own competitive advantages. The advocates of this position point out that several Chilean agro-fruit industries have gained positions of global prominence within particular industries (Portilla, 2000, p.36). Such arguments also tend to suggest that this strategy helped to maximize employment levels and had a significant positive impact upon the growth of national income. Proponents of these views tend not to consider any of the more complex elements of the relationship between small farmers and large companies in the sector.

In the 1960s, frequent balance of payments crises lead Frei's government to promote the expanded production of exports, both traditional and non-traditional. However, the potential for exploiting comparative advantages were reduced by protectionist policies

and the inefficiencies of a productive system that contained many distortions (Maloney, 2002, p.33). Nevertheless, according to Jarvis (1992, p.2), from the 1960s, the state had begun to play an increasing role in promoting the expansion of the fruit sector through the activities of CORFO. In Chapter Five we analysed the role of CORFO in the economy and how this state agency evolved in the seventy years from its foundation. It is not a coincidence that in the 1960s, CORFO had contributed to the process of industrialisation in general in Chile and that it had also encompassed the fruit sector.

Jarvis specifically points out how the activities of CORFO enabled Chile to adopt, adapt and further develop fruit technologies that had been developed for California and other fruit producing regions (Program Chile-California). Interestingly, he remarks that:

“although the public sector was responsible during the 1960s for developing the scientific expertise and the technological base that initiated the fruit sector's growth, the private sector was the motivating force for the substantial, varied and broadly diffused technological advances which occurred after 1974 and which have been directly associated with Chile's expansion into international markets.”(Jarvis, 1994, p.20)

CORFO's interventions in that period included: analysis of the existing fruit in orchards to determine quality of existing varieties, analysis of potential demand in foreign markets, development of production goals, introduction and evaluation of new varieties, establishment of nurseries to propagate plants free of disease, construction of refrigerators in strategic locations to promote post-harvest care, phytosanitary inspection of exported fruit, and establishing lines of credit and favourable working capital, in addition to the refund of customs duties on fruit exports (Silva, 1999, p.7). The establishment of the National Institute of Agricultural Research (INIA) in Chile in 1964, as explored in the previous chapter, was also important. As a result of all of this, the Chilean fruit sector developed the scientific knowledge necessary to facilitate technology transfer from other countries, it began identifying and planting new varieties suitable for foreign markets, it developed improved orchard and post-harvest management, was able to draw upon improved fruit research and teaching, and gradually developed the necessary infrastructure to export fruit to foreign markets.

During this period, several exporting companies increased their experience of working with foreign markets.

Also, it has been remarked, in this optimistic view, that Chilean agro-fruit businesses were successful due to the Chilean government's adoption (Pinochet's government) of a planned strategy of internationalization (Silva, 1999, p.7). In Chapter Six it was discussed that this strategy is based on full trade openness, a simplified refund policy to nontraditional exports and activities organized around its own competitive advantages. The advocates of this position point out that several Chilean agro-fruit industries have gained positions of global prominence within particular industries (Portilla, 2000, p.36). Such arguments also tended to suggest that this strategy helped to maximize employment levels and had a significant positive impact upon the growth of national income. Proponents of these views tend not to consider any of the more complex elements of the relationship between small farmers and large companies in the sector.

In addition, the agrarian reforms implemented by the Frei and Allende governments brought to an end the so called 'Latifundio' (Kay, 1997, p.81). However, under the new military government these lands were either returned to their original owners or subdivided and distributed as 'parcelas', but many of the new owners had to sell their land as they could not work it. (It was analysed in the Chapter Six).

In the last decade, the Chilean fruit industry has been consolidated as one of the main export activities of the country. The export orientation of Chilean fruit growing is also expressed in the fact that about 80% of the country's fruit production is exported, both as fresh and processed fruit (ODEPA, 2012). Of the total exported, 80% corresponds to fresh fruit and about 20% to fruit with some degree of processing.

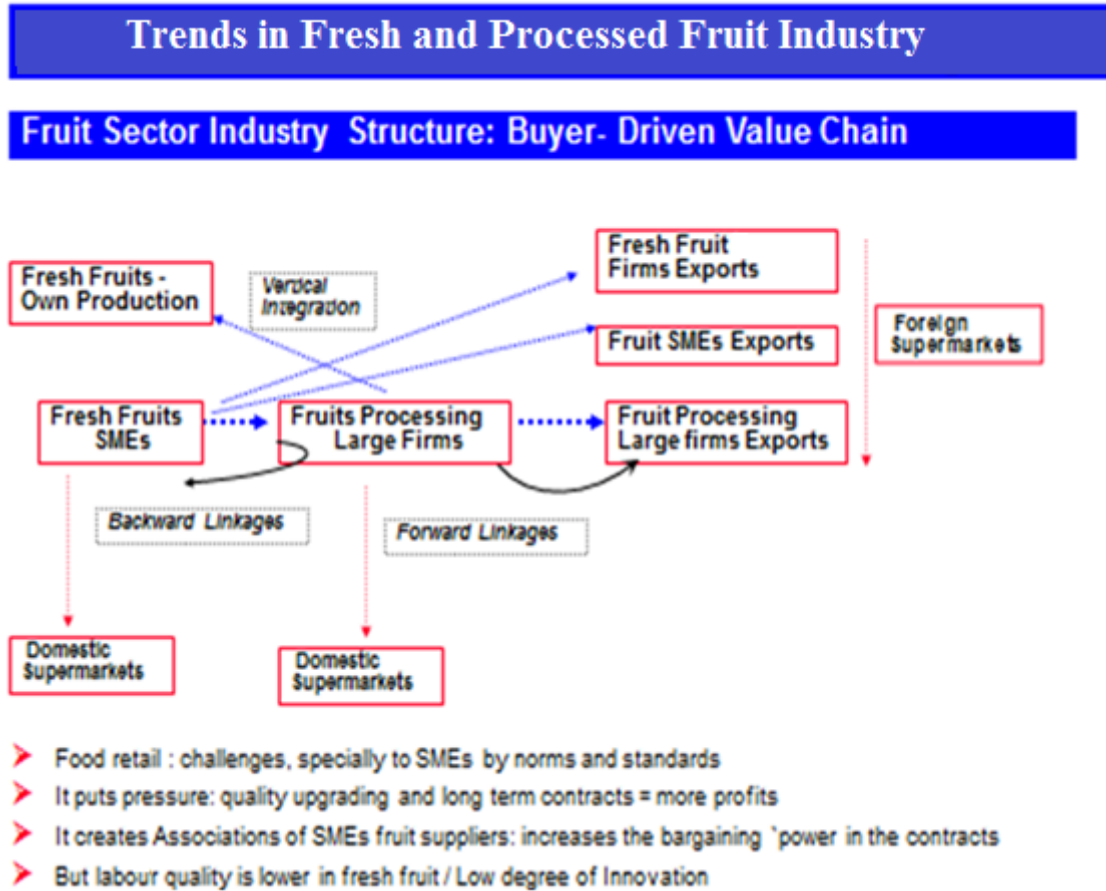
Together with diversifying export varieties, on-going public-private collaboration has sought to open and incorporate new markets. Chile is currently exporting fresh fruit to more than 100 countries and is the leading producer of fresh fruit exports in the Southern hemisphere, supplying nearly half of all exports of grapes, apples, kiwi fruit, avocados, plums, peaches, and pears from this zone. In 2011, 36% of Chilean exports of fresh fruit were exported to the United States, 25% to European Union countries, 10% to South and Central America, 4.2% to the Middle East and 10% to the rest of

Asia. Chile is now a major off-season fruit supplier for the main world markets and contributes a significant proportion of the fresh fruit imported by the United States, the European Union and Japan. The significant expansion of the Chilean fruit sector has gradually led to the country being recognized abroad as a world class fruit and vegetable supplier. Fruit is one of the products that are most strongly associated with Chile as a country of origin, according to recent studies of international perceptions of Chile's image (Albornoz, 2008).

Trends in the Fruit sector

Before examining the industrial structure of the fruit sector in greater depth, it is necessary to outline global trends in the industry and how they have acted to define the institutional arrangements in the sector in Chile. In particular, it is important to understand the direction of change in the global fruit industry and how the Chilean fruit sector, in all its complexity, needs to respond those new realities. A critical point is that most processes of change are being driven by large global firms, and in the globalization of the fruit market, the role of SMEs has generally been as spectator (see Figure 7.3). As explained in Chapter One, the GPN as a methodological approach is useful to demonstrate that the networks of firms (particularly SMEs and small farmers in the fruit sector) have not developed sufficient global connections. These connections are weak even in the regions where they work (insufficient knowledge, lack of information in detail of international prices, etc.).

Figure 7.3 Industrial Structure of Fruit Sector



(Source: Own elaboration)

In Figure 7.3, it is possible to show trends in the fruit sector. Using GPN, we can point out that our focus in this research are the small farmers (fresh fruits-own production and fresh fruits SMEs). This figure reflects the issues affecting small farmers and SMEs which is the main focus of your research. It demonstrates why external upgrading in response to the stringent requirements of international markets does not lead automatically to an improvement in the financial returns or working conditions for small companies as they sell a lot of their produce to large export firms.

Also the prospects for these small growers should improve due to the actual trends related to need of good habits of consumption. This push factor should be a force to have more stable small growers. But it is weak because of their limited bargaining power

One of the major global developments that have affected the sector over recent years has been the way in which increased awareness of the importance ‘healthy eating’ has increased the demand for fresh fruit, due to its positive effects on health. Some of these trends are described in Table 7.2:

Table 7.2 Good habits of consumption.

Preferences and habits of consumers	<ul style="list-style-type: none"> a) Trend towards consumption of healthier foods. b) Growing concern, in relation to health, leading to demands for traceability of foods and limiting the environmental pollution of productive processes. c) Increased demand from markets for specialty, functional and dietary food. d) Increase of the participation of women in the job market, reduction in the size of families and decreasing availability of free time have caused consumers to prioritize the convenience of processed food.
Demography	<ul style="list-style-type: none"> a) Growing population rates boost consumption growth. b) Increase in life expectancy generates a demand for food from the niche of ageing groups. c) Increase in per capita GDP, in developing economies, leads to a higher demand for this type of food (fruits)
Regulations	<ul style="list-style-type: none"> a) Regulatory requirements (sanitary certifications, traceability) are growing in the majority of countries
Markets	<ul style="list-style-type: none"> a) Integration of retail chains and an increase in the participation of private labels increases the power of last chain link, exerting growing pressure on producers. b) Increase in the participation of food service in consumption poses opportunities and challenges to producers.

(Source: Boston Consulting Group, 2007)

All of these changes (be they demographic, related to new habits in consumption or new regulations) have acted to gradually change the ways in which the economic surpluses generated throughout the global production network of each individual commodity are distributed. They have also created space for rearticulating the economic relationships involved within the production networks. Some of these changing external conditions (such as the spread of quality certification, which has its origins in developed markets) have offered opportunities to boost the upgrading of firms and players in the productive

structure. Some forms of certification, for example, are related to achieving “best practice in the agrarian sector” which includes the right of workers in the sector to have good working conditions (fair salaries, access to social rights, foods and acceptable sanitary facilities and working conditions, etc.) and the farms should be environmentally friendly.

7.2 Debate in the Internal Dynamics of the Fruit Sector: Labour, SMEs and Concentration.

We have just described the fruit industry as an industry that has a regional presence, where there are more than 16,000 producers. There are 597 exporting companies which supply to more than 1,300 importers of fresh fruit around the world. Nearly 80% of the fruit produced is exported fresh. The industry generates employment mainly in the regions, being an important sector in regional employment from the III to the IX regions of the country (Central and Southern Chile). The fruit sector generates employment for 150,000 permanent workers in the fields, packing plants and cold storage as well as for 300,000 temporary workers (CORFO, 2008). In total, the fruit industry generates 1,139,980 jobs, including those in the ancillary industries linked to fruit. Of these jobs, 85.7% are seasonal and 14.3% permanent (ODEPA, 2007) (see Table 7.3).

Table 7.3 Employment in the fruit industry

Sector	Employment	Percentage
Primary Fruit Culture	250,000	22
Fruit Processing	170,000	15
Ancillary Industries	719,980	63
Total Industry	1,139,980	100

(Source: ODEPA, 2007)

But the fruit sector has some special characteristics. For instance, with regard to the fruit growing trajectory, the stabilisation of instability is a phenomenon which is observed at the posts of work (Rodriguez & Venegas, 1991, p.135). They point out that temporary workers work more than a season in the same firm, or from the point of view of the

firm, that it has its own set of temporary workers. This longer term relationship is built on the basis of personal nexus (non-contractual).

Turning to the relative size of the various productive units that make up the sector, Table 7.4 shows the distribution of types of producer across the different regions of the country according to the number of firms and the size of their land holdings. This illustrates those small producers comprise around 19.7% of the arable land in Chile, whilst they account for 70.8% of the total number of firms within the sector. Medium-sized firms, account for 37.1% of the national territory but they only amount to 21.4% of the total companies involved in the sector. Finally, large companies comprise 43.1% of land holdings but only make up 7.8% of fruit sector companies.

Table 7.4 Number and Types of Fruit Producers distributed by Region in 2008.

Regions	Small firms	Medium Sized firms	Big firms	Total	Distribution
III	429	43	30	502	3%
IV	1,353	169	85	1,607	10%
V	3,126	566	201	3,893	23%
RM	1,393	656	281	2,330	14%
VI	1,952	996	270	3,218	20%
VII	2,361	791	308	3,460	21%
VIII	815	183	48	1,046	6%
IX	163	57	31	251	2%
X	75	61	27	163	1%
Total	11,667	3,522	1,281	16,470	100%

(Source: CORFO, 2008)

There is a considerable level of concentration in the fruit sector. In addition to the problems that the large numbers of small producers face with regard to the limited size of their farms and their lower productivity, as argued more generally in the previous chapter, small fruit producers predominantly sell their production to large firms and frequently assume high risks in these transactions. The interviews conducted for this research confirmed that for most small producers, their major challenges were not necessarily related to their small scale or low levels of productivity but rather to the lack of regulation and control of their contractual relationships. A Small farmer (Research interview conducted in March 2013) points out that:

“We fix the prices of fruit with the export firm before delivery. But they never fulfil these prices, except one of them. The rest of the firms say they will pay us 8 to 9 US\$ per box but later they come and say that the grapes have deteriorated and create other excuses in order to pay less. As we do not have a contract, we have to take the money, and when they do make contracts, these are really bad.”

Another small farmer from the same valley (small farmer, Research interview conducted in March 2013) points out that:

“We only know at the time of settlement how much we will receive for our grapes. We finish producing at the end of February and only know the price of the grape in June or July. This is one of the largest problems that we have as farmers due to uncertainty in the price”.

The apparent success of the fruit sector, so extolled by the Chilean government over recent years, is not, therefore, without its critics. Generally speaking, the wages are low (although they have risen recently due to a low supply of labour) and are frequently very close to (or even below) the poverty line (NGO Director, Research interview conducted in July 2012). At the same time, there is an urgent need to improve the prospects of the smaller producers in the sector, in terms of improving their financial and technological autonomy and enabling them to improve their positioning within their negotiation processes with their contractors. This suggests the importance of facilitating in-depth research on the role of public policy in creating the framework and conditions within which to develop new versions of industrial policy for the sector. This new

‘industrial policy’ will have to take into account the specific characteristics of the fruit sector with a particular focus on SMEs and investment in workforce training (Moguillansky, 2013; Agosin, 2013). The next section moves on to consider some of the negative influences originating from the excessive concentration in the fruit sector, starting with the role of marketing companies.

7.2.1 The Role of Marketing Companies in the Industrial Structure of the Fruit Sector.

According to Murray (1997, p.47) the growing role of multinational and large-scale national firms in the Chilean agricultural sector has been decisive in determining market power, levels of concentration and unequal relations in the negotiations of contracts within the fruit sector, and all of this is reflected in the distribution of economic surpluses. These marketing companies have restructured and affected the small agrarian economies creating opportunities and conflicts.

In the specific context of the Chilean fruit sector, marketing companies play several roles:

- a) Marketing (channels of distribution abroad),
- b) Technology adoption, adaptation, transference
- c) Provision of finance for growers

The discussion that follows draws heavily upon but also extends the analysis of Murray (1997:47–8)

Marketing

Large export companies play an important role in the promotion of Chilean fruit in export markets. They provide the facilities necessary for the preparation, packing and cold storage of fruit, without which many small producers would be unable to export their production (although this contention is discussed in more detail in the following section). They seek to capture large amounts of Chilean production, in order to achieve the scale economies needed to justify their investments, and in so doing, they can exert bargaining power in the countries they export to.

Technology

Murray (1997) argues that given the lack of a strategic approach towards the development of the sector during the first years of Pinochet's dictatorship, the export companies played a remarkable role in the identification, adaptation and transfer of a wide variety of fruit technologies (e.g. the Chilean company, David del Curto, developed new varieties of seeds at that time).

Provision of Finance

The export companies have also created a finance system for the growers. In fact, they operate as banks. They have acted as a substitute for the provision of formal banking services to the small growers, who would not otherwise have access to credit. Under this system, the securing of the supply of products to be exported is carried out under short-term contracts through which credit is offered to the producer at a real annual interest rate of 8–12%. This advance of money is to cover all production costs plus a proportion of living costs. The grower (producer) is expected to follow a strict timetable for the application of inputs during the season (these inputs are mostly provided by the companies). An agronomist is also frequently sent by the companies to monitor progress. After the harvest, the crop will be delivered by the grower to a packing facility on the date stipulated by the firm. Fruit must satisfy a standard, which was established in the contract, or it will not be accepted. Once packed, the fruit will be taken away for refrigeration and shipment. Payment for some fruits (grapes, apple, peach, etc.) is made through what is known as the 'consignment price system' (Murray, 1997, p.48).

Under this system, the net return to growers can be calculated as follows:

- Price received from the export companies
- Less advanced credit plus interest
- Less costs of inputs (machinery, even labour) plus mark up
- Less agronomist charges
- Less a commission (between 8–12% of gross return)

A debt clause states that the farmer will have to supply all his production to the firm until full payment is made. But the view expressed by a government official (Research interview conducted in May 2012) is slightly different. He claims that:

“They write a monthly report with all the international prices of the fruits. It is useful to the small growers and producers as input in the negotiations with large export fruit firms.”

Although it is relevant to the negotiation process, the non-existence of formal institutional mechanisms for price-setting means the existence of the report does not guarantee fair prices.

In addition to these large, extremely well-organized marketing companies, other ‘footloose’ companies also operate in the sector. These companies simply buy and sell fruit (and other commodities) as intermediaries. When entering into agreements with these companies, small farmers have to be able to provide technological and financial capabilities themselves. This tends to create a situation whereby it is increasingly only medium and larger scale farmers who are able to remain in the market. Some of these ‘footloose’ firms hire the facilities and infrastructure of export companies, although most of their interaction with small growers is carried out through a system called ‘credit-contract-consignment’. Also, according to Murray (1997, p.49) this has boosted the formation of by small growers of export associations so they do not depend on large companies in order to export their products. These associations create their own channels of distribution, get credit at advantageous rates, and are able to monitor the international prices of the goods that they export more effectively.

According to Casaburi (1999, p.121), on the other hand, one important factor that has contributed to solving these problems in the contracts along the productive chain is the active competition of small growers. Casaburi also points out that: “exporters depend on the grower’s general improvement, including their ability each year to offer more and better-quality fruit. This dependence explains the extensive assistance most exporting firms offer to their growers, and the fact that most growers tend to stay with the same exporters for several seasons.”

In the following section I will analyse the issue of innovation in the context of the fruit sector using the GPN approach.

7.2.2 SMEs and the Global Production Networks.

One of the interesting issues revealed by the interviews conducted for this research, is that innovation processes within the sector have largely been driven by the large export firms due to the fact that they must meet certain quality requirements set by their clients (in this case large supermarkets and retailers). These higher requirements originate from the increasingly strict regulations that exist in international markets (traceability, respect for the environment, carbon footprint, etc.) as explored earlier in the chapter. This kind of innovation is asymmetrically distributed in the Chilean fruit sector. The largest companies are extremely concerned about these standards and have created units and departments with specialists to monitor the performance of these indicators (Human Resources Department, Technical Department, etc.) while the SME firms, especially small farmers, do not possess the financial resources to tackle these challenges on their own. A small farmer (Research interview conducted in March 2013) points out that:

“They don’t have to send our grapes to market under our name. On the contrary, the grapes are sold as Frutexport (a large export firm) and they don’t even have to specify the valley of origin which would help to strengthen the region. We state that we want to innovate and go into fair trade abroad using our own name”.

In the case of fresh fruit, according to interviews conducted with officials in PROCHILE, the opportunities for innovation relate mainly to commercialisation, channels of distribution and new niche markets e.g. organic food. The latter provide potential alternatives for small business and organic food is a very well-established market, but it is necessary to achieve certification due to the stricter conditions set by buyers in these international markets. As the fruit sector, according to Gereffi’s classification, is embedded in a ‘Buyer-Driven Chain’, the lead firms (in these cases, supermarkets) set the conditions and these results in other firms in the value chain having to upgrade.

Following this logic, one of the PROCHILE representatives interviewed pointed out that:

“In the case of agro-industry, every company starts to improve their competitiveness based on their target markets. If you want to export to Walmart, Walmart’s rules should be the norm, but if I want to export to Europe I require Casar regulations and, if I want to export to the UK, I must have Tesco regulations. In the Chilean case we are far from a single model. There are firms abroad that do not ask certain certifications to the exporters and are now requesting them all and all must have a GLOBAL G.A.P⁹ and export firms have to comply otherwise they cannot export”.

When some small producers were interviewed during the research about whether these more stringent conditions have been reflected in a better price for their product, the answer was positive on the whole. For example, addressing sustainability issues has generally led to improvements in quality which can be equated with better agrarian practices. There were, however, differences in the responses from different types of producers. The smaller farmers who sell their production to large companies found that any improvements they made were not generally reflected in better prices, because of the nature of their contractual relations (this, it was frequently claimed, acted as a significant disincentive for carrying out innovations in a more sustained way). On the other hand, where small producers of blueberries and other similar fruits, for instance, have formed an association in order that they themselves commercialize and sell their products in the market, it has been possible for them to internalise the price improvements from undertaking innovations, not least because they have been able to be selective in their choice of distributor. Their bargaining power as a block means that they have been able to negotiate improvements in the conditions related to price, transport, insurance, etc.

In the following section, I will explore working conditions in the fruit sector. Some of these concepts were already discussed in Chapter Six.

⁹ GLOBAL G.A.P (global good agrarian practices): Certification System is made up of interlinking mechanisms that ensure the proper development, implementation, improvement, integrity, transparency and harmonization of certificates in the agrarian activities.

7.3 Labour Conditions in the Fruit Industry

As discussed in the previous chapter, the undoubted economic success of Chilean agribusiness has not been shared in equal proportion by all participants within the sector. The conditions faced by many of the workers in the industry make something of a mockery of the official 'Chile Food Power' mantra promoted by the government. As discussed in the previous chapter, the neoliberal restructuring of Chilean agriculture has had a dramatic effect on the composition of rural labour and as Kay (2002, p.481) points out, a large number of the temporary wage workers are employed in fruit production for export. Also Venegas (1992, p.226), in a study of the social impact of the fruit industry, concludes that workers have an unfavourable opinion of their current conditions of employment (derived mainly from low wages).

The notion of 'temporary' refers to those who work seasonally. The fruit industry generates one million one hundred thousand jobs in total including the ancillary industry that is linked with the processing of fruit. Seasonal work represents 85.7% of total employment in the sector and only 14.3% of the work is permanent.

When the primary fruit activities are analysed together with fruit processing and the ancillary industry, the latter accounts for 63% of total employment in the agro-fruit sector. The ancillary industry is more closely linked to fruit processing because of the range of services involved (more intensity in electricity, packing and canning, cleaning services, marketing, etc.).

Angie Mendoza, a researcher at the NGO the Centre for Development Research for Women (CEDEM)-, claims that the labour market in the fruit sector has become increasingly feminized, as a strong new sexual division of labour has taken hold in the Chilean fruit export business (cited in Mendoza & Donoso, 2011, p. 1–8). In this new scenario, firms hire mostly women leading to a significant transformation of the dynamics of the sector, new trends in relation to migration, flexibility and precariousness during a period of considerable economic expansion.

As part of this process, the number of female labour migrants has greatly increased and women have become an important part, even a majority, of agricultural labour markets

in the fruit sector. However, the growth of female labour has not offset a wider trend towards labour shortages. This has led to calls from entrepreneurs for the percentage of foreign migrants legally allowed in the total workforce of a company to be increased from 15% to 30%. A large Entrepreneur (interview conducted in March 2012) points out that:

“If there is more labour supply, the cost of labour will not increase and this measure would not be negative”.

Alongside the flexible insertion of temporary female labour into the fruit production chain, other recent changes within the sector have included greater economic integration amongst the firms operating in the sector, an increase in the use of chemical inputs and a deepening of the phenomena of regional specialization and monoculture. All of this has been accompanied by continued overall expansion in the volume and value of fruit exports (ODEPA, 2007).

The intensifying flexibility and feminization of the agricultural labour market has had a series of impacts. Above all there has been a significant increase in job insecurity and the difference between the number of people hired as permanent workers and those hired on a temporary basis continues to grow. Hours and conditions vary depending on the cycle of fruit production, whilst wages are difficult to predict and unstable due to the fact that workers are paid piece work rates, other social benefits are practically non-existent. Figures from Fundacion Sol (2008, p.51) confirm this pattern of precarious employment and also chart the growing presence of women workers within the sector. They found that 70% of the total numbers of people employed in the agriculture and livestock industry were workers with low qualifications ('jornaleros') or employees in private companies, whereas skilled workers and farmers represented only 30% of total labour. It is also interesting to note that among the operators of general fruit machinery (as well as those involved in the preservation of fruit, legumes and other vegetables) the female participation rate was greater than 50%. They also found that whilst two thirds of workers had a written contract, of these, only 34% were on long term contracts, 18% on temporary contracts and 45% paid piece work rates. In other words, just one in three workers have a more stable work position. Interestingly, the situation facing women is even more precarious. In the case of those employed in the preservation of fruits,

legumes or vegetables (or as fruit machine operators) the classification ‘women and seasonal work’ is four times higher than men, which reflects the complexity of the fruit industry in relation to the working conditions of women.

Internal migration is another important characteristic of labour within the fruit sector. Agricultural exports depend on cycles in the international market; this is further complicated by the significant levels of geographic specialization in production. This encourages the displacement of workers and generates significant internal and external migration flows. Temporary labour migration and displacement from urban to rural areas, together with a lack of protection of their basic rights result in a continued precariousness of the agricultural labour market. Also, there is great interest among local entrepreneurs in raising the limit on the number of foreign workers they can employ, thereby reducing the constraint on them to employ local workers in Chilean agriculture. Chilean law allows firms of 25 or more workers to employ up to 15% foreign workers, smaller firms can employ 100% foreign labour. An agricultural trade union leader (research interview conducted in March 2013) points out:

“Agricultural entrepreneurs prefer to use cheap foreign labour instead of improving the conditions of local workers (salary, length of Journey, etc)”.

Union leaders are very concerned about this issue because they see it as a threat to the definitive improvement of working conditions.

According to Mendoza & Donoso (2011, p.2), temporary workers in the agribusiness sector face significant health problems that relate particularly to the seasonality of the fruit cycle. An Agrarian Analyst (Research interview conducted in June 2012) claims that the origin of these problems lies in the lack of control and poor compliance with the laws relating to benefits (pensions and health). He acknowledges the existence of several specific laws that should in principle protect workers but argues that these have not been properly enforced by the public authorities. A Business Leader (Research Interview conducted in March 2012) explains that:

“In the fruit sector, the situation has been worsened by the role of contractors, suggesting that “the relationship of the agrarian market with the contractors is a

disaster”. He claims that some entrepreneurs believe that by hiring contractors (intermediaries), the problem of the benefits of agrarian workers is solved but in reality many of these contractors do not respect the benefits workers or even, he argues, extract for their own purposes money that was dedicated to cover the worker’s benefits”.

This demonstrates that the state resources allocated to control and regulation in the agrofood sector (fulfilment of contracts, social rights including pensions and health) are insufficient and a new development strategy for a better coordinated industrial policy is required that addresses these problems.

Skills acquisition

The Chilean fruit industry clearly needs to move in a direction that provides better conditions for its workforce in order to avoid problems of health, precariousness and low salaries. It was already addressed in Chapter Three in terms of needs and requirements of an industrial policy applied to SMEs. Part of responding to this challenge involves developing the skills of the workforce in the sector.

Consistent with the theory of Global Production Networks and linking it with the framework of Global Value Chains, the workforce is seen as part of the initial endowment of a territory and transformed through education and training as a source of competitive advantage for firms located in this territory. According to Gereffi et al. (2011, p.3)

“Through the combined efforts of governments, businesses, education and training providers and labour force intermediaries, employment in value-adding industries can provide pathways out of poverty through formal employment, career advancement and adequate social protections that are unavailable in informal economies and microenterprise-driven livelihoods”.

Although the rising quality controls exerted by external markets (certifications, fair trade, Global.G.A.P norms) have created an enormous pressure to upgrade products and processes along the value chains in the Chilean fruit sector, there has been something of a dispersion of the efforts of public and private agencies in terms of developing a more skilled workforce to respond to the challenges of upgrading the sector. Business

associations such as Corporacion del Vino, Federation of Fruit Growers (FEDEFRUTA) and others, have grouped together medium-sized producers and helped them grow their businesses in new international markets. These associations participate in international fairs, promote the products of their partners and carry out ‘market intelligence’ to find new market niches.

However, these joint efforts carried out by the industry are not sufficient to upgrade the whole fruit industry and its components . From the majority of interviews conducted for this research, it is clear that there is a real concern about how to increase the productivity of labour in agrarian activities. However, in practice this is not a priority for managers and owners. It is necessary to divide the workforce into two categories: one is skilled and specialized (managers, technicians, oenologists, and people that in general develop complex processes related with the more technical aspects of these industries). The other larger group with low skills is mainly employed on a seasonal basis.

One potential way for the Chilean fruit sector to upgrade successfully (it was argued in Chapter Three that social upgrading was more relevant (important) than economic upgrading) is for the producers within the sector to find new market niches.

In the Figure 7.4, the three types of economic activity within this sector are examined:

- a) **Production:** This is the entry point for fresh and processed fruit. It provides a basic opportunity for low-income countries to export higher value-added agricultural products.
- b) **Packing and Cold Storage:** countries that wish to increase the value of their exports and to improve the quality of supply for their clients will invest in improving their packing and cold storage systems. This can include sophisticated packing for fresh fruit and vegetables, such as ready-to-eat products, that are pre-washed, cut, and bagged.
- c) **Processed fruit and vegetables:** Once the basic production stage has been successfully achieved, a country can begin to invest in developing the infrastructure and workforce capacity to engage in the more advanced processing of commodities. In the case of Chile case, this third area of upgrading has mainly been carried out with the discards from fresh fruit

production – that is by utilising the fresh fruit that cannot be exported due to its low quality.

The successful achievement of these upgrading processes also allows for the development of ancillary industries (consulting, technicians, marketing, transport, etc), which in many cases, are more important in terms of the creation of employment than direct employment.

The interaction amongst the different stages in the fruit industry improves product characteristics. This can occur in all the stages of the networks – production, packing and storage, and processing. Some of the standards that have been adopted by the industry, such as Good Agricultural Practices (GAP) standards, focus on product upgrading, as well as ensuring that the sanitary and phytosanitary conditions of the product are met through product upgrading. Also it creates upgrading through systematic improvement of the processes.

In the case of Chile, production has generally remained concentrated on fresh fruit with the processing of fruit being largely relegated to a secondary activity. Rather than focussing on quality enhancement, fruit processing in Chile has largely been about the volume of production and it is certainly true that overall production levels of processed fruit have been growing in the country. According to a government official (Research interview conducted in April 2012), the fresh fruit business continues to be more profitable than the fruit processing business, although the latter does help companies to diversify their sources of income. He claims that:





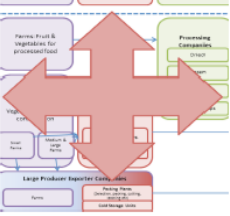
“Processed foods are classed within manufacturing and obtain a higher value added because you have to train your workforce, and the type of employment is of higher quality and therefore justifies a higher salary. From the point of view of investments this is not so true. From this point of view, the ranking of price is lower in comparison with fresh fruit, and when investments are chosen, they are mainly directed towards fresh fruit. For example in relation to grapes, I’m thinking of fresh grapes, I apply the proper amount of fertilizer for increasing the size and so have a higher productivity per hectare, and it is only what is discarded that is transformed into juice or concentrate and then enters into an

international market price. The processed fruits have a yield of between 8 to 10% per year (very low compared with the yield from fresh fruit).”

With respect to SMEs, Sawadi points out that their situation in relation to large export companies is complex due to their restricted bargaining power. He claims that:

“The development of agricultural SMEs in this sector is complex. Those in the Exporters Association (ASOEX) export and every exporter has a platform and a portfolio of clients who are producers. ASOEX buy fruits from them, and sell these in the international market and then pay the producers. The services provided to local producers (brand, storage, etc.) are deducted, and it can be an important part of the final price received by the producer. A large producer can improve its situation with the exporters”.

Figure 7.4 Upgrading Trajectories in the Fruit and Vegetables Global Value Chain

	Diagram	Description
Production (Entry in the value chain)		<ul style="list-style-type: none"> • Entry point for the fresh and processed fruit and vegetable value chain. • Opportunity for low-income countries to export higher value added agro products.
Packing & Cold Storage (Functional Upgrading)		<ul style="list-style-type: none"> • Countries looking to increase the value of their exports and to improve supply for their clients will improve their packing and cold storage systems. • This can include sophisticated packing for fresh fruit and vegetables, such as ready-to-eat products, that are pre-washed, cut, and bagged.
Processed Fruit & Vegetables (Functional Upgrading)		<ul style="list-style-type: none"> • To enter in this segment, countries have to master the production stage. • Countries need new infrastructure and a workforce prepared to engage in this activity.
Product Upgrading		<ul style="list-style-type: none"> • Improve the product characteristics. This can happen in all the stages of the value chain—production, packing and storage, and processing. • Some of the standards that have been adopted by the industry, such as GAP standards, focus on product upgrading, as well as ensuring that the sanitary and phytosanitary conditions of the product are met.
Process Upgrading		<ul style="list-style-type: none"> • Introduction of new technologies in the production system or the restructuring of the existing system to generate services more efficiently. • Companies implement more efficient systems in the search to improve productivity and remain competitive.

(Source: Gereffi, 2011)

7.4 Attempting to Define a Cluster Policy for the Sector

In chapters two and three the concept of clustering and its implications in the economic structure was introduced. Clustering policy with public resources involved is a strategy that seeks to develop industries and their ancillary economic activities. Generally, in the

ISI Period in the 1960s, industrialisation was thought of as a phenomenon applying to large firms and the manufacturing sector. The concept of clustering as the agglomeration of firms and their productive linkages was undervalued. But a new view about the process of economic development, taking into account regions and their comparative advantages, has led to a revaluation of cluster activities and cluster policies. Bachelet's centre-left government (2006–2010) defined eight sectors with high potential for expansion, and established a broad cluster policy for these sectors. Although it took a rather static view of development, the cluster policy was a step forward and it was a form of governance of development. However, the conservative government abandoned this cluster policy.

It is necessary to note that already in 1988 had signs of concern about the development of the Chilean agriculture and its sustainability. Gomez & Echenique (1988, p.271) claimed that it would become more and more difficult to continue growing (fruit sector) at the same rate if these exports were not properly diversified. They also point out that the apparent modernisation process had not embodied small-scale agriculture and the gap with commercial agriculture had increased, with the result that the control and ownership of land by small growers was precarious.

In interviews, government officials frequently raised the question of the government's role in the development of the cluster policy in the fruit sector. They pointed out that the Ministry of Agriculture actively participated in the development of the scheme. One of them points out that:

“There was participation in each sub-industry, there were support groups and fruit Technological Consortiums were formed. These brought together the ideas of all sectors and agreed certain definitions of policy such as the development of new varieties. Essentially, because the fruit industry has to develop new varieties, this was an important effect”.

However, other interviewees revealed significantly different points of view with regard to cluster policy. A large Entrepreneur (Research interview, entrepreneur, March 2012) claims that:

“Fruit producers such did not involve so much in the development of the policy. I think that the clustering initiative was important but was not a magical solution to the problems of the sector. I agree that firms that got involved in the initiative obtained benefits from participating in technical fairs, for example, by accessing innovation in processes but I felt that what was really needed was a greater focus on credit issues”.

Another fruit sector Entrepreneur (Research interview conducted in March 2013), in turn, offers a more negative view of cluster policy. He claims that:

“It has not been useful at all and it meant an excess of expenditure of several million dollars in consultancy to the Chilean State”.

From the theoretical point of view, “an agro-based cluster is simply a concentration of producers, agro-industries, traders and other private and public actors engaged in the same industry and inter-connecting and building value networks, either formally or informally, when addressing common challenges and pursuing common opportunities” (Galvez-Nogales, 2010, p.1). It creates benefits for small producers and agribusiness firms, from agglomeration economies to joint-action benefits, such as access to local and global markets, promoting local governance, scaling up and disseminating innovations. According to the Global Production Networks approach, clustering involves an understanding of the territoriality of production networks- namely, how they constitute and are re-constituted by the economic, social and political arrangements of the places they inhabit (Henderson et al., 2011, p.446).

Attempts to develop a clustering policy for the fruit sector were part of the national debate over clustering which took place in the middle of the last decade (as discussed in the previous chapter). With regard to the fruit sector, the BCG pointed out that: “Chilean fruit quality is high but lower than that achieved by individual reference countries on fruits. Enhancing the sophistication of small and medium producers will be essential to achieve increases in productivity and quality of Chilean fruit” (ODEPA, 2007). But also there are opposite opinions in regard to define a cluster policy in this sector. An academic claims that it is false that the fruit sector exports only raw materials; he points out that “there is no other industrial sector of the Chilean economy

that has as much value added in services as exports from fruit cultivation” (Research interview conducted in March 2013).

A weak point in this previous argument lies in which type of firms are producing these innovations (large firms, SMEs, firms in the ancillary industry) and the extent of sustainability of these firms in the chains and networks.

To reduce the gap between small and large firms in the sector, BCG (2007, p.63) proposed:

- a) The creation of centres of Agricultural Management for the organization of training in management in order to convey basic concepts of agricultural business management.
- b) The development and transfer of technology packages by region and species that would include tracking metrics and scorecards, including periodic updates.
- c) The dissemination of information on the potential for mechanization in the industry via seminars with experts, outreach to suppliers, etc.
- d) They explicitly added that this strategy should imply a strong state commitment to the industrial upgrade of the fruit sector.

While considering the BCG proposals for increasing the productivity of fruit sector, it is necessary to take into account the views of specialists with regard to this issue. Several of the interviews conducted for this research (business leaders and academics), as well as the positions expressed by entrepreneur associations, focused on the large firms active in the sector suggest a set of factors that from their perspective would have to be addressed by any effective state intervention within the sector. These factors include:

- a) The impacts upon competitiveness of the appreciation of the Chilean exchange rate.
- b) The low productivity of Chilean producers in comparison to the top global producers
- c) How insufficient investment in R&D is limiting sector differentiation
- d) The impact of the rising costs of key inputs (e.g. the cost of labour given its growing scarcity, the high cost of energy)

- e) How the current market portfolio and Chile's country image do not enable the capture of premium prices
- f) How the heterogeneity in the composition of exports negatively affects perceptions of Chilean supply.

Acknowledging some of these issues, the BCG argues that the state must focus on supporting improvements in labour productivity and solving the market imperfections caused by insufficiencies of appropriability of profits by small farmers, failures in coordination and information and uncertainty on the activities developed by SMEs and small farmers. This perspective is similar to the reasoning based on market neutrality (*laissez faire*) examined in Chapter Five. As discussed in Chapter Five, there is no explicit and significant role for SMEs in the production of final goods as well as in the activities connected to the value chain (ancillary industry). The BCG does not give an opinion on the nature of contract relations (fair, unfair, how these might be enhanced, etc.) inside the production networks. Certainly these issues are mentioned, but there is no special place in terms of these being carried out by SMEs.

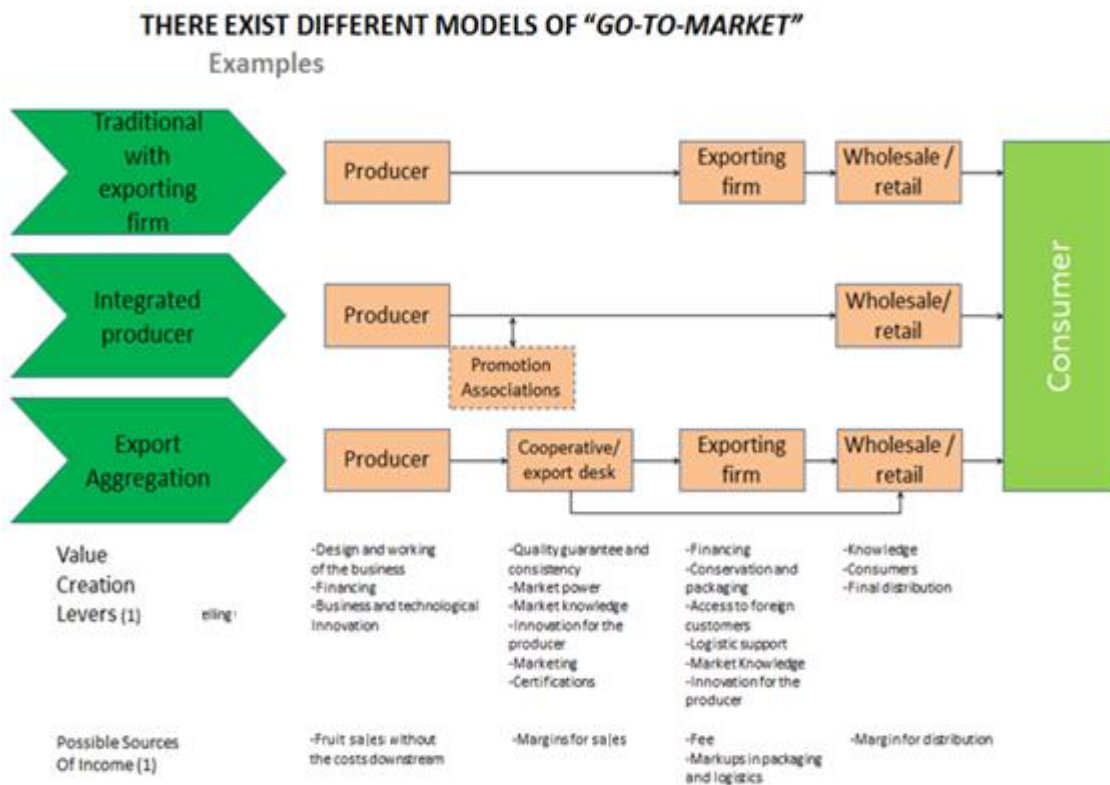
In the next section, I will outline the OECD's criticism of the 'single desk' model used by New Zealand to improve the quality of fruit. I have included this discussion because one of the proposals of BCG (Government adviser in 2007) was to adopt the single desk business model to penetrate the international markets and simultaneously to improve the quality of fruit.

7.5 International Experience in the Fruit Industry: the New Zealand Case

In the discussion of clustering policy in the fruit sector which occurred under the previous government, an interesting debate around the advantages and disadvantages of different models of getting the fruit to market (Figure 7.5) emerged. One particularly interesting approach adopted in New Zealand was called the 'export aggregator' which operated through a so-called 'export desk' scheme based on cooperatives. This 'export desk' model was introduced in New Zealand (1999) as a response to problems of quality in kiwi fruit production which was affecting the price of the product. The strategy allowed for a quality guarantee and greater consistency and provided producers with

enhanced bargaining power, improved market knowledge, greater access to innovation and, ultimately, higher sales margins. (Turners & Growers, 2009, p.10)

Figure 7.5 Models of ‘Go-To-Market’



(1) Selectively according to the model

(Source: Boston Consulting Group, 2007)

This model was recommended by the BCG for Chile, but critics have pointed out that it runs the risk of removing competitors of medium and low quality and concentrating production into the hands of larger producers. Certainly, this model reduces productive heterogeneity but it can also obstruct the emergence of new and challenging competitors due to the fact that they do not meet the necessary requirements. When the Chilean and New Zealand cases are analysed and compared, it is clear that, for example, the quality level of Chilean grape production is significantly less than the average quality level of Kiwi fruit from New Zealand. Whereas the NZ model is now based on the ‘single export desk’, the Chilean model is based on the mediation of exporters with insufficient input to development of producers. The problem, however, is that applying the New

Zealand model to the Chilean case does not take into account the risk that an export desk model disadvantages those SMEs that cannot reach the minimum quality standards.

Exploring the New Zealand experience in a little more depth reveals that economic successes have been focused on a few categories, such as kiwi fruit and apples. The New Zealand government has had a key role in the creation of a producer association (or cooperative) known as Zespri¹⁰ and has played a major role in R&D financing. Their approach has clearly been to enhance the production of commodities of high quality. The government support has led to greater coordination among entrepreneurs, and high levels of investment in marketing campaigns have been used to promote the country's image in its target markets. R&D has mainly been oriented around the creation of new varieties and productive processes. Furthermore, the government has played a role in helping to establish long term contracts with international traders which can considerably reduce the uncertainty facing producers. The New Zealand model has also significantly improved the management of quality and distribution, involving, for instance, quality control systems along the chain, the employment of specialized management professionals, and the development of packing systems with strict quality rules.

In the literature (Gropp et al., 2000, p.11), the benefits of the export desk model are said to be the following:

- a) Clear incentives through the control of quality/homogeneity, aggregation and control of supply
- b) Critical mass for marketing investment with centralized choices
- c) Reinforcement of industry quality standards
- d) Ability to adapt supply to the needs of customers
- e) Management of production in off-season
- f) Investment in R&D

¹⁰ In New Zealand, Zespri, the cooperative of producers, is responsible for almost all exports. It exerts a virtual monopoly and is state backed.

The main challenge is that producers get a proper management. There is a lot of pressure for commercializing all production whereas prices are kept high. The result was increased production of apples and, in particular, kiwi fruit. The organization of the kiwi fruit Industry (Zespri) emerged as an answer to the growth of off-shore production. It was necessary to control quality, market conditions and avoid fruit of mixed quality. Zespri was formed after several years of overproduction and low prices for New Zealand farmers. It relies on a strong network of growers, post-harvest operators and other suppliers, distributors, and customers to coordinate the production and marketing of the fruit.

However, lately, some voices have complained about the monopolistic character of the production of kiwi fruit in New Zealand. For example, in 2011 OECD criticized Zespri in a report in which it called for its single-desk status amongst the country's kiwi fruit exports to be removed. This is indicative of a view amongst many observers that Zespri is both monopolistic and anticompetitive. For instance, NZ kiwi fruit growers are forced to sell through Zespri, to the extent that owners of non-Zespri kiwi fruit varieties are banned from selling their fruit anywhere but in Australia and New Zealand. In addition, Zespri has monopoly powers conferred upon it by the Government, but it is still a private company.

Accordingly, Zestril has spiritedly defended its position in this debate (Knowles, 2011)

“This impressive level of growth has been possible as a result of the single point of entry industry structure. The structure has provided the certainty and capacity for the New Zealand kiwi fruit industry to focus on delivering top quality fruit to market, meaning growers get premium returns for their efforts and customers and consumers receive exceptional quality fruit”.

Those who defend this scheme (single desk export) mention the strength of the single point of entry industry model because it addresses specific challenges by providing industry cohesiveness that allows small growers and post-harvest operators to compete and succeed in the global economy (Gropp et al., 2000, p.11). But there would be more costs than benefits if this scheme is applied to the wider fruit sector. It would create more segregation in the fruit sector creating serious problems to the small growers, who would be disadvantaged if they could not upgrade in the short term (increase

productivity, improve the quality of fruit, etc.). It is probable that many would have to sell their land, increasing the concentration of ownership, and increasing the bargaining power of large firms. This top down approach would be likely to worsen the current conditions of SMEs.

CORFO, on the other hand, taking a similar view to the BCG, has developed an investment program in order to boost industrial upgrading in the sector. According to CORFO (2009):

“The objective is to strengthen the fruit and agribusiness cluster in the Chilean regions by promoting business opportunities and domestic and foreign investments to contribute to the specialization and diversification of the industry and to complete the value chain in production, processing, logistics, and distribution in order to increase the industry’s competitiveness”.

In the specific scope for investments in fruit agribusiness, CORFO has the following goals:

- a) Achieving enhanced quality in the final product by introducing greater value added processes to the value chain: irrigation technology, traceability, conservation equipment, quality control equipment, processing plants for dehydrated and frozen products, pulp, juices, concentrates and canned fruits, packaging, waste treatment, etc.
- b) Enhanced management of the fruit industry investment portfolio: increasing the share of premium and high value varieties such as organic products, nuts, berries, cherries, etc.
- c) Customization of fruit products: growing different varieties to either sell fresh or for processing, in accordance with new market trends, by increasing investments in biotechnology, agronomic engineering, among others.
- d) Increased cultivation of new areas: plantations in not yet developed areas, irrigation technology, resistant varieties, greenhouses, etc.
- e) Increased productivity: consultancies for precision agriculture, nurseries of certified plants, biofertilizers, pollination, automation equipment, cold

technology, picking and harvesting machinery and technology, specialized informatics, agronomic engineering, etc.

These criteria mainly address the problems of medium-sized and large firms. There is no mention of the development of contractual conditions between large firms and small farmers, the sustainability of small firms in the agrofood sector, or working conditions.

At the same time as CORFO has been developing this strategy for diversification in the current structure of the fruit export sector, PROCHILE has been carrying out a campaign to increase the volume and add new varieties of fruits to the portfolio of producers. With respect to the moves towards diversification, a government official (Research Interview conducted in April 2012), and States that:

“We have been working with fruit that has more volume but also we have been incorporating smaller producers and small exporters and eventually also, in the future, we will incorporate other fruits, besides the three most important fruits (apples, grapes and kiwis). In this sense, our focus has been on working with large business associations and in the case of exporters and producers of fruits, these make generic marketing campaigns of fresh fruit.”

The cooperation that exists in the fruit export sector in the marketing of its products in international markets is interesting. There has been close cooperation between state agencies and the large export firms, in the main, brought together in the ASOEX. Officials in PROCHILE explain how they as a state agency cooperate with exporters to mount international marketing campaigns. The producers contribute one cent (US) per box to finance the promotion of the product, so export firms pay ASOEX to carry out its generic marketing campaigns. Most of the producers participate in ASOEX and they have a strong presence in the regions.

As argued in the previous chapter, the development of the agrofood sector in terms of producing goods with higher value added not only requires that firms are able to upgrade and move along the value chain (production – packing – storage – processing fruits), but also that they have a more skilled workforce. However, in the case of the fruit sector, this is not that easy to achieve. A relevant question is what kind of education should there be for these industries? If there exists a demand for skills (firms

want to hire a more skilled workforce), there should exist an educational supply able to fill these gaps. It is clear that this educational supply is in the field of technical and vocational schools. If public policy has as objective to upgrade firms and the agrofood industry as a whole, there needs to be a closer link with educational policies. A business leader (Research interview conducted in March 2013) claims that:

“It is necessary to encourage young people to work in agriculture. For that, it is necessary to encourage them to enrol in the agrarian schools which have been set up by the associations of entrepreneurs.”

However, it is not an easy task due to the great attractiveness of commercial and mining activities which demand a growing amount of labour. Inevitably, to attract good workers (offering high productivity) it will be necessary to change the conditions offered to them in a radical way.

Emphasizing the previous issue that education is undervalued in the analysis of government, Figure 7.6 offers a description of the government’s understanding of the agrofood sector without include explicitly the education.

The problem with the government’s approach towards the sector is that the market incentives, through the price signals, are slow and this can create backwardness in the upgrading of firms in this sector. The need for greater technological expertise and higher skills and qualifications in certain areas of production cannot be met in the short term. Besides, insufficient expertise and knowledge can cause bottlenecks in this industry, generating slow growth and low productivity. So, the ability to compete in the international markets would be affected in a negative way.

Figure 7.6 Industrial Description of the Agrofood Sector

Agriculture	Manufacturing Plants	Ancillary Industries
<ul style="list-style-type: none"> •Companies devoted to cultivate emerging varieties of berries and dry fruits looking for direct investments or local partners •Fruit tree nursery companies •Companies devoted to organic agriculture •Companies developing precision agriculture 	<ul style="list-style-type: none"> •Pulp processing plants •Frozen food processing plants •Canned food processing plants •Dehydrated food processing plants •Juice and concentrates processing plants 	<ul style="list-style-type: none"> •Packaging containers and wrappings: plastic, wood, cardboard, product labelling, thermo retractable film, and other packaging elements. •Advance services suppliers: labs, agronomic engineering, agronomic training, specialized computers, production and handling engineering. •Agrochemical producers and marketers: fertilizers, plant health, protection gear for applications •Technological equipment and service suppliers •Environmental control systems •Conservation and freezing equipment •Farm machinery: automation/robotics for picking and harvesting, treatment and harvest machinery and equipment, etc. •Handling machinery: automatic and semi-automatic sorting lines, i.e.; weighing, etc. •Greenhouse structure vendors and related mounting and maintenance services •Companies that provide installation and maintenance services for irrigation systems •Companies that provide biological production elements (pollinating insects, raising ancillary species for pest control, anti-insect mesh, etc.). •Waste treatment

(Source: CORFO, 2009)

In the next section, several state initiatives to create industrial upgrading in the fruit industry will be examined in depth.

7.6 CORFO's Programs (Productive Promotion)

The previous chapter explained a range of different government interventions designed to accelerate industrial upgrading within the Chilean agrofood sector. Here, we explore the application of several CORFO schemes to the fruit sector which, as shown in the following section, displays many of the more general disequilibria of the Chilean agrofood sector and, in particular, the weak bargaining power of small farmers and SMEs in general, and the poor working conditions of large sectors of the workforce.

A number of CORFO's programmes are outlined here:

INVESTCHILE

Among the policies developed by CORFO in order to strengthen productivity activities is the INVESTCHILE program which was established in 2009. This program aims to attract overseas investment that contributes to projects with a technological orientation.

Regional Investment Incentives

There is a special CORFO program which is orientated around supporting the regions and decentralizing the use of resources (the measures involved are termed Special Economic Zone Incentives). Among the tools that have been developed are 'Pre-Investment Studies', which are available to all regions in Chile except for the Metropolitan Area (Santiago, the capital city). In order to be eligible, new projects must involve a minimum investment of US\$ 400.000.

High Technology Investment Incentives

Another CORFO scheme is aimed at technologically-driven investments. In these cases, projects are selected to get financial incentives.

However, these apparently well-designed programmes, do not really address the issue of closer cooperation between small firms in the fruit sector. Following the current government's decision to withdraw from the cluster policy, it is doubtful that small and medium sized firms on their own will be able to take advantage of these measures and special funding initiatives. Besides, these programmes are designed for larger firms, and do not take into account the specific dynamics of SMEs and small farmers, the nature

of contracts and problems in fulfilling them, as well as the constraints in innovation and upgrading.

Strategies proposed by the World Bank so that Chile can be a relevant producer by 2030.

In the Chapter Six, we examined the problems of the agrofood sector, focusing on small producers and their working conditions. The problems are several and complex. The Ministry of Agriculture commissioned in this context a report from the World Bank called “Plan De Accion Chile 2030 / Sistema De Innovacion De La Agricultura Chilena”. The report produced by the bank suggests that if Chile wants to consolidate its position as a significant actor in the global agrofood markets, it must address several challenges with regard to strengthening the sectoral innovation system (for example, enhancing local genetic improvement, applying technology more intensively, and establishing longer term financing instruments; with all of these being conditioned to the different scenarios posed by climate change). The plan proposed by the World Bank, to be implemented over a period of twenty years, is that the Chilean agrofood sector should: (a) become a high quality producer of foods and fibre, (b) be environmentally sustainable, with production based on ecologically appropriate techniques and (c) be integrated into high value production chains, well integrated between production and the final markets through the application of TICs (technologies of information), investments in agricultural technology and the training of the workforce. According to government official Alvaro Cruzat (Agriculture under Secretary), “our goal is that Chilean fruit and wines become leaders in the international markets, just like Swiss chocolate and Dutch cheese is today” (Fundacion para la Innovacion Agraria, 2010).

The World Bank report points out that to achieve this transformation, Chile must make increasing the capacity of the Chilean agrarian innovation system a strategic goal. Amongst the critical issues discussed in the report of particular relevance to the fruit sector is that of genetic improvement. It argues that if productivity is to be increased and stable production consolidated, then Chile needs to nurture scientific collaboration in multidisciplinary teams in different crop areas.

In matters of quality standards, the World Bank proposes that the Ministry of Agriculture should support the private sector to extend the use of CHILE GAP to all agrarian production, in the export markets as well as in the domestic markets, and the expansion of support programmes for certification, with public/private financing.

Another factor pointed out by the World Bank Report is a more highly qualified workforce. One way to mitigate this problem, according to the World Bank, is that jointly with BECAS CHILE (a state program of grants) the agrarian sector should build a plan to develop qualified human resources, based on sectoral strategy for innovation and the strengthening of international networking for the exchange of scientists.

In the light of the main problems and challenges facing the fruit sector (as identified by small farmers interviewed in the North of Chile), the proposals of World Bank do not address the most relevant issues for small farms in the fruit sector. The World Bank does not explicitly promote the farming contract to avoid the abuses of bargaining power of large firms. Nor does the World Bank mention the problems of informality of working conditions in the fruit sector. The World Bank, in its analysis, sets out only technical proposals without considering the dimensions of power, the location of small farmers, the conditions of temporary workers, or the lack of a legal framework to solve disputes in the fruit sector.

In the next section, I will remark the main issues related to the problems of fruit sector, focused in the dynamic of small farmers and working conditions.

7.8 Concluding Observations: Industrial Upgrading and the Chilean Fruit Sector

The development of the fruit sector in the Chilean economy has been in general terms 'successful'. In recent years, new fruits such as blueberries have been cultivated as well as 'traditional' fruits such as grapes and apples. The public policy has been concerned about how Chile can export more (fruit in better conditions) in the international markets. Agencies such as PROCHILE have established commercial offices in many foreign markets in order to penetrate the markets with Chilean fresh fruit (also wine and other

products). CORFO, on the other hand, has promoted the credit, innovation, and other needs in a scheme of horizontal industrial policy (it was defined in Chapter Two). Public policy has moved slowly to correct market failures, but without altering or intervening in the production structure of the fruit sector. Although the Ministry of Agriculture provides some tools that benefit small farmers – for instance, INDAP – public policy is generally neutral in the development of this industrial sector. Although there are several programmes dedicated to development of high technology in the fruit sector (i.e. new varieties, new seeds), these do not address the complexities of the industry. These are basically explained by the lack of an actual farming contract (which was described in the previous chapter). Even the cluster policy initiated in by the centre left government (2006–2010) did not take into account in an explicit way the problems of small farmers as for example the possibility to sell to fair prices their production to large firms. Even the proposals originated in the Boston Consulting Group (government’s adviser of the centre-left government) as well as the objectives of public policy did not address the serious problems that affected and affect the temporary workers in the fruit sector. It is the high informality, lack of supervision in the fulfilment of contracts, and the insufficient state regulation by the ministries.

Analysing in detail the fruit sector, there is a significant percentage of small growers, who sell their production to large firms. From our interviews in the north of Chile with small-scale grape growers of grapes and with farm workers’ trade union leaders, the common pattern emerging is that large firms exert monopsonic power over small producers. Basically, the determination of price, quality, and payment dates in contracts is not favourable to SMEs, and as there are no specific agrarian laws in the Chilean economy, it is impossible to go court seek compensation.

The sector has grown over recent years, attaining 30% of the total income of the agro-fruit sector. It is clear from Table 7.5 that the growth of fruit processing is important, however it only contributes 25.4% to the value of total exports of the fruit industry. However, the share of industrialised fruit is growing in recent years (from 19% to 25% of the total of exports in the fruit sector, between 2006 and 2008). This fact is related to the industrial value added of processed fruit. The expansion of the sector requires training of the workforce, the application of technology to adapt fresh fruits and transform them, more sophisticated channels of distribution, a more committed

marketing campaign, and state incentives. The growth of this sector creates significant benefits throughout the supply chain, not just for the fruit producers who provide the raw material, but also for the ancillary industry supporting fruit processing.

Table 7.5 Development of Processed Fruit compared with Fresh Fruit

Industry	Exports 2006 (Tonne)	Exports 2008 (Tonne)	2006 (%)	2008 (%)	Value 2006 (thousand US\$ FOB)	Value 2008 (thousand US\$ FOB)
Fresh Fruit	1,968,177	2,278,778	80.8	74.6	2,322,969	3,068,400
Processed Fruit	464,700	541,132	19.2	25.4	630,283	1,042,176
Total	2,432,877	2,819,910	100	100	2,953,252	4,110,576

(Source: ODEPA, 2009)

In summarising the issues explored in this chapter, it is possible to claim that these are baselines. In other words, these are the basic things that need to be addressed to make the fruit sector more effective and equitable, which must be complemented by other efforts of public policy in favour of a more transparent market.

It should be the baseline position in Chile:

- a) Fruit processing (industrialized fruit or processed foods) can be transformed into a dynamic focus of investment in the sector. This is because fruits with value added require a more complex environment (capital goods, machinery, training, long term credit, etc.).
- b) The creation of new production techniques would help to reduce production costs and create improvements in fruit quality, ideal for a competitive industry that wants to develop as an agricultural power. Public policies have a role to play in this.
- c) In the fresh fruit sector, the capacity of accommodation is acknowledged, to satisfy the requirements of demand (innovations in cultivation, irrigation,

application of genetics, etc.) in order to become more competitive by delivering products that match external demand.

- d) The linkages between fruit producers and their customers should be a priority, so that the exporter or processor helps small farmers by providing information about crops with more potential.
- e) There exists 75 different fruit species, of which nearly 80% of the fruit produced is exported fresh. The sector generates employment mainly in the regions, being an important sector in regional employment for all the regions between the III and IX regions of the country (Central and Southern Chile)

But these baselines require an analysis more in depth to transactions occurred in this industry. The small farmers are not usually able to take advantage of these investment opportunities. Also, operating on their own or as part of weak associations, small farmers are not able to negotiate better prices for their crops. The public policy doesn't take account of the issues that small farmers face. Along the same lines, Murray (1999, pp. 9-36.) claims that the regulatory activity of the state can theoretically reduce or mitigate the impact of these global economic changes and the pressure on the small growers. But in case of Chile, it is not working because the capital is playing a deterministic role due to the state's adherence to neoliberalism. Accordingly, models of global commodities chains (as in the fruit sector) do not presuppose that there exists a lack of will of the local agencies to reconstitute the system.

In drawing together the argument articulated in this chapter, it is clear that after three decades of impressive development in the fruit sector, several challenges arise to the capacity for continuing growth at that rate. The transnationalization of this sector and the establishment of large entrepreneurial consortiums have created increasing spatial differentiation, exacerbating the gaps and differences between the regions and within rural communities. (NGO Director, Research interview conducted in July 2012).

The working conditions and low salaries dominant in the sector are not consistent with the boom in export development. Although there have been periods in which employment levels in the industry have been high, salaries have remained low, despite

the active participation of international companies along the value chain (Fundación Sol, 2008, p.39).

The long term sustainability of this industry in Chile depends on how the relationship between the SMEs and the large firms and exporters is managed within fruit sector production networks. The role of SMEs within the sector ranges from the activities of small farmers to the so called ‘ancillary industries’ which also form part of the broader network. Working conditions in the industry are also relevant to determining its future sustainability, particularly given that much of the success of the fruit sector has been based on the excessive market power of large companies and the poor working conditions for the majority of the workforce. Certainly, it is necessary to take advantage of this development, but in a broad sense, it needs to be more equitable and inclusive of all the relevant actors. It encompasses the workers, the fulfilment of contracts, timely payment of welfare benefits (pensions, health), fair prices in transactions between small growers and large firms, and a legal framework to protect small farmers and workers.

The volume and value of fruit has been growing at a slower rate over recent years. There is more competition from producers in the southern hemisphere, more protectionism, and more demanding markets in terms of quality. This has caused a reduction in the price of Chilean fruits on world markets. This suggests that the easy phase of growth has been exhausted and that the state will need to intervene if the sector is to continue to offer a sustainable source of economic growth. It is likely that some sort of cluster policy would provide the best way of tackling the future of the sector, but it would need to be much more complex and sophisticated than that proposed by the BCG. This intervention must explicitly consider the SMEs (both small farmers and those involved in the ancillary industry) in terms of improving their bargaining power. It should also address the training needs and working conditions of the labour force so that it is equipped to face the challenges of the future development of the sector.

In conclusion, it is necessary to reinforce the bargaining power of local SME associations inside the agrofood chains (a fair distribution of the surplus). It must be directed by a clear public policy, in the context of governance of development.

The industrial upgrade needs to promote regional employment so contributing to the decentralisation of the country. The public policies should be more specific, oriented to the SMEs and particularly allocating more state funds to strength this industrial network. Fruit processing has grown exponentially in value, proving that industrial upgrade is the correct path to follow. However, it is necessary to reinforce the quality and differentiation of products (sanitary status) as well as scaling up of small and medium producers.

The state should focus, in the first instance, on solving given market imperfections due to insufficient appropriability, coordination failures and the lack of information on innovation initiatives, market development, export promotion, training and technical training, associativity and the dissemination of information. At the same time, the state should create regional agencies that have as a clear objective the protection of the working conditions of agrarian workers in terms of respect for their social rights (health, pension funds). The state should also establish a social threshold to generate minimum conditions to start a sustained social upgrading. These agencies should also help SMEs in the agrofood export sector to negotiate fairer contracts and better conditions.

Chapter Eight: Analysis of the Wine Sector

The wine sector together with its upstream productive linkages (fruit, grapes) has direct participation in the manufacturing sector and indirectly participates in the agriculture sector. Although wine as a product belongs in the category of 'manufacturing', it also involves the use of raw materials (grapes) and any analysis has to take account of this. An initial analysis was presented in Chapter Six and this chapter examines the sector in greater depth.

The fruit and wine sectors have been very dynamic in the Chilean economy in the last 20 years, showing high rates of growth in production and exports, diversification in destiny markets and generating employment and new investments. However, behind these aggregate figures (as seen in chapters six and seven), there are serious weaknesses in the development strategy of this sector, in particular, the lack of a true contract farming that would ensure guaranteed terms to small growers (of grapes and fruit in general) when sell their production to large firms, the limited bargaining power of SMEs especially in the fruit sector, and the inadequate working conditions especially of temporary workers. Chilean wineries are in most cases medium sized, and given the nature of wine production, this has allowed a significant advance in management practices, innovation and close association between wineries. However, in their relationships with agricultural workers involved in cultivation and harvesting, they present the same problems as demonstrated in the fruit sector.

This chapter starts with the history of the Chilean wine sector showing how the international links have permitted local changes with regard to ownership, innovation and new techniques of production. I then go on to analyse the technological context and the quality of governance of this industry in the context of GPN. The same conceptual framework is used to analyse the working conditions of the workforce, especially in the collection of grapes, and the situation of the small growers in their relationships with large firms.

8.1 History and Geographical Characteristics of Chilean Wine Production.

Chile is one of the main producers of wine in the world (it is currently (2012) the ninth largest in terms of the total volume of production). Also, Chile is the fifth largest exporter after Italy, Spain, France and Australia, with 8% of the market share. In 2012, total wine exports rose 8.9% to \$ 1,690 million, or about 700 million litres, which is a record for the Chilean wine industry. (All figures are from the industry association 'Wines of Chile' which represents 96 wineries including major exporters). Interestingly, as recently as the 1980s, this situation was very different. At that time, Chile had not developed its wine industry to achieve its full potential.

The history of Chilean wine is very old, dating from the time when the first Spanish conquerors arrived (Van Tienhoven, 2008, p.20). During the mid-twentieth Century during the period when the import substitution strategy was dominant (from 1930 to 1970), a moratorium on new wine plantations was imposed. This led to technological stagnation and a decrease in quality (wine could not be ripened in French oak, and it affected its quality). These circumstances led wine producers to focus on the domestic market, due to a lack of stimulus for exports. With the *coup d'état* of Pinochet, the wine market was liberalized, which led to local market saturation (poor quality local wines out-competed by new competition from overseas). Furthermore, the crisis in 1982 (originated in deregulating policies applied by Chicago School) in particular greatly reduced domestic wine consumption in Chile.

According to Benavente (2006, p.2), in 1979 the Spanish entrepreneur Miguel Torres came to Chile and introduced the latest in viticulture technology (e.g. temperature driven stainless steel tanks). At the same time, Torres started to expand the export of fresh fruit and wine. In the late 1980s, many Chilean wine firms began to copy this example and started to export as well. In general, however, it was other overseas (and in particular French) investors that followed in Torres's footsteps. Investments were, for example, carried out by the Rothschild family and Lapostolle companies through joint ventures with Chilean wine companies.

In the literature on the Chilean experience in the wine sector (see, for example, Benavente, 2006; Kunc & Bas, 2009; Visser & Langen, 2006 and Gwynne, 2008), there

is general agreement that extended contact with international markets and international experience has been crucial in making the Chilean wine industry more export-oriented and in encouraging a significant process of upgrading. Of course, this international market development has also only been possible because of the natural advantages afforded by Chile's geography (its soil and climatic conditions).

According to Van Tienhoven (2008, p.23):

“In the vineyard zones, the climate is practically devoid of rain from December, when the grape bunches appear, until after harvest, allowing the grapes to mature without the risk of infection. It also provides a high level of homogeneity in wine quality over time. Daily temperature variations of up to 20 degrees Celsius result in a high concentration of aromatic components in Chilean wine. Because of its isolated geography, Chile is the only country free of phylloxera, a root louse that destroyed Europe's vineyards in the nineteenth century. Therefore Chile possesses some of the oldest vineyard plantings in the world”.

One explanation for the great transformations that have been wrought in the Chilean wine industry over recent decades has been the presence of foreign investment in this sector. Although foreign investment in the ownership of Chilean wineries is low in terms of total industry size, according to Kunc & Bas (2009, p.14), its influence has been high due to the introduction of highly visible technologies such as the previously mentioned stainless steel tanks and other innovations in the design of cellar facilities. In essence, the lessons derived from successful experience elsewhere have promoted a coordinated programme of industrial upgrading in the industry (branding, processes, etc.) that has pushed this industry towards the capture of higher value added in the production process. There have also been internal factors at play but it is certainly the case that a large part of the process has been driven by foreign direct investment (mainly through joint ventures) and other international factors.

A second wave of innovation started around 1995. This wave involved the introduction of new foreign investors who had a desire to sell premium wine to sophisticated market

segments. For example, the Rothschild & Mondavi companies have established themselves in Chile through joint ventures with local producers. These joint ventures have been oriented around the production and commercialization of high price quality wines. This is reflected in the fact that by 2004, the average price of a bottle of Chilean wine from companies with foreign involvement was US\$ 4.90 while the price of Chilean wine more generally was US\$1.60 per bottle, (Kunc & Bas, 2009, p.15).

Table 8.1 shows the participation of foreign investors (foreign firms are related to active joint ventures) relative to the total area of valleys dedicated to wine production. Although this investment has focused on premium wines, it has had several positive effects in the local industry.

Table 8.1 Distribution of Foreign Wineries in Chilean Valleys in 2005

Valley	Total Area (hectares)	Foreign Firms		Local Firms		% of total area under foreign firms
		(Total Hectares)	(Average Age)	(Total Hectares)	(Average Age)	
Elqui + Limari	2,000	0	0	2,000	10	0
Aconcagua	2,300	120	10	2,180	10	6
Casablanca	3,600	900	10	2,700	10	33
Maipo	9,500	450	12	9,050	40	5
Cachapoal + San Antonio	9,500	420	15	9,080	60	5
Colchagua	17,000	1,000	15	16,000	45	6
Curico	19,000	400	28	18,600	65	2
Maule	25,000	400	18	24,600	75	2
Itata + Bio Bio	12,000	50	10	12,000	30	0

(Source: Kunc & Bas, 2009)

These transformations in the sector meant more specialization and a detailed selection process for defining the most profitable and suitable grape varieties. The arrival of foreign firms also improved access to international distribution channels and the image of Chilean wine in international markets, enhanced knowledge of international markets and enabled the industry to take advantage of economies of scale. Between 1990 and 1998 the joint ventures increased to reach a value of 38 million US dollars and the wine

acreage doubled during this period, along with a change in focus to serving export markets, which involved the local industry in significantly improving the quality of Chilean wines (Van Tienhoven, 2008, p.22).

8.2 Industrial Structure in the Wine Sector

Chile has 13 clearly identified wine regions: some of the most well-known include the Elqui Valley, the Limari Valley, the Aconcagua Valley and so forth. However, the majority of Chile's premium wines are made in the wine regions of Maule, Maipo, Aconcagua, Cachapoal and Colchagua, which are close to Santiago (Chile's capital city). Although the economic activity of wine firms is developed mainly in the regions where they are produced, empirical evidence shows that the marketing, strategy, administrative and other managerial functions of larger wine firms tend to be located in Santiago. (See Figure 8.1)

Figure 8.1 Chilean wine production zones.



(Source: Wines of Chile; 2013)

With respect to the industrial structure, the Chilean industry is quite concentrated. The four largest wineries in Chile account for 50% of wine export value. However, this perhaps underplays the diversity of the sector, as it is clear that that Chilean wine industry is comprised of a range of differently-sized firms, dedicated to the selling of wine, either for internal consumption or export.

There are two basic business models in the wine industry:

- a) The production of wine for export in bulk to companies that then bottle and label this wine through their own processing. Examples include companies such as Tesco

or large international wine companies who insist upon specific wine type and quality. Producers in this sector include both large growers who produce their own wine for the international buyers and others who also purchase wine from other smaller vineyards and then sell this on in bulk to larger companies like Concha y Toro, among others, which insist upon basic quality standards.

- b) The other business model found in the industry is the production of bottled wine for both national and international markets, depending on the quality of wine produced. This business model is subdivided into three parts according to the quality of the grapes. (Business leader, Research interview conducted in March 2013).
 - a) ‘Varietal’ wine is produced on a large scale grape production per square meter and requires no great cost in the production process, this varietal grape is intended mostly for the large-scale production of inexpensive bottled wine.
 - b) ‘Reserve’ wine needs further elaboration and is produced with fewer grapes per square metre planted and with more intensive post-harvest treatment. This wine is aimed at a more sophisticated market looking for a good wine at a lower cost.
 - c) ‘Premium’ wines have even lower grape production per square metre, vine growth is handled with great care and considerable resources are expended in R&D activities such as variety selection and post-harvest processing. There is greater integration of ancillary enterprises in the production of these wines, (aimed at enhancing added value), which further increases the prices demanded for premium wines.

Grape production is centred upon the vineyard, which is the agrarian unit where the productive cycle of the grapes unfolds ending in the vintage. Directly related is the vinification cellar, where the technological processes for developing the wine are carried out. Traditionally, vineyards had their own wine processing plants where the vinification activities were carried out, although the current trend is to send grapes to an independent processing plant which can process grapes from the same farm as well as process wines of third parties. To these we can add the firms that supply inputs and services to the vineyards and cellars: these are firms of different sizes and specialization that are involved in the productive process in a variety of ways (consulting, certification, wine analysis, etc.).

The amount of land turned over to wine production has increased substantially in Chile over recent years. It is interesting to explore, however, how this production is distributed across the country and the size of enterprises which dominate across the different regions. Table 8.2 shows the average size of vineyards for each of the major wine producing regions of Chile.

Table 8.2 Average vineyard size

Region	Area (ha)
IV	14.9
V	27.0
VI	22.8
VII	9.4
VIII	2.2
IX	3.4
X	4.6
RM (Santiago)	34.7
Average size of Vineyards in Chile	8.4

(Source: Fundación Sol, 2008)

The table shows, for example, that in the VII and VIII regions, the average size of vineyards is relatively small (9.4 and 2.2 hectares respectively) in contrast to the Metropolitan Area and the VI region where there is a high level of concentration. Nevertheless, the average figures can be misleading. There are small and medium vineyards which sell to third parties. Also, there is bulk wine that is bought from small producers and then marketed by large wine export companies (similar practices are also found amongst domestically-oriented production). It is crucial that the development of public policies towards the industry at a regional level is based upon careful analysis of the contractual market relations between large and small firms within the sector (with a particular emphasis upon the specific factors delaying the upgrading of small producers and how public policy can help shape this process). Currently, production of grapes for wine is carried out in 13,900 vineyards, 83% of which are small vineyards of less than 10 hectares (see Table 8.3).

Table 8.3 Distribution of Vineyards according to size and location

Region	Size of Vineyards (hectares)						Total
	0 - 1	1,1 - 5	5,1 – 10	10,1 – 20	20,1 – 50	>50	
Coquimbo	13	59	34	24	15	7	152
Valparaiso	34	39	33	29	41	29	205
Lib. Bdo. O'Higgins	104	343	315	327	260	134	1,483
Del Maule	1,596	1,802	813	572	427	162	5,372
Del Bio Bio	3,833	2,168	247	88	68	14	6,418
Araucania	1	3	1	-	-	-	5
De los Lagos	-	1	-	-	-	-	1
Metropolitana	25	45	74	58	59	50	311
Total	5,606	4,460	1,517	1,098	870	396	13,947

(Source: Catastro Vitivinicola, 2007–2008)

Table 8.3 shows that approximately 40% of Chilean vineyards have an area of less than one hectare and that 97% of vineyards have less than 50 hectares. On the other hand, according to Fundacion Sol (2008, p.25), the 207 largest Chilean wine firms together account for 62,000 hectares, which corresponds to 54% of the total area devoted to wine. Therefore, the average size of those vineyards is 303 hectares. Clearly, then, Chilean wine production features both the presence of a good number of small-scale producers but also a large degree of concentration of ownership.

According to a business leader (Research interview conducted in March 2013):

“There is a high level of vertical integration in the industry (many wine exporters have their own vineyards) especially in the large firms orientated toward the production of ‘premium’ wine. However, amongst the smaller-scale growers, the industrial structure is more heterogeneous, with some larger vineyards purchasing grapes from smaller growers”.

For many reasons, the large firms prefer vertical integration: they control the quality of grapes and own the majority of lands where produce grapes, keep quality control in processing, control of oenology, etc. When there are potential negative externalities (for example a bad product that is not correlated with a good marketing campaign), and there are decentralised units and independent producers involved within the production

network, it is possible that enhanced vertical integration would provide one solution for mitigating these undesired effects (Milgrom & Roberts, 1992, p.544)

The next section analyses the industrial organisation of the wine sector in general terms.

8.2.1 Industrial Structure of the Wine Sector

As suggested above, the structure of the Chilean wine industry is complex. There is a small group of large, frequently internationalized, wine companies which enjoy significant economies of scale, of which Concha y Toro is a classic example. Then there is an intermediate stratum of relatively large but, for Chile, medium-sized companies, the majority of whose brands are not well known. Then there are the small wine producers, including the small new boutique firms that are stylish but produce very small quantities of very high quality wine, and other small wine producers who produce some of their own wine but also sell grapes to the larger wine producers (Van Tienhoven, 2008, p.39). The grape producers range in size from really large-scale producers who are basically dedicated to growing grapes rather than producing wine, to those who have just one hectare, with all other possible combinations in between. Most wine producers have their own vineyards where, as well as producing wine, they frequently buy and sell grapes depending on their needs. Also depending on the wine that they produce is the quantity that bottled with their own label and sells it as bulk wine (locally and internationally).

8.2.2 Product Upgrading: Bulk Wine and Bottled Wine

There is an interesting discussion in the industry about the need to focus on bulk wine (medium quality) or premium wine. In order to illustrate this point and put it in context, in the last six months of 2012, bottled wine shipments grew at only 1.5%, while bulk wine exports grew at 101% in value and at 67% in volume compared to the same period in the previous year. As one interviewee put it (Academic), “so you cannot build a country identity”. The point is that bulk wine is not high quality wine, and therefore the efforts of the industry to promote Chilean wines as high quality are thwarted. This is

reflected in the fact that the price of Chilean wine is not increasing because bulk wine is thought to tarnish the image of Chilean wine as a whole.

Santiago Achurra, Managing Director of Viña Requingua, points out (Bravo, 2012) that:

“Consumers are more and more demanding. And the wine is a complex product, i.e. not just what's inside the bottle. It is necessary to take into account the distribution, service, image, status, a concept, etc... otherwise sales decrease. This requires more marketing campaign and knowledge”.

An example of this dichotomy of views in order to develop the industry, is the ‘Grupo Santa Rita’ which has focused on building a premium wine brand, abandoning promotional activities involving price reductions that do not add value to the brand. Their strategy is to achieve growth in profits even though the volume of sales falls – a strategy that is designed to develop the brand and achieve a more profitable business in the longer term.

But not everyone in the industry agrees that the Chilean strategy should be to raise prices. For Santiago Achurra, the CEO of Viña Requingua, which exports 500,000 boxes a year, the land and climate of Chile are capable of producing a range of wines from top-end premium wines to the cheaper varietals. He argues that Chile must take advantage of this and not focus on a single segment of the market, because all can drink a great quality wine at an affordable price. When you put prices too high there are very few people who can appreciate the wine (Bravo, 2012).

A review of the views of commentators and specialized participants in the industry, reveals a conflict between those who support a stronger focus on promoting premium brands and the orientation of public policy (and public resources) towards that end, and those who favour a broader focus which also embraces the growing specialization in the production of bulk wine (which has been growing over recent years via the participation of a growing number of large entrepreneurs).

According to an Academic, focussing public effort in the production and commercialisation of bulk wine is not a sustainable longer-term strategy due to its negative effects on price and the reputation of the industry. He argues that:

“There are several ways from a marketing point of view in which you can enter the market. The strategy that was adopted in fruit and also in wine was to sell a product of reasonable quality at an affordable price. This means improving sales by stimulating demand, for me this does not produce a virtuous circle because it is generated by selling at low value”. (Research interview conducted in March 2013)

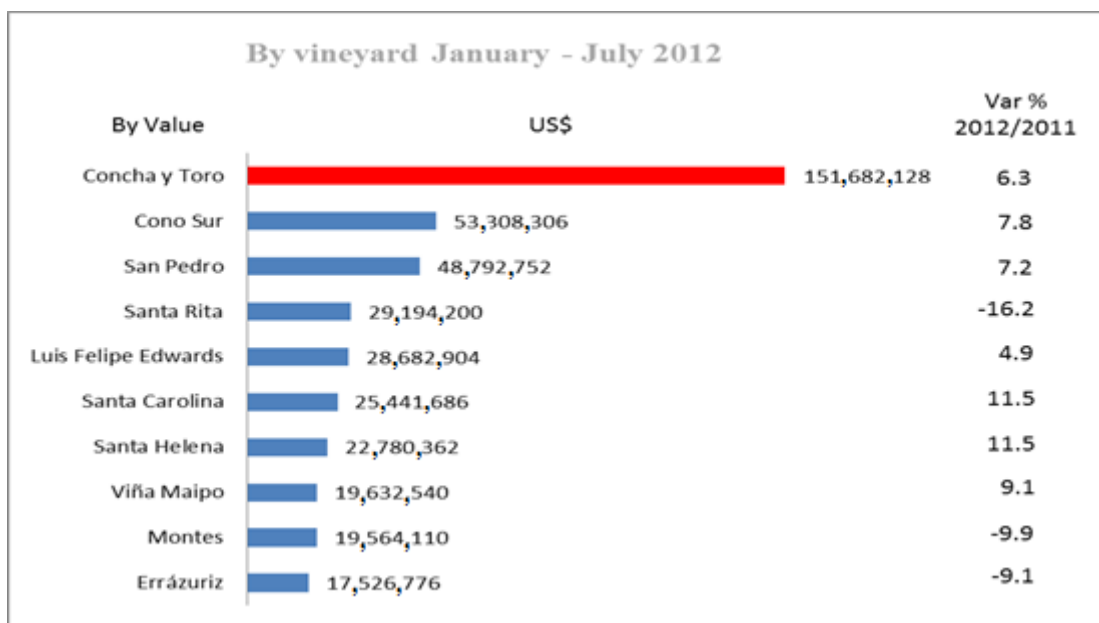
Despite such views, it is clear that the bulk wine industry in Chile has evolved positively over recent years. It was previously a marginal business, based on discarded fruit rather than good grapes, but it developed a profitable niche market, managed by specialized enterprises oriented towards export markets. The success has been due to the fact that Chilean bulk wine is relatively a good quality wine, certainly better than the majority of its competition. Nevertheless, it remains the case that in the ‘sophisticated’ Chilean wine sector, to refer to bulk wine is to refer to bad quality wine that is marginal to the bottled wine and premium wine industry. The development of the industry in recent years has, however, increasingly challenged this characterisation and the Chilean bulk wine industry is increasingly associated with a product of generally good quality and with specialized players.

Figures 8.2 and 8.3 shows that 10 vineyards alone produce 53% of the total export value of Chilean bottled wine. When the results are analysed in terms of value, the bottled wine produced by wine companies grew by 3.6% in the first semester of 2012 in comparison to the same period in 2011. It is necessary to take into account that this is the premium segment (wines of high quality) which faces intense competition in the international markets. In the case of bulk wine, the development has been very different from 2012 onwards. The growth of value in the same period is 91% while the price rose by 18%. The sector has attracted numerous large companies who are investing heavily in bulk wine leading to an increase of quantity of 61% in the first semester of 2012.

However, the composition of bulk and bottled wine (in value) remained relatively stable between 2007 and 2011 (the value bulk wine exports represented 30% in total export wines these years) (Wines of Chile, 2012).

Summarising this discussion, according to the more traditional wine firms aimed at the higher quality market, the growth of the Chilean bulk wine industry is negatively affecting the brand perception of Chilean wine in the international market in its attempts to be considered premium wine of high quality. On the other hand, the firms that produce bulk wine suggest that their wine has been improving its quality significantly over time and that it is good that the productive diversity of Chile is present in the global markets. This issue is returned to below.

Figure 8.2 Exports of Bottled Wine by Value



(Source: Vinos de Chile, 2012)

Figure 8.3 Exports of Bottled Wine by Price



(Source: Vinos de Chile, 2012)

In the next section, the technological upgrading of the wine industry is examined. It has occurred as a sequence of facts and has created the conditions for a good governance of this industry.

8.3 Technological Context

As suggested in the introduction to this chapter, the technological upgrading of the Chilean wine industry has been boosted by external market entrants at least in the beginning. When Miguel Torres arrived in the 1980s, he introduced small oak barrels (of 220 litres) to replace the 4,000 liter-fudres¹¹ in which all Chilean reds had previously been fermented. The use of smaller barrels improved the wine quality, despite being more expensive (Benavente, 2006, p.233). Torres's approach was quickly followed by the rest of the industry.

¹¹ Fudres: Wooden bowl with round bottom and side walls and large capacity curves (200-300 hl.) Used to store and mature wines.

Until the 1990s, R&D in this industry was scarce. However in the last few years there have been higher levels of investment in these activities, although the level of this depends on the size of the firms. Kunc (2007, p.116) carried out a survey regarding how the managerial practices of Chilean small and medium wineries have contributed to the past success of the wine cluster. The findings indicate that:

“Chilean wineries are following the right recipe for success in the wine industry but they may not be prepared for meeting future challenges. To survive, winery managers will need to pay more attention to distribution, marketing, consumer behaviour and cost management while maintaining their actual efforts in production and viticulture technology. The results also show that there are clustering processes aiming to exchange knowledge in certain aspects of the wine value chain like viticulture. (Kunc, 2007, p.118)”.

Moguillansky et al. (2006, p.28) remark that the firms that have achieved better standards of innovation have the following characteristics: they have a clear and defined strategy, their strengths are based on a quality product, branding, flexibility in management, and an ability to find answers to changes in demand quickly. Also they employ dedicated people in the area of R&D. These firms have also clearly identified the importance of association for innovation and actively participate with other entities such as universities and technological consortiums in their activities, as well as maximizing their use of public resources for productive promotion.

However, more balanced views in regard to development of the wine sector as a whole were expressed by interviewees in the research. An Academic (Research interview conducted in December 2012) points out that:

“It is necessary to improve the infrastructure (ports, motorways) and increase R&D, and contribute to help the small wine producers (that state uses all its subsidiary role), but that medium and large producers (wineries, grape producers) are not subsidized directly, at least.”

One of the critical points of literature in terms of reach stages more advanced of a broad industrial basis is the need that the state carries out collective investments (public

goods) to reduce the risk of new investments. It is also quite clear that public policies should discriminate positively in favour of small growers and SMEs.

Among the main constraints that prevent small wine firms from functioning more effectively are the lack of a business strategy (vision, mission statement, concrete targets), effective budgeting, management and marketing campaigns. There is little coordination among the small firms and they do not know how to engage effectively with the state agencies to obtain credit, training to boost innovation, etc. (Kunc, 2007, p.118). A small farmer (Research interview conducted in March 2013) points out that:

“We as small producers are not united (North of Chile in the Region Coquimbo); then we sell the grape, but then we have to pay the packing of export firm, pay the transport, etc. And we are with the expenditures in the limit (break-even). We are just creating an association”.

Certainly, boosting associativeness is key to mitigating the problems that affect small growers.

However, literature reveals that innovation in the sector has not generally been designed in conjunction with marketing strategy. For many SME vineyards the two are not connected (innovation and marketing). As Mogueillansky et al. point out (2006, p.29), generic marketing, penetration in distribution networks and precompetitive research represent challenges where the risk is high and the possibility of appropriating low. This implies that firms would benefit from cooperating to overcome these challenges. As Kunc suggests (2007, p.118), there are potential gains for SMEs from enhanced cooperation. But there is a highly relevant issue in this discussion. The capacity of state agencies to provide advice and consultancy to small growers is inadequate which is of concern to growers and SMEs in general. A small farmer (Research interview conducted in April 2013) he points out that:

“Complained that he enrolled in the INDAP to receive advice from an agronomist, but he never visited him. This affects so many small growers who were hoping to improve their crops”.

This point is critical to the success of any truly productive modernisation (not in a neoliberal sense) that takes into account the characteristics and needs of small growers.

One institution that has played a major role in the promotion of the competitiveness of SMEs in the wine sector is the business association Chilean Wine Corporation (CCV). Its objective is to contribute to the upgrading of its associated firms. The CCV performs several functions that contribute to innovation processes and the search for new varieties and new markets. The CCV helps to reduce the gap between innovation and productivity which individual firms could not otherwise overcome (in the form of generic marketing, participation in international fairs, technical assistance, etc.).

In 2005, two technological-entrepreneurial wine consortiums (Vinnova and Tecnovid) were created to encourage R&D activities. These are private firms composed of large wine firms (60%) and universities (40%). These consortiums have as an objective the development of research projects in all the wine value chain focusing on the more biological aspects of the wine industry rather than processes and business models). 60% of financing comes from INNOVA CHILE and the consortiums, and the other 40% comes from wine firms and universities. The objective with this initial investment, is to create a continuous innovation cycle developing new projects according to the needs of wine firms. It demonstrates that network productions of this industry are working in an adequate way. There is trust between the different actors in this industry (trust which has developed over time) and there are leader firms which work actively with public organisations. However, when the industry as a whole is examined, it is clear that working conditions are poor, especially for grape pickers. The next section considers what is required to achieve good governance in the wine industry.

8.4 Institutional Arrangements: Quality of Cluster Governance

In the Chilean wine sector, the quality of cooperation at the industrial level has been crucial for the successful development of the sector. The forces which have been pushing the industry forward come from several sources. One factor has been the increasing internationalization of the industry; whilst this has been an over-whelmingly positive factor for the development of the sector, the challenges for Chilean producers

have been a factor underlying the growth of intra-cluster cooperation. The empirical evidence from the Chilean wine sector shows that the growing international connection to global markets played a substantial role in allowing for the industrial upgrading of individual wine firms. It enhanced the export performance of this sector as a whole. This relative success is due to cooperation between firms and other actors in key areas of the industry: marketing and promotion, internationalization, training and innovation (Langen & Visser, p.177).

Drawing together the argument of the chapter so far, it is clear that the remarkable success of Chilean wineries is due in the main to two factors: the consolidation of regional clusters (agglomeration of firms in the wine industry which were jointly developing) and their integration into global production networks that have enabled them to increase their sales and upgrade their products and processes. Clustering and cooperation has been massively important in the evolution of the industry.

The need to specify technical and logistic requirements in the light of product differentiation, design and branding strategies for global markets, and the risks of supplier failure regarding the quality, speed, and reliability of the delivery of products (Schmitz, 2004) have seen buyers switch from market based to networked, hierarchical 'chain governance'. This in turn influences the prospects for upgrading, through process, product, functional, and /or intersectoral upgrading at the level not only of the firm, but also of the cluster. Development driven only by market forces ('market signals') without these elements of clustering would not have boosted the industrial upgrading that the wine industry as a whole has experienced.

A low-cost strategy is not enough to increase competitiveness in the long- run. Clearly, as argued above, part of the success of the Chilean wine sector has been based around a low cost strategy, particularly in the case of bulk wine (although there are different qualities of bulk wine with well-established niche markets). According to several interviews, the source of longer-term competitiveness cannot be oriented toward the production of large quantities at a low price alone. The low cost strategy, as discussed extensively in Chapter Two, is called 'immiserizing growth'. Within this context, an Academic (Research interview, professor, March 2013) claims that:

“There are several ways from a marketing point of view to enter the market and what Chile did in the fruit and also in the wine sector was to sell a product at an affordable price. The industry is changing its strategy to maintain good business based around selling another product with a higher unit value; this involves change the packaging, labelling etc. The issue is how we convince our customers that they must pay more for this bottle of wine; in order to do this we must change the image of the industry”.

This reflects the idea that a strong marketing campaign underpinned by the necessary resources is a highly effective means of promoting the image of the country and creates additional value for Chilean products. However, it remains critical that the working conditions and the SMEs inside the production networks is complex. Otherwise, the image of country will not be credible in the foreign markets.

As already indicated earlier in this chapter, the sources of competitiveness are an increase in the quality and variety of wines. This requires enormous investment in branding. This is an issue that cannot be solved by individual firms alone, but only by the industry as a whole taking collective action and engaging in collective investments. This poses new questions and challenges: who will develop a branding strategy, how will it be done, who will finance it and what does re-orientating production towards higher value market segments entail in terms of investments in R&D, innovation, training and infrastructure.

In research carried out by Visser & Langen (2006, p.189), when the managers of Chilean wineries were asked what variables were causing problems for the competitiveness of the Chilean wine sector they mentioned the following key issues: 1) innovation, 2) education and training, 3) internationalization, 4) marketing and promotion, and 5) infrastructure. From the interviews conducted for this research, it appears that producers see the most important of these challenges (in terms of issues requiring collective action) as those relating to marketing and internationalization, and to a lesser extent, education, training, and innovation. However, although there are also new perspectives about these developments. An Academic (Research interview conducted in December 2012) claims that:

“Innovation in the medium term will lead to a more highly skilled workforce commanding higher wages and better working conditions but that it will also lead to more mechanisation in the agrofood industry.”

That is, many actors in the sector agree that the image of Chile on the world markets needs to improve in order for the premium-end of the Chilean wine market to develop.

Beyond the question of coordinated marketing and transforming the image of the Chilean wine industry, the interviewees also highlighted the importance of innovation. This was explored in section 8.3 (Technological context). The issue of innovation encompasses a range of different dimensions: the need to differentiate products, the optimization of wine making processes and improvements in the use of information technology for monitoring and control in the plantations and in the cellars, amongst other factors. At the same time, effective coordination is vital to avoid oversupply and the associated declining prices. Some interviewees raised issues about the quality of labour, although these invariably revolved around the technical knowledge of oenologists and managers rather than the temporary agricultural workers (who get the lowest salaries in this value chain). There is, however, some recognition of the problems caused by the insecurity of work and poor contracting arrangements in the sector. A business leader (Research interview conducted in March 2012), for example, argues that:

“The informality of labour contracting is a shared responsibility between the state and entrepreneurs in the sector. I complain about the lack of control by the state of the contractors (people who hire workers in the agrofood sector on behalf of the firms) because they are not responsible for the temporary workers once they begin to work on the farms.”

The eventual quality of wine is largely determined by the quality of the manual work of temporary workers in tending the vines etc. This implies that a necessary and sufficient condition for achieving better quality wines is to train this group of workers. One option to achieve this would be via the introduction of a certified training programme (delivered through short courses by state or private sector agencies) for workers in the industry. This could eventually lead to better salaries and better working conditions for

workers who complete the course and would reduce the risk to firms of mishandling of grapes and wine by a poorly trained workforce.

Accordingly, some initiatives have been introduced in the sector that is designed to correct some of these weaknesses. A business leader (Research interview conducted in March 2012), for example, explains that most wine companies are concerned about these issues:

“We provide induction to all people that work in the firm. Some activities are short and some a little longer; they deal with handling, health and safety etc. And now we use a government program called CHILE VALORA. My company trained more than 200 workers with CHILE VALORA. They receive a certificate depending on whether they complete the induction course to a satisfactory level”.

One of the basic issues in the agrofood sector is having more certifications of training to reduce the risks of excessive low salaries and low productivity. Although these certifications must go accompanied by higher bargaining power of trade unions and a legal code that recognise these precariousnesses.

In general terms, the Chilean wine cluster works well. Exporting wineries have their own vineyards, so they control the quality of grapes. If more raw materials are required, they can buy grapes from third parties. There are public and private institutes doing research for the wine industry, which encourages innovation. As mentioned previously, leader firms (national and foreign owned) have played a major role in creating the conditions for more general upgrading of the sector into higher added-value activities within global production networks for wine.

This reflects Visser's (2003, p.29) depiction of the main factors determining the quality of wine cluster governance, which he defines as:

- a) Trust: which facilitates collective coordination
- b) Knowledge: intermediaries improve the coordination of collective actions
- c) Leader firms: improve the coordination of collective actions

- d) Improving the quality of the coordination of collective actions will enhance the performance of the export industry.

The issues raised during the interviews conducted for this research confirm these factors in the case of the Chilean industry. Above all, the participation of intermediaries has been crucial in the recent development of this industry. Thus, the activities of the major sectoral business associations (Corporacion de Vinos de Chile and Vinos de Chile), together with state institutions (CORFO, universities, and technological consortiums), have boosted the industrial upgrading of the sector and coordinated generic marketing campaigns abroad to penetrate the international markets.

According to Felsensztein (2003, p.6) even in the late 1990s Chilean wine was unknown around the world. By 2003, he claims that it had a good position and could be found across a range of major stores in Europe. In his research he points out that the reasons for this growth have been a good price-quality relationship, health factors and the agro-climate conditions. Felsensztein also emphasizes the role of particular companies in opening up and developing new markets. For example, he describes Concha y Toro (its main brand in the UK is 'Cellar of the Devil') as a pioneer company in this regard. The company opened a UK office in Oxford in 2000 in order to invest in brand building and coordinate a long term marketing strategy in European markets. Nevertheless, the role of these 'leader firms' in the evolution of the Chilean wine sector has not been interpreted in an uniformly positive way.

The preceding discussion of the most important factors necessary for achieving effective governance of the wine cluster in Chile does not explicitly incorporate the upgrading of the skills of the workforce. As discussed in Chapter Six and in the previous paragraph, and mainly is related with a social upgrading, rather than a narrow economic upgrading.

Generally, it appears that most participants from within the industry do not consider social issues to be a major aspect of the challenges facing the sector, or it is assumed that the upgrading of each firm on its own will enhance the skills of the workforce. As has been argued throughout this thesis, however, a holistic discussion of the sustainable

development of individual clusters and the upgrading of economic sectors would explicitly address the question of labour and skills development.

The wine sector shares some of the features of informality and precariousness (especially amongst the ‘temporeros’ or seasonal workers) already discussed in relation to the wider agrofood industry in previous chapters. Central to this phenomenon is the role of the contractors (‘contratista’), the companies/individuals contracted by firms to hire seasonal workers for the harvest (the wine firms pay the contractor who then pays the workers). However, as seen in previous chapters, a lot of complaints arise because the rules established by the contractors are often not very clear and the workers do not know their rights. Also, in general, the firms involved in the wine sector do not seem to be particularly concerned with the conduct of contractors. This is not a minor problem. The population of seasonal workers reaches ten times that of the number of permanent workers in the wine industry (Ramos, 2007, p.3). These workers also face other problems, for example they frequently have no way of knowing, in the short term, whether the contractors have paid their benefits, health insurance, etc. Although some wine firms prefer not to work with contractors, it is a real problem that could affect the profitability and prospects for upgrading of this industry in the medium term. Several interviewees mentioned the need for higher control and regulation by the Ministry of Work’s ‘Work Service’ authority. Farm workers’ trade union leader (Research interview conducted in March 2013) points out that:

“The intermediaries appropriate of the benefits of farm workers because state control is weak”.

As in the fruit sector, there are important aspects of gender in the labour market in the Chilean wine sector. According to research carried out by Davila (2009, p.19) in the wine sector;

“Long term work contracts are made up of 70% men and 30% women, direct (i.e. without the use of contractors); temporary contracts are comprised of 60% men and 40% women but in the case of the most precarious temporary contracts, 60% of workers are women. This stratification of work reveals that it is in rural

areas where more rigidly entrenched patriarchal structures that place women in a subordinate position relative to men continue to be most entrenched.”

Farm workers’ trade union leader (Research interview conducted in March 2013) points out that:

“Our organisation National Association of Rural and Indigenous Women, supports increase in wages, improvements in working conditions and collective negotiation (stronger trade unions on a par with the large entrepreneurs). We are also aware that more could be done about risk prevention in work.”

Clearly there is a problem with the working conditions in the wine sector (this will be discussed in the final section of conclusions). This discussion is one of the central axes of the problems of development in the agrofood sector. This chapter focuses on the wine sector which is founded on temporary work. However, national trade union leaders and farm workers complain about the conditions in which they carry out their work. The farm workers’ trade union leader (Research interview conducted in March 2013) claims that

“despite the efforts of medium and small entrepreneurs to internationalise Chilean products (wine, fruit), it is necessary to acknowledge that the Chilean economic model is without constraints; it is a model where everything is sold with international marketing campaign and even shows Chile as if there are no poor people.”

On the other hand, whilst some academics, entrepreneurs and businesses associations interviewed for this research did not generally talk much about the precariousness of working conditions in the sector, they were certainly concerned about falling profitability within the sector. Accordingly, an Academic (Research interview conducted in March 2013) claims that:

“The following issues pose problems for the wine sector: the exchange rate (it would be low and non-competitive), rising costs and availability of labour, and scarcity of water”

Specifically, in regard to the scarcity of water, he points out that, the wine sector and agrofood in general have a very efficient competitor in the mining sector, and besides there are problems with rainfall. One of the challenges to the future economic success of the agrofood and mining sectors is the fight for water rights in order to develop their productive activities. A new framework is required for the rights of tenants to water.

As discussed in Chapter Six, these are the same factors that affect the agriculture sector as a whole. Although it is a view focused in the entrepreneurial development of the sector, and that do not take into account the problems that face the farm workers in the wine sector, specially the temporary workers.

Behind all of these problems lies the weak power of trade unions in this sector. Within the wine industry, trade unions have not generally been able to negotiate at a collective level, only at the level of individual farms. The unionization rate is low in Chile (10% of workforce) as a result of fears and prejudices after decades of the neoliberal framework. During the dictatorship there were attacks on trade union leaders.

Overall, according to Ramos (2007, p.2) the problems of seasonal workers in the agrofood sector (included the wine sector) can be summarized in three themes: i) bad employment conditions (informality, low salaries, instability); ii) scarce health protection and difficulty enforcing the law with respect to child care (the law points out that the owner of the farm must organize child care if the number of female workers is 20 or more), iii) low negotiation power with respect to employers. One of the chief motivations for doing something about these circumstances is that increasing pressure for companies to take questions of social sustainability seriously is coming from the international markets (Morsing & Perrini, 2009, p.2). This is at least a starting point for the industry, as it implies that companies will have to certificate their processes, improve their working conditions (social security must be paid on time as well as health and other benefits provided to workers) and be more environmentally friendly.

8.5 Conclusions

The discussion over the course of this chapter has indicated that the industrial structure of the Chilean wine sector is highly concentrated, particularly in the ‘wines of high quality’ segment (the participation of small wine firms is less relevant in the production of wines of high quality due to the processes of vertical integration of the large wine companies). According to Gwynne (2008, p.42), “with the increasing vertical integration, the leading companies have been linked to a significant growth in planting and private sourcing, at least of their premium, super-premium and ultra-premium wines”.

As discussed, small wine firms face the same constraints as the larger firms (such as the low international price of wine as a result of overproduction) but their position within a highly concentrated industry leaves them in an even weaker position to deal with issues such as increased global competition, the increased bargaining power of importers and the increased importance of marketing branding (Van Tienhoven, 2008, 78).

The interviews revealed a particular preoccupation with wine marketing across the industry. The main problem of the industry is not the production of wine. Although smaller firms will not generally be able to differentiate into producing premium wines of a really high quality, a more sophisticated marketing campaign would be beneficial for them. The Chilean strategy for branding its wine needs to encompass everyone from the small wine firms to the Government. Several interviewees stressed the need to strengthen ‘Brand Chile’ (this has also been highlighted by several researchers including Felsensztein, 2003).

Organisations such as Vinos de Chile and PROCHILE are considered experts in creating image, and in helping small wine firms to promote their products in export markets. Branding is important for adding value to the product; it creates awareness in consumers. Apart from the brand name and label, innovative packaging enables wineries to add value to their offering. Some observers have suggested that the smaller wine firms should start to cooperate amongst themselves in R&D and marketing (Benavente, 2006, p.240). This would ensure that smaller producers would have a better position in negotiations with importers, distributors and supermarkets. For instance a

group of producers could hire a common manager to export the wines in their name, which would then allow the producers to focus on production.

Nevertheless, in order for this to work, it is necessary for these wine firms to have a common and measurable focus on quality, consistent with the demands of the importer and final consumer. Other advice (Kunc, Visser & Langen) is that smaller wine firms should develop alliances (partnerships, joint ventures) with foreign wineries, so that the smaller Chilean wineries can learn and develop new skills, access and become more familiar with the working of distribution channels and reach new marketing-brand standards. Foster et al. (2002, p.35) point out that the orientation towards a high quality product wine at a competitive price should be a priority of all Chilean wine companies: “it does not matter if we are talking about small, medium, or large wineries. Industry coordination is therefore critical to positioning these concepts in international markets”.

It is also important for smaller wine firms to have the correct distributor for their products. The distributors have better knowledge of the market, and know how to target specific types of consumers. Smaller firms cannot target consumers directly, therefore it is crucial for the future success of the broader Chilean wine business for the relationships between distributors and wine producers of all sizes to be strengthened. Nonetheless, the selection of a distributor is not a simple matter. If a large distributor is selected, it offers winery marketing and marketing expertise, as well as an established distribution channel enabling the small firms to focus solely on production. The disadvantage, however, is that the large distributors are not interested in small wine firms, preferring instead to do business with large wine companies due to the fact that these supply different varieties of wine. A good distributor keeps different varieties in a portfolio of wines. Furthermore, this gives them a lot of bargaining power, altering the fair relations that should exist between smaller firms and distributors (Van Tienhoven, 2008, p.82). It implies that small wine firms should cooperate to sell their wine. Hence, they should create commercialisation channels such that the costs of operating are reduced and so they can keep the control of the final price

From the point of view of GPN, the Chilean wine industry has managed to design a governance structure that has allowed a high relative degree of development, particularly in the segment of medium and large wineries. These actors have responded

to external market impulses, and this has enabled an improvement in the processes, final product, distribution, etc., particularly in larger companies. These companies have tended to adopt a vertical integration strategy, for example expanding their own grape production to keep track of product quality. Here the upgrading of production networks has resulted in favourable conditions for the permanently employed technicians who work in the vineyards (winemakers, human resources specialists, administrative, etc.). Smaller growers within these networks, mainly small grape growers who sell their production to the medium and large-sized wineries, frequently complain about the contract conditions they face (for example frequent contract changes prevent small farmers from planning their incomes and expenses). In this context, the upgrading which is being promoted via external market pressures reaches this segment of the chain with far less strength and they find it far more difficult to appropriate additional economic surplus. In addition, working conditions of workers in this industry are very similar to those described in the wider agro-industrial sector in previous chapters. Given the nature of work in the industry, it is seasonal, quite informal (frequently providing no social security payments etc.), and although it is impossible to generalize, relevant entrepreneurs in this industry consider that this situation (not fulfilling of the payment of benefits) is a mess. Public policy is required to audit and control it more closely.

Clearly the larger producers involved in the sector have experienced considerable growth and development over recent years: they have grasped new marketing techniques, developed knowledge of new markets and increased production of both high quality (premium) wines and bulk. These developments have been achieved by embracing collective action within the sector through business associations (e.g. Wines Chile, Chile-vid) and an especially active public policy oriented to overcoming the individualist attitude of Chilean wineries (here the role of PROCHILE has been especially relevant). The role of these associations in the training of segments of the workforce (developing their capabilities in order to fulfil the international requirements in an effective way) has been vital to achieving the upgrading that has taken place amongst these medium and large-sized companies.

The marketing, internationalisation and training and education regimes in the Chilean wine industry can in general be considered to be relatively well developed, whereas the innovation and infrastructure (assets, governance, and institutional arrangements)

appear to be weak spots in the cluster governance of medium and large-sized companies. However, when Chile's overall insertion within the global production networks of the wine industry is considered, the most challenging issues are the uneven nature of the industry, difficulties faced by smaller-scale producers and the continued presence of extremely poor working conditions. Although there is a trend in small and medium-sized wineries toward strengthening their human resources departments in order to tackle the problems imposed by contracting practices in the industry, the outcomes are quite mixed. The largest wineries, on the other hand, are adopting increasingly 'good practices in human resources', at least in some cases, and are developing new standards and protocols due to the requirements of more developed markets.

In the light of GPN, the networks of firms involved in R&D encompass the segment of medium and large wineries. Also the marketing efforts as well as design and distribution are influenced externally (abroad) what strengthens the global production network. But it is not sufficiently global due to that it does not embody the small growers in a proper form as well as the workers in this activity. The distribution of corporate power within the industry remains in the hands of large local companies, which have made alliances in the last decade with multinational companies putting more pressure on small growers (very long payment period, reducing the price because the small firms are said not to have fulfilled specific quality standards). The state agencies have been unable to design a public policy that considers the real context of the weakest elements of the Chilean economy's participation within these production networks.

From the point of view of decentralization and economic activity in regions outside Santiago, it would be helpful if the government would support the small producers in their relationships with medium and large-sized wineries. Otherwise, the production network atrophies, its development is uneven and it does not facilitate productive linkages especially in the regions where these small grape producers are located.

Therefore, based on the GPN approach, the social upgrading in this industry is incomplete, as it is not taking working conditions into account. The small growers do not have legal protection in their contracts (a very weak 'contract farming'). So it is

possible to state that this industry has enjoyed vigorous economic upgrading, benefitting mainly the large and medium sized companies (wineries). They have taken advantage of the external pressure to improve quality, traceability, and fulfilment of sanitary conditions. But economic upgrading has not spread to all the actors involved in the production networks of this industry. Although the Chilean wine industry has developed enormously in the last two decades, the social costs of this development have been asymmetrically distributed among the actors. This is because in the neoliberal context, public policies dedicated to tackling these problems are weak or non-existent and the benefits of this growth have not promoted more inclusive development.

Chapter Nine: The Future of Industrial Policy in Chile

This final chapter has as objective to analyse the future of industrial policy in Chile. It combines the main research aims of the thesis, starting with the main problems that face the agrofood sector in the Chilean economy. It encompasses from the difficult situation of SMEs and small growers as well as the poor working conditions, both in the context of agrofood sectors. Also there is a development of proposals to mitigate these problems. In this chapter are explained and discussed the domestic and external constraints to overcome these obstacles that impede to have a more sustainable development in the agrofood sector.

Main Research Aims: This thesis started from the premise that the changes required in the agrofood sector and in the Chilean economy in general to instigate a transition towards a more sustainable and equitable society will require a significant series of policy reforms such, for example, that regions and local governments can have more influence in the strategy of development. As such, the thesis adopted a wide-ranging political economy approach to its subject matter; a focus which took on greater significance as the conducting of the final stages of the thesis coincided with the election of a new Chilean government committed to the three pillars of i) Social Inequality, ii) Education, and iii) Regional Inequality. These principles are central to the programme of the new administration and it is related to this research. Basically, it is that the paradigm to overcome is that the upgrading in the weakest parts of agrofood sector (SMEs and workers) is not automatic.

Over the course of the preceding chapters, the thesis has examined the conditions of small and medium enterprises (small producers) in the agricultural export sector in Chile, particularly in the fruit and wine industries, it has also analysed the conditions under which workers operate in this sector. It also sought to understand the nature of the underlying relations in the agrofood sector. In essence, the research has constituted a detailed critique of traditional theories of ‘upgrading’ which it criticises as a narrow and incomplete process in Chile because it is not based on an appropriate holistic industrial policy. In particular it establishes the case that the pursuit of upgrading in Chile has been overly economic in its orientation and has not taken into account the

specificities related to SMEs and working conditions that exist within the agrofood sector.

9.1 Main problems in the Agrofood Sector.

As it was analysed in the Chapters Seven and Eight, the development of agrofood sector has been complex, showing precariousness which should not exist given the current development of Chilean economy as a whole. These problems are originated due to insufficient power of public policy (*laissez- faire* scheme operating in the agrofood) to organise and structure in better way these markets. It includes the problems of weak trade unions, lack of a true farming contract, weak control of regulatory agencies, and in general the inexistence of an industrial policy that tackles these problems.

Some of these problems were already analysed in the previous chapters. These are:

- a) SMEs with weak and low bargaining power, low capability of associativeness. And hence a high level of concentration within the sector.
- b) Poor working conditions and a lack of regulation by the Ministry of Work of the rights of workers and peasants in the agrofood industry. Lack of true political will to solve these problems.
- c) Shortage of trained labour working in the agrarian sector. Substantial improvement of working conditions is required in order to attract skilled workers.
- d) Weak power of trade unions in the agrofood sector.
- e) High ratio of seasonal workers in comparison to workers with long term contracts.
- f) Lack of a balanced territorial development as a result of a fragmented economy.
- g) Low levels of R&D into the production of goods and services with higher value added.
- h) Growing concentration of agrarian activities in large firms and multinationals.
- i) Insufficient provision of market information to small growers about international price trends for the products that they produce. The low level of cooperation does not promote the clustering of SMEs. The analysis of potentialities of a

public policy supporting clusters and SMEs into these should be focused in long term results.

- j) Most farming contract does not provide a true guarantee to small growers. Delayed payments are a significant problem for small growers.
- k) Part of the wealth generated through copper (through higher royalties and or taxation) should be allocated to stimulating the agrarian sector, with a focus on SMEs.

One of the central arguments of the thesis is that underlying the problems experienced in the sector has been a neoliberal vision of the Chilean economy and society within which the State does not act as a counterbalance in order to create and unleash a productive development from the bottom (social basis). The neoliberal view does not consider the spatial or historic context in its approach towards economic progress and development. It tends to analyse variables at an aggregate level without in depth knowledge of the forces operating behind apparently successful results. For example, there is no assessment of the extent to which the success of export policies in Chile has depended on low wages or the fact that the suppression of trade unions has meant intensification of the misdistribution of the economic surpluses created in the agrofood industry. Similarly, a focus on national output measures does not reflect the position of SMEs and small growers in the Chilean agrofood industry and the impact of the excessive bargaining power of large export firms is not taken into account.

An effective industrial policy for Chile needs to consider all the components of the various production networks within which Chilean producers are embedded and promote better distribution of the economic surplus among the various actors in these industries – that is the agricultural workers, SMEs and small growers. The analysis also emphasized that the level of export concentration in Chile is characteristic of countries with significantly lower levels of income. This is connected to the great technological heterogeneity of the Chilean productive system where companies that are at the global technological frontier (in mining, forestry complex cellulose-paper, and some foods, for example) coexist with a wide range of companies that are significantly underdeveloped. Finally, despite increasing access to credit since the 1980s and the efforts of the authorities to democratise access to finance over the past two decades, funding for investment by companies without collateral and no credit history is still very poor.

The thesis also addressed the implications of the complex pattern of regional differentiation in Chile. The high dependence upon copper in the Chilean economy (about 60% of total exports) and the relatively low levels of manufacturing activity in more sophisticated goods and services mean that the economic conditions for the country as a whole are quite unequal. While Santiago and the Metropolitan Region account for over 40% of the total population and almost 50% of national GDP, there are regions in the north and south of the country where economic development has had little impact and has not improved conditions for unskilled workers. The Chilean production system is also still highly concentrated in the supply of natural resources (mining, agriculture, cellulose, etc.).

One of the major themes that emerged consistently during the interviews conducted for the thesis was the need to address the poor conditions faced by workers in the Chilean agro-export sector. The figure of the contractor (or ‘latch’), who hires workers in the field and often misappropriates the social legislation payments (welfare and health) of temporary workers, was frequently singled out as a major factor in the difficult circumstances facing these workers. An additional issue alluded to in the empirical chapters of the thesis is that increasingly, many agricultural sectors are experiencing labour shortages due to both the low quality and insecurity of the jobs offered within the sector and the growing demand for labour in the mining and construction sectors. Hence, improving the working conditions of agricultural workers is extremely important for the private sector to continue recruiting its workforce.

One of the central tenets of this thesis is that if the political classes in Chile are serious about upgrading the Chilean economy, this will have to involve an element of social upgrading and to achieve even a modicum of this will be impossible if there is not greater recognition of the need to improve minimum labour standards in the agrofood sector. In the next section I pose some proposals to face these problems.

9.2 Proposals

One of the key focuses of this thesis was on clustering policy and the opportunity to strengthen the SMEs and working conditions in these agglomerations of firms. One of

the implications of the findings of this research is that any new cluster policy should consider greater regulation by state agencies to tackle problems of informality in the labour market, as it is not possible to discuss a new industrial policy or upgrading if these poor practices continue (lack of formal contracts, non-payment of benefits, and the lack of will on the part of entrepreneurs to tackle these issues). Therefore, one of the key recommendations of this thesis is that the state should create regional agencies located in the agrarian regions in order to check that contractual relations between large firms and SMEs, as well as working conditions (including social benefits) are fulfilled and there is no abuse of dominant power. Similarly, it is clear from the foregoing analysis that any new cluster policy must focus on SMEs and on training of the workforce as well the provision of decent working conditions. The new Bachelet government cannot create or design a cluster policy that neglects or undervalues these issues.

The cluster policy in operation during Bachelet's previous government was limited as these issues were not addressed as an integral part of the policy; there was a lack of rigour in analysis of the weakest parts of the agrofood complex. This could be explained by a continued preference for minimal regulation in some areas of the agrofood sector observed during this period. My research demonstrates that a new industrial policy that considers the integration of SMEs (small growers) and workers (especially temporary workers) needs to tackle these issues from the outset. A cluster policy supported by public resources should build measures designed to address these problems into its initial design from the outset.

Drawing on the analysis conducted in this thesis, an effective upgrading of the Chilean economy will require a significant transformation and improvement in: (I) the national innovation system, (II) the financial system and its impact on competitiveness, (III) policies to promote business development, with an emphasis on SMEs, (IV) productive development policies aimed at expanding comparative advantages, and (V) the role of regional development agencies.

Also to develop a more sophisticated economy will require the use of significant public-funded incentives and other interventions. This includes increased spending on research and development by the State, greater involvement of private actors in R&D activities, and higher levels of production linkages across sectors or business units. Ultimately,

leadership must be exercised by the State to move from 'soft' horizontal industrial policies to more selective vertical industrial policies.

Interestingly, it appears that some of the strongest pressures being exerted towards the adoption of improved labour standards in Chile come from within the global production networks in which Chilean producers are embedded, where changing consumer preferences, demand for higher standards and the growing importance of corporate social responsibility departments within some of the major companies are all exerting pressure on Chilean companies to improve the living conditions of their farm workers.

The external pressure exerted by these international actors encourages Chilean producers to consider a range of forms of upgrading that might allow them to maintain market position and/or adjust their position within the global production networks and the amount of value added they are able to capture. These elements range from technical traceability (origin of the product, packaging components, phytosanitary conditions, etc.) to the general working conditions of their labour force.

From the discussions presented in the preceding chapters, it is clear that it is only when entrepreneurs view improving the conditions and skills of the workforce as a central component in enhancing productivity (rather than as a residual adjustment factor in the scale of production of their firms), that they will begin to show a greater concern for meeting the basic conditions of decent work. However, real progress cannot depend on the good will of employers alone. As such, one of the major recommendations arising from this thesis is that improvements to the conditions in which the Chilean workforce labours should also be prioritised through legislation and enforced through the Chilean State and its regional agencies in order to prohibit and restrict corporate malpractice.

The starting point is to introduce measures that can help labour to generate more complex productive specialisations. The problem is that the traditional comparative advantage of the Chilean economy (low wages) does not lend itself to the embracing of complex learning or the capture of a greater proportion of value added, but rather it can create cycles of immiserizing growth (where profitability is preserved via increased production rather than any innovative practices).

The Chilean evidence reviewed in the preceding chapters is mixed in relation to a sustainable development of the agrofood sector. Certainly there is still a significant degree of informality in the agro-export sector and contract workers frequently face issues such as the non-payment of their social benefits. However, it is also clear that Chilean exporting companies are becoming aware of how negative externalities (e.g. the impacts of delegating issues such as pension payments and health insurance to 'contractors' who do not have the interests of the workforce at heart) can affect the brand reputation of their companies and some are taking measures to reduce this problem.

Although better integration of local suppliers and producers within agrofood production networks could imply economic gains for workers, these are not automatic and economic upgrading does not necessarily imply social upgrading. There is a need to rethink the governance structures of particular global production networks and their connection to prospects for real social upgrading. Poor working conditions should be addressed in any future strategy to promote upgrading and productive diversification.

9.3 Future Opportunities and Constraints

Bachelet's government, in its new term in office, has promised to tackle problems of economic and social inequality in Chile, reform the educational system, reform labour legislation so as to empower workers and improve working conditions and wages (especially for seasonal and temporary workers), improve productivity, support small and medium-sized enterprises, and contribute to decentralization of economic activity in order to support the regions outside the capital city. Over recent years Chile has published outstanding figures for GDP growth, the reduction of poverty and low inflation rates and has ranked first in the world in terms of macroeconomic management. But behind this success lies growing inequality. This is consistent with the limited diversification in the economy, where improvements in working conditions in the agriculture sector have been driven by external markets rather than a change in the values and beliefs of local entrepreneurs.

In addition, the Bachelet administration is contemplating a “new version” of Cluster’s Policy which could boost a policy with a clear orientation in favour of SMEs (small growers and small firms connected to the agrarian activities) as argued for in this thesis. The cluster policy introduced during Bachelet’s first term in government (2006–2010) did not take proper measures to support this kind of firms. However, what is clear from the analysis presented here is that any clusters policy has to go beyond merely providing credit to SMEs or delivering them tax benefits. A new policy should consider the key elements of injustice that occur in the agrarian activities especially in the contractual relationships between SMEs and large firms. Similarly any effective policy will also have to consider spatial inequality and address the question of productive diversification across the regions. There should strength the farming contract such that SMEs have more certainty with regards to the payments, technical requirements, variations in the international prices, etc.

Clearly, however, there are a number of constraints which may mitigate against the adoption or success of such a transformative strategy.

The global-world system constraints

Chile is embedded in a large number of free trade agreements and is therefore one of the most open economies in the world. This point is very important because Chile cannot, therefore, increase tariffs to protect its “infant industries” in the current institutional framework in which it is embedded. Chile could apply temporary safeguards to protect some products from unfair competition but safeguards would not provide a permanent public policy solution in the Chilean context. Any rejuvenated industrial policy will have to take this into account. Although free trade has benefitted larger firms in the agrofood sector, small firms have not been able to take advantage of these agreements because of the disadvantageous terms through which they sell their production to larger enterprises.

The domestic political economy constraints:

The constraints also come from the local environment. Large firms in the agrofood sector are well connected politically and therefore make it difficult to introduce reforms favourable to SMEs and workers. The large conglomerates hold the balance of power in economic relations which contributes to maintaining a high degree of concentration in the economy, in particular in the agrofood sector. The excess of power of large conglomerates is the reason for extreme delays in passing and implementing legislation to improve working conditions,

The political constraints and opportunities

The Bachelet government is proposing to change the tax system to make it more progressive and to increase state revenues so as to finance educational and other equity-enhancing programmes. It is through these mechanisms that the state will generate the resources needed to finance R&D and supporting measures (credit, technical assistance, etc.) for SMEs. The problem is that the kinds of tax reforms contemplated generally require a two-third majority in parliament which the government has not got which may mean that the government will not be able to generate the revenues needed to finance its ambitions in this area.

At the same time, however, current political circumstances may also provide some opportunities. If the right-wing and centre-right parties wish to be elected in the future (they were heavily defeated despite the very good economic record of the Piñera government), it is likely that they will need to reach some compromises and agreements with the Bachelet government regarding social policies, especially those regarding education and economic-social policies which tackle the endemic problem of inequality. There is also a general recognition that the Chilean economy and the State budget have to reduce their dependence on the performance of copper exports. Hence there is potentially a window of opportunity to reach cross-party agreement over the implementation of some of the policies recommended.

9.4 Operationalising Industrial Policy

The thesis has explored the ways in which the Chilean state has made some attempts to strengthen horizontal industrial policies, with an emphasis on the incorporation and promotion of SMEs. Much of this has been coordinated for the business sector in general by CORFO, through programmes to encourage partnerships, technological improvement and management, access to long-term financial resources, and technological innovation. CORFO has also been the main institutional means whereby the state has attempted specifically to support the SME sector. This activity has been implemented through a second-tier agency, with provision of financial resources by CORFO. At the same time, though, Piñera's government (2010–2013) did not consider the role that a targeted industrial policy could play in supporting sectors and clusters which demonstrate strong or potential comparative advantages. There is an opportunity for the new government to attempt to implement these measures.

A coordinated and rejuvenated industrial policy might involve the development of a more territorially active industrial policy that could reduce the underutilisation of economic space, creating local economic growth in the regions outside the capital city.

Without such an integrative industrial policy, the upgrading of the Chilean agricultural sector has to date been insufficient to provide significant economic gains to small businesses. This is not an issue of scale inefficiency but rather a matter of monopsonistic exploitation and unequal bargaining power. Unable to obtain good prices and good conditions, SMEs in the agricultural sector have little incentive to innovate intensively. What is needed in this context is an industrial policy that explicitly considers territory and location. At the same time there is also a clear need for the development of active state agencies that could provide information to small farmers (for example on the international prices of the products they sell to the large export companies) and assistance in situ in negotiating better prices. These would be the basic conditions to allow us to start talking of a modern effective industrial policy in Chile. Currently, industrial policy is inexistent, and economic policy is oriented mainly to tackling market failures. Therefore, industrial policies are required that take into account the specificities of the Chilean agrofood sector as discussed in detail in Chapters Two, Five and Six.

This research provides a useful starting point for thinking about how such challenges may be addressed. Although the fruit and wine industries are at different stages of development and the governance of the GPNs within which they are embedded are different, as discussed in the preceding chapters, there are some common problems which could be addressed via the evolution of specific industrial policies that consider the dynamism of SMEs and the question of working conditions in the sector more generally.

In the next section, I will explore the broader contribution of the thesis to the academic literatures within which it was situated and implications for future research.

9.5 Broader contributions and an agenda for further research

In many ways this thesis is about the limited understanding of the nature of industrial change and upgrading inherent in many of the major theories of economic development. Even in coherent literature such as the global value chain approach (Gereffi, 1994), it is too frequently assumed that what is good for the economy as a whole is good for everyone, and that policies work in the same ways for all participants within particular industries. Properly targeted mechanisms are frequently argued to produce a sort of automatic upgrading. It is also assumed that this upgrading happened in capital intensive and manufacturing sectors rather than across all sectors; a focus which has dominated Latin American approaches to economic development for decades. The ISI approach was, for example, imbued with this developmental vision whereby large firms and large-scale industrialisation were thought to be the basis for achieving economic development.

The discussion about the development of the Chilean economy (and that of Latin America in general) was dominated by the Washington Consensus (as discussed in Chapter Two and Three) in the decade from 1990 to 2000. When the free market policies recommended by the Washington Consensus proved ineffective, the post-Washington Consensus emerged following the subprime crisis (2008–2009). The post-

Washington Consensus addressed the resulting problems (Fine, 2011) as if they were market failures (leading to a focus, for example, on horizontal industrial policy).

The main criticism of the post-Washington Consensus approach to industrial policy is that there is no industrial selectivity. In addition, addressing the needs of SMEs within such approaches generally tends to cover only market failures, typically problems of access to credit and insufficient spending on innovation and development. The post-Washington Consensus does not address the problem of the excessive bargaining power of large firms in their relationships with small firms.

Similarly the dominant approaches do not consider local geographical development in terms of a more complex interaction of SMEs within regional networks, in order to create more autonomous economic growth. In addition the post-Washington Consensus does not address the problem of poor working conditions in Latin American economies, especially those in resource-intensive sectors (agro-export). In this, the original Washington Consensus is very similar to the post-Washington Consensus. Overall, the Code of Good Governance promoted by the World Bank (as discussed in Chapter One), and its later versions, claim that the state should have a facilitating role in the economic process (Lin & Chang, 2009). But still in the view of post-Washington Consensus, comparative advantages are the signals that guide investment and the search for new sectors and niche markets. The interventionist economic policy is considered ineffective. In my opinion, this policy fails to take into account the successful experience of some Asian countries in 1960 through an active process of intervention in markets (Wade, 1990).

So, the post-Washington Consensus cannot create the conditions for structural change in the economic conditions of developing countries. These are strongly tied to the cycles of commodity prices. The transformation of the productive structure is weak and tends to be based on the same sectors, with no real diversification in terms of finding new niches and economic sectors.

So, the application of the conceptual framework of GPN allowed me to analyse the development of SMEs and small growers as well as the characteristics of labour in the agrofood sector in Chile within the context of the global industries and local governance

structures within which they are situated. The adoption of this approach allowed for the specification of the problems that exist in the local production networks and in their connection to the global markets. Large firms in these global networks maintain a privileged position. The lack of political will expressed in the post-Washington Consensus results in the status quo being maintained in terms of production and insufficient diversification. The result is that the development of SMEs is not an explicit objective of economic policy, and they are treated similarly to large firms in the agrofood sector and in the economy in general. Their relatively weak economic position does not facilitate adequate upgrading. The same is true for poor working conditions within SMEs. Although there are global forces that are exerting pressure for the improvement of these conditions, changes are slow. Despite the fact that fresh fruit is a highly valued product in developed markets, the conditions of agricultural employees and small growers are not what they should be. The situation in the wine industry is different because it produces a more sophisticated manufactured product. However, the wine industry faces the similar problems to the fruit industry with regards to the conditions of the workforce, especially those involved in harvesting the grapes. For this reason, the GPN approach (Milberg & Winkler, 2011) considers upgrading in a wider context, taking into account the factors that prevent more complete industrial development.

Future research within the GPN tradition should take more fully into account the singular characteristics of emerging economies which are highly dependent on natural resources. The particular characteristics of SMEs and working conditions in small enterprises should be the starting point for development of a new industrial policy that overcomes typical market failures within those contexts. Upgrading the weakest parts of the agrofood sector is not automatic. Conscious and carefully targeted intervention of the state at the local and regional levels is fundamental to tackling these problems.

9.6 Further Research

One direction for future research in this field is the closer integration between regional development theories and the GPN approach within studies of economic development within contexts such as that of Chile. Aspects such as the location of industries, their

connection to regions, and the promotion of an active productive process are of great interest in order figuring out how they shape the economic space to generate greater employability and an appropriate use of the natural resources of the regions. Granovetter (1985, p.507) claims that industries made up of small firms embedded in dense networks would be able to compete against large firms. In this context, it would be fascinating to investigate how a rejuvenated vertical industrial policy, with a focus on strengthening SMEs, could engage more directly with regional policy.

As such, it is important to acknowledge that industrial policy needs to have a territorial dimension (Bellandi & Di Tommaso, 2006) and there is considerable potential for further research in this area. Clearly, it is necessary to identify a development model that is embedded in the territories in order to develop local capabilities (Moguillansky, 2013, p.16). Also the institutional framework will determine the model of development (Coe, 2003, p.17) since the development of firms and labour skills require specific interventions through a determined industrial policy that takes into account imbalances.

In exploring these issues, it is clear that a more spatially balanced approach to development could mitigate the relatively high unemployment in some Chilean regions. This would require restructuring of the concept of clustering which was defined by the centre-left government of Bachelet (2006–2010). This redefinition must broaden the current intellectual borders and must be much more explicit in addressing regional conditions related to SMEs and working conditions.

Another potential direction for future research in this field is to analyse the influence of copper on the Chilean economy (the mining sector represents approximately 60% of total exports). Although the mining sector works as a cluster, the economy does not take advantages of all the productive linkages that it is possible to develop. There is a wide range of SMEs in mining ancillary industries, and the national policy has to take into account the territorial aspects which will vary from region to region.

During the course of the research for this thesis I have become very interested in exploring the barriers that SMEs face in developing and improving conditions. I have a strong interest in deepening analysis of this issue by carrying out a comparison of the nature of the barriers faced by SMEs within different economic sectors (manufacturing,

agriculture, mining, etc.). Chile is a highly concentrated economy where many markets are dominated by a few large firms. In this case, it would be of interest to understand the entrepreneurial dynamic of SMEs and how these firms are located according to their value chains and understand in depth their relationship with large firms and any innovative practices that they have developed in addressing the difficulties that they face.

Another strand that I am interested in studying in more depth is the development of industrial policy in Chile over the course of the twentieth century. To do this, it would be necessary to explore how state owned companies created an industrial base. This would need to encompass the political context of that period, specific public policies, the influence of international experiences, and look at which policy objectives were or were not achieved. Through this it should be possible to draw lessons and propose a new role for the state (to achieve higher value added). The idea of a new role for the state is mainly linked with the analysis of the Asian experience and how the Chilean economy could develop different productive sectors in new or traditional sectors.

Finally, I would like to emphasise that behind each human being there are enormous complexities that shape their vital experience. It is a moral duty of policy makers and authorities to create the conditions for the development of an economy in which SMEs and small growers enjoy fair terms, as well as improving working conditions in the agrofood sector in general. This should be the starting point for any economic policy that has upgrading across all economic sectors as an objective.

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Appendices

Appendix I, “Interview Schedules”

Interview, National Level	
Name of interviewee	Interview Date
Academic (I), Universidad de Chile.	5 August 2012
Senior Economist, Banco Central de Chile.	2 January 2013
Academic (II), Universidad de Chile.	11 March 2013
Academic, Universidad Católica de Chile.	14 December 2012
Academic (III), Universidad de Chile.	29 March 2013
Large Entrepreneur, wine yard in region metropolitan	6 March 2012
Academic, Universidad de Santiago de Chile.	10 November 2012
Business Leader	5 March 2012

Interview, Government Agencies.	
Name of interviewee	Date of Interview
Government Official (I)	1 April 2012
Government Official (II)	8 April 2012
Government Official (III)	8 May 2012
Agrarian Analyst	21 June 2012

Interview, NGOs and Trade Unions.	
Name of interviewee	Date of Interview
NGO Director	21 July 2012
Agricultural trade union leader (I)	8 March 2013
Agricultural trade union leader (II)	11 March 2013
Agricultural trade union leader (III)	15 March 2013
Small Farmer (I), Region of Coquimbo.	28 April 2013
Small Farmer (II), Region of Coquimbo.	28 April 2013
Small Farmer (III), Region of Coquimbo.	28 April 2013

Small Farmer (IV), Region of Coquimbo.	28 April 2013
Small Farmer (V), Region of Coquimbo.	28 April 2013

Appendix II, “Semi-structured Interview”

National Level

¿Cuál ha sido el rol de la economía geográfica en el desarrollo chileno?

¿Es necesaria una nueva institución para tener políticas públicas efectivas?

¿Es recomendable ampliar los límites de trabajadores extranjeros en las faenas agrícolas?

¿Qué se puede desprender de las políticas de clúster?

¿Se aplica el pick the winner en Chile?

¿Cómo afecta la volatilidad del tipo de cambio al sector agrícola?

¿Cuál ha sido la repercusión de las políticas arancelarias para que Chile se posicione en el mercado exterior?

¿Hay mucho abuso con la asimetría de información entre las grandes exportadoras y los pequeños productores?

¿Cómo son los costos de producción en el sector agrícola?

¿El papel que cumple ProChile es relevante para el desarrollo de la industria en el exterior?

¿En qué parte de la cadena productiva se produce la mayor inversión?

¿Cuál es la parte de la cadena productiva que más innova?

¿Cuáles son los lineamientos que debe tomar el sector agrícola para aumentar su desarrollo y tomar posición en el mercado internacional?

¿Las políticas de clúster son relevantes para el desarrollo del sector agrícola?

¿Los centros investigativos se han visto repercutidos por las políticas de clúster?

¿Cómo se contempla el modelo ZESPRI y el consejo de Boston Consulting Group y la recomendación de la OECD respecto a este tema?

¿Cómo se logra la capacitación de la mano de obra temporera en los campos?

¿La mecanización en los campos ha afectado la calidad de la fruta?

¿Dónde el estado debe subsidiar al sector agrícola para aumentar la productividad?

¿Cómo se ha visto el proceso de creación de valor agregado en las cadenas productivas?

¿Cómo se relaciona el mercado agrícola con las tercerización de la mano de obra?

¿Cómo se toma la responsabilidad social empresaria en el sector agrícola?

¿Hay integración entre la elaboración de fruta fresca y procesada?

¿Las viñas tienen planes de capacitación?

¿Existen sindicatos al interior de las viñas?

¿Cuál es la apreciación del sector vitivinícola en el mercado internacional?

¿Cuál es la intensidad de las PYMES en el sector vitivinícola?

¿Qué política publica espera el sector agrícola para tener condiciones favorables para el desarrollo?

Government Agencies

¿Chile debiese concentrarse en productos específicos para posicionarse en el Mercado exterior?

¿Qué estándares de calidad deben cumplir los agricultores para poder comercializar en el extranjero?

¿ProChile abarca desde los PYMES a grandes empresarios?

¿Es necesario que Chile tenga política industrial?

¿Chile puede tener una política industrial en el contexto actual?

¿Hay integración vertical entre las empresas exportadoras y los productores agrícolas?

¿Cómo se maneja la consignación de fruta entre las empresas exportadoras y los pequeños productores?

¿Cómo es la calidad de empleo en la producción de fruta fresca y la procesada?

¿Las políticas públicas tienen impacto en la interacción entre los pequeños productores agrícolas y las empresas exportadoras?

¿Cómo se maneja la asimetría de información entre las empresas exportadoras y los pequeños productores?

¿Se regula el financiamiento de las empresas exportadoras a los pequeños agricultores?

¿Hay espacio en el sector agrícola para las políticas de clúster?

¿Cuál es la posibilidad de que las PYMES exporten sin pasar por las grandes empresas exportadoras?

¿INDAP tiene programas de asistencia técnica para los pequeños agricultores, en materias administrativas como la negociación con las empresas exportadoras?

NGOs and Trade Unions

¿Cuál eran las condiciones de los trabajadores temporeros antes del estatuto, en general había contrato temporal de tres meses?

¿Cuál es el porcentaje de mano de obra temporal en el sector?

¿Negocia colectivamente todos los trabajadores de una empresa?

¿Cómo ves la innovación en las cooperativas y pequeños productores?

¿La estructura de la agricultura familiar campesina es de subsistencia o también comercializa?

¿Quiénes han participado en la mesa para negociar el estatuto temporero?

¿En el ministerio de agronomía hay leyes para las cooperativas?

¿Durante estos años han implantado alguna mesa con los municipios rurales para dirigir los dineros que disponen, para generar capacitaciones?

¿Qué piensas con el desencanto de la gente del campo?

¿Sus trabajadores tienen contrato?

¿Se capacita a los trabajadores antes de entrar a las faenas?

¿Tienen asesoramientos para evitar accidentes y para mejorar los procedimientos de los trabajadores?

¿Han implementado algún grado de innovación en el campo y se asesoran con algún agrónomo?

¿Cómo llegan acuerdo con la empresa exportadora para la consignación de los precios?

¿El dólar como lo fijan para hacer el pago?

¿Ustedes han recibido algún tipo de ayuda de INDAP o municipio?

¿Qué espera usted de las políticas estatales para mejorar su productividad y rentabilidad?

Appendix III, “Interviews”

Large Entrepreneur

Interview Date, 6 March 2012.

This interview was selected to be representative of the set of interviews

¿Podría hacer una descripción de la viña y como se creó?

Bueno, esto es una viña que Cumple 50 años el próximo año, pero nuestra familia esta del año 1961, la verdad es que antes de ser una viña esto era un campo común, como los campos chilenos que tenían una parte viña, había ganado y otras cosas, pero la viña propiamente tal está funcionando del año 1961 como ya como viña productora y como exportadora mucho después, pero como productora de vino para mercado interno desde el año 1961 y como exportadora desde el año 1998, como un proyecto ya botellas y granel, que son las dos áreas que nosotros manejamos. Producir vino para granel y también producir los vinos para ser embotellados y exportados. Ese es un poco la reacción. Esto es una viña familiar, yo soy segunda generación, era de propiedad de una empresa alemana antiguamente, entiendo que hasta el año 1970 todavía eran, habían ellos tres aquí. Ósea, nosotros nos asociamos, les compramos a ellos el año 1970.

¿Qué tipo de certificación tiene la viña?

Nosotros como certificación propiamente tal estamos trabajando en varias. Una que ya está en trabajo es la norma HACCCP, que va orientado a la inocuidad de alimentos. Ya, entonces nosotros ya en eso tenemos la certificación hace unos 4 años y hoy día estamos avanzando en normas ISO. No tenemos pensado certificarnos en ISO, sino que la próxima certificación que estamos buscando, es la certificación que solicitan los supermercados en Europa y algunas partes del mundo que son varias de ese tipo. Que van más que nada orientado a que los supermercados tengan la seguridad de que sus productos no van a ser saboteados, contaminados. Eso es lo que estamos buscando. Además, tenemos firmado el acuerdo de producción limpia, solicitado por la industria, no como obligación, pero si como propuesta. Entonces nosotros también firmamos es

acuerdo de producción limpia. Y ese acuerdo de producción limpia toma varios caminos, los temas de personal, pero también los temas de RILES, entonces ya estamos certificados en RILES, ósea no podemos operar si no tenemos planta de RILES. Y eso diría que son las 3 áreas que estamos trabajando en cuento a ese tema de certificaciones. Queda pendiente iniciar el tema del personal, las buenas prácticas y manejos del personal de la empresa. Que ese yo te diría que son las futuras normas que tenemos que empezar a trabajar ahí. Muchos de los puntos ya los estamos cumpliendo, pero otra cosa es certificarse. Las certificaciones nuestras van más que nada relacionadas con las necesidades que nos pide el mercado. La verdad es que no estamos haciendo certificaciones por juntarlas en una muralla de diploma, sino por las necesidades o los requerimientos que nos pide el mercado.

¿Cuál es la dotación de personal temporero, contratado y cuáles son los índices de rotación y ausentismos que mantienen la viña, esto incluyendo a los enólogos?

A ver, en general en la viña yo trabajo con dos formas, una es el personal de planta y el personal de planta yo diría que es el personal estratégico de la empresa, ese es de planta. Y ese es aproximadamente unas 70 personas, y después viene un personal que le llamo de temporadas o con contratistas o de terceros, que dependiendo de la época, si está en cosecha, poda, despacho, llegan unas 120 personas más, ósea, hay un peak que estoy manejando 200 personas. Pero como te digo, la parte estratégica que es la comercial, la administrativa, la información, esa es de planta. La razón de esto es porque esto es una empresa agroindustrial como esta y yo diría que muchas empresas agrícolas no soportan tener una planta de personal muy alta durante todo el año, porque los trabajos son muy estacionales. En la parte agrícola es netamente estacional, la cosecha es una vez al año, son dos meses. En la parte industrial, tiende a ser más uniforme el año, pero también tiene sus peaks de trabajo, ósea todos los meses nosotros vendemos ni procesamos la misma cantidad de botellas, porque el consumo en el mundo es distinto. Entonces, hay meses en que son muchos más fuertes, digamos octubre, noviembre, septiembre, son muy fuertes, no así diciembre, enero y febrero que son meses más bajos. Entonces si se producen yo diría dos a tres peaks en el año. Mira, existía mucho ausentismo y rotación yo te diría hace unos 10 o 15 años atrás. Cuando la empresa estaba en proceso de industrializar todo el vino que producía y no venderlo solamente a las viñas grandes en

chile cuando estábamos en proceso de formar nuestras líneas de productos en botella, cuando estábamos en proceso de instalar equipos, cuando estábamos en proceso de que las responsabilidades del trabajo eran distintas a las anteriores. Digamos que antes una persona, regaba y podaba, y después se encontró que tenía que manejar equipos tecnológicos, que tenía que manejar idiomas, que tenía que manejar laboratorios, entonces ahí se produjo un cambio de personal y una capacitación de algunos de ellos muy fuerte. Y ahí si se fue mucha gente y no fue capaz de tomar estas nuevas responsabilidades, algunos lograron capacitarse y se incorporaron ya, y se produjo una instancia de rotación. Yo diría que los últimos diez años, más que rotación ha existido gente nueva que ingresa, pero con mucha más preparación, así que yo te diría que la rotación que tenemos es súper baja. Tengo mucha gente con 10, 12 años, 8 años de trabajo con lo cual es bastante.

¿Cuáles son los criterios de contratación de mano de obra para el campo?

Si yo tengo que podar 400 hectáreas y de esas 400 hectáreas tengo que podarlas en 90 días, tengo que poner la cantidad de gente necesaria dependiendo el rendimiento de ellos para que quede podada en 90 días.

¿Qué mecanismo utilizan para el pago de temporeros?

Mira, hay varias maneras de pagarles, por faena determinada, ósea, yo a un contratista le digo te pago tanto por la poda, te pago tanto por regar, te pago tanto por hacer todas estas cosas esa es una forma muy usada en el campo. La otra alternativa en cosecha por ejemplo, te pago tanto por el kilo de uva que tú coseches. Existen formas también de incentivos para que la gente se quede en todos los periodos y no se vaya rotando. Por ejemplo, si yo te pago 10 pesos el kilo, pero si te quedas toda la temporada, te voy a pagar dos kilos más adicionales. Ese tipo de incentivos existen, eso es con respecto a la masa laboral fuerte. Con respecto a los trabajadores especializados, llámense enólogos, llámense jefes de planta, jefes de línea, buscamos tener incentivos por el trabajo que ellos están desempeñando. Por ejemplo, el jefe de planta embotellado va a ganar un incentivo adicional por el costo que le cueste cada caja desde que empieza el proceso hasta que termine. Va a ganar también un valor adicional por el buen uso que le dé a los insumos, que no quiebre muchas botellas, que no se pierdan muchas cajas, que no se

caiga mucho vino, ósea que trabaje de buena forma. El enólogo, seguramente va a ganar una parte por el volumen que trabaje en el año, también va a ganar una parte más cualitativa por la cantidad de vino reserva que logre producir. La verdad es que somos una viña que usamos varias variables de ingresos de la gente. Cosa que no es fácil de calcular, es difícil. La gente de ventas por ejemplo, además de su ingreso fijo, tiene un ingreso por cajas vendidas y pagadas. La verdad es que también tiene un incentivo adicional y la verdad es que a nosotros nos gusta mucho usar ese uso de incentivos, cosa que no se usa en todas las viñas. Cada día se usa más, pero es complicado, es difícil, porque te cambian los tamaños. No es lo mismo vender 100 mil cajas que vender 400 mil cajas. Tú tienes que hacer todos los tratos de nuevo, entonces es un poco complejo. Pero nosotros somos digamos, proclive a usar ese sistema a todo nivel. Por eso yo te hable de los enólogos, te hable de los jefes de planta, te hable de los obreros, y yo diría que obreros hoy día la gente que trabaja con personal súper especializado que por lo demás recibe capacitación permanente. Hoy día por ejemplo estamos en una certificación del personal, ósea hay una empresa que viene y nos está certificando que la gente que tenemos en algunos puestos específicos este capacitada y es auditada externamente que si está capacitada por ejemplo para preparar el pallet que se va de exportación. Y eso lo está haciendo una empresa de la industria del vino justamente porque quiere que la industria chilena en su conjunto lo que exporte tenga una cara uniforme en el sentido que no hayan muchos errores, entonces está proponiendo certificar la competencia de cada una de las labores.

¿Cómo se elige el personal a capacitar?

Si, nosotros proponemos. Ahora por ejemplo nosotros tenemos 12 personas que están siendo evaluadas para ser certificadas con un diploma que si están preparados para cumplir estas funciones y si no, yo me veo en la función de capacitarlos para que me cumplan de buena forma. Ósea es una obligación para ambas partes, gana el operario porque va a quedar certificado, pero nosotros también ganamos como empresa porque tenemos un operario calificado.

¿Esto se aplica a todos los niveles?

Mira es una cosa que se está haciendo hace muy poco tiempo, porque antiguamente teníamos la herramienta de la capacitación, en el fondo que tu capacitabas a una persona, pero esa capacitación que tú le das no te certifica que esa persona va a hacer el trabajo bien, entonces lo que estamos haciendo ahora es certificar que las personas que fueron capacitadas están haciendo bien su pega, que es distinto. Yo te puedo pedir a ti que te capacites y tu quedas muy bien capacitado, los cursos, gastamos, tú fuiste a clase y todo, pero después a la hora de hacer la pega es distinto si la estás haciendo bien o no.

Entonces en esa etapa estamos ahora en algún porcentaje de la gente, no con todos.

¿Cómo se hace la elección del enólogo?

Lo que pasa es que ahí el tema, el tema en lo lógico es un tema que uno lo puede mirar por muchos lados, porque existen enólogos que están muy especializados y orientados a producir y tienen experiencia en vinos específicos, en zonas específicas, en países específicos, en cepas o en tipos de vinos. Hay otros que tienen especialización en manejar volúmenes y son capaces de manejar muchos litros, pero de una calidad más común, entonces el criterio usado por nuestra empresa hace 10 años fue, primero queríamos un enólogo que nos diera, nos pudiera dar un valor agregado a la empresa y en ese momento tomamos la decisión de usar como enólogo jefe a un francés, más que nada por un tema de marketing en la cual la enología francesa tiene un prestigio conocido por muchos años, tiene una forma de trabajar a mi modo de ver que ha prestigiado sus vinos durante muchos años. A pesar que hoy día tiene un problema la enología francesa, pero si tiene un prestigio mundial internacional. Entonces elegimos un enólogo francés, pero que si estuviera dispuesto a venirse a vivir a Chile y que estuviera dispuesto a hacer vinos chilenos y no vinos franceses, ósea a usar su know how, pero a la chilena. Además que fuera una persona que se pudiera adaptar a nuestra realidad, nosotros trabajamos con vinos masivos, pero también trabajamos con vinos reserva y entonces tenía que ser una persona que además tuviera esa disposición y esa personalidad a que no ser solamente un artista y hacer el vino que él quiere, sino que estuviera dispuesto a hacer el vino que el mercado quería, cosa que es muy importante y cosa que no todos los enólogos están dispuestos, no todos los pintores están dispuestos a

pintar abstracto si les gusta ser realistas, o estar dispuesto a pintar lo que quiere el público. Pero si hay algunos artistas que se adecuan a lo que quiere el mercado, y esa fue también una de las condiciones que le pusimos. Ósea que si venía a Chile, que fuera un enólogo francés que estuviera dispuesto a adecuarse a nuestro proyecto. Llevamos 10 años con el mismo enólogo en jefe y él trabaja con 3 enólogos más que son chilenos que son sus asistentes, que por lo demás tienen proyectos a su cargo, pero el enólogo jefe y responsable de toda la producción es él. Y se ha mantenido desde que tomamos esta decisión.

¿Ha sido muy difícil mantener el personal, con tanta demanda de personal capacitado en la industria?

Por supuesto que las personas cuando vienen a levantar la gente es porque estamos las cosas bien y porque tenemos buena gente. Si nadie me quiere levantar el enólogo, ni el vendedor, ni el gerente, quiere decir que no somos interesantes. Ósea, cuando se empiezan a dar ese tipo de cosas, yo estoy contento porque quiere decir que la industria a uno lo mira con buenos ojos, y muchos creen que llevándose a una persona o dos personas va a solucionar sus problemas, porque una persona no hace una empresa. Así es que por supuesto que mucha de mi gente tiene ofertas y algunos se han ido, pero como te lo decía, tengo muy poca rotación porque hemos logrado 2 cosas que la gente gane más plata, primero le gusta estar contento seguro y tranquilo en su trabajo con un buen trato, que lo consideren. Por supuesto que es importante el tema económico se tiene que relacionar por la productividad. Si yo a una persona la evaluó aunque sea en una parte por su productividad, por supuesto va a ganar más dinero, pero también me va a hacer ganar más dinero a mí como empresa. Entonces, se hace más difícil que una persona que tiene un fijo más un variable relacionado con su productividad, pueda irse a otro lugar donde va a ganar más, porque si yo ya lo estoy evaluando y alguien de afuera, es más complicado que vaya a entrar a ganar eso de inmediato. Y una persona aunque gane un poco menos, pero que tenga lo otro satisfecho, tranquilidad, seguridad para su casa, para su gente en el largo plazo, prefiere quedarse donde está.

¿En la viña existen manuales de cargo, procedimientos y organigrama?

Si, esta todo descrito. A ver, nosotros tenemos un departamento de control de calidad que está trabajando en las normas ISO, en las normas europeas para poder certificarse, que trabajo en la CHCCP, en la misma área que está trabajando en producción limpia. Ósea, el departamento de nosotros de control de calidad, es más que un departamento de control de calidad, sino que está incluido en todo esto, los organigramas de la empresa con la descripción de cargos. Y eso está descrito uno por uno, cada persona que entra se le entrega esto, pero sufre modificaciones permanentes. Para mí la industria que no sufre modificaciones permanentes se está muriendo. Ósea, la verdad es que ese organigrama es poco fijo porque va cambiando a medida que se van requiriendo otras necesidades con respecto al mercado, con respecto a los clientes.

¿El personal de la viña comparte los valores de la viña?

Bueno, la empresa tiene su misión, su visión, tiene su plan estratégico, y dentro de eso, nosotros tenemos un concepto que lo debe conocer cada persona que llega, algunos lo practican más que otros por su puesto, es que nosotros buscamos la satisfacción de nuestros clientes, pero considerando el bienestar y la satisfacción de las personas que trabajan con nosotros. Y diría que esa es la ley de oro si la puedo llamar de la persona que entra aquí, es que buscamos justamente satisfacer a nuestros clientes, pero también considerando una buena relación entre nosotros.

¿Cuál es el perfil que tiene el personal de administración, en específico el personal de recursos humanos?

Recursos humanos es el área más atrasada que tiene la empresa. Desgraciadamente el tema de recursos humanos en Chile. Ósea un gerente de recursos humanos es caro. Implementar todo lo que significa el tema recursos humanos es un valor súper alto. Todas las empresas del tamaño nuestro, que es un tamaño mediano en nuestro, primero nos preocupamos de que exista una buena producción, que exista buen sueldo para la gente, buenas instalaciones, que tengamos suficientes recursos para desarrollar los mercados que existan recursos para entregar dividendos a los dueños, porque los dueños quieren esto para poder retirar y no una obra de calidad, entonces uno siempre va

dejando alguna cosa de lado, y yo diría que el tema de recursos humanos no se considere, si nosotros lo consideramos, pero no tenemos un departamento de recursos como yo quisiera.

¿El personal de recursos humanos tiene especialidad en la materia?

Mira, de las personas que están trabajando ahí que son 2, han tenido cursos de especialización en recursos humanos, pero no son profesionales de recursos humanos. Yo creo que para las empresas del tamaño nuestro, lo ideal es contratar un especialista externo.

¿El especialista externo, en que se enfoca cuando solicitan sus servicios?

Lo que pasa es que el especialista externo viene a solucionar problemas coyunturales. Por ejemplo si hay un problema social grave, por ejemplo ahora había un problema grave por el terremoto por las casas, ahí nosotros trajimos a alguien que nos ayudara a tabular eso, a conocer cuántos eran y como resolverlo. Es un caso puntual que quedo solucionado. También ahora hemos hecho campañas para que la gente adquiriera y compre sus viviendas y sus cosas, entonces ponemos a alguien que nos ayude con los papeles sus cosas. Pero son cosas puntuales, no son cosas permanentes.

¿El personal a quien le reporta sus problemas, asistencias y consultas?

A ver, nosotros trabajamos con una gerencia general y una gerencia de producción, comercial, y finanzas. Todos los recursos humanos de área les reportan a estas 3 gerencias, dependiendo del problema a tratar.

¿Cuál ha sido una de las decisiones más importante en estos últimos 12 meses?

Despedir gente, es como uno tiene que terminar la relación de trabajo con alguien, para mí eso siempre ha sido lo más difícil, y me ha tocado muchas veces, Porque hay una cosa que está muy clara que los intereses personales no pueden ir en contra de los intereses de la empresa, y cuando una persona no tiene la capacitación, no quiere capacitarse o no está dispuesta a seguir las líneas y requerimientos de la empresa, lo

único que hace dentro de la empresa es perjudicar al resto, entonces yo me veo en la obligación de separarlo del grupo porque además de perjudicar a la empresa, está perjudicando al resto de sus compañeros.

¿Existe la posibilidad de reinsertarse en otra área?

Si es posible que se reinserte si él quiere. En la misma área en un cargo inferior o en otra área. Y otra cosa que si no tenemos nosotros es que la empresa los ayude a reinsertarse en otros lugares. Hay bancos que tienen esa organización porque son grandes y tienen recursos, nosotros no los tenemos.

¿La viña tiene una planificación en relación al personal que se necesita contratar?

Si, hoy día por ejemplo, el tema de recursos humanos es fundamental en una empresa. Ósea, cuando no hay equipos de trabajo, nosotros tenemos que armar equipos de trabajo y los equipos de trabajo tienen que tener la suficiente productividad, conocimiento, disposición, garra y todo lo que uno pueda ponerle dentro de un equipo de fútbol por ejemplo, no solamente la pura garra, también tienes que tener entrenamiento, estrategia, táctica, entonces nosotros estamos muy preocupados a raíz de lo que ha sucedido con la baja y el tipo de cambio ya en los últimos años, es que la gente que trabaja dentro tiene que mejorar su productividad. Se puede mejorar que una persona sea capaz de hacer más funciones teniendo los equipos más modernos, capacitándolo más, teniendo la gente realmente más capaz, nosotros necesitamos mayor productividad, es fundamental. Y eso es una estrategia que en esa área nosotros proponemos que vamos a tener 4 personas suficientemente capacitadas. Ojala sean las 4 que están o si no hay que hacer cambio para capacitarlos, pero si hay planificación de la parte de recurso humano es clave, sino, empiezas a morir.

¿Cuáles son los criterios para reclutar y seleccionar al personal?

Bueno, tengo una empresa que hace muchos años trabaja con nosotros, que ya nos conoce, sabe cuál es nuestra filosofía de empresa, sabe cuál es nuestro ambiente de trabajo, y nosotros le pedimos a ellos que nos ayuden a buscar o nosotros les presentamos gente dependiendo del caso y que cumpla con los requisitos que nosotros

queremos para ese cargo y también para con la empresa. Y eso nos da muy buen resultado porque significa que a la gente que contratamos nueva pasa por este filtro y hay mucho menos posibilidades de equivocarse.

¿Cómo se lleva a cabo el proceso de inducción del personal nuevo?

Cada uno de los jefes de producción, cuando llega una persona nueva a un cargo que no sea un podador, porque llega un podador, el contratista lo manda a podar y se va. Cuando llega a uno, yo le digo los cargos de responsabilidad, esta persona le debe explicar nuestra misión, nuestra visión, estrategia de la empresa hacia dónde vamos, que es lo que queremos como empresa, cuál es su trabajo, la importancia dentro de la cadena, esto está dado por 2 lados, uno por el gerente de producción, pero también por la persona de control de calidad que si ayuda mucho a insertarlo. Si no se empapa bien de lo que nosotros queremos, la verdad es que no le va a ir bien, porque no va a saber para donde andar, entonces yo creo en los mismos jefes de área y los mismos gerentes se preocupan de que cuando entra alguien nuevo, se empape de lo que estamos haciendo para que le respondan a él, porque además yo le voy a pedir cuentas a mi gerente y su gerente le va a pedir a su jefe, entonces si ellos no hacen bien esa pega de inducción, aunque no exista un protocolo les va a ir mal a ellos. Quizás no exista una inducción tan planificada como lo que tú dices, pero si hay una capacitación antes de entrar.

¿Tiene la viña procesos de sucesión de cargos al interior de las diversas áreas?

Yo primero miro adentro, si no encuentro adentro en la misma área el que le sucede o en otra área, lo trae de afuera, pero los cargos están relacionados con la capacidad que tiene que tener la persona, si se va el enólogo por ejemplo, lo más seguro es que yo no ponga a mi enólogo asistente, a no ser que esté preparado para este cargo. Sí que voy a buscar una persona que esté preparada para este cargo. Si se va una persona que maneja una maquina específica y el segundo es ayudante y no está preparado para eso, sino está preparado para ser ayudante, no lo puedo poner de jefe, tengo que poner una persona que este prepara. Ósea va más que nada por eso, así que se da de las 2 cosas. He tenido gente que por ejemplo nuestro jefe de bodega, el partió de júnior, de abajo, ahora es el de mayor responsabilidad en la bodega después de los enólogos.

¿Cuáles son los criterios para la evaluación de desempeño del personal?

Mira, la verdad es que hemos probado todo. Hemos tenido evaluaciones del desempeño con la misma gente, poniendo bueno, muy bueno. Con un papel, con un formato escrito, si es simpático, si es pesado, si ayuda, si coopera, todas las preguntas que se puedan ocurrir hechas por el departamento de calidad, apoyadas por un psicólogo seguramente. La verdad es que no me ha convencido demasiado. Hoy día la verdad es que lo que estamos usando para la evaluación del desempeño, parámetros, valores medibles. Ósea, me costó la caja de \$600 la baje a \$550, es una evaluación del desempeño realmente específica, pero también hay que dejar una parte para una evaluación un poquito más general. La disposición a trabajar de la gente, el aporte que hace al equipo, el empeño que le pone, porque de repente uno puede ponerle mucho empeño, pero por otras variables sus parámetros medibles no funcionan. Así que a final de año como nosotros tenemos un bono, un bono voluntario, hay una parte de este bono voluntario que esta generado por sus resultados específicos que se le pidieron, por ejemplo costos por caja, el uso de los insumos, la pérdida de insumos en porcentaje, los kilos molidos, por ejemplo la cantidad de mercado abierto, por ejemplo las cajas vendidas, por ejemplo las medallas ganadas, bueno y así te puedo empezar a poner varias cosas. Pero hay otra parte de la evaluación que es totalmente subjetiva y que es por olfato.

¿La evaluación a los temporeros como se realiza?

A ver, los temporeros como son a ratos, ellos están siendo evaluados todos los días, porque yo les pago por kilos, o les pago por parra amarrada o les pago por hectáreas regadas o les pago por hectáreas pulverizadas, entonces la evaluación es por la eficiencia que ellos tienen, no esta tan dada en ese parámetro la evaluación de la calidad. La calidad en todo aspecto está siendo controlada por su jefe. Y yo le evaluó la calidad del trabajo, pero él le paga a su gente por eficiencia. Nunca estas cosas son perfectas, es muy difícil, siempre uno comete seguramente alguna injusticia, pero peor es hacer nada.

¿Cuáles son las áreas de la viña que van enfocada las capacitaciones?

Bueno, siempre una vez al año con los responsables de cada área, vemos donde están nuestras debilidades. Por ejemplo, cuando hay debilidades de liderazgo en los jefes, las capacitaciones se orientaran a que ellos mejoren su liderazgo con su gente.

¿Cómo se financian las capacitaciones?

Bueno de varia formas, la mayoría va por SENCE y una mezcla entre lo que paga uno y lo que paga el otro. Hay buenos instrumentos hoy día en Chile. Nosotros usamos OTEC, pero ahora entiendo, estamos 100% con SENCE. Se usó OTEC un tiempo que una parte de los sueldos que uno va dejando en un pozo y uno va usand que esta OTEC administra los fondos, yo creo que hoy día lo estamos haciendo directo, pero no me atrevo asegurarte, yo creo que lo estamos haciendo por SENCE.

¿La relación de las compensaciones, se define escalas de sueldos en la viña?

La verdad es que el tema de la escala de sueldo es súper móvil y variable, hay cargos que uno tiene que contratar a la persona dependiendo del sueldo de mercado, pero el sueldo de mercado uno de repente no sabe lo que es. Uno va construyendo los sueldos con el tiempo, esto es un andar. Contrato al segundo, le pago un poquito menos que el primero, después tengo que contratar a otro, le pago esto, y así se va armando algo un poquito desordenado. Hoy día lo que estamos haciendo en conjunto con unas 30 o 40 viñas chilenas, se contrató un proyecto en la cual estamos uniformando los cargos. Por ejemplo, enólogo jefe que maneja tantos millones de kilos, gana esto fijo más este variable por este rango. Un operador de maquina embotelladora que trabaja tantas horas diarias, esto es lo que está ganando, esto es el segmento, el promedio de la industria. Estamos tratando de uniformarnos con respecto a la industria porque yo me he dado cuenta que tengo algunos cargos muy pagados y tengo otros cargos que están siendo mal valorados por nosotros. Entonces, antes de empezar a ordenar esto que tampoco es fácil, bajarle el sueldo a alguien y subírselo a otro, la idea es saber cuál es el parámetro de industria, al menos los rangos. En eso es lo que estamos, pero yo diría que estamos bien con algunas personas, estamos inflados con otras y estamos abajo en otras. Además que como la industria crece la empresa va creciendo, bueno, las personas tienen

mayores ingresos porque sus variables son mayores. Acuérdate que una parte de nuestro ingreso es fijo y la otra parte es variable. Las variables mientras más botellas pasen y más kilos pasen, más gana la persona. Entonces de ese punto de vista hay una parte del sueldo que se regula solo, pero el fijo no.

¿Cuáles son los beneficios con los cuales cuentan los trabajadores?

Hay paseos a la playa, yo la verdad es que con el tiempo he tratado de eliminar un poco esos beneficios y tratar de llevarlos todos a dinero y productividad. Quizás no hay que irse tanto a un extremo, y creo que es bueno tener unos beneficios generales digámoslo así, pero cuando uno tiene muchos beneficios generales, al final no hay incentivo de ser productivo, porque ya me dieron todo, como lo que pasa en Europa. Que uno trabaja, le pagan un sueldo, se jubila a los 50 años y así están todos medios relajados. Yo la verdad es que a mí me gusta tener tiburones dentro de la empresa. Que significa tener tiburones dentro de la empresa, es que el trabajador tiene que moverse adentro para que le vaya bien, si se va a sentar en los laureles, se lo come el tiburón. Esa es la política nuestra.

¿Existen sindicatos al interior de la viña?

Si, existe un sindicato, pero la verdad es que tiene bien poca actividad.

¿Han tenidos conflictos serios en este último tiempo con los empleados?

Los conflictos complicados que tengo son el tema de los robos, yo te diría que ese es un conflicto casi permanente que hay mucha gente que es amigo de lo ajeno y que donde ve una abundancia cree que se puede sacar. Yo creo que hay una mala costumbre en eso y he tenido algunos conflictos con algunas personas porque no ha estado muy clara esa situación. Y ha redundado en otra oportunidad o ha redundado en que ha tenido que irse. Se pierden botellas de vino, que se pierden cajas, que se pierden palos, la gente que trabaja adentro o gente que avisa y entra gente de afuera en la noche y roba o vienen al lugar eso pasa más de lo que uno quisiera.

¿Cuál es el sistema de comunicación que tienen con los empleados?

Nosotros tenemos reuniones de área, los jefes o los gerentes de sección, no sé si quincenales, pero periódicas. En la cual ellos informan a su gente. Existe una reunión de gerencia donde se dan las directrices de corto plazo y largo plazo. Estos jefes de área hacen reuniones con su gente, que son 3; producción, finanzas y comercial, para delinear las cosas de corto, detalles y también de largo plazo. Esa es una forma, y cuando hay comunicados masivos, se hace por escrito. Por escrito a la gente que no tiene correo, por e-mail a los que están conectados por e-mail y además se publica.

¿Usan algún programa computacional relacionado con la administración de personal?

Nosotros trabajamos con SOFTLAND que es un programa de personal y recursos humanos estos programas tú les puedes ir poniendo más elementos, pero usamos el SOFTLAND. Usado ya bastante y se le ha incorporado muchas cosas, pero es SOFTLAND ya la marca.

¿Son partícipes de algún tipo de membresía o algún uso de redes?

Pertenecemos a la corporación chilena del vino, a la cual yo soy miembro y consejero. Pertenecemos al que representa a los productores de uva en Chile, pertenecemos a vino de Chile, pertenecemos a fines of Chile, que es la asociación que está encargada de la publicidad y reconocimiento de nuestros vinos afuera. Pertenecemos a la asociación de canalistas de la zona, pertenecemos, entiendo a 2 o 3 grupos de transferencia tecnológica en la cual se transmite tecnología en la producción.

¿Cuál de estas membresías es más relevante para ustedes?

Bueno, cada uno en su tenor por supuesto. Es importante estar en la asociación de exportadores de vino porque uno maneja mucha información de lo que pasa en el mundo, de lo que pasa con la competencia, no quitándole la importancia a la asociación de regadores porque riega. Pero yo diría que esa en términos generales es la más importante. Junto con Wines of Chile que promueve nuestros vinos afuera.

¿Qué tipo de innovaciones han implantados últimamente en la viña?

Bueno, sabes que el negocio de la venta es buscar la diferenciación, ósea uno lucha todos los días por diferenciarse en algo. La verdad es que diferenciarse en el vino es muy difícil, el producto natural cierto, que uno lo hará mejor que otro, pero no puedes diferenciarte en el vino. Diferenciarse en los embalajes hoy día también es complicado, todas las etiquetas son bonitas, las cajas, la verdad es que no es fácil diferenciarse en eso. Yo te diría que nosotros tenemos ese viñedo que está aquí que es una etiqueta de madera que es la única del mundo. Yo te podría decir que es un elemento diferenciador, ósea la única etiqueta de madera que existe en el mundo hoy día. Puedes tocar la etiqueta. Pero hay otras que tienen otros elementos diferenciadores. Yo te diría que la única manera que nosotros estamos tratando de diferenciarnos de los demás.

¿En relación de servicios?

Yo te diría que en el servicio al cliente hacia afuera como lo atendemos, como nos acercamos a él, como nos nutrimos de su información, como le entregamos lo que él quiere, esa es una innovación, no porque sea algo nuevo, porque todos lo hacen, sino que tratamos de hacerlo mejor que los demás. Yo creo que en eso hemos tenido buenos resultados. Y la otra innovación interna, es que tratamos, que cada uno sea empresario de su trabajo, yo te decía dar una buena satisfacción al cliente, pero también con una buena relación interna entre nosotros. En la medida en que la gente es valorada y evaluada y pagada dependiendo de lo que hace, si lo hace mejor o peor, esa gente se transforma.

¿Qué diferencias han podido apreciar desde la implementación de estas innovaciones?

Pero claro que sí. Para con los cliente quieren seguir trabajando conmigo y cuando les llega otra persona a ofrecer un vino igual o mejor o a veces más barato, prefieren seguir trabajando conmigo porque ellos se aseguran que yo les estoy dando un servicio distinto, y ahí en ese servicio hay elementos que son privados de la empresa, pero si tratamos de diferenciarse en ese tipo de cosas. En ponte tú los papeles, bueno hay tantas cosas que uno puede hacer que son de repente pequeñas cosas. Y internamente se

produce una a ver, cada uno trabaja primero que nada, yo tengo claro para su familia y para él, y desde pues para la empresa. Yo no creo que cuando la gente “No yo trabajo para la empresa”, yo trabajo para mi plata y para tener mantener a mi gente, mi familia, mis cosas, mi deporte, mi hobbies, lo que sea. Entonces teniendo claro que cada uno trabaja para uno y eso es lo primero de uno, la familia la persona es también uno, si uno se la juega por eso, ósea si uno se la juega en su trabajo y por añadidura, ósea por resultado me va mejor a mí, entonces se produce una explosión de motores adentro de la empresa que se nota.

¿Cuál es su apreciación del sector vitivinícola, cree que el mercado seguirá creciendo?

Están delineados, hoy día Chile exporta USM\$1.500 y esperamos el 2020 como industria exportar USM\$3000, Chile tiene 120 mil hectáreas plantadas y hay que plantar de aquí al 2020 un 50% más de superficie para abastecer este crecimiento. Y lo otro que tiene la industria es su peso promedio, ósea vender más vinos reservas que vinos básicos. Ósea ese es la apuesta de la industria en general. Ósea Chile es muy pequeño creo que el 3% o 4% del contexto mundial, entonces la verdad es que tenemos mucho espacio para crecer y siempre vamos a ser pequeños, pero ese es el desafío de la industria.

¿Qué desafío se plantean como empresa?

Nosotros tenemos una meta que termino este año, la primera meta que teníamos que era exportar un cierto número de cajas de un cierto valor que se logró, y hoy día nuestra meta esta puesta en el 2015 con otro volumen de caja a un cierto valor con ciertos mercados, y estamos trabajando en la meta del 2020. La meta del 2015 ya está planteada y estamos trabajando en ella hace más de un año. Y la meta del 2020 estamos trabajando en ella a ver qué podemos hacer. La verdad es que en eso somos súper riguroso, nos ponemos las metas son para no mirarlas, pero si para mirarlas como objetivo. Y ya los objetivos están trabajando para eso.

¿Cuáles son las particularidades de la viña para que sean escogidas por los clientes?

Los clientes que tenemos afuera. Yo diría que el primer contacto que se da es por el producto, el contacto con el consumidor está en la copa en la mesa, esa relación nosotros no la conocemos. El distribuidor es la persona que tiene una oficina, una camioneta que reparte el vino en camioneta, ese es nuestro cliente. Ese cliente llega de dos maneras porque le gusta el vino, le gusta la presentación, llama por teléfono, le gusta el precio, vio que lo atendían bien, había buen feeling con la empresa. Ahora, ¿cómo elegimos nosotros? Nosotros tenemos un perfil definido de lo que queremos. Nosotros queremos un distribuidor que no tenga otro vino chileno, que sea de un tamaño medio, no queremos una persona muy grande, porque si no, no nos va a mirar mucho a nosotros que tenga una cobertura de supermercado o de botella de restaurant que sea el caso. Si cumple con una buena cantidad lo que nosotros estamos pidiendo, seguimos adelante con la conversación, si no, le decimos que no. Pero siempre la gente llega por el producto o porque nosotros tratamos de ofrecerle el producto, pero uno siempre parte por” Tengo dos minutos para presentarte la botella”, y de ahí viene lo demás. Pero siempre parte con esto.

¿Cómo es la intensidad de las pymes en el sector vitivinícola?

Primero que todo se debe entender cómo se conforma la industria, en Chile se encuentran 12.000 productores de uva que tienen de una hectárea hasta mil, posterior a esto le siguen 600 bodegas vitivinícolas, registradas en el SAG. Ósea estos 12.000 productores pasan a solo 600 bodegas que vinifican, de estas se pasan a solo 300 que exportan así está conformada la industria. De estos 12.000 productores se producen vinos varietales, Premium y reserva, de estas 600 bodegas algunas se concentran solamente en varietales otras, hacen de todo dependiendo sus hectáreas y estas otras 300 también están divididas en diferentes niveles.

De lo más difícil de entender y donde yo soy más crítico no de la industria sino de la forma de enfrentar, que de estos 12.000 productores tenemos 120.000 hectáreas en Chile aproximadamente dedicada a la producción de uva. Y de ahí lo más importante de esto la mitad de las hectáreas nunca serán vino Premium y nunca serán más de varietal, entonces es un discurso extraño cuando va el país entero a vender vinos Premium cuando el país produce varietal. Entonces digo esto está totalmente disociado, no hay

una integración en eso, y si ahora veo yo las grandes viñas que promocionamos o vendemos, veamos concha y toro tiene un precio promedio de 23 o 24 dólares, entonces lo que concha y toro hace es promocionarse como vinos Premium y vender varietales, es cosa de ver las estadísticas. Muestro don Melchor promociono un vino reserva y vendo un vino varietales, eso es lo que hacemos. Entonces en ese concepto si el país produce vinos varietales y tiene buenos vinos varietales entonces se tienen dos alternativas, una es embotellarlo que yo lo hago y lo digo con conocimiento de causa, yo hago 600 mil cajas de eso el 50% son varietales, además de esto la viña fue la segunda en mayor tasa de crecimiento en botellas. A mí no me van a decir cómo se hace el tema de la botella.

¿El argumento que el vino varietal es muy inestable en volumen año a año, que es muy pro-cíclico?

Lo que su sucede en una cadena de valor para una persona que vive en estados unidos y en Europa tomarse una botella de vino en plata chilena de 1500 pesos que no le importa mucho de qué país vienen, quiere tomar una caña de vino en el fondo quiere emborracharse, esa persona no le importa de dónde viene el vino y le da lo mismo si lo embotellaron en Talca o Alemania. Él lo que quiere es una botella de vino a un precio conveniente y ahí entran los supermercados donde quieren llenar sus estanterías con rotación y para tener rotación es tener buenos productos a precios convenientes. Entonces lo que se hace es comprar el vino a granel y embotellarlo allá, en donde no estoy fletando ni corcho, etiqueta y ninguna cosas. Le ponen Tesco o como quieran ponerle, lo que sucede es que es más económico embotellarlo allá dado que nosotros no podemos llegar a ese precio.

¿Qué piensas de eso de campaña país, perjudicial para el vino a granel?

Lo que pasa es que el granel no compite contra el Premium, yo se dado que hago de las dos variedades, yo vendo vino en lata, botella y vinos de 93 puntos. Yo creo que lo importante en la industria del vino es que la mayor cantidad de gente consuma vino y cada persona decidirá que vino toma, si yo quiero pagar 40 mil pesos la botella que lo haga.

¿Ósea una campaña país con recursos públicos que presionan las viñas grandes no estás tan de acuerdo?

Yo creo que le da una buena imagen.

¿El argumento es que la imagen país potencia el vino Premium, sube el precio se concentran en volumen, se concentran en calidad y al subir el precio financian las futuras innovaciones, corrientes de innovaciones, innovaciones en procesos ese es como el argumento?

Yo creo que es bueno tener una imagen, pero uno no puede desconocer.

En Nueva Zelanda el gobierno hizo lo mismo con el kiwi crearon una gran empresa respaldada por el estado y si había un productor de calidad intermedia no podía exportar. La OCDE ahora recomienda eliminar el modelo neozelandés porque el Boston consulting group dijeron textual apliquen el modelo neozelandés de ventana única, ninguno puede exportar si no pasa por esta gran empresa que controla calidad, que hace la comercialización y tiene economía de escala.

En el caso del kiwi y ahí habían cosas buenas, que son cosas parecidas al vino de la OIV que regula los parámetros técnicos con los cuales puedes producir. En el tema del kiwi ellos debían producir con ciertos grados brix y ese es los puntos más álgidos de todos en el kiwi. Ya que tú cosechas más verde tienes mal consumo porque la gente no le va a gustar el kiwi. Yo creo que es bueno promocionar el vino Premium pero lo otros no puede desaparecer.

En Nueva Zelanda están desapareciendo los pequeños productores con este esquema ya que no podían exportar ya que no pasaban por “Zesprix” la empresa que controla el mercado, y el Boston consulting group en las propuestas de hace 5 años dice que se tiene que aplicar el modelo neozelandés y la OCDE hace 6 meses piden que lo eliminen, que es un sistema que no produce innovación como bien tú dices ocurren en todos los niveles.

Ahora con respecto a lo que tú me preguntabas en calidades de las uvas, que es lo que ha pasado en Chile para entender un poco más a los productores ya que ellos son la parte más débil del eslabón ya que en una botella de vino varietal la uva representa 4 máximo el 5% del valor y el restante es la cadena de valor, una botella de 8 dólares la uva te pagan 200 pesos, y eso es casa nada. Lo que pasa que este es un negocio que incurre en muchos sub productos y servicios para la entrega de la botella de vino, entonces debemos entender la cadena de valor es una parte del negocio. Los productores de uva pueden decir que son el corazón de esto dado que ahí se produce y se parte el proceso del vino, pero lo demás debe tener el respeto también, es un negocio financiero finalmente.

¿La intensidad de las Pymes en el negocio a granel?

Ahí entramos a un tema más comercial, donde hay que diferenciar dos cosas. Una es ser un productor y vendedor de vino a granel y otra cosa es tener una cuba de vino y venderla a granel, son cosas distintas. Yo tengo una cuba de vino que tiene color e intensidad, x y variedad cabernet sauvignon y además tengo 200 mil litros de chardonnay con estas características, ese es un vino que está a granel. Por otro lado tenemos a Tesco y donde él va a licitar x cantidad de botellas, que se la entreguen en un cierto lugar y fecha, pero primero que todos tenemos un embotellador que esta primero y es él el que se gana el tender de vino de distintas partes del mundo, entonces ellos compran el vino pero ese vino debe tener cierto grado de alcohol, tanto color, pH, acidez y muchos factores y este productor a granel tiene ese vino, ese vino nunca se lo va a vender a esa empresa porque esta empresa requiere a alguien que fabrique el producto que está pidiendo, que somos nosotros, que vamos donde ese señor donde tiene esta cuba de vino que esta acá, y tomar esto y vinificarlo ya que esto es como una fábrica. Entonces en este sentido las pymes están en una gran desventaja de exportar vino a granel, si pueden ser alimentadoras de vino de viñas como nosotros que si exportamos.

¿Eso genera más intensidad que si esto fuera una estructura Premium? Si nosotros cambiamos el foco como en nueva Zelandia, solo producción Premium destruyo más el sector pyme que es mucho más débil.

Hay mucha gente que tiene 10 hectáreas de uva vino varietal y lo va a tener para toda la vida varietal, ahora lo que paso fue brotando el vino Premium, que esta gente empezó hacer y le dijeron no produzca 20 mil kilos y produzca 10 mil kilos ya que necesitamos baja producción para que se concentre mejor calidad, no lo riegue hágale esto, hágale todo este otro. El 80% de esas personas cuando fue a cosechar siguió con vino varietal, pero con menos kilos y a esa persona le siguieron pagando los mismos X pesos y el PxQ le dio negativo, eso fue lo que paso. Ahora algunos de ellos que estaban ubicados en un buen lugar con buena tierra, con buena exposición y todo lo demás, si lograron traspasarse a vino Premium pero fueron los menos. Entonces uno tiene que ser eficiente en lo que uno realmente puede y ahí una conversión grande y aun inconclusa hoy en Chile que hay muchas viñas que están orientadas para vino reserva con producción de vino reserva y costos de vinos reservas y su producto es varietal y esa gente está condenada, entonces tu produces 10 mil kilos por hectárea para vino varietal y nunca vas a ganar nunca un peso por ese producto, esa pyme esta sonada. Ese productor tiene que orientarse a sacar 20 o 30 mil kilos por hectáreas que le dan un vino varietal decente, ahora el vino varietal que es lo que tiene es un vino más suave con un color suave sin mucha acidez para alguien que no entiende mucho de vinos y que le gusta tomárselo como una coca cola, eso es lo que produce un vino varietal.

¿El discursó Premium es medio loco entonces? Porque si mueves una parte de los recursos públicos más el de los grandes empresarios estas dejando más débil todo este otro tejido, porque tú me dices que el pequeño productor alimenta mucho a los gráneles, entonces el vino Premium no es de volumen.

Uno tiene que ser muy capaz en lo que le toco, si me toco Premium venderé a 3 dólares el kilo o más como donde hay en Chile que la uva extraordinaria. Pero si a ti te toco producir uva de vino varietal tienes que ser súper eficiente en esa línea y mantenerlo, ya que eso se venderá como varietal por toda la vida

Santiago en cuanto a la corporación chilena del vino ¿cómo ha asesorado a las Pymes?

Mira yo soy director de la corporación y verdad que no ha sido fácil abrirse paso en la industria porque hay un cierto grado de conflicto de interés, entre la asociación de

exportadores de vinos de Chile son los que exportan el vino y hacen el esfuerzo país los que corremos el riesgo digamos y los productores no cierto hay un conflicto de interés. Nosotros como exportadores tenemos que tratar de comprarle la uva al menor precio posible, eso es lógico y resulta que los productores nos tratan de vendernos la uva al mejor precio posible. Ahora como esta al final regulado de alguna manera por las producciones mundiales. Ya que aquí debemos entender que tenemos Francia, España y tenemos a California, Argentina, Chile y Sudáfrica como los vinos del nuevo mundo y es como se mueve esta cosa. Por ejemplo el año pasado hubo una coyuntura, muy baja cosecha en EEUU los chinos le llevaron todo el vino a los españoles, Chile y Australia con una baja de cosecha eso fue una tormenta perfecta para que el precio de la uva y el vino se fueran arriba. De hecho es más el año pasado un kilo de uva varietal costaba lo mismo que el kilo de uva reserva, 280 pesos 290 pesos era el precio del varietal y por el reserva yo pagaba 300 pesos entonces era como algo increíble. Ahí se produjo una distorsión muy fuerte porque los precios en los supermercados no los puedes cambiar de un día para otro y la composición chilena no la nuestra es que se produce el 20% y compran el 80%

¿Cómo?

Cualquier viña de Chile de lo que produce aproximadamente el 70% lo compra y el 30% lo produce, esto es porque esta tan concentrada la industria donde hay 12 mil productores y 300 que exportan que la mayoría de las empresas están así. Porque tú no puedes tener plantado todo lo que vendes es muy difícil, nunca le vas a apuntar.

Además el riesgo de tener capital inmovilizado.

Entonces qué es lo que pasa estas viñas estaban comprando uva para vinos varietales a un precio altísimo y no podían subir el precio, así que por eso los balances de las viñas el año pasado fueron muy estrechos, porque la materia le costó carísimo. La viñas como nosotros fue distinto porque producimos el 70 a 80% que es una estrategia distinta, entonces no es que la corporación del vino no sea querida, pero representa a los productores

¿La corporación chilena a los productores de uva?

Si a todos, tenemos asociado aproximadamente a un 40% de la producción chilena.

¿Y en vino de Chile?

Se encuentran los exportadores y los grandes, porque además las viñas están separadas en 3 grupos, las grandes viñas como por ejemplo concha y toro y otros que serán aproximado 10, concha y toro tiene el 40% de todo el mercado, después por otro lado aun grupo de 200 boutique que son las que venden menos de 2.000.000 de botellas que son empresas que venden vino caro, viñas de familia o hobby de una persona que tiene otra empresa. Al medio debemos ser 20 a 30 viñas que somos medianas, en la cual nosotros estamos, al final la situación de estas boutique con las de acá contra los grandes tienen mucho contra peso por la imagen país, porque son los que llevan el 70% del negocio debido a esto cualquier cosa que haga el país está muy influenciadas por estas, además son las que más aportan a vinos de Chile y se benefician mucho de los beneficios públicos que al final llegan a estas viñas y no llegan a estos productores que están ubicados en el sector boutique y medianos.

Eso es más o menos lo que planteas tú en el artículo de América Economía un poco.

Lo que pasa es que esto se trabaja para todos y los que exportan más son al finalmente los que reciben más dólares.

¿Entonces ahí hay una relación compleja de la corporación de vinos de Chile con vinos de Chile?

Son intereses distintos además, es natural y es bueno que en la industria exista eso y hay que buscar puntos de encuentros y hemos encontrado muchos.

¿En la corporación del vino quienes se encuentran?

Son productores menores de uva ya que los grandes productores de uva también son las viñas.

¿En vinos Chile quienes están?

Están el 95% de los exportadores, están concentradas en 60 viñas.

¿Las peleas por el precio deben ser fuertes ahí?

Esas son cosas que los productores de uva han querido regular la compra y eso no se puede en una economía de libre mercado.

Yo fui a ProChile y una de las alternativas que están viendo ellos era entregarles a los pequeños productores de uva entregarles el listado del precio de la uva a nivel internacional, entonces cuando subiera el precio ellos con esto podrían ajustarse al precio de mercado. Lo que ellos decían además que si había una cantidad de pequeños productores podrían asociarse y exportar directamente sin pasar por el intermediario.

Si pueden hacerlo, pero es muy difícil ya que un pasaje te cuesta 5 mil dólares por ejemplo. Mira estos recursos estatales que se invierten en las ferias son buenas, pero atender desde un mercado que esta tan lejos como Chile y los distribuidores están concentrados, cuando llega un pequeñito es un cacho para ellos porque que es lo que quiere el distribuidor no cierto, calidad precio y servicio y para tener todo esto no puedes llegar con un puro vinito, entonces esto es muy difícil y al final esta manejado por las cadenas de distribución, los clientes nuestros son las cadenas de distribución. Ahora está el consumidor está la cadena de supermercado luego el distribuidor y después nosotros los productores, nuestro cliente es el distribuidor, no el supermercado y uno a veces hace negocios directos. Este distribuidor tiene 20 vendedores y tienen 2000 puntos de ventas y otro tiene 30 vendedores y tiene 3000 puntos de ventas.

¿Para resumir, tú piensas que la mejor forma de ayudar a los pequeños productores de uva, es tener una fuerte posición de vino varietal?

Pero claro, que es lo que pasa es que antiguamente este país estaba manejado por concha y toro en donde decía que iba a pagar 70 pesos el kilo de uva y como era el

único poder comprador del país, 70 pesos de uva para todos y resulta que con la apertura del negocio a granel, concha y toro ya no es el único jugador, porque vienen los americanos que compran 60 millones de litros, vienen los españoles ahora que se llevaron 40 millones de litros y ahora concha y toro es uno más. Que es lo que está haciendo concha y toro este año pudiendo haber puesto un precio súper bajo y conveniente para ellos, dijo no yo tengo que proteger a los productores un poco pago un poco más para que no se vendiera a otros lugares este vino debido que ellos deben comprar el 60% de su producción.

¿La misma presión global, es favorable para los productores?

Yo mismo planto el 70 a 80% de mi producción y tengo que salir a comprar uva, ósea porque hay un poder comprador de granel que tenemos nosotros yo tengo que salir a comprar y ya no está concha y toro solo. Como el espectro son más amplios los productores si se benefician más.

¿Ellos pueden hacer alguna inferencia en la calidad de la uva, en el precio si le pagan más?

Si tú tienen un viñedo que esta manejado de una cierta forma que produce cierta cantidad de kilos de varietal transformarla en reserva, es muy complejo y muchas veces no se puede.

¿No ves una corriente de innovación en esa parte de la cadena?

En las nuevas plantaciones si, chile debe plantar 120 hectáreas de aquí al 2020, nosotros como industria exportamos 1.500 millones de dólares y el plan 2020 es llegar a los 3.000 millones de dólares. Para esto se requiere plantar 40 mil hectáreas más en chile. Las plantaciones que se están haciendo hoy están mucho mejor hechas, se han elegido los suelos y las ubicaciones que ya están probadas, segundo se están poniendo las variedades en los lugares adecuados no es lo mismo plantar cierta variedad entre los ángeles y Curicó, tercero se están usando los patrones y clones adecuados que son mucho más productivos o de una calidad mucho más uniforme, no son plantas basales como se llaman. También hay un sistema de conducción mucho más desarrollados, me

refiero una buena poda una mejor mano, está entrando la mecanización que es una cosa importante en el futuro esto nos llevara que las plantaciones nuevas que se están haciendo si vayan enfocadas a lo que corresponde y nosotros queremos. Mira yo esto haciendo plantaciones para 40 mil kilos por hectárea y también esto haciendo plantaciones para 8 mil kilos por hectáreas para los vinos que valen 70 dólares la caja, pero son lugares distintos y plantas diferente, antes no uno sacaba estaquitas y plantaba en la casa.

¿Santiago en este sentido los enólogos y agricultores los traen desde el extranjero o son formados acá en Chile?

Hoy en día ya no es necesario traer gente de afuera, lo que paso aquí en Chile los antiguos enólogos era gente de chaqueta y corbata y no era el que metía las manos en ese momento me toco traer 14 franceses a Chile, de hecho mi enólogo es francés y mi vinicultor también es francés, pero hoy día encuentras muy buen capital humano en Chile.

Tú como representante de vinos Chile y la corporación chilena del vino ¿qué esperas del estado para maximizar la producción y llegar a la meta del 2020?

Yo me concentraría en solo dos cosas, el tema imagen país debe ser abordado de forma integral, no por los fruticultores, ni los salmones, de la fruta, debe ser una imagen país que nos represente a todos como en otros lugares como Argentina, eso fácil de entender que hasta la Patagonia es de ellos o si tú vas a Nueva Zelanda su imagen país es kiwi Australia por los canguros, a Chile le hace falta eso, le hace falta esa imagen única más que tener a todas las asociaciones trabajando por distintos lados y el estado debe juntar todo esto y que marque una marca país genérica que sea transversal porque o sino tu pones hacer campañas exclusivas en las cuales mucha plata se va a ir. Mira si tu miras las marcas en el mundo hoy día son muy pocas las marcas globales, Coca Cola es una marca global pero si tú le sacas la publicidad Pepsi se la come en 5 años, ósea tú dices la Coca Cola vale mucho pero si tú le sacas eso cae la imagen, Casillero del Diablo lo mismo, es muy conocido pero tú le sacas esto y entra otro enseguida. En otro aspecto las exportaciones necesitan un tipo de cambio adecuado es fundamental y aquí hablo más transversalmente. Yo he sido criticado por la parte nuestra de la industria porque yo no soy partidario del tipo de cambio muy alto, porque cuando el tipo de cambio es muy alto

hay una competencia. Ahora el tipo de cambio hoy en día es muy peligroso para el área agroindustriales que son tomadoras de precios. Si yo produzco manzanas yo no tengo nada que hacer en el precio ya que la mando y espero que me liquiden. En el vino hay algo distinto porque hay organizaciones que te ayudan a nivelar tu precio y ubicarlo pero los demás tu eres un tomador de precios, entonces el tema del tipo de cambio es fundamental para las exportaciones adecuados.

¿Se ve últimamente que la gente está emigrando del campo y se van a buscar trabajo en otras áreas?

Yo soy muy cercano al tema ya que soy director de la escuela agrícola “COECER” hace 15 años, en nuestras estadísticas de los últimos años que está claro que la gente está emigrando a las ciudades, segundo la gente ya no quiere trabajar en el campo y prefiere trabajar en una oficina o una tienda, no sé si se verá mal mirado pero no gusta eso. Hoy día la tasa de ingreso a las escuelas agrícolas es bajísima, si esa tendencia sigue así y lo dije en una entrevista al mercurio, esto puede ser muy grave a 3 o 5 años porque los egresados todavía son muchos de las escuelas agrícolas pero de aquí a unos años los egresados serán muy pocos.

¿Cómo piensan revertir esa tendencia?

Nosotros desde punto de vista de los productores debemos mecanizar esto y no porque mecanicemos esto la gente se quedara sin pega, si no que en el fondo estamos obligados a meter maquinas al campo, hoy en día el pleno empleo es muy peligroso además que eso te genera un alza de costo altísima. Yo creo que la emigración hacia las mineras es una competencia irreal, ya que mucha gente se va pero mucha vuelve ya que es muy dura la pega minera familiarmente es muy destructiva y la gente va se hace sus Lucas y vuelve. El problema más que la minería, es que no existe el incentivo a la gente.

¿Si les pagaran más a la gente en la agricultura, los temporeros?

Por supuesto que un buen sueldo ayuda, pero lo que pasa es que ustedes tocaron el tema productividad y lo que pasa en Chile ahora ha ido cambiando constantemente y lo que

antes se hacía es que si tenías un mal negocio, tenían que cambiarme le tipo de cambio, subirme los precios, cuando lo primero que debemos hacer es mirar hacia a dentro.

¿Qué piensas de toda la discusión del estatuto temporero?

Lo que pasa es que la realidad, la fruticultura concentra el trabajo en 6 meses y un porcentaje importante de esto está en 3 meses que son los meses de vacaciones y la cultura chilena y la educación en Chile y el crecimiento agrícola está dado porque muchos alumnos tienen que trabajar para pagarse los estudios después y muchas mamás tienen que trabajar esos 2 meses en un packing para sustentar la compra de útiles y todas las cosas. Entonces no puede ser que la legislación te prohíba esas ventanas.

¿Pero si la persona trabaja dos veces al año en forma temporal pasa a ser un trabajador permanente, y luego si le pro-rateo todas las imposiciones para que pueda acceder a los beneficios?

Si yo creo que es una cosa que se puede hacer, lo peor que podríamos hacer es dejarlo como está, eso sí lo que encuentro impresionante es el tema de las horas extras, ya que ellos tienen la gran posibilidad de trabajar más horas durante los dos meses de cosecha en que tienen tiempo y ganas de tirarse 4, 5 horas y otros tirarse toda la noche yo no los puedo contratar, ya que no pueden trabajar más de dos horas.

Es discutible si va a trabajar 3 meses coartarle la posibilidad.

Y esa persona que trabaja todo el año también quiere esos 2 o 3 meses, ya que quieren cambiar algunas cosas y es el minuto de hacerse su plata adicional.

¿Estás de acuerdo que el tema imagen país se complejiza hacia afuera por el problema con los temporeros?

Sí, no es fácil ya que la diferencia de sueldo en Chile es algo dramática y aun no resuelta, estos grandes grupos económicos son demasiado grandes, yo no digo que no den trabajo pero eso no es bueno, no es bueno que Luksic sea dueño de la mitad del país y eso que no tengo nada contra él.

En Alemania el 80% del PIB es PYME y en Chile es más o menos el 20% DE PYMES muy débiles, eso es parte de mi tesis que el desarrollo debe ser un tejido mediano y no un tejido grande.

Eso ya es un tema político social.

¿La corporación y vinos Chile como han tratado el trabajo con sindicatos?

El tema sindical es un tema por cada empresa, al menos que yo participo directamente en la corporación nunca se ha tocado ese tema y en vinos Chile donde soy director tampoco.

Algo interesante es ¿empezar con acciones de RSE?

Sabes lo que pasa ese tipo de cosas para los que estamos exportando, ya estamos haciendo mucho en eso. Yo no podría estar exportando si yo no tuviera mi trazabilidad, precio, calidad, servicio si no tengo todos los requerimientos de RILES de huella de carbono y de responsabilidad en el sentido porque tengo que tener a mi gente bien. Cuando mi gente viene para acá es lo primero que pregunta es eso. Aquí hay empresas que tienen first trade, pero si tu hoy día quieres exportar debes tener las condiciones que piden en los diferentes mercados, por lo mismo nuestro departamento de RRHH es cada día más grande, ya que no puedo vender en algunos mercados si yo estoy contratando niños. Yo creo que hay mucho que hacer todavía en eso, pero muchas empresas están haciendo mucho más de lo que está exigiendo la ley, las empresas de la industria del vino están mucho más avanzadas.

Autores señalan que el modelo chileno de desarrollo agroexportador está muy bien tuvo una desfase Pinochet abrió la economía, se aumentaron los volúmenes pero que sigue siendo el tema de la sostenibilidad social es lo más débil y que en algún minuto debe cambiar, dado que algunos empresarios cuando le preguntan que falta es innovación, marketing, imagen país y el recurso humano te lo mencionan al último, entonces cuando tú y otros dicen en el texto nuestro vino está hecho con nuestras manos. ¿Y estas propias manos como están insertas en estas cadenas?

Mira ese es un tema muy complejo, yo te puedo hablar desde mi experiencia cuando empezó la modernización en Chile y la industria del vino que es la que conozco mejor, empezaron a llegar máquinas, cubas acuérdate que antes en Chile hacíamos el vino navegado, sabes cuál es el vino navegado? Que lo mandabas para allá y estaba malo y lo mandaban de vuelta. Resulta que el capital humano que teníamos en el campo, yo me recuerdo trabajar gente con paño y ojota, los hijos de ellos que estudiaron en la misma escuela del fundo pudieron pasar a manejar un tractor, las pulverizadoras pero ellos que tienen mi edad en el fondo yo les paso una máquina electrónica de llenado de botellas es imposible que la puedan manejar, porque la tecnología y los equipos se han complejizado tanto que el movimiento social se va demorando generaciones y resulta que la necesidad de Chile es mucho más rápida, entonces esta gente no cierto, no es culpa de ellos mira yo recibo alumno en la escuela agrícola que llegan a primero medio que no le han enseñado nada imagínate el esfuerzo que tenemos que hacer en la escuela agrícola. Pero lo que ha pasado es que hemos tenido que recurrir a los universitarios gente que ha tenido otra capacitación, técnicos pero a la gente del campo a esa masa grande le va a costar llegar, primero porque deben recibir una educación básica adecuada, para acceder a la educación media y universitaria de buena manera, entonces hay se produce esta separación. Mira yo le he dado la oportunidad ya que allá se capacita mucha gente y tú le dices mira antes yo te necesitaba para regar con la pala y yo a tu hijo le puedo pedir que maneje el tractor pero no le puedo pedir que se haga cargo del programa computacional de riego, es imposible porque voy a destruir la empresa.

¿En esa arista el estado te puede colaborar con subsidios?

Yo creo que lo que están haciendo con esto no está adecuado ya que les deben pagar más a los profesores, buscar que el PSU sea mejor pero eso se va a demorar 30 años, lo que pasa es que ningún gobierno lo quiere tratar porque es muy poco popular invertir y no se ve el resultado inmediatamente.

La agricultura pondera un 2% del PIB, la mano de obra como 2/3 y usa como insumo los productos agrícolas, así que por lo tanto el vino que está en el manufacturing process, la cadena completa es como el 12% del PIB y el 25% del empleo y en algunas regiones es el 50% del empleo, en ese aspecto yo creo que hace

falta una visión del estado, hablando con algunos empresarios que estaban dispuestos a pagar 800 mil pesos, pero que no les servía cualquier persona, si no necesitaba a un tipo que lo hayan tecnificado, pero antes eso no se ajustaba a las necesidades que tenían las empresas ya que no estaba la oferta educacional correspondiente para eso.

Mira al final a mí el sueldo no me importa tanto, si no que si vienen una persona que no sabe nada y tienes que pagarles 600 mil pesos a la empresa le cuesta carísimo, por eso cuando dicen que la mano de obra chilena es barata yo tengo mis reservas, hay un porcentaje de mano de obra chilena que es muy cara, para lo que es capaz de hacer, para lo que está preparado, con esto me refiero con gente sin estudios, con la situación hoy día con el pleno empleo un maestro carpintero llega al millón de pesos rápidamente, esto es bueno que pase, pero se empiezan a producir distorsiones.