

**NEGOTIATING SUSTAINABLE DEVELOPMENT: AN ANALYSIS OF THE  
BARGAINS BETWEEN THE STATE AND MINING MULTINATIONAL ENTERPRISES  
IN THE CHILEAN COPPER MINING GLOBAL PRODUCTION NETWORK**

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## **DECLARATION**

I, Martin Ignacio Arias Loyola, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

London, November 2016

## ABSTRACT

The latest processes of globalisation have brought major changes in the world's social fabric. Today, places are connected by an intricate web of relations and flows, determining their development possibilities. The natural resource rich countries and regions have been plugged into these global production networks, but despite their natural wealth, they have not successfully reached a sustainable development path. Orthodox economic theories have assuming positive externalities from FDI flows fail to capture this outcome. However, recent developments in the Economic Geography literature provide an analysis of uneven development in the guise of the Global Production Networks approach. This literature acknowledges the decisive role of power in producing a strategic coupling between the host region/country interests and the extractive multinational enterprises, something crucial in the extractive industries.

This research focuses on the mining industry, as a way to advancing a better understanding of the relationship between the extractive industry and sustainable development of host regions. For this, it uses the Chilean copper mining as a case study. Hence, this research tries to contribute to the general question of how the mining industry affects uneven regional and national development in the context of the latest globalisation process by: first, incorporating the GPN in analysing the extractives industries; second, unpacking the concept of bargaining power, to explain issues related to value capture; third, providing empirical evidence about the successive bargains taking place between the mining MNEs and Chilean State in different nodes, and their implications for sustainable development; and fourthly, establishing the role of the State in the successive bargains taking place with the mining MNEs in the current Chilean copper mining GPN.

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# CHAPTER 1

## INTRODUCTION

### 1.1 INTRODUCTION AND RESEARCH QUESTIONS

Since the late twentieth century, globalisation has brought major changes in the world's society, culture, politics and economy. The birth of several transnational institutions (IMF, World Bank, WTO), the creation of the 'Washington Consensus', the consolidation of large multinational enterprises (MNEs) <sup>1</sup>, and the progressive withdrawal of the governments from Keynesian policies are among the most important features of this period. All of these installed an overall consensus about the positive effects of globalisation on the macroeconomic development, a perception broadly bolstered by the current economic literature, mainly focused on the study of the virtuous impact of the MNEs in the development of the industrial regions in developed countries.

Furthermore, globalisation has changed the way in which states and MNEs bargain within the global production networks (GPNs) that they belong to. This change has been remarkably fast and strong in the extractive industry, especially after the incorporation of the modern international institutions that have affected this process (IMF, World Bank, WTO), which have favoured the interests of MNEs over the local communities, by promoting the neoliberalization (Peck & Tickell, 2002) of local markets, trade and legislation. The logic was to attract foreign direct investments (FDI) into these regions, in order to improve their socio economic conditions and reach sustainable development.

These policies have been promoted by the 'Treasure Chest Theories', of international trade and neoclassical approaches, which have been the pervasive explanation for studying resource based economic development lately (Bridge, 2004a, 2008). These theories usually assume that host regions will benefit from open markets and FDI, due to the positive externalities created by the MNE's presence, like knowledge and technological spillovers that should improve local firms' productivity. Hence, these external sources of investment and markets available for mineral products 'provide opportunities for a resource rich region to 'plug into' the global economy' (Bridge, 2008) bringing the chance of opening such global markets to local suppliers linked to the

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<sup>1</sup> This research utilizes the term MNE instead of Transnational Corporation (TNE) used notably by the UNCTAD, since most of the enterprises considered in this research still have strong cultural, political and economic linkages with their countries of origin.

extractive MNEs. Such linkages with the local economy will also stimulate growth and the apparition of new specialised firms - helping to diversify the local economy, achieve sustainable growth and higher levels of socio-economic wellbeing (Bridge, 2008; Gunton, 2003; Javorcik, 2004; Li & Liu, 2005).

For the mining industry specifically, they argued that with its emphasis on technology and capital – intensive production, the industry could create and support the emergence of a ‘national innovative capacity’ or the ability of countries to produce and commercialize knowledge over the long term. This should create a platform from which innovative potential can be launched in other sectors and parts of the economy, contributing to sustained economic growth and the apparition of clusters of new activities (Lagos & Lagos, 2010; World Bank & International Finance Corporation, 2002).

Nevertheless, this literature has been heavily criticized due to the diffuse definitions of ‘innovative capacity’, ‘knowledge spillovers’ and ‘clusters’, the lack of empirical work measuring these concepts, its neglect of power asymmetries in the industry, and, most importantly, the negative results that extractive regions in developing countries have had during the last decades (Phelps et al., 2015; Rosser, 2006). Moreover, most of the strictest neoliberal policies have taken place in developing extractive countries, especially as a part of the structural adjustment policies, promoting large inflows of foreign direct investment (FDI) and the privatisation of State firms and strategic resources. This has left the host regions of FDI at the mercy of powerful global economic forces that they are unable to control. Likewise, development theorists have largely overlooked space as a critical dimension of analysis, focusing mainly in the aggregated level and forgetting that cities and regions are essential agents of the development process (Scott & Storper, 2003).

Consequently, it is because of the unfulfilled promises of the international trade /neoclassical literature that a second body of literature appeared, to understand why the host regions were not reaping the socio economic benefits of their mineral wealth. Thence, resource rich regions and countries have faced a paradoxical situation, in which the more resource endowments they hold, the more difficult it is to achieve sustainable growth and development (Sachs & Warner, 2001; Bridge, 2004a). Such a situation has been treated as a ‘curse’ for resource rich regions, and it has been studied by the literature called ‘Resource Curse Thesis’ and ‘Dependency Theory (*Teoría de la Dependencia*)’ (Auty, 1980; Cardoso & Faletto, 2007; Ross, 2001; Ross, 1999; Rosser, 2006; Sachs & Warner, 2001).

According to this literature, countries rich in natural resources show an uneven and unsustainable growth path; and large income inequalities that constrain further development and make them dependent of the MNEs home countries. The main conclusion is that 'cases where resource extraction has driven broad based forms of regional development should be understood as important exception rather than a general rule' (Auty, 1980, 2007; Bridge, 2008; Ross, 1999; Rosser, 2006). Moreover, these theories usually have a national scope and study the underperformance due to state failure, rather than a regional scale, leading to a policy consensus that is the state and its institutions the ones exerting the most crucial influence over the impact of the extractive resources on national development.

For the mining industry in particular, these theories have been applied to study the development effects of MNEs presence. Some authors have claimed that rich ores cause political and economic dependence to the minerals (Cademartori, 2002, 2008; Cardoso & Faletto, 2007; Weisskoff & Wolff, 1977). The eagerness of local governments to attract FDI facilitates the concentration of bargaining power in MNEs' hands which may lead, in extreme cases, to uneven development through the formation of enclaves and unsustainable growth. In recent years, this literature has often been dismissed because of their 'anti – mining bias' (Bridge, 2008; Davis, 1995), but its rich tradition and incorporation of crucial elements like power asymmetries in the bargains between local institutions and mining MNEs, make it relevant for framing this research. Moreover, this framework has reached something of an analytical stalemate in the past few years, since it has not been able to provide new insights for the causes of dependent growth and unsustainable development (Bridge, 2008).

Withal, an essential weakness present in both approaches, is the lack of an integrated view of the whole production network, its actors and relationships, from the local to the transnational level. This broad perspective is vital for understanding how the different actors in different levels affect the development outcomes in the extractive industry, and how the benefits of this industry are distributed along the network. Such a gap can be addressed considering the adaptation to the extractive industry of the Global Production Networks (GPN) approach, in a way that the relationship between the extractive industry and regional development to be addressed – something which 'has been identified as a neglected area in economic geography' (Gunton, 2003; Walker, 2001).

What can be now called the 'GPN 1.0 approach' explicitly turns the attention to uneven development along the nodes involved in a particular industry, by focusing in how the power asymmetries between the actors can determine the level of embeddedness and,

ultimately, issues of value in terms of who captures it and where. Value capture is crucial for the sustainable development of both the regions and countries hosting the FDI and will ultimately be decided by the dynamic bargains taking place among the actors: MNEs; the state; and civil society in the different nodes of the network. If the bargaining power exerted by the actors is somehow balanced, there will be chances of reaching a strategic coupling between their strategic objectives, meaning high chances of reaching sustainable development. Contrarily, when there are bargaining power asymmetries, chances are that one actor will benefit at the expense of another (Bridge, 2008; Coe et al., 2004).

Hence, the GPN approach provides a way to deepen the discussion about the perceived negative effects or 'Dark Side' of the extractive industry, which remain largely understudied today (Bridge, 2004b). However, despite the crucial relevance of the concept of bargaining power in the GPN approach, this has not been unpacked, even less empirically studied. This distribution of power and its influence over the bargain between the host states/regions and the MNEs is particularly important in the extractive industry, especially in mining (Moran, 1974; Yeung & Coe, 2015). In this dynamic process, the balance of power tilts depending on several strategic resources and constraints related to each actor of the industry, the stage of exploitation and the place where the negotiations take place. An initial bargain occurs before the exploitation of the mineral, where the MNEs and local institutions agree the terms and conditions of the initial investment under the national laws and international trade agreements. Such conditions could determine the long term development outcomes for the host region, especially if they remain static.

Furthermore, additional bargains might take place once the investment is made, since the host State and local institutions have the chance take advantage of the large sunk costs in the mining industry, and get better socio-economical retributions for the exploitation of finite natural resources. This means that, under certain conditions, the state can influence national and local benefits from the extractive GPNs. Most of these conditions are related to the actual bargaining power of the State to make it happen, which is based on its control over strategic assets and capabilities, as well as the constraints it faces (Coe et al., 2008b, p. 446).

Bargaining power asymmetries that favour the MNEs have been a common characteristic in traditional national enclaves, which historically had extremely negative consequences for the local and national development due to the unsustainable nature of the growth produced. As a result of this uneven bargain caused by power asymmetries,

weak governments, institutions and lax legislation can have disastrous consequences for the local economy, since they lead to an unsustainable and uneven growth, creating an illusion of development instead of sustainable clusters in mining regions. This raises the question about whether the enclave form has been completely overcome or not.

Hence, according to the previous discussion which is summarized in Figure 1, there is still room for advancing a better understanding of the relationship between the extractive industry and sustainable development of host regions. In this sense, this research tries to contribute to the general question of: *how does the mining industry affect uneven regional and national development in the context of the latest globalisation process*. It does so by answering four specific research questions:

1. How can the GPN be incorporated into an analysis of extractive industries, specifically mining, and in determining the chances of reaching sustainable development in the host region and country?
2. How can the concept of bargaining power in the GPNs be conceptually unpacked in order to explain issues related to value capture, such as where and how is value being captured and by whom?
3. What kind of empirical evidence about the successive bargains taking place between mining MNEs and the Chilean State in different nodes can be provided, and what are the implications for sustainable development of the outcomes of these bargains?
4. What is the role of the State in the successive bargains taking place with mining MNEs in the current Chilean copper mining GPN?

The main contribution of this thesis to economic geography flows from answering these four questions as developed next.

## 1.2 CONTRIBUTIONS

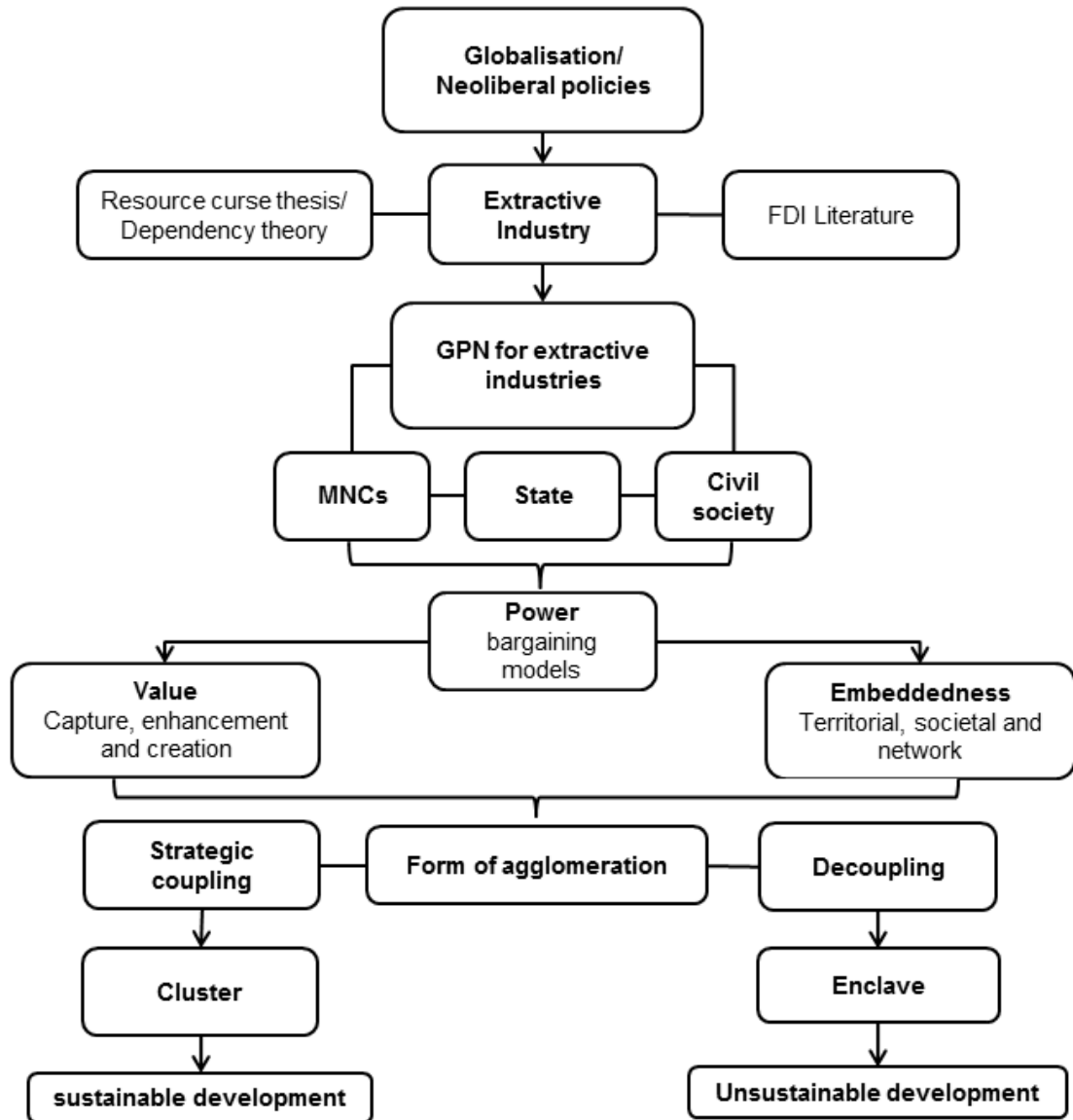
To answer the previous research questions, the research takes Bridge (2008) pioneering work on incorporating the GPN approach to the study of the extractive industries, as a base for exploring how GPN analysis can be used to understand the uneven development seen in some dependent mining nations and regions, focusing on the relationship between the mining MNEs and the state. The basis to this contribution is depicted in figure 1.



The international trade, extractive and network literature have paid little attention to power asymmetries in the advancement of theory. This research fills this gap by using the GPN as a broad framework of analysis while focusing on its conceptual category *power*. Specifically, it unpacks the crucial concept of power, and how this determines value capture. Studying the distribution and exertion of power between the agents is vital, since it will cause a specific form of agglomeration that may promote or hinder regional development. Hence, to 'unveil the black box of power' this research proposes some operational definitions of bargaining power, while also adapting and integrating the extant ideas on bargaining into the GPN framework.

In particular, the study focuses on the sources of bargaining power, as well as the way it is dynamically exerted and distributed among the actors in the extractive GPN. There is a special focus on the dynamic bargain between the local state/institutions and the mining MNEs on one hand, and between the international institutions and national/local institutions on the other. This is to address the relevance that such international actors have had over the development policies in the last decades. By following the bargaining literature, the research recognizes the role that the strategic resources hold by each actor can play as potential bargaining power, which can (or cannot) be exerted while facing each actor's particular constraints, providing a way to have some empirical measure of the bargaining power exerted by them.

**Figure 1: Structure of the theories, concepts and possible outcomes of the extractive industry debate.**



Source: Own elaboration.

Furthermore, the strength of the actors involved and the strategic resources that are the source of the bargaining power are the focus of theoretical development regarding the strategic coupling or decoupling between the MNEs' and local interests. This is especially relevant for policies related to the role of the state in actively/passively promoting sustainable growth and development.

Moreover, the Chilean copper mining GPN is used as the case study, since it is considered the most important copper producer of the world, one of the most important

metals, has a long history with the mining industry, and a world reputation of a successful example of economic development. The country, with its highly specialised productive fabric and its extremely FDI-friendly environment, makes it possibly the best case with which to examine the exertion of power within GPNs. In this way, as summarised in Table 1, the relevance of the Chilean copper industry is multi – level, since: it is the main producer and holds its biggest reserves worldwide; its growth, exports, FDI flows and tax revenues are heavily dependent on the copper industry nationally; and the Antofagasta region - where most copper is produced and found – has a long history of mineral mono – dependence and enclave formations, where economic growth has been constant, but not sustainable.

**Table 1: Summary of the relevance of Chilean copper industry worldwide, nationally and regionally (2013-2014).**

	Amount	Unit of measurement
<b>World relevance of copper industry</b>		
Participation in world reserves (2014)	30	%
Participation in world production (2014)	30	%
<b>National relevance of copper industry</b>		
Share of Chilean GDP (2014)	11.2	%
Share of total employment (2014)	3.2	%
Share of total Chilean exports (2014)	54.2	%
Taxes and mining contributions (2014)	4,728	MMUS\$
Contribution to tax revenues	8.9	%
Total investment in big copper/gold mining (2013)	14.783	MMUS\$
<b>Regional relevance of copper industry</b>		
Share of regional GDP (2015)	57	%
Share of the national mining production (2013)	48	%
Participation of mining over total regional exports (2013)	96	%
Regional average income per capita (2013)	9,000	US\$

*Source:* Own elaboration based on data from COCHILCO, USGS, Consejo Minero and OECD.

Historically, these mining enclaves has brought dire socio – economic consequences to the region, but the recent extremely high copper prices of the commodity super cycle have led some international institutions to declare Antofagasta, as a region, and Chile, as a country, as examples of development based on extractive resources (CEPAL, 2009; OCDE, 2009), and the belief that a mining cluster has taken shape. However, mining enclaves were born from a deep relationship between the Chilean State and the mining MNEs exploiting the ores, leading to considerable social and environmental costs assumed by the region and labour force, which highlights the need of re – evaluating the

role that both, the State and the mining MNEs, should play in promoting regional and national development in a modern copper mining global production network. Consequently, this research provides empirical evidence about the relative strength of the mining MNEs and state; how the bargains take place in each relevant node of the Chilean copper mining GPN: London, Santiago and Antofagasta; and some of the outcomes these successive bargains have had for the sustainable development of the host region and nation.

### 1.3 THE STRUCTURE OF THE THESIS

Regarding to the organization of this thesis, Chapter 2 provides a discussion of the debate about the effects of mining on national and regional development, while also introducing the GPN literature which provides crucial elements to address this issue. In this chapter, the thesis also seeks to incorporate the mining industry specifically to the GPN approach, by following Bridge's (2008) pioneering work. Chapter 3 aims to theoretically unpack the concept of power, by promoting three operational definitions based on the power debate literature. Chapter 4 details the methodology used in the research, as well as the main data sources. Chapter 5 provides an historical description of the Chilean case, and its participation in several mining GPN by way of context for the bulk of the original empirical research. Chapter 6 identifies the main strategic power resources held by the Chilean State and constraints on deploying this power for its bargains. Chapter 7 identifies the strategic resources of the mining MNEs and the constraints upon their use. Chapter 8 analyses how the Chilean State and the mining MNEs use their strategic resources while facing their constraints in the successive bargains taking places in the three different nodes studied in this research, while also providing a brief description of the outcomes of such bargains. Chapter 9 concludes this research by summarizing its main findings as well as the challenges and opportunities for future research.

## CHAPTER 2

### THE GPN APPROACH AND EXTRACTIVE INDUSTRIES

#### 2.1 INTRODUCTION

The latest globalization process has caused a major metamorphosis over the development possibilities for regions and states, changing the way in which MNEs, State and local/international institutions interact. Because of the scope of these changes, a broader theoretical framework is needed. However, the current research on economic development, especially for developing countries, is focused on state-centric assumptions and analyses. This approach forgets that the relations at a meso and micro scale are essential for the development process, not just in advanced countries but also in less – developed parts of the world (Henderson et al., 2002; Scott & Storper, 2003).

To overcome this limitation, any new theoretical approach has simultaneously to address the complex dynamics of the uneven development and its variety of institutions and interest groups involved, operating at multi-scalar level: transnationally, nationally and sub-nationally (Coe et al., 2008b; Coe et al., 2004; Henderson et al., 2002). Such an approach must also address the dynamic and asymmetrical power relationships of the agents involved that produce specific geographical outcomes, which can ultimately define the living conditions and development outcomes for the host region of the FDI (Coe et al., 2008b; Henderson et al., 2002).

Additionally, it should provide tools for studying what firms do, where they do it, why they do it, why they are allowed to do it, their governance structures, internal power struggles and how they organize the doing of it across different geographic scales, (Henderson et al., 2002; Phelps & Fuller, 2000). This must be assessed to have a better comprehension of how their logic influences the outcomes of the bargaining between them and local institutions.

Theoretical attempts to address all these issues have been made through the development of the chain and network approaches. Among the former, the main representatives are two: the Global Commodity Chains (GCC) concerned to understand how global industries are organized in the production and distribution of a particular good or service (Bair, 2005; Gereffi & Korzeniewicz, 1994); and the Global Value Chains (GVC), more focused on investigating governance structures in different global industries (Bair, 2005; Coe et al., 2008a; Gereffi et al., 2005). However, the chain approaches have

been criticized because of their conceptualization of production and distribution processes as mostly 'vertical and linear'.

Among the network literature, the GPN approach<sup>2</sup> has become its most relevant representative. Whereas the chain approaches offer a vertical and linear conception of the production network, the GPN framework considers all relevant actors and relationships when deploying the network metaphor (Coe et al., 2008b; Henderson et al., 2002; MacKinnon, 2012). As Sturgeon posits (2001, p. 10) 'a chain maps the vertical sequence of events leading to the delivery, consumption and the maintenance of goods and services... while a network highlights the nature and extend of the inter-firm relationships that bind sets of firms into larger economic groupings'.

Hence, what can be called the 'GPN 1.0' approach conceptualises the economic processes present in the production network in terms of their linkages, flows and feedbacks, rather than a simplistic aggregated or linear perspective, allowing to understand how places are being transformed by flows of capital, labour, knowledge and power, and how, at the same time, places and their institutions are transforming those flows as they locate in place-specific domains (Coe et al., 2008a; Coe et al., 2008b; Henderson et al., 2002).

Recently, GPN 1.0 has been refined in what Yeung and Coe (2015) call the 'GPN 2.0 approach'. In their work, they establish that, in many ways, GPN 1.0 remains an inadequately developed theory of global production networks since it has not explicitly developed and specified the causal mechanisms linking the conceptual categories of value, embeddedness, and power to the dynamic configurations of global production networks. Hence, they propose that the competitive dynamics between firms and non-firm actors produce four actor-specific strategies for organizing GPNs and is a first attempt to address some of the weaknesses of the GPN approach (Coe & Yeung, 2015; Yeung & Coe, 2015), something further developed in Yeung (2016). However, this chapter tries to deepen GPN 1.0 rather than GPN 2.0, especially regarding the conceptualization and study of power in the changing bargain that takes place among the GPN actors due to its relevance for regional development.

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<sup>2</sup> The GPN draws on actor-network theory (ANT) (Law, 1999).

## 2.2 A GLOBALIZED WORLD OF NETWORKS

Both chain and network literatures have dealt with the issues previously described. The chain approaches have been criticised for depicting linear structures; and for being focused mostly on the governance of inter-firm transactions, while not considering other actors outside the production chain in the analysis (Henderson et al., 2002). Conversely, the GPN approach provides a broad relational framework for studying the intricate economic globalisation and its aspects. This framework aims to 'incorporate all kinds of network relationship' and to 'encompass all relevant sets of actors and relationships' in the study of the regional development effects of a determined industry (Bridge, 2008; Coe et al., 2008b; MacKinnon, 2012). The GPN approach also offers an open and geographically sensitive perspective that goes beyond the more restricted and linear frameworks offered by the GCC and GVC approaches (Henderson et al., 2002; MacKinnon, 2012). This sensitiveness allows the links between the micro (firms), meso (regions) and macro level of extractives production to be examined.

The main aim of the GPN approach is revealing the multi-actor and multi-scalar characteristics of global production, through the analysis of three conceptual categories: *power, value and embeddedness*, and how these influence the formation of a 'strategic coupling' between the MNEs' interest and regional assets, which would ultimately lead to a sustainable growth and development (Coe et al., 2008a; MacKinnon, 2012; Yeung, 2016). The strength of this approach resides in its incorporation of the complex interactions among the economic, political, social and cultural institutions and groups which are part of the production network. Such multi-scalar arrangement of actors and its dynamic interplays are characterized by asymmetrical power relationships, which produce specific geographical outcomes and development possibilities (Coe et al., 2008b).

The exercise of power between the actors of the GPN is crucial in determining the value creation, enhancement and capture, as well as the level of embeddedness of the MNEs in the host region, all of which is related to the 'strategic coupling' and virtuous growth and development (Coe et al., 2008b, p. 180). Nonetheless and despite its relevance, the concept of power, its sources and distribution have not been developed at length in the extant GPN literature, being loosely defined and not supported by relevant empirical research. This work tries to fill this gap, by 'unpacking' the concept of power through the construction of an operational definition, and an empirical study about what are its

sources, and how its changing distribution shapes value capture, embeddedness, and ultimately sustainable regional development.

### **2.2.1 GPN definitions and categories**

Any approach that intends to explain globalized production processes in depth ought to consider the complex social, economic, political and cultural relations of the agents and institutions involved. These actions and interactions operate 'at multi-scalar levels and territorialities and through *dynamic and asymmetrical power relationships* [emphasis added] to produce specific geographical outcomes: the material world in which people struggle to make their lives' (Coe et al., 2008b, p. 271). The GPN framework makes such an effort, through its conceptual categories which allow the study of the development chances of the many agents involved.

Likewise, the GPN is defined as 'the globally organized nexus of interconnected functions and operations by firms and non – firms institutions through which goods and services are produced [consumed] and distributed' (Coe et al., 2004; Henderson et al., 2002). Such a definition considers the increased organizational complexity of these networks, and its increasingly global geographic extension. Furthermore, GPNs integrate firms and their sub-units, national regional economies and other actors that participate directly or indirectly on the production process.

This integration takes place in predominantly imbalanced structures where regional and national boundaries become blurred, and it will have critical implications for the development chances of the economies involved. Such interactions are highly influenced by the socio-political context of the geographies where they occur which are mostly 'territorial specific', whereas the production networks themselves are not (Henderson et al., 2002). Moreover, GPNs operate through several state boundaries and in different scales, partly influenced by 'regulatory and non-regulatory barriers' and 'local sociocultural conditions'. This characteristic 'create structures which are *discontinuously territorial* [emphasis added]' (Henderson et al., 2002 , pp.446), which occur in a context of stark asymmetries of power (Coe et al., 2008b) adding further intricacy to their analysis.

Furthermore, the GPN literature posits that the existence of 'regional assets' are a necessary precondition for regional development. These assets can be attractive for



MNEs and produce economies of scale and scope embedded in within specific regions, under specific conditions. In this line, economies of scale can be achieved through highly localized concentrations of specific knowledge, skills and expertise. This concentration can lead to industrial agglomeration and sustainable growth (Coe et al., 2004). However, they could also lead to negative effects, such as dependency, unsustainable growth and negative externalities, especially when agglomeration revolves around one or few major MNEs (Phelps et al., 2015).

On the other hand, economies of scope may be present if regions are able to reap the 'intangible benefits of learning and the cooperative atmosphere embedded in these agglomerations', also known as 'spillover effects' (Coe et al., 2004, p. 470). In this case, several high value-added activities may be developed in order to promote cooperation and learning processes, which can help to diversify the local productive fabric through the apparition of technologically advanced local providers of goods or services. Consequently, economies of scale and scope have the potential to promote regional development if they can complement the *strategic needs* of the trans-local actors participating in the GPN. This potential is directly related with the 'creation, enhancement and capture of value [emphasis in original]' (Coe et al., 2004, p. 473) all which depend on the power distribution and the degree of embeddedness of the actors involved.

The GPN approach reduces the complexity of the dynamic interaction of its members by addressing them using the conceptual categories of value, power and embeddedness. These categories provide a way to achieve a deeper grasp of issues related to network governance and power relationships (Coe et al., 2008b). The comprehension of these conceptual categories, and their role in producing a 'strategic coupling' between the 'regional assets' and the 'strategic needs' of the agents involved is crucial for the industrial transformation and development possibilities of the host region (Yeung, 2016).

### **2.2.2 GPN's conceptual categories**

The way in which the three conceptual categories of value, power and embeddedness interact and can influence regional development is developed here. In this sense, regional development is directly related with the creation, enhancement and capture of value. This process is a product of the bargaining that takes place between the agents of a particular GPN, where they use their bargaining power to achieve their particular strategic needs. The chances of achieving a strategic coupling between the different strategic needs will depend upon the outcomes of the bargain, which is articulated deeply

influenced by the concrete socio – spatial contexts in which the GPN is embedded (Coe et al., 2008b; Yeung, 2016).

### **2.2.2.1 Value**

The term *value* incorporates both Marxian notions of surplus value and orthodox definitions of economic rent. It refers to several forms of economic rent identified by Kaplinsky (1998) that can be obtained through market and non – market transactions (Coe et al., 2004).

Value creation refers to the economic return or rent generated by the production of commodities for sale, involving the conditions where the conversion of labour power into actual labour through the labour process takes place (Henderson et al., 2002; MacKinnon, 2012). Value creation is not only produced through the labour process, it can also take the form of policy, human resources, organisational, marketing, infrastructural, financial, relational, resource and technological rents identified in Kaplinsky (1998). Value may be created, for example, through the control of particular product and process technologies; the development of certain organizational and management capabilities; the harnessing of inter – firm relationships; and the prominence of brand – names in key markets (Coe et al., 2004).

The conceptualization of value as economic rent has, according to Coe et al (2008b), two prime implications for the regional development analysis. First, in a GPN where different actors can create and retain different forms of rents, some regions can have better chances of creating and capturing those rent that are based on their particular regional assets. Thus, regions do not need to create or retain all forms of rents, but specialize and become competitive only in the ones they can produce economies of scale and scope. Second, value can take different shapes when it is transferred through the GPN. This multiplicity suggests that value creation and capture analysis should unpack the different forms of rent that these values encapsulate in order to have a better understanding of its contribution to regional development.

The second aspect, value enhancement, has to do with the necessity of firms to compete for a market share, which can be achieved through processes of knowledge and technological transfer, industrial upgrading, the provision of more advanced infrastructure and the upgrading of specialized skills and production capabilities in the local labour pool and productive fabric (Coe et al., 2004; MacKinnon, 2012).

All this raises the issues of *value capture*, the third aspect, in terms of which actors and locations in the networks are able to appropriate and retain value, highlighting questions of ownership, power and control (Henderson et al., 2002; MacKinnon, 2012). It is one thing for value to be created and enhanced in given locations, but it may be quite another for it to be captured for the benefit of those locations. This means that value capture can be a deeply controversial matter, especially considering the asymmetrical power relationships usually present in the GPN relationships.

The capture of value is related with matters of state policy and corporate governance in given national contexts, as well as ownership and profit retention inside the region. These issues also reflect, in some degree, the extent to which key firms are locally owned and embedded in the regional economy. Furthermore, value capture is a result of the dynamic bargaining process that takes place between the MNEs and the rest of local and non-local actors of the GPN, which is determined by their bargaining power. Therefore, power and control are critical in the analysis of the distributional aspects of regional development and the sustainability of the GPN (Coe et al., 2004; MacKinnon, 2012). Despite of its relevance, the bargaining process and power asymmetries have not been studied in depth by the GPN literature. A deeper description about how power relates to value creation, enhancement and capture is developed in a later section about power. Moreover, all these issues related to value creation, enhancement and capture are shaped by the degree and kind of embeddedness of the key firms and agents.

#### **2.2.2.2 Embeddedness**

In this sense, GPNs do not only connect economic and non-economic actors, but they also link aspects of the social and spatial contexts in which those actors are *embedded*. These local and translocal relations take place among actors with diverse social backgrounds and inserted in wider networks, which are spread over different spatial scales (Henderson et al., 2002; Hess, 2004).

Furthermore, spatial proximity in these relations facilitates the exchange of information, experience and knowledge, which is vital for the stimuli of regional growth and development. Proximity enables the sharing of strategic resources available only in face to face interactions, which can generate positive externalities and virtuous forms of agglomerations (Harrison, 2007). Three dimensions can be defined in order to

understand these interactions: societal, network and territorial embeddedness (Hess, 2004).

Social embeddedness relates to the origins and background of the participants of a particular GPN. It reveals the importance of the broad societal characteristics of the place where an actor comes from: the history, cultural heritage, political situation and economic structure of their 'birthplace' shapes their values and behaviour. This 'genetic code' represents the local/regional/natural 'culture' and it strongly influences actors' performance within their respective societies and outside it. Likewise, this cultural baggage also relates to the way in which GPN actors position themselves within wider institutional and regulatory networks (Hess, 2004; MacKinnon, 2012).

Network embeddedness, on the other hand, describes the network of actors with which an agent is related, regardless of their country of origin or local anchoring in particular places (Henderson et al., 2002; Hess, 2004). The 'architecture', durability and stability of these formal and informal relations determine the agents' individual network embeddedness and the structure and evolution of the GPN as a whole. The former relates to the social and economic interrelationships between different actors, whereas the structural aspect of network embeddedness considers not only the agents involved in the productive process, but also the broader institutional networks, including non-business agents like governmental and non-governmental actors (Henderson et al., 2002; MacKinnon, 2012; Yeung, 1998). Summarizing, 'network embeddedness relates to the topological space of networks, in which distance and proximity are a function of the relations between actors without being confined to particular regions' (Hess, 2004, p. 181).

Finally, *territorial embeddedness* considers the extent to which a GPN actor is 'anchored' in particular territories. Economic actors become embedded in the sense that they absorb and are constrained by the socio-economic dynamics that already exist in those places. Thus, territorial embeddedness comes from the construction of substantial socio-economic linkages between the foreign and local actors, like in the Marshallian sense (Hess, 2004). These linkages may be related to the historical ties between firms and particular locations, but they can be weakened by the constant need to find new and cheaper locations to invest and stay competitive, which reflects the tensions between spatial fixity and mobility that are endemic to capitalism (Harvey, 1982; MacKinnon, 2012).

Moreover, the location of lead firms in particular places might generate a new local network of economic and social relations, involving existing firms as well as attracting

new ones. Territorial embeddedness, then, becomes a key element in regional economic growth and in capturing global opportunities. What is more, the nature of these locations also influences how the agents behave and perform inside the GPN, along with the changing power relationships in the network. The environmental factors derived from a firm's location may affect its competence, which determines the strength of its influence over the dynamic *bargaining process* between them and other actors of the network (Coe et al., 2008b).

Similarly, national and local government policies may explicitly or implicitly aim to embed particular parts of the GPN in particular cities or regions, in order to support the formation of new nodes and clusters in the host regions . However, the positive effects of embeddedness in a particular place cannot be taken for granted over time. For example, once a lead firm cuts its ties within a region<sup>3</sup>, a process of disembedding takes place (Pike et al., 2000, pp. 60-61). This potentially undermines the previous base for economic growth and value capture, which can be the case if the agglomeration takes form as an economic enclave (Henderson et al., 2002).

Hence, territorial embeddedness can be linked to a space in which objects and actors are clustered together and boundaries can be drawn. Consequently, the mode of territorial embeddedness or the degree of a GPN firm's commitment to a particular location is an important factor for value creation, enhancement and capture, which is crucial for sustainable regional development (Henderson et al., 2002; Hess, 2004).

### **2.2.2.3 Power**

Additionally, regional development does not take place on a level playing field. *Power imbalances* and the increasing 'footloose' nature of MNEs and hypermobility of FDI present limits to the bargaining position of national/local institutions. This is a critical issue for sustainable regional development and prosperity, since the sources of power and the ways it is exercised and distributed within the GPNs are decisive in determining the potential for value enhancement and, most importantly, value capture (Coe et al., 2004; Henderson et al., 2002).

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<sup>3</sup> Like disinvestment or plant closure.

If power asymmetries pervade the production network, local actors may not be able to capture much of the value created in the region, seriously hindering their regional development perspectives (Amin & Thrift, 1994; Coe et al., 2004). When MNEs concentrate power, regional assets can be transferred out of the region through repatriation of profits and, eventually, the relocation of the productive networks in other regions. This situation has historically created unsustainable agglomerations in the form of economic enclaves. Conversely, regions with considerable or strategic regional assets may be successful in creating value in team-based projects that require face-to-face interaction in spatially proximate clusters that can promote the apparition of agglomeration economies, economic diversification and sustainable growth (Coe et al., 2004).

While the concept of power in social thought is a complex one (see Clegg, 2002; Lukes, 2005), the GPN literature follows Allen (2003), who defines power not as a capacity or a repertoire of resources possessed by actors, but rather as *relational effects* of social interaction. To Allen

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

However, this distinction between the exercise of power and resources and capabilities has not been empirically addressed in the GPN literature, leaving the use and operationalization of the concept of power in a theoretical 'black box'. Furthermore, the actors' capacity to exercise power will be limited by the bargaining power of each actor, highlighting the relevance of the bargaining process and its dynamics within the GPN (Henderson et al., 2002; MacKinnon, 2012). *The central relevance of the bargaining process in the distribution and exertion of power repeatedly has been highlighted in the GPN literature, but has not been theoretically or empirically linked to it in a deeper way.*

According to the GPN literature, there can be three main forms of power: corporate, institutional and collective power. Corporate power refers to the lead firm's capacity to influence decisions and resource allocations, decisively and consistently in its own interests, through the control over key resources, like information, knowledge, skills and brands within a GPN (MacKinnon, 2012). Lead firms in these networks concentrate an immense corporate control of resources through their ability for collecting and processing

information globally. Such information asymmetry can play a large role in strengthening their bargaining position when they interact with regional institutions (Dicken, 2011).

However, the utilization of a network approach implies a complete rejection of a 'zero sum conception of power', in that lead firms rarely, if ever, concentrate all the corporate power (Henderson et al., 2002). The GPN framework assumes power to be asymmetrically distributed in production networks, meaning that the specific configurations and asymmetries of power within GPNs are largely complex, contingent and variable over time. For example, the power relationships between firms their suppliers are rarely as simple as the conventional wisdom tends to suggest whereby the large automatically dominate and exploit the small. As Coe et al posit (2008b, p. 276) 'size does not always matter'.

Small firms can also have sufficient autonomy to develop and exercise their own strategies, which can be achieved in combination with others. A successful agglomeration of small firms can take the form of a SMEs cluster, presenting most of the positive externalities of an industrial district and benefit from the GPNs' global markets and connections (Henderson et al., 2002). However, agglomerations of SMEs are not produced out of thin air, they require strong regional institutions and clearly defined policies in order to create the conditions for the apparition of clusters. Institutional power, thus, plays a crucial role in this.

Institutional power refers to the exercise of power by: (a) the national and local state; (b) international inter – state agencies (European Union, NAFTA); (c) the 'Bretton Woods' institutions and the World Trade Organisation; (d) the various UN agencies; and (e) the major international credit rating agencies which exercise a unique form of private institutional power. The capacity to exercise power to influence the most important decisions of lead companies and other agents integrated into the GPN is 'inevitably asymmetric' and varies both 'within and between' these five categories (Henderson et al., 2002). In this way, some strong national states (especially in East Asia) have successfully influenced private companies in order to achieve industrialization and development. On the contrary, countries where neoliberal policies and legislation favour the FDI attraction while weakening the unions, civil society and state's bargaining position, have not been able to fully benefit from presence of MNEs.

The power of interstate agencies has been considered as potentially strong for some cases like the EU, but it seems almost insignificant in other contexts like countries of the Global South. The power of the Bretton Woods institutions is still significant in countries needing financial aid, but it seems to have weakened in countries free of debts and with

greater degree of autonomy. The UN agencies have little to no direct power compared to the rest, since its influence is only moral and advisory. The credit rating agencies, however, can still hold an extensive power, both directly for many lead companies and indirectly via their credit risk assessments of national governments, but little is known about the way they exercise that power (Henderson et al., 2002).

Likewise, the more the region is articulated in a GPN, the more it will have to benefit from the economies of scale and scope in these networks. However, it is also more prone to be affected by external crises, control and dependence (Coe et al., 2004). The role that national and local institutions play in this balance is crucial for harnessing the best of the GPN while protecting the national and regional economies from its global dangers, and their bargaining power will greatly influence the possibilities for regional development. Likewise, value capture can be strongly enhanced by the non-firm institutions and their accumulation and exertion of power.

The last form of power is collective power, which is associated with the actions of collective agents who seek to influence companies at particular locations in GPNs, their respective governments and, occasionally, international agencies. This includes the local, national or international constitution of the various collective actors participating in the GPN, such as the firms (trade and labour unions, employers' associations), consumers and civil society organizations (NGOs involved with human and environmental issues, neighbour councils, consumer associations and political parties) and academia (Henderson et al., 2002).

In most circumstances where these organizations are engaged in, they attempt to balance the exercise of power of the other actors, either directly on particular firms or groups of firms within given networks or indirectly on national governments or international agencies. The exertion of this collective power by the different collectives aims to influence and shape the institutional and regional environment in their favour. Such situation is especially strong on economically weak nations or regions, where they compete to attract and retain investment by offering the best conditions for FDI (Henderson et al., 2002; MacKinnon, 2012).

Furthermore, even though labour, consumers and civil society are often (though not always) relatively powerless compared with the MNEs that dominate GPNs, they have learned to organize to be effective. Civil society organizations (CSOs) have become increasingly important in the global systems during the last decade by evolving from local to international organizations, and linking themselves to global organizations sharing similar objectives. CSOs' influence varies widely, but there are some industries where



they are extremely prominent and have significant influence over corporate behaviour, such as the natural resources, energy, clothing and textile industries (Coe et al., 2008b).

The collective power that some CSOs have displayed is such that some authors claim that 'they are the originators, advocates and judges of global values and norms' (Beck, 2005, p. 238), a position they achieved 'by sparking public outrage and generating global public indignation over spectacular norm violations' (Coe et al., 2008b, p. 288). These constant pressures and embarrassment carried out by some CSOs have been so strong, that some consider them the main reasons for the current trend towards explicit corporate social responsibility policies (CSR) among MNEs. CSRs has been widely used lately as a way to alleviate these allegations and recover the MNEs' social licence to operate, especially when the MNEs presence is associated with serious negative externalities like pollution, corruption and violations of human rights (Coe et al., 2008b; Dicken, 2011; Gereffi et al., 2001). Nonetheless, the relevance of CSOs over the changing bargaining processes and their relation with the other actors involved in the production network has not been expanded by the GPN literature.

### **2.2.3 How the different actors interact**

A further explanation about how these categories affect the interactions of the GPN actors is needed in order to understand the way institutions and governance structures affect the dynamic bargaining process and hence the possibilities for strategic coupling and regional development.

GPNs can be considered as contested fields, where the production is organized between actors that belong to quite different industries and social contexts (Levy, 2008). This intrinsic diversity means that there is usually a confrontation between the various particular agendas and objectives, one that will be resolved through the dynamic bargain whose outcomes depend upon the relative power configuration of each actor in specific situations.

Moreover, power relationships between GPN actors are not structurally determined or unidirectional (Coe et al., 2008b). Each of the most important set of actors in the global economy is involved in both cooperation/collaboration and in conflict/competition relations at the same time (Dicken, 2011). This paradoxical behaviour highlights the

relevance of not assuming that the relationships between the GPN actors are always of one kind.

For example, the relationships between MNEs and national/regional states are not always based on conflict or competition. They can cooperate if they are part of a joint development project, where they may try to promote the apparition of positive externalities that would benefit both firms and regions. Likewise, relationships between different labour unions may not be always cooperative, even between unions that belong to the same firm. Internal power struggles or rivalries may prevent comradeship to take place. All these different (and sometimes unexpected) interactions are related with the diversity of actors and networks, all of which are imbued within an ever-changing mixture of both cooperative and competitive relationships (Coe et al., 2008b).

It is also important noticing that regions do not automatically benefit from being 'plugged' into GPNs. Regional benefits can be hindered for several reasons: local actors may be creating value that does not maximize the region's economic potential, the enhancement of value might not be happening inside the region (or at all), and the local actors may not be able to capture much of the value created within the region. For example, a region may have an advantage on some regional assets, like in the quantity and quality of mineral ores they possess. However, the value created might not be enhanced inside the region by the MNEs. Mining corporations may be focused only on exporting raw minerals without promoting other value-adding processes, like refineries or advanced engineering services. Moreover, much of the value created in the exploitation of this abundant natural resource may be transferred out of the region through the repatriation of profits and eventually the relocation of production networks to other regions (Coe et al., 2004).

Accordingly, regional assets can become an advantage for regional development only if they fit the strategic needs of global production networks, a process that the GPN framework calls 'strategic coupling'. This coupling takes place as an outcome of a dynamic bargaining process between the agents involved in the production network, where each actor exerts all their bargaining power based on the strategic resources they hold. Furthermore, the process of 'fitting' regional assets with strategic needs of global production networks requires the presence of appropriate institutional structures that simultaneously promote regional advantages and enhance the region's articulation into GPNs (Coe et al., 2004, p. 474).

Similarly, regional institutions have an essential role in shaping the regional development possibilities of a globally embedded region. They can balance the power asymmetries

obstructing the benefits from such networks, while also providing the 'glue' that ties global capital and unleashes regional potential. By regional institutions this research includes local specific institutions, such as the national, regional and local government, and other civil organizations and extra-local institutions that influence activities within the region without necessarily having a physical presence (like the national tax authority). Hence, regional institutions play a major role in creating, enhancing and capturing, which are the base for regional development (Coe et al., 2004).

However, GPNs are characterized by profound power asymmetries that usually favour MNEs. The global scope of MNEs provide them with several pivotal advantages over regional institutions that make their position stronger: they can collect and process big quantities of information globally; produce and have access to the newest technology; have a detailed knowledge of the market and; most notably, concentrate big amounts of capital, allowing them to invest in projects and infrastructure. Thus, regional development will have a strong non-local component, as the exercise of power in particular places may be originated at some other distant location.

The GPN framework posits that regional institutions and civil society will try to counteract the region's dependency from external forces by exerting all their bargaining power. The bargaining position of these regional institutions can be particularly strong when their region-specific assets are highly complementary to the strategic needs of MNEs, in which case they can become considerable powerful in relation to the MNEs present in the production network. An example of this is when regions offer notably cheaper factors of productions, strategic resources that cannot be found somewhere else – like minerals or specific know-how, highly cooperative trade relations and favourable labour and tax legislations.

Moreover, value capture can be enhanced in the region if MNEs reinvest or retain earnings in the local subsidiaries instead of exporting their earnings to their headquarters. This scenario is plausible when such subsidiaries play a critical function in the GPN and it can be stimulated through the availability of venture capital formation or favourable support from national banking institutions. In both scenarios, regional actors directly and indirectly involved in the GPN – workforce, suppliers, SMEs –are likely to benefit from the enhancement and retention of value through skill upgrading, technological innovation and new venture formation.

Despite all of the above, value is unlikely to be retained in the region unless certain basic structures are already in place. These include a critical mass of know-how, skills and finance in rapidly evolving growth markets, a socio-cultural and institutional infrastructure

capable of designing and funding a common industrial agenda, and entrepreneurial traditions encouraging growth through vertical disintegration of the division of labour (Amin & Thrift, 1992, p. 585). The role of the State is critical in providing these basic structures, which can assure a significant retention of value in the host region. Consequently, the State is the main institution in charge of bargaining with MNEs to get the best of their presence, through its policies and regional resources management. Furthermore, the continuous bargains taking place in the GPN will be significantly influenced by the governance structures of the regional institutions and MNEs, all of which determine the possibilities for sustainable regional development.

## 2.3 THE BARGAINING PROCESS, THE STATE AND THE STRATEGIC COUPLING

### 2.3.1 Weaknesses and gaps in the GPN approach

Despite the literature supporting the benefits for regions and states of being plugged into a GPN, there are several critical voices questioning the universality of these claims. Such authors raise questions about the shortcomings, dangers and weaknesses related to the 'dark side' of the GPNs, especially for the host regions in developing countries (Coe et al., 2008b; MacKinnon, 2012; Yeung & Coe, 2015). Some of the most relevant drawbacks are: the lack of depth in the study of power and the increasing power asymmetries; decoupling and regional downgrading processes; the neglect of the extractive industries; and the inadequate theory development and empirical work by the GPN 1.0 regarding to the conceptual categories of power, value and embeddedness; all of which have important implications for regional development possibilities.

Arguably, there is a *lack of depth* in studying the concept of power, the bargaining power and power asymmetries in the GPN literature. Power is crucial in determining the regional development and, unless we assume perfect market competition, socio-economic relations are usually characterized by stark asymmetries in its distribution. The GPN approach, however, has tended to underplay the tensions that arise from the differential powers of key agents in particular the often unequal nature of the relationships between key agents like the local residents, regional institutions and MNEs (Dawley, 2011).

Furthermore, most of the GPN literature stresses the central role of power and the bargaining process in achieving a strategic coupling, but there are scant efforts to

'unpack' these concepts, to operationalize them or to apply them in an empirical analysis. The definition of power used in the GPN approach has been considered too simplistic, and the link between power and the bargaining process has not been deepened or studied (Yeung & Coe, 2015). The rational link among these two concepts is the concept of 'bargaining power', but it has been used only in a superficial way, even though the 'obsolescing bargain' literature deeply advanced its definition and applications.

This is particularly worrying, since power distribution and accumulation has been one of the main concerns of earlier political economy approaches to regional development. This literature recognized and warned about the dire implications that power concentration in MNEs' hands can have for the host region, especially in terms of forging external technological, cultural and capital dependency (Cardoso & Faletto, 2007; Harvey, 1982; Massey, 1984; Moran, 1974; Vernon, 1971). Historically, when MNEs concentrate power – or bargaining power specifically –, they have not had any incentive to achieve a strategic coupling with the host region, since their primary goal is related to profit maximisation.

Likewise, power asymmetries between MNEs and regional institutions reflect the spatial mobility of the former over the regional specific assets of the later (Phelps, 2008). Hence, MNEs have the power to make regions compete with each other in order to offer the best conditions, in terms of financial, legal and institutional support. Such a situation has been widely fostered by neoliberal policies promoted by international institutions (IMF, WB, WTO), which have spread deregulation, trade liberalisation and privatisation. These policies aimed to reduce the barriers to movement of capital over space while privileging the demands of MNEs over those of other interests groups such as labour and SMEs (Harvey, 2010; MacKinnon, 2012; Peck et al., 2010). This, in turn, has caused weaker and more dependant local institutions that are unable to bargain in fair conditions with MNEs.

This concentration of power by the MNEs is usually complemented with the political power to mould national and subnational regulatory environments to their needs. In some cases, this can result in 'corporate capture of public goods' whereby MNEs are able to re-orientate regional institutional capacities to serve their interests at the expense of other actors such as indigenous firms and workers (Phelps, 2000, 2008). Thus, the study of power asymmetries is fundamental for understanding the possibilities for regional development. Power concentration in the hands of MNEs will reinforce regional dependency on foreign forces and actors, leading to an unsustainable development and

a vicious cycle that reinforces itself, which can ultimately take the spatial form of an economic enclave (Figure 1 and 2).

Additionally, there is a denial of decoupling, recoupling and downgrading processes in the GPN literature, which has also paid little attention to the historical evolution and transformation of production networks and regional assets over time. Strategic coupling can be viewed in evolutionary terms, suggesting that regional institutions' capacities to bargain with MNEs will reflect the legacy of previous strategies and forms of investments. Processes of decoupling, downgrading and corporate abandonment have attracted little attention (MacKinnon, 2012). Coe and Hess (2011) identify ruptures between GPNs and regions related to disinvestment, in addition to intra – regional ruptures such as political exclusion, the severing of local economic ties and displacement and eviction. Such forms of decoupling also need to become a more central focus of GPN research.

Another flaw is the neglect of the extractive industry, since as Coe (2008b) and Bridge (2008) state, the GPN literature tends to ignore extractive industries almost entirely. They explain that the production is unequivocally grounded in the environment, as all forms of GPN demands on the natural resources through its needs inputs for the production process (resources) and the outcomes that emits to the natural environment, in the form of pollution or waste. This has caused several problems that are not being addressed by the current GPN research, like the overuse of non–renewable and renewable resources, the destruction of ecosystems, and the sustainability of the growth and development for the host regions. This point is especially interesting considering that the bargaining power of regions is particularly high when their region-specific assets are complementary to the strategic needs of the MNEs. Thence, extractive regions should have a considerable amount of bargaining power, which is not the average scenario. Moreover, the extractive industry is the basic pillar for several developing countries, as well as their developed counterparts that use these resources as inputs, so further research is compulsory to fill in this theoretical gap.

From all these criticism, this research focuses on developing a conceptual and empirical contribution regarding to the bargaining power of the MNEs and the State within an extractive GPN, which can ultimately determine the development possibilities of the host region and country. In this sense, understanding the bargaining processes and the role of the state in reaching a strategic coupling becomes vital.

### 2.3.2 The bargaining process

The dynamic bargaining processes happening at the different scales of the GPN have direct implications for value capture and the regional development possibilities. Such outcomes are determined by the exertion of bargaining power among the agents involved. Nonetheless, power is unevenly distributed among the actors participating in the GPN, so the conditions framing the initial bargains do not take place in a fair playfield (Coe et al., 2004). The outcomes of these bargains will reflect the adjustment of each actor's needs and assets, or the degree in which there is a 'strategic coupling' and regional development possibilities.

As in all bargaining situations, the relative power of actors within a network depends, largely, on the extent to which each possesses assets sought by the other party and the extent to which access to such assets can be controlled. The scarcer the asset, the greater the bargaining power it conveys and vice versa (Coe et al., 2008b, p. 276). Hence, the weakest actors in a GPN will be those who hold easily replaceable assets.

However, this is not a static situation. Actors can upgrade their assets and competencies by forming associative relationships and becoming more competitive, while also reaping power from their position within the other GPNs to which they belong. Contrarily, actors can also lose bargaining power when there are significant changes in the status quo or initial conditions. Power asymmetries related to the bargain process are dynamic and sensitive to the changes in local and trans – local socioeconomic and political conditions. Such changes can provoke drastic adjustments in the power balance, which are usually followed by new bargains. Here, the bargains will take place in some or all of the multiple scales where the GPN's actors are distributed, depending on the spatial scope of the changes. The actors involved in the new negotiations will exert all their bargaining power, determining the potential for regional value creation, enhancement and, more importantly, value capture.

An example of these shifting conditions is the implementation of neoliberal or FDI friendly policies in an industry. This provokes a shift in the power balance towards the MNEs, which in turn will demand a new bargain with the regional institutions in order to establish new and more beneficial conditions to their strategic interests. Similarly, regions holding strategic valuable and scarce resources may wait until considerable sunk costs are made by a MNE to renegotiate the conditions, taking advantage of the spatial fixation of the investment. Moreover, the way in which these bargains take place and the outcomes they produce are also shaped by the governance structures of the agents involved.

These structures relate to the way in which firms, states and other actors organize themselves and decide how to use their strategic assets as sources of bargaining power.

### **2.3.3 The state and regional development**

Governance structures of firms and regional institutions are another decisive variable influencing the way in which the actors exert their bargaining power. Certainly, each region/nation has a specific socio economic context, which, in turn, presents distinct governance structures (Coe et al., 2004). The diversity on such structures also implies that similar developmental policies may have different impacts on regional assets, meaning that there is not a unique 'holy policy' that can assure strategic coupling and regional development for all regions and cases.

Hence, national/regional states play a central role in obtaining the best out of the bargaining processes, since they usually hold the most powerful bargaining position to get the best conditions for regional development. Under certain circumstances, national and regional states can exert a considerable influence that can ensure positive national and local benefits. However, to achieve this, the national/regional state not only has to have the theoretical capacity to control the access to assets within its territory but also the power actually to determine such access. In other words, 'strong' states can be highly effective in the power struggle over investments (Coe et al., 2008b, p. 282).

Still, some argue that states' position have weakened in relation to MNEs, especially when they are highly embedded in GPNs (see Petkova, 2006). When national/regional institutions are weakly developed or completely missing, MNEs find little or no resistance to their exercise of power and can impose their will over the rest of the actors, capturing value, public goods and the regional institutions for their own benefit (Phelps, 2008). This situation has been deepened by the increasing adoption of neoliberal market policies of concessions and incentives granted to MNEs by some developing nations, like the ones included in the IMF's 'structural adjustment programmes', causing great difficulties for achieving regional development.

However, the regional integration agreements – such as the European Union – have allowed states to retrieve a measure of their bargaining power. As Bartlett and Seleny (1998) emphasize, this was only possible since the EU acted as a unified 'strong state'. As they explain, without the EU post–communist countries in Eastern Europe would have



been relatively powerless (Coe et al., 2008b), highlighting, again, the relevance of a strong local, national or supranational state that is able to represent regional's interests when bargaining with MNEs.

Henceforth, the likelihood of value capture for the host region is greatly enhanced when regional institutions are able to exert considerable power in the bargains with MNEs and other agents of the GPN. The bargaining power of each actor varies according to territorially specific, and dynamic, socio-economic configurations, as well as their strategic assets and the particular governance structures of the institutions and firms. Therefore, knowledge about these territorially specific power configurations is essential for regional institutions to take appropriate measures for transforming a region's assets and to maximize their bargaining power and impact (Coe et al., 2004). The strength of regional and national states is, therefore, crucial in promoting a strategic coupling between the regional and corporate interests, a necessary condition for sustainable regional development.

#### **2.3.4 Strategic coupling**

In the GPN' approach, regional development is a consequence of the strategic coupling between the interests and assets of the MNEs and regional institutions involved in the production network (Coe et al., 2008b; Coe et al., 2004; MacKinnon, 2012). Such a process is one of the main contributions of this literature and, consequently, widely studied. Strategic coupling is defined as 'the dynamic processes through which actors in cities and or regions coordinate, mediate, and arbitrage strategic interests between local actors and their counterparts in the global economy' (Yeung, 2009, p. 332). These multi-scalar processes involve material flows in transactional terms and non-material flows like information, intelligence, and practices (Yeung, 2009).

Furthermore, Yeung (2009) explains that this coupling mechanism has some very singular attributes since it is strategic, meaning that the process does not happen without the active intervention and intentional action on the part of the participants. Hence, the actors will make their best efforts exerting all their bargaining power to get the better conditions for their strategic needs. The process is also time-space contingent as the coupling process is subject to change. A typical strategic coupling resembles more a form of temporary coalition among the different actors and institutions rather than long term commitments or alliances. Additionally, the coupling process goes beyond territorial

boundaries and geographical scales, as actors from multiple spatial scales (international institutions, multinationals, states, regions, and localities) converge and their practices radiate out to diverse geographical places – some global and some highly local.

Essentially, the strategic coupling concept is about explaining the dynamic relational processes and mechanisms that occur when the key actors of the GPN reach a mutually beneficial agreement. The strength that each actor has in order to achieve their strategic needs will depend on their bargaining power and assets, and its outcome will have multi-scalar consequences for everyone involved directly and indirectly in the production network, as well for the spaces where they are located.

Additionally, Yeung (2009) recognizes three processes and mechanisms that facilitate the strategic coupling. The first relates to the emergence of transnational communities, formed by the transnational elite professionals and businessmen that are constantly traveling around the world. This spatial mobility and face to face interaction allows them to construct informal webs for sharing knowledge and technology based on a shared social identity and/or nationalistic feelings. Transnational communities and social capital have been proved as crucial in regional development (Phelps & Wood, 2006; Rodríguez Pose & Storper, 2006) since they provide a significant mechanism for international diffusion of knowledge and the creation and upgrading of local capabilities, especially in developing countries (Saxenian, 2002). They also help to coordinate the efforts between MNEs and suppliers through different languages and business cultures, which facilitates the communication and strategic coupling inside the GPN.

The second mechanism is the change experienced in the industrial organization. The increasing social division of labour creates opportunities for adopting organizational and technological innovations in some regions and countries, and plug themselves into broader GPNs. Many industries are passing through a process of vertical disintegration where individual MNEs are shortening their value chain activities, just to reintegrate those processes in cheaper/more profitable geographical dispersed locations. Such process of vertical disintegration/reintegration provide a strategic coupling platform for local and regional firms in the regions and countries where the productions stages have been relocated. However, these changes in industrial organization depend greatly on technological changes and how regions and firms can adapt their capabilities to them.

The last mechanism relates to the initiatives of states and institutions. The two previous mechanisms greatly depend on the fierce efforts that some state institutions to achieve strategic coupling. One of the most important morals regarding the success of some Asian countries – like Taiwan, Singapore and South Korea – is that there is little doubting

the decisive role their states and governments have played in paving the way to become the major exporters of information and technology worldwide. State institutions have also become increasingly important in the last decades, by promoting the enhancement of human resources and physical infrastructure through strong industrial policies, all of which established suitable conditions for regional growth and development.

If the strategic coupling process is a success, there will be possibilities for the diversification of the local production, through the birth of new local suppliers of the GPN and specialized firms that may become part of new GPNs. Such a fertile environment is ideal for the appearance of SMEs clusters, which are usually associated with sustainable growth and regional development. Knowledge spillovers and capital reinvestment in the host region are critical variables for this to happen, since the capture of the value produced in the region should lead to a virtuous cycle of self-sustained growth regional development.

Still, the process of 'fitting' regional assets with the strategic needs of the MNEs requires the presence of appropriate institutional structures that simultaneously promote regional advantages and enhance the region's articulation into the GPN, since failing in producing a strategic coupling can leave to unsustainable forms of agglomeration, namely, economic enclaves (Coe et al., 2004).

Again, it is imperative for regional institutions to ensure that strategic coupling occurs with the needs of MNEs in GPNs and to guarantee that the creation, enhancement and capture of value takes place inside the region. The strategic coupling is an outcome of the bargaining process between MNEs and local institutions; hence, if local institutions' bargaining position is strong, they will be able to ensure a successful strategic coupling between local and MNEs' interests, so the region will be able to benefit from this relationship. This means that local institutions, and especially regional states, are critical actors in promoting sustained economic and social development in the locations incorporated into GPNs (Coe et al., 2004; Henderson et al., 2002; MacKinnon, 2012).

### **2.3.5 Three challenges of the GPN 1.0**

As figure 2 summarizes, the previous discussion expands the concepts and dynamics comprised within the GPN 1.0 approach. Here, regions and corporations hold strategic assets, used in the bargains aimed to achieve their strategic objectives. The outcomes of these bargains are determined by the bargaining power each actor accumulates and exerts. Hence, if regional institutions exert a greater bargaining power in relation to

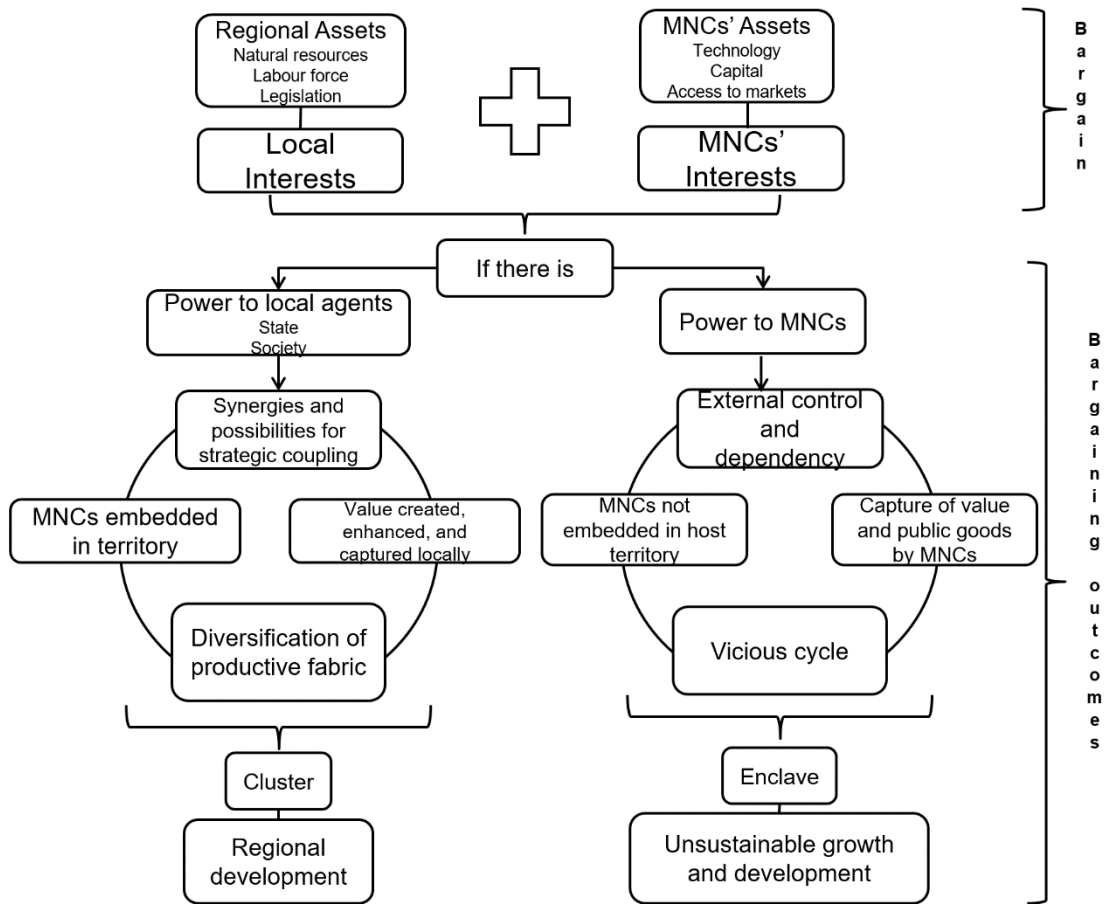
MNEs, there will be possibilities for synergies, positive externalities and, ultimately, a strategic coupling between local and trans-local interests. Such coupling means that a significant amount of value will be created, enhanced and captured locally, leading to a diversification of the local productive fabric. Furthermore, MNEs will be more embedded in the local economy, which can stimulate the apparition of an economic cluster, fostering the chances for sustainable regional development.

Conversely, if MNEs hold more bargaining power than regional institutions, they will try to get the best conditions for exploiting the regional assets, looking for favourable legislation, concessions and capture of public goods and regional institutions, making the strategic coupling impossible. Moreover, the region will probably become dependent on external forces and will develop a specialization in the production of low value added activities. Value enhancement activities will probably take place outside the region, and most of the value may be capture and exported by the MNEs, who will have minimal embeddedness in the region. This can generate a vicious cycle and the illusion of growth, unsustainable in the long run, taking the spatial form of an economic enclave and grim chances for regional development.

However, the discussion so far leaves three main issues weakly developed. Firstly, the extractive industries have been almost absent in the analysis, despite being the base of most of the current final and intermediate goods. Secondly, issues related to the bargaining processes between the actors involved within a GPN, and how these determine the strategic coupling between the actor's particular interests, are seriously underdeveloped. Thirdly, the concept of power, which ultimately explains value capture and the potential sustainable development possibilities for the host region and country, has not been conceptually unpacked or empirically analysed.

These three underdeveloped aspects of the GPN approach are closely related. Indeed a focus on the extractive industry can enhance the GPN 1.0 approach and reach a better understanding of the concept of power, and how it relates with the bargains taking place within the GPN and the possibilities of reaching a strategic coupling among the actors.

**Figure 2: GPN approach summary.**



Source: Own elaboration.

## 2.4 INCORPORATING THE EXTRACTIVE INDUSTRY IN THE GPN APPROACH

### 2.4.1 The extractive industry

In a very real sense, the extractive industries represent the ‘beginning of the beginning’; the initial stage in the basic production circuit and in the web of global production networks that make up the global economy (Dicken, 2011, p. 243). However, despite its relevance, there is comparatively little coverage of the extractive industry in the GPN literature. Moreover, it is problematic to apply the conclusions of GPN analysis for the manufacturing to the extractive sector; extractive industries – especially mining – have so rarely been associated with sustainable development. This industry is represented by the finiteness and location specificity of its resources; and the stark bargaining power asymmetries within the production network, causing very unequal distributions of benefits and costs among the actors involved in the exploitation of the resource (Bridge,

2008; Davis, 1995; Gunder-Frank, 1969; Humphreys et al., 2007; Prebisch, 1950; Ross, 2001).

The basis of the extractive industries lies in the concept of natural resource, defined as 'the materials created and stored in nature through complex biophysical processes over vast periods of time' (Dicken, 2011, p. 244). However, this view of resources as 'natural things' whose origin belongs to the world of physical science, obscures the way all resources are, intrinsically, cultural evaluations about utility and value (Bridge, 2009). Thus, an element or material found in nature is only a 'resource' if it is defined as such by potential users; meaning that is both a socio – cultural and a political construction; and that its relevance depends on political variables, which is why natural resources have always been a source of socio–political struggle (Dicken, 2011).

Most of the resources<sup>4</sup> that are the base of the extractive industries are non–renewable and their quantities fixed, at least under the technological conditions available when they are assessed (see Figure 3). Another key characteristic is their locational specificity, since 'they are where they are' (Dicken, 2011, p. 244). This means that they must be, at least initially, exploited where they are located, although later stages of the extractive commodity chain can be located somewhere else. In either case, their use involves large investments in exploration, extraction, processing, transport infrastructures and human capital formation (UNCTAD, 2007).

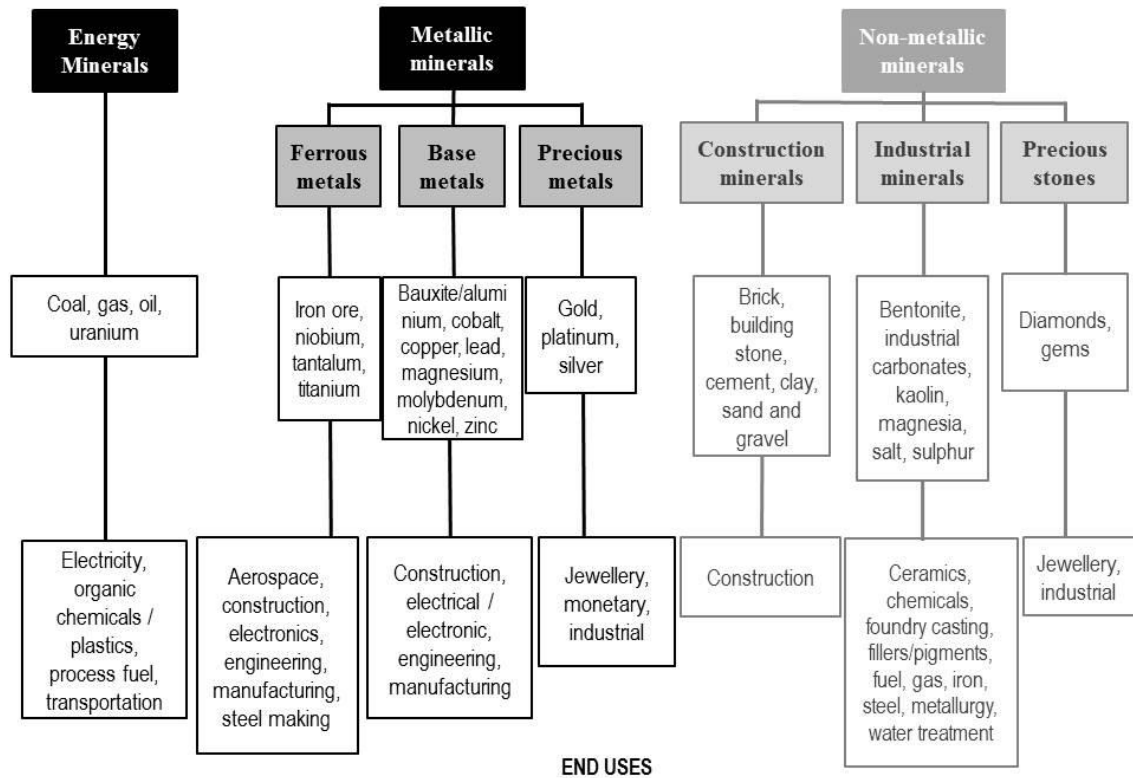
Moreover, the extractive industry is characterized for being overwhelmingly producer – driven; the colossal size of its firms; and the strong mix of private enterprises (MNEs) and state – owned enterprises (SOEs). This mix of finite quantities, fixed locations, territorial embeddedness, scale of production and FDI presence is what shapes the development possibilities for extractive regions (Dicken, 2011). However, natural resource endowments do not mean automatic development gains for a country or region. As the Resource Curse literature highlights, cases in which countries rich in natural resources have developed are few, which is closely related to the dependency of the host region with the extractive sector. This takes shape in the conflictual relation between the host state/society and the extractive MNEs/international actors over the distribution

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<sup>4</sup> There is a distinction is between a resource and a reserve. The latter includes all geologically identified deposits that can be economically recovered. All other deposits are labelled resources, either because they have not yet been discovered or because their exploitation is not currently feasibly (Turner, 1994, pp. 222-224).

of benefits; and in the economy's sensitivity to price shifts, which will also affect the power distribution among participants.

**Figure 3: Classification of mining industries.**



Source: UNCTAD, 2007: Box III. 1.1.

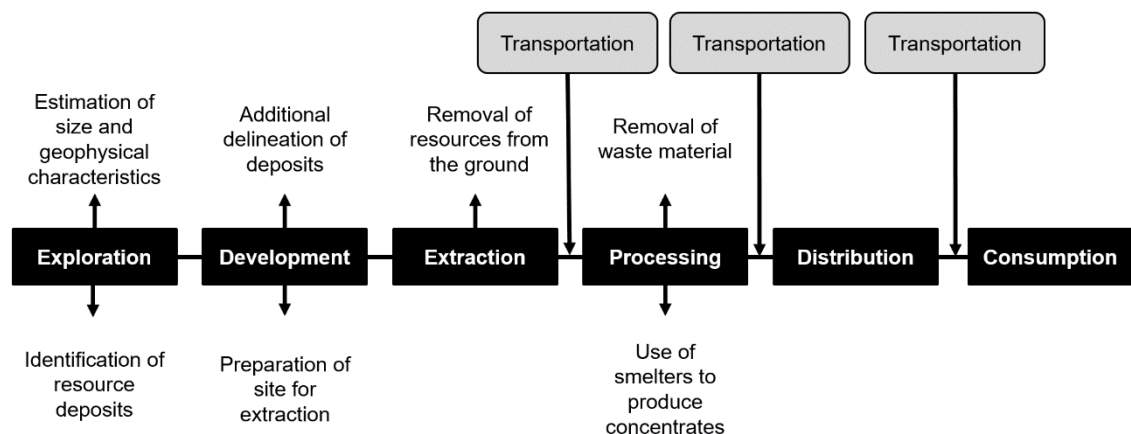
### 2.4.2 The extractive GPN

The extractive GPN has some very particular features, which are vital for the development possibilities of the host region. The extraction of mineral resources is mostly dominated by large-scale, capital-intensive investments, although small-scale mining can be important in some countries and for some specific minerals. Furthermore, some projects are technologically complex, and investments are made under high levels of uncertainty that usually take a long time to materialize (UNCTAD, 2007). Therefore, the investments required in this industry are especially costly and risky. Likewise, most of the extractive reserves are located in developing countries where the host states

generally do not have the capital, expertise and technology to exploit them. This has been one of the main causes for applying neoliberal policies and incentives in order to attract FDI into these locations.

The basic GPN of the extractive industry has been historically organized in a vertical production system, comprising a linear sequence of stages: exploration, development, extraction, processing, distribution and final consumption (Figure 4). Each of these stages has an environmental output, usually forgotten by the economic analysis (Bridge, 2008). These negative effects take shape in pollution or other negative externalities, which are often reduced by the promotion of corporate social responsibility policies by the extractive firms (Frynas, 2005; Gilberthorpe & Banks, 2012). However, despite its apparent simplicity, this is a highly complex and contested process where all the actors involved exert their bargaining power to achieve their strategic needs, which is why a network approach is necessary to better comprehend this industry.

**Figure 4: Extractive GPN.**



*Source:* Dicken, 2011: Figure 8.2.

Moreover, each stage poses huge technological challenges due to the finiteness and locational specificity of the resources. This means that technological solutions have to be continuously implemented in every stage, which are highly expensive and produced in the more developed parts of the world. Among these technological challenges, three are the most important: finding new sources of supply, extracting the highest benefits from these sources, and getting them to the market. New ores are difficult to find and usually difficult and expensive to exploit, since the most easily accessible ones have



been already exploited. Purity will be determinant in the economic viability of the exploitation, since the lower the degree of purity, the greater the cost involved in extraction and processing. Finally, the need to get the product to the market stresses the importance of investing in expensive transport infrastructures which are often entirely lacking (Dicken, 2011).

Furthermore, the long distances between the ores and the final markets generate the need for a massive scale of transportation infrastructure. Thus, this industry has always faced the problem of increasing the scale of production and being able to transport the product to its final consumers. These investments are also slow to materialize; extremely costly; and once they have been finished they turn into high sunk costs, since the facilities and infrastructure built are not easily transferred to alternative uses (Dicken, 2011). These sunk costs can be extremely high in the exploration, development, extraction, processing and distribution stages, meaning that the investment will be spatially fixed after it has been materialized, causing a shift in power towards the local state as the obsolescing bargaining models predict (Moran, 1974; Vernon, 1971). Likewise, the capital intensity of this industry is extremely high compared to its labour requirements, since it employs fewer workers relative to their size and production in comparison to other industries (UNCTAD, 2007).

Recently, the organization in the production in extractive industries has drastically changed, due to the incorporation of MNEs and the technological changes brought by the globalization of production. This means that the industry has gone from organizing itself in a vertical way, where the production process was linear or chain like, to a situation in which the extractive industry is mostly horizontally integrated. Such change was caused by the outsourcing of processes that are not vital for the production, and the subcontracting of labour force for lower wages and worse working conditions. This has several implications for the agents involved in the industry, especially in terms of bargaining power. Bigger firms are integrating with each other, increasing their economic leverage and influence; while the smaller ones lose relative bargaining power due to their size and inability to create bigger conglomerates of firms which would allow them to bargain collectively with the MNEs.

Finally, the state is a vital actor through all the stages of the extractive GPN, since the resources are geographically embedded in a territory that is controlled and administrated by it. The relationship between the state and the rest of the actors of the chain has been deeply studied, but also somehow neglected by the current mainstream extractive

literature, which mostly focuses into the purely abstract economical flows. Hence, the role of the state is developed next.

## 2.5 EXTRACTION, GOVERNANCE AND THE STATE

Several authors consider the state as a crucial actor in determining the development outcomes for an extractive region plugged into a global production network (Auty, 1994; Bridge, 2008; Dicken, 2011). There are two important reasons for this: firstly, the unique territorial embeddedness of resources, which are ultimately controlled, regulated and sometimes exploited by the national state in which they are located (Dicken, 2011); and secondly, the external forces that can be too powerful for local institutions and actors to handle. This requires a high participation of the state, since it is the only actor strong enough to bargain with MNEs and the international institutions supporting them. Hence, the state's strength will determine the outcomes for the agents involved in the bargains that set the terms and conditions for the exploitation (Auty, 1994; Dicken, 2011; Moran, 1974).

In real life scenarios the role of the state is dynamic, as well as its influence over growth and development, but is useful to keep in mind the consequences of strong and weak states for the production network. Furthermore, the relative strength of the state in the extractive industry is closely related to its promotion of appropriate macro-economic and sectoral policies reinforcing its bargaining position (Auty, 1994). Thus, the strength of the state plays a key role in determining the development outcomes for the host regions. However, these outcomes will also depend on the motivation behind the state's exertion of power, as is explained next.

### 2.5.1 Strong states in extractive spaces

Natural resources can be a considerable source of bargaining power. Therefore, the strength of resource rich states depends on the scarcity of the resource worldwide; the quality and quantity of the ores found in the country/region; the characteristics of the labour market; and the political stability, all of which can make the exploitation highly desirable for MNEs. Since taxes and royalty payments associated to primary extraction can generate important revenues for national and regional governments, the

regional/national states frequently try to promote the attraction of FDI and the establishment of new extractive centres.

Moreover, the extractive industry usually provides direct and indirect jobs and the apparition of economic linkages with the rest of the economy. The more important is this industry in the production of a region/country, the more the state will want to control the conditions of exploitation. Hence, a powerful state can exert its influence in two ways: a 'strong developmental state' related with the promotion of regional development and benefit redistribution; and a 'strong state dominated by selfish interests', involving the enrichment of the political/dominant class and MNEs at the expense of the environment and population's wellbeing.

In the first case, a strong developmental state uses its power to achieve the best conditions for luring FDI into the region, while also protecting the environment and promoting the creation of safe and decent jobs for the local labour. It also stimulates the generation of economic linkages with SMEs and technological spillovers from MNEs, in order to create a more competitive and vibrant environment. This should help to diversify the productive fabric and stimulate the exports of goods and services value added, leading to an improvement in the national and regional development possibilities.

Likewise, a developmental state promotes stronger relationships between the MNEs and local groups, meaning higher standards to get a social licence to operate (Bridge, 2004a). Additionally, the extractive MNEs usually depend on the actions, strength and legitimacy of state power to realize their investments. Such actions include infrastructure development, the allocation of title to land and resources, and the establishment/enforcement of the procedures by which other parties can participate in decisions over land use (Bridge, 2004a). All this relates with the state's ability to provide a safe environment for resource extraction for all the agents involved, by using its power to, for example, allocate land destined for exploitation and the terms, conditions and compensations expected from the MNEs.

In the second case, a strong state dominated by selfish interests promotes policies and actions that favour the political/economic elites in charge of such decisions without considering region and its inhabitants wellbeing. Here, corruption and influence peddling are the norm. The state aims to create a mutually and supportive relationship between the MNEs and the nation's political elite, where the firm is politically and physically protected from the population, as long as they provide benefits to their protectors (Bridge, 2004a). This scenario often promotes violence used against objectors and the working and exploitation conditions are exceptionally harsh for the local population. A particularly

well-documented case is what the literature calls 'rentier states', which mostly refers to non-democratic developing countries, specialized in oil production (Ross, 2001; Sandbakken, 2006).

Another variation is when the state is 'captured' by MNEs. Here, the initial bargain is dominated by the MNEs, which manage to get the best possible conditions for exploiting the resources. The state can be potentially strong, but does not use its bargaining position in order to avoid scaring the FDI. The outcomes of such bargains usually involve the implementation of neoliberal policies and laws liberalizing the labour market, the access to natural resources, providing tax concessions and facilitating the capture of public goods (Phelps, 2008), where the state only acts as a referee in what it considers 'issues among privates' that will be solved by the market. Moreover, a state not willing to exert its bargaining power state could, in the long run, lead to enclave formations. This situation can be reversed once the state realizes that it can exert its power on new rounds of negotiations, after the investment has been done and the costs are sunk (Vernon, 1971).

### **2.5.2 Weak states in extractive spaces**

The recent globalization process and neoliberal policies adopted in resource rich developing countries have, in some cases, weakened their states and regional institutions to such degree that some of them seem to be completely absent (Bridge, 2004a). One of the main implications of this is the hyper-specialization in the primary sector is a process named 'primarization' (Muradian & Martinez-Alier, 2001), which may, in the long run, lead to further increases in the already large gaps between developed and underdeveloped regions of the world. This since it could cause a decay of the manufacturing industry; unequal distribution of benefits; and violence, all of which worsen the dependency and development chances of the host regions and countries.

The growth and nourishment of the manufacturing industry has been historically considered as vital to achieve autonomy and development by the developing extractive regions and their states. However, the 'primarization' caused by a weak state, could hinder all this. As Benavente et al. (1997) illustrate, the globalization process not only has expanded the extractive production and processing industry, but it also has induced a decay of manufacturing industries in Latin America. Likewise, Noorbakhsh and Paloni (1999) shows that structural adjustment programs applied in most African countries have preceded declining or insignificant rates of growth in their manufacturing industry.

Moreover, weak states can also cause an unequal distribution of profits. After the 1980's most of the developing states lacked financial capital and were under strong international pressure to adopt neoliberal policies for getting funds, causing a reversal in the nationalization processes that took place in the 1970s. Hence, today, the extractive MNEs can function as economic enclaves, importing the bulk of their inputs and repatriating most of their profits to their headquarters without creating significant backward or forward linkages with the local economy that could allow the generation of a competitive local industry capable to export or compete globally (Muradian & Martinez-Alier, 2001; Phelps et al., 2015). Additionally, these companies have vertically integrated networks of production that include extraction, processing, and international distribution, so intrafirm trade is very common, allowing 'transfer pricing'; the artificial reduction of the MNE's taxes in the host country to increase their profits, which reinforces the exportation of profits to the headquarters (Muradian & Martinez-Alier, 2001). Consequently, the profit distribution has not improved but, on the contrary, it has become more concentrated in the hands of mining MNEs.

Finally, weak states can lead to violence. There are some cases in which the state can be completely absent which can be caused by a shift in the state's ideology. For example, some nations under the neoliberal influence perceive any state intervention as a potential destabilizing force scaring away FDI. The weak governance of these states may create deep civil unrest, especially among people suffering the worst consequences of the extractive industry: pollution, bad working conditions, increasing cost of life, among others. This tension is usually suffocated with violence, where the state deploys the police or even the army in order to pacify manifestations (Canel et al., 2010; Zalik, 2004). Historically, extractive countries have witnessed several massacres of workers, due to states that were unable to distribute the benefits of the extractive industry or to achieve new and more fair agreements with the MNEs.

### **2.5.3 Extractive States and GPNs**

The role of the state has been widely studied in the literature. However, the spatial manifestations and dynamics involved in the bargains within GPNs have not been developed in the same manner. The economic geography sub-discipline provides a way to acknowledge this through the recent development of the chain and network approaches. Such literature has incorporated questions of governance, political relations

and how these structure the actions/inactions of the state on issues of resource development and environmental protection (Bridge, 2004a).

The GPN stands out among the approaches, since it studies more complex structures and relations between states, MNEs and other actors, considering vertical, but also horizontal relationships within production. Moreover, it frames its analysis considering the role of space, by delivering a 'sense of the relational way in which production is organized via inter – firm networks that massively exceed the boundaries of the nation – state and a mode of analysis, which is time and space sensitive' (Bridge, 2008; Coe et al., 2008b). Hence, to further develop the GPN literature and its analysis of the extractive industries, issues of how state and MNEs' bargaining power shape the production network are crucial. Still, the application of this approach to the extractive industry would be futile without addressing the particular features of this industry. In this sense, Bridge (2008) provides the pillars for the construction of an extractive GPN, focused on the development possibilities that this industry may (or may not) facilitate in developing regions, as shown next.

## 2.6 A FIRST ATTEMPT TO DESCRIBE AN EXTRACTIVE GPN

Oil and copper are two of the most important minerals in the extractive industry. Oil has been deeply studied due to its geo-political relevance and its various strategic uses. In this sense, Bridge (2008) provides a first attempt to construct an extractive GPN based on the oil industry where he addresses the complex relationships between the various firm and non-firm actors involved, and the implications of these for sustainable development. Likewise, copper has been considered one of the most important metals, since it provides almost one fifth of the world metallic mineral production due to its uses as an electric conductor; building material; and base for several other goods (UNCTAD, 2007).

This research takes Bridge's (2008) attempt to depict an extractive GPN as a blueprint, adapting it for the copper GPN and incorporating issues of bargaining power and the changing relationship between states and firms for the copper industry in the Chilean case - the most important copper producer worldwide. Bridge's (2008) work was pioneering in addressing the concerns about the extractive industry outlined above, expanding the findings of the resource curse thesis into the construction of an extractive GPN. He applies the GPN's analytical tools to the oil industry as an alternative

perspective for understanding the 'limited opportunities' that transnational extractive industries provide for regional sustainable development, while also incorporating the intricate network of relationships of actors and spaces that the nationally-focused theories did not allow (see Figure 5).

Bridge (2008) firstly notices the 'landed' nature of assets in the extractive network, which differentiates it from the other industries. Landed has a double meaning here: it relates to the materiality and territoriality of the resource. Hence, the materiality of the resource refers to the processes related to its exploitation, such as production, transportation and processing (see Figure 5). Since natural resources are only partially socially produced, extractive sectors rely on natural production to a degree not found in other industries. Therefore, the dependency on natural production limits the spatial flexibility of the network. This means that ownership over the resources is strategic for value creation and capture, and *that their distribution will be determined by the bargaining power of each actor of the GPN*, creating a relation of mutual dependency among resources holders and seekers. Furthermore, the unknown nature of the upstream exploration stage means that this industry heavily depends on resource quality, technology and capital available rather than labour intensity.

On the other hand, the territoriality of the resource relates to how they are embedded in the proprietorial, institutional and cultural – political structures of the nation–state, which is greater than for other sectors; and how, therefore, this industry is closely related with capture and distribution of resource rents. Regarding the former, mineral resources belong to the state, which leases or licences their exploitation after a series of bargains with the mining MNEs. Consequently, the state has a strong bargaining position, and changes in the policies related to resource ownership and access can produce considerable shifts in the configuration of the network.

Additionally, extractive resources are also embedded in a national cultural system, where they are bound to notions of sovereignty and national identity. As history shows, political struggles have taken place all over the world when natural resources have been 'privatized', since it has been considered as an attack to the 'national character' of such wealth (Perreault, 2006). These struggles are directly related to the distribution of resource rents, highlighting the relevance the bargaining processes have in extractive GPNs. The exertion of the bargaining power by state and extractive MNEs will determine the value capture and development chances for the region.

Hence, there are two defining tensions in the extractive GPNs influencing its organizational structure and geographies: the tension between resource–holding states

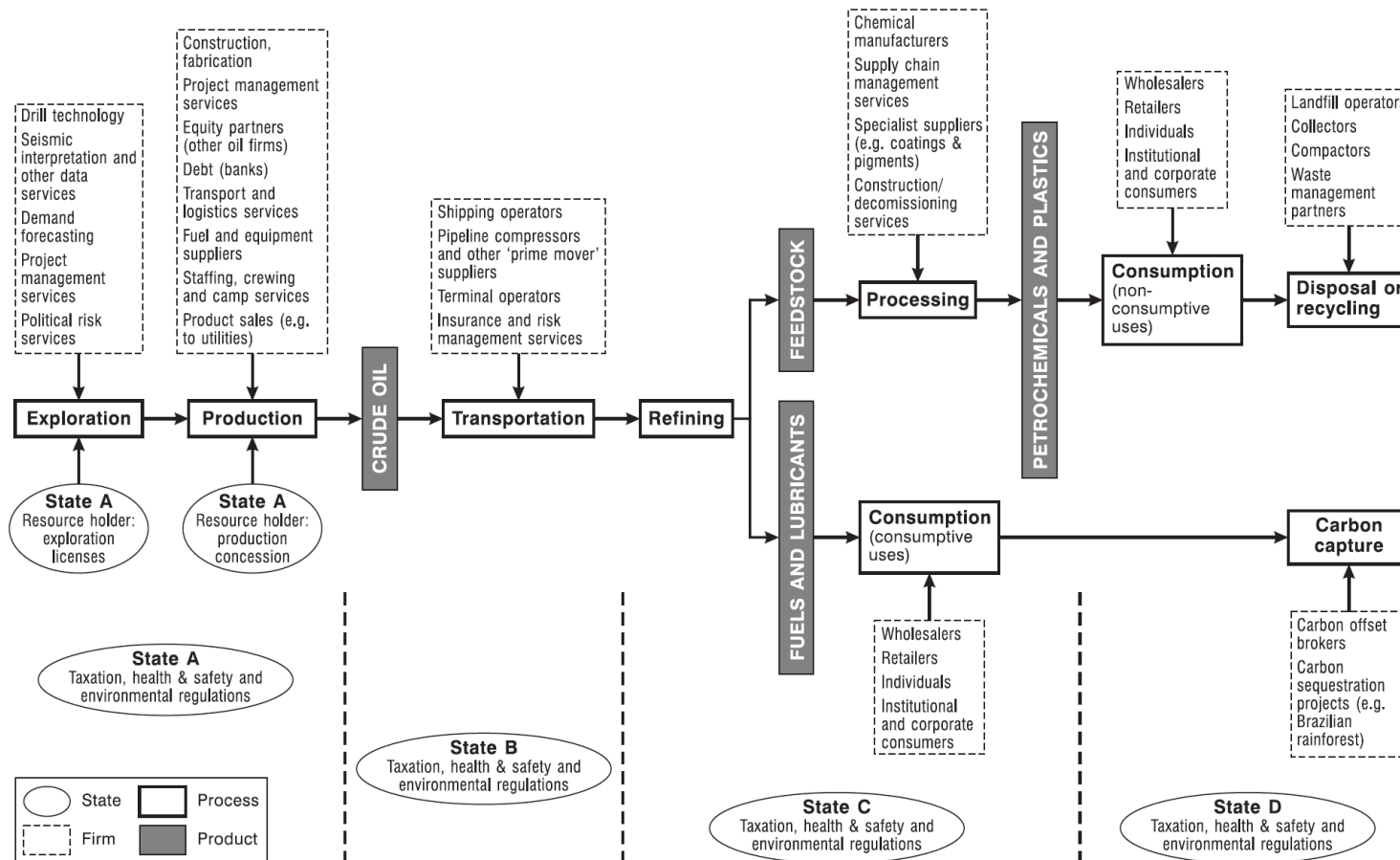
and resource-seeking firms; and the distribution of value between producers, both state-owned and private, and consumers, where this distribution is determined by the *bargaining power* of the different actors and significantly affected by changes in price. Both of these tensions are transversal to most of the mining related industries and are the focus of this research (Figure 5).

Moreover, in an extractive GPN, a significant portion of value can be captured at the very beginning of the chain via the assigning of rights to exploit the resources. This assignment will be heavily influenced by the bargaining power of the MNEs, which will do anything possible to reach maximum control over low-cost/high-quality resources; capture public goods that would facilitate the extraction; and to diminish the ability of resource-holding states in the (re)negotiation of ground rents and other conditions (Bridge, 2008; Dicken, 2011; Phelps, 2008).

Likewise, the regional development opportunities for oil regions depends on three structural imperatives of the extractive production network, which are closely related to issues of value, power and embeddedness: the resource imperative, the ecological imperative and the technological imperative. Since the oil industry shares several characteristics with the other extractive industries, it is useful to consider how the imperatives that Bridge (2008) proposed can be used in understanding the development possibilities of such regions.



**Figure 5: A global production network for oil.**



Source: Bridge, 2008.

### **2.6.1 Resource imperative**

Extractive MNEs have to address the imperative of replacing their reserves, so they do everything in their power to gain stable control over the best ores. In the particular case of mining, the differential rent of the resources will be a matter of dispute among the state and mining MNEs. This logic of rent capture has two consequences in shaping the extractive production chain: firms will compete for access and controlling reserves, and rent capture will be simultaneously an issue of rent allocation between producing firms and resource – holders (Bridge, 2008; Dicken, 2011). Since extractive resources and minerals are usually property of the state, the extractive MNEs *have to bargain* the terms and conditions of the exploitation. Firms will try to capture the differential rent via property rights, established in the initial bargain with the host country/region. Such bargains take place several times during the lifetime of an extractive project, becoming a great source of the tensions between MNEs and states. The GPN approach highlights the relevance of these negotiations, and the power that the actors exert in order to determine its outcomes.

Thus, the GPN approach allows the incorporation the tension between the actors involved in the extractive GPN and the implications of rent distribution or value capture - which are subject to a dynamic bargain among the actors of the extractive production network. The latter has been largely studied by the resource curse literature, but the GPN approach provides 'a relational perspective on Vernon's model of the 'obsolescing bargain' between firms and states' (Bridge, 2008; Vernon, 1971). However, despite the explicit link between these two bodies of literature, the theoretical bridge has not been built yet. This research provides a first step in making the connections between the GPN and bargaining models, as well as providing an empirical analysis about how bargaining power influences strategic coupling and regional development in mining regions.

### **2.6.2 Ecological imperative**

The ecological imperative relates with the environmental impacts the extractive industry has over the host region, like the negative effects on landscapes and quality of life of the region's inhabitants. It also refers to how the radically polluting nature of some extractive GPNs (especially mining) affects the distribution of value. The leftovers and by-products generated by the extractive industry generate extra costs for the host region, in terms of

the damage to the environment and the expenses they have to incur in order to mitigate these negative effects, all of which diminishes the real value that regions are capturing when allowing the extractive production (Bury, 2004; Cademartori, 2008).

The extractive MNEs have tried to reduce the social outrage of the negative impacts of resource exploitation by incorporating less contaminating technologies, but mostly when they are either cost efficient or because the local regulation and/or social pressures oblige them. Extractive MNEs have also applied corporate social responsibility policies (CSR) in the host regions, to get a 'social licence to operate'. These policies have been widely used in the recent years, especially in the cities and regions that are most exposed to the negative externalities of the extractive industry.

CSR initiatives in the mining and other extractive industry sectors have been mostly articulated around issues related with the environment, social and community development, employment and labour, and human rights (Carroll, 1999). However, these policies have been heavily questioned in the last decade since they are perceived as not solving the most fundamental problems arising from the extractive operations, such as the negative impacts on the environment and society (Frynas, 2005; Hilson, 2012). Hence, there is a rich literature explaining that CSR might actually increase negative effects of the extractive production for the host region such as: interfering in local and regional governance (Frynas, 2005); increasing inequality, fragmentation and social – economic insecurity (Gilberthorpe & Banks, 2012); increasing the firm's detachment from the host region (Gardner et al., 2012); obstructing the chances of overcoming the resource curse symptoms (Ackah Baidoo, 2012); stimulating the generation of enclaves (Ackah Baidoo, 2012); and influencing the 'shrinking' of the state and the loss of legitimacy in the mining operations (Campbell, 2012).

These negative effects are directly related with the questionable motives for the implementation of policies in the first place (Slack, 2012). Additionally, CSR policies tend to reproduce the shortfalls of the agendas imposed by external actors in the past such as a lack of concern about the socio–economic development of the host region when compared with securing the best conditions for resource exploitation (Campbell, 2012). Hence, there is a real danger on focusing on CSR policies, since this may divert attention from broader political, economic and social solutions to those problems (Frynas, 2005).

### 2.6.3 Technological imperative

Since the extractive industry produces relatively changeable commodities in which product competition is based primarily on price, extractive producers face a 'technological imperative' to reduce costs along the productive chain. This means the aggressive pursuit of economies of scale in production, refining and transportation, which has led to the scaling up of production and the infrastructure needed for it. Moreover, the upstream stages of the extractive chain, where the exploration to find new ores takes place, face the additional challenge of being unable to achieve conventional economies of scale, since employing the same exploration technology over larger areas, for example, does not reduce costs of exploration in terms of mineral discovered per unit area (Bridge, 2008). The technological imperative then draws attention to where value is captured in the upstream end of the production network.

Furthermore, the GPN perspective indicates how the technological imperative in the extractive industry can constrain opportunities for turning the particular strategic coupling among its actors into regional advantages (Bridge, 2008). In many resource rich economies, natural resource endowments provide the primary 'regional asset' which should stimulate regional development (Coe et al., 2008b). If regional institutions have enough bargaining power to achieve their strategic objectives, there may be some possibilities for strategic coupling, and in some industries, like mining, this may increase the chance for the apparition of clusters. This is a key argument for the GPN approach, since regional development depends on the coupling mechanism's ability to facilitate processes of value creation, enhancement and capture (Coe et al., 2004). However, in an extractive GPN the strategic coupling may be constrained for three reasons.

Firstly, the scaling up of production, refining and transportation raises the capital intensity of production, and entrenches the position of existing actors by increasing barriers to entry. This tends to weaken the opportunities for developing strong backward and forward linkages between extractive investments and the host economy (Bridge, 2008). The few backward linkages with local firms are established to get basic support/maintenance services or for outsourcing low skilled parts of the production chain, leaving the activities with more added value outside the host region's. The resource curse literature already established that when MNEs concentrate power, there is a high possibility of external control and dependency, which can lead to the formation of mining enclaves with dire consequences for local development (Cardoso & Faletto, 2007) (Auty, 1980; Cademartori, 2008; Phelps et al., 2015; Ross, 2001).

Secondly, some phases of the extractive production network are technologically complex, creating an entry barrier where local firms are unable to penetrate and benefit from the knowledge spillovers produced. Likewise, the upstream part of the GPN requires considerable investment, know-how and technology, creating further entry barriers. MNEs usually possess access to the huge amounts of technological knowledge and financial capital needed to start a new project, which strengthens their bargaining position before the investment is done (Moran, 1974). Hence, the upstream part of the production chain is dominated by MNEs that benefit from their strong position to capture value (Bridge, 2008). However, state owned and local firms may be able to gather the technology and capital necessary to participate in this part of the chain, but only under particular conditions related to the support given by the state and the particular characteristics of such firms.

Finally, *the imbalance of power between different actors in the chain is highly significant.* In most extractive regions, MNEs hold a considerable amount of bargaining power in comparison to the local governments and social movements. This is particularly true in the period before making the investments in the host region, since MNEs have control over the investments, technology and knowledge. Consequently, the initial conditions are usually very favourable to FDI, a situation deepened by the intervention of international trade organisations (IMF, WB, and WTO) which have imposed neoliberal policies in these countries, weakening the state position (Bury, 2005; Ramamurti, 2001). Hence, the uneven distribution of bargaining power can become a considerable obstacle for the strategic coupling process between MNEs and local institutions.

## 2.7 CONCLUSIONS

In sum, GPN literature allows the analysis of the mining MNEs' impact on local development through the analysis of power relationships; value creation and capture; and embeddedness. A GPN approach focuses on the inter-firm relations between the agents involved in the extractive production network, incorporating the diversity of organizational forms and governance structures of its participants. It also draws attention over issues of relations of dependency and dominance across the network and the ways in which these shift over time and space (Bridge, 2008, p. 414). The GPN allows a further enrichment of the extractive literature since it widens the analysis of structural relations of dependency by considering issues of value capture and territorial embeddedness,

which will vary for each extractive industry according to the materiality and territoriality of the resource.

The spatial fixity of the natural resources also means that the state plays a pervasive role in the extractive industry. The reason lies in the uniqueness of resources and the control of access to them presented by the national state in which they are located (Dicken, 2011). However, some countries have been under the neoliberal paradigm long enough to consider any state intervention as a threat to their socio-economic structure. In these places, the state may choose not to exert all (or any) of its strength in the bargain with extractive MNEs. *Since the extant literature has not addressed this issue, this research hopes to re-evaluate the state-firm relationship under these circumstances as one of its main contributions.*

Furthermore, value and embeddedness - crucial for regional development - are determined by the power exerted in the continuous bargains among the actors within the network. However, the unpacking of the power concept and the incorporation of bargaining models have received little or no attention in the GPN framework despite being explicitly considered as some of its main concerns (Bridge, 2008; Coe et al., 2008b; Henderson et al., 2002). The adaptation of the GPN approach to the extractive industry requires the consideration of bargaining power issues, since these have historically determined the outcomes for regional development as the obsolescing bargain and dependency theories stressed (Cardoso & Faletto, 2007; Moran, 1974; Vernon, 1971).

Hence, there is a need to develop and deepen the analysis of bargaining and power within the GPN 1.0 approach. In this sense, this research aims to theoretically unpack the concept of power, specifically bargaining power, and incorporate it into the GPN approach. To do this, the GPN approach is adapted to the mining industry following Bridge's blueprint and considering and updating the bargaining model literature (Moran, 1974; Ramamurti, 2001; Vernon, 1971). It is to the development of an operational definition of bargaining power and the incorporation of the bargaining models into the GPN 1.0 literature that this thesis now turns.

## CHAPTER 3

### POWER IN EXTRACTIVE GPNS

#### 3.1 INTRODUCTION

Power is a complex and contested concept for the social sciences in general<sup>5</sup> (Clegg, 2002; Haugaard, 2002; Lukes, 2005) and hence for the GPN approach, since it determines the value and embeddedness of, and development outcomes arising from, relations among the actors of these networks.

The GPN approach has incorporated Allen's definition of power in its theoretical framework (Coe et al., 2004), which considers that '...power is a *relational effect* (...) it is an outcome of social interaction not something designed to put a blunt stop to it' (Allen, 2003, pp. 4, italic added). However, the GPN literature has not fully developed the power concept, treating it as a *black box* that somehow pervades almost every aspect of the GPN while, simultaneously, determining the chances of strategic coupling and sustainable development. Furthermore, the GPN approach continually recognizes that a very specific kind of power plays a crucial role in determining the strategic coupling possibilities, namely, *bargaining power* (Coe et al., 2008b; Coe et al., 2004; MacKinnon, 2012). Yet again, no deeper theoretical efforts have been made in order to adapt bargaining models to the GPN approach.

Since this research aims to contribute to *unpacking the concept of power* in the GPN literature, focusing on bargaining power, this chapter starts with a brief summary of the main debates regarding power in the social sciences. This provides the base for the proposed definition of bargaining power of this research, as well as its operationalization for the analysis.

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<sup>5</sup> Haugaard (2002) notes how power is, in part, a reflection of the nature of power as a concept. Power is what the philosopher Wittgenstein terms, a 'family resemblance' concept - when we use the concept in different contexts, its meaning changes sufficiently so that there is no single definition of power.

## 3.2 THE THREE DIMENSIONAL POWER DEBATE

The definition of power has evolved from being completely focused on the agency of the participants to also considering the structural variables, non-decisions, perceptions and circuits of power. A basic and mostly transversal definition of power can be found in *The Dictionary of Human Geography*, which states that 'a minimal definition of power [refers] to the ability of one agent to affect the actions or attitudes of another' (Gregory et al., 2009, p. 575). This idea of relations and effects is the one thing that most of the power definitions share, and is why the GPN approach considers power as a series of relational effects among the actors involved (Allen, 2003).

### 3.2.1 Dahl's agency based concept of power

The community power debate was initiated with Robert Dahl with his seminal work *Who Governs? Democracy and Power in an American City* (1961). In his continuous works (Dahl, 1957, 1958, 1961, 1968), Dahl showed a deep concern about achieving methodological precision in the measurement of power. In this sense, he proposed an initial formal definition of power by following a methodology in which, rather than measuring what power was thought to be, power was to be measured through *responses*. Hence, responses were taken as an indicant of power, which stood as the cause of the measured reaction (Clegg, 2002; Dahl, 1958).

Dahl's work highlights the relational and contested nature of power, by arguing that power can be observed when an actor 'A' made an open attempt to force an actor 'B' to do something that s/he had would not otherwise do (Dahl, 1957). If A succeeded, s/he had power in this particular area (Clegg, 2002). However, Dahl (1963) concluded that B could also exercise power over A in another issue area (Gregory et al., 2009). Hence, for Dahl power was conceived as 'intentional' and 'active'. It was 'measured' by studying its exercise, this is, by ascertaining the frequency of who wins and who loses regarding to a particular issue, or who prevails in a decision-making situation. Such situations are positions of conflict between interests, where interests are conceived as preferences, revealed in the political arena by political actors taking policy stands (Lukes, 2005).

Thus, power was something which a concrete actor – individual or organization – had to be seen to be *exercising*. Power is exercised to have those subjects to it to go along with



the individual preferences of the powerful. Dahl also notes that A's power over B will have what he terms a source, domain or base, conceptualized in terms of *resources* open to exploitation by A in relation to B, which are expressed through means or instruments of power (Clegg, 2002). Hence, resources are defined in terms of the distribution of cash, popularity and control over jobs, and control over information sources (Dahl, 1968, p. 409).

The above implies that power has a very specific meaning in this literature: it is about prevailing in decision-making situations and is not to be equated with power resources (Haugaard, 2002, p. 6). This is vital, since for Dahl *resources may or may not be mobilized in decision making*. Here, resources are *potential power* and have different 'scopes', where scope means the specific situations that can be affected by this potential power. Thus, potential power based on resources or reputations should not be considered as actual power (Haugaard, 2002). However, the consideration of resources in defining power helps to qualify the definition Dahl made in 1957. By linking power to resources he is claiming that potential power will be intrinsically unequally distributed, and that there will be an *inherent bargaining process* among the actors involved, since resources are unevenly spread out in the world, previous to any specific political or economic relation among actors (Clegg, 2002).

This approach concludes that since different actors and different interest groups prevail in different issues, power will be widely dispersed than narrowly concentrated in communities (Clegg, 2002; Haugaard, 2002; Lukes, 2005). Furthermore, this approach has a strong focus on behaviour in the decision making capabilities of the actors involved in a power struggle, or their 'agency'. In this sense, agency is not limited to individuals, but may assume a collective form (Clegg, 2002), which is fundamental in the study of GPNs.

Still, Dahl's approach has been strongly criticised based on the lack of any criteria for deciding whether or not an exercise of power was in fact intended (Clegg, 2002). A variety of other criticisms (Lukes, 2005) led to the apparition of a new body of literature, which tried to fill the gaps left by the pluralist framework, what Bachrach and Baratz named the 'Two Faces of Power Approach'.

### **3.2.2 Bachrach and Baratz's two faces of power**

This approach was firstly proposed by Bachrach and Baratz (1970; 1962). Their central critique claims that the Dahl's model 'unduly emphasises the importance of initiating, deciding and vetoing and, as a result, takes no account of the fact that power may be, and often is, exercised by confining the scope of decision-making to relatively 'safe' issues' (Bachrach, 1970, p. 6).

However, they accept several claims of Dahl's approach: they agree that it is wrong to equate actual power to power resources or reputation of power; scope and intensity of power have to be considered in the analysis; conflict can be observable and, most importantly; power has to be analysed at a behavioural level. Agency in power is crucial, since it involves agents making things happen that would not otherwise have happened (Haugaard, 2002).

Bachrach and Baratz identified 'two faces of power': the one depicted by Dahl's model, in which agency is the main component; and their proposed 'structural face' of power (Clegg, 2002). This second element expands the one dimensional approach which, according to them, does not take into account the 'institutional bias'. By this, they mean that not only A exercises power over B in overt decision-making instances (like Dahl proposes) but A may equally well exercise power over B by *limiting the scope* of the political process to issues which are relatively inoffensive to A. The most obvious instance of this is the process of agenda setting whereby an issue of importance to B is deliberately left off the agenda by A (Haugaard, 2002).

Thus, they argue that power is not only manifested in observable decision making on certain issues, but also in limiting the scope of the decision-making process related to such issues (Clegg, 2002). In their words: 'the central point to be made is the same: to the extent that a person or group – consciously or unconsciously creates or reinforces barriers to the public airing of policy conflicts, that person or group has power' (Bachrach & Bachrach, 1962, p. 949). This unobservable element was called 'non-decision making' and introduces the notion of 'potential issues', which non-decision making prevents from taking place (Clegg, 2002; Lorenzini, 2006; Lukes, 2005). Hence, the power they called non-decision making is the decision to not to make a decision about key issues that challenge the resources of power, or authority, of those who currently dominate the process (Haugaard, 2002; Lukes, 2005). Accordingly, an empirical analysis would then have to incorporate the examination of both: the *decision* and *non-decision making* processes.

Along these lines, Bachrach and Baratz's definition of power is two dimensional, since it retained a focus on decision-making but it also considered non-decision making and

the existence of an actual conflict of interests a form of it. In their words, a decision is a 'choice among alternative modes of action' (Bachrach, 1970, p. 44). Thus, non–decision making is 'a means by which demands for change in the existing allocation of benefits and privileges in the community can be suffocated before they are even voiced; or kept covert; or killed before they gain access to the relevant decision–making arena; or, failing all these things, maimed or destroyed in the decision–implementing stage of the policy process' (Bachrach, 1970, p. 44). Such view of power relations allows the consideration of the control over the political agenda, as well as the way in which potential issues can be kept out of the political process.

Despite the advances of this approach, it has also been criticised. Among these, Lukes (2005) claimed that power is not only reflected in concrete decisions. Individuals or groups can limit decision–making to relatively non – controversial issues by influencing community values and political procedures and rituals. This critique took form in which is now considered Luke's model, or the Three Dimensions of Power.

### **3.2.3 Luke's three dimensions of Power**

Lukes (2005) critiques previous conceptions of power for their inadequacies in addressing the impact of structural conditions in the exertion of power. He proposes the notion of *dimensions* instead of 'faces' in the analysis of power, and a 'third dimension of power' that opens up any evident dualism between agency by incorporating the structural elements, or what he calls 'false consciousnesses' or ideology, that influence the actor's decisions and non–decisions (Clegg, 2002).

Lukes (2005) considers that the two faces view is inadequate for a comprehensive study of power for three reasons. Firstly, Bachrach and Baratz model still assumed that non–decision making is a form of decision making, even though their model was built as a critique of the limited behavioural focus of the Dahl's view. This commitment to behaviourism, that is, to the study of overt actual behaviour, where concrete decisions are made in situations of conflict, neglects the influence that structure exerts over individual action (Haugaard, 2002). He posits that the bias of the system is not necessarily reducible to individual's actions or non–actions but by the socially structured and culturally patterned behaviour of groups, and practices of institutions all of which are inherited from the past (Haugaard, 2002; Lukes, 2005). However, this raises several difficulties regarding of how to distinguish power exertion from structural constraints.

Secondly, the two faces of power approach wrongly assumes that actual observable conflict is necessary for power. This is highly debatable for Lukes since two of the modes of power, manipulation and authority, may not involve such conflict; and it is highly unsatisfactory to suppose that power is only exercised in situations of such conflict. He explains that 'A may exercise power over B by getting him to do what he does not want to do, but he also exercises power over him by influencing, shaping or determining his very wants'. In this respect, Lukes argued that power is at work also when securing consent and thus preventing conflict from arising (2005, p. 7).

Thirdly, the two faces view insists that non–decision making power only exists where there are disputes or controversy among the actors involved, which are denied in the political process in the form of issues. Hence, it is assumed that if some of the actors feel no grievances, then they have no interests that are harmed by the use of power. This is refuted by Lukes, since grievance is a social perception that depends on the very specific socio-economic context and culture. Moreover, he claims that the supreme exertion of power is precisely to shape people's perceptions, cognitions and preferences in such a way they accept their role in the existing order of things.

Considering all of these, Lukes claims that it is important to consider what he calls 'the third dimension of power', which is the power to prevent the formation of grievances by shaping perceptions, cognitions, and preferences in such a way as to ensure the acceptance of a certain role in the existing order (Lorenzini, 2006, p. 92). Thus, this three dimensional view allows the consideration of several ways in which potential issues are kept out of politics, whether through individuals' decisions or through the operation of social forces and institutional practices.

Furthermore, Lukes (2005) introduces two important linked concepts for his analysis: the 'latent conflict' and the 'false consciousness' of some of the actors involved. A latent conflict is a contradiction between the interests of A (those exercising power), and the real interests of B, which are excluded from this process. The conflict is latent, because those subject to power either do not express or remain unaware of their 'real interests', what Lukes calls false consciousness or ideology. This means that the interests of B are very difficult to trace, since those concerned cannot express them or are unable to recognize them (Lorenzini, 2006). Hence, Lukes redefines power by considering these two concepts in terms of interests, by stating that '...A exercises power over B when A affects B in a manner contrary to B's interests' (Haugaard, 2002, p. 38).

There are other later contributions to this debates, such as the made by Clegg (2002) where he renames some of the previous concepts, while also developing others. He

calls, Dahl's definition of power, 'episodic power' and differentiates between 'power over' and 'power to'. The former is the archetypal view of power, where one side subjects the other to its will due to the asymmetrical distribution of resources; whereas the latter is the ability to do something on one's own based on each actors' resources and established in mutual action due to the symmetrically distribution of the resources. This research proposes an operational bargaining power definition based on these dimensions while also considering the role that strategic resources, particular constraints and scope play in the bargains as detailed next.

### 3.3 STRATEGIC RESOURCES, CONSTRAINTS AND SCOPE IN BARGAINING POWER

A central element for the proposed definition of bargaining power, is the role of *strategic resources* in the bargains. The previously developed idea that power is socially created by the actors implies that they must foster and expand their strategic resources, since those resources may become the actor's base of potential power (Barnes, 1988; Clegg, 2002; Haugaard, 2002; Parsons, 1963). These strategic resources are unevenly distributed, relatively scarce, highly desired and unavailable from other sources in the quantity or quality required to the demanding actor's needs, but the accumulation of some of them by one or more actors does not exclude the others from developing their own<sup>6</sup>.

However, it is vital to emphasize that power is not to be equated should with a strategic resource. As Giddens (1979) concludes, 'resources are the media through which power is exercised' (Giddens, 1979, p. 91), meaning that power can be exerted only because resources have certain meaning attached to them which, in turn, is generated by the structure. Moreover, Giddens explains that when a social agent acts, it draws upon certain resources to bring about certain situations which would not otherwise have occurred.

Allen, whose definition of power is associated with the GPN literature, further develops this point when he claims that power

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<sup>6</sup>Hence, bargaining power is understood as a non – zero sum game (Haugaard, 2002; Parsons, 1963).

'As an outcome cannot and should not be 'read off' from a resource base, regardless of its size or scope. Power in this sense is no more to be found 'in' the wood of musical instruments. It is, as suggested, a relational effect, not a property of someone or some 'thing' (Allen, 2003, p. 5).

He posits that power is usually disguised as resources and, because of that, we have to separate them: there has to be a clear distinction between the exercise of power and the resource capabilities mobilized to sustain that exercise. This idea is the base for the proposed bargaining power definition of this work. The distribution of strategic resources implies that the actors have to negotiate with the others holding the resources they need to reach their strategic objectives. In this sense, power is exerted in social interactions called *bargains*, where the bargaining agents can affect the actions, attitudes and perceptions of the rest through several scales (Gregory et al., 2009).

Moreover, power is exerted in a context where each actor also faces several *particular constraints* (Mann, 1986; Ramamurti, 2001). Here, constraints are understood as the elements that impede, limit or restrict the actors in fully using their strategic resources to strengthen their bargaining position. The key point is that each actor must hold some of the strategic resources desired by the other actors in order to establish a bargain; and that some strategic resources can become a power resource or potential power, strengthening the bargaining position of the agent holding it. The extent to which a strategic resource will enhance the bargaining position of an actor is determined by the constraints they face.

Moreover, even if some actors have a stronger initial bargaining position in a particular GPN due to the strategic resources they hold, the strength of their position will probably change over the successive bargains if they foster and develop their strategic resources while overcoming their constraints. Consequently, each actor's bargaining position is not fixed, but dynamic, since it depends on how it manages its resources and constraints over successive bargains.

A final essential element is the *scope* or spatiality of power. When defining power, Allen (2003) argues that it is inherently spatial and, conversely, spatiality is imbued with power. He explains that the exercise of power in particular places may originate far away from those places, yet it remains part of power's active presence. Therefore, power relations in a place are affected by what happens somewhere else and by the network of connections of which is part. In his words, 'any placement of power involves the distanced actions of those physically absent as much as it does present and in close physical proximity' (Allen, 2003, p. 181). However, what puts people and power in place

is the mixture of styles and modes peculiar to a particular location, something particularly relevant for the GPN approach.

Subsequently, the research assumes that both, the bargaining process and the exertion of bargaining power, are intrinsically spatial. Thus, geography and location of the actors influence the exertion and strength of bargaining power. This means that each actor's bargaining power has a spatial scope of influence, which depends on its position in the GPN, its strategic resources, constraints and will to use its resources in order to reach its strategic objectives. Hence, the actors hold several bargains in different nodes, where their strategic objectives adapt according to the hierarchy of the node where the bargain takes place within the GPN. In this way, actors located in one or more spaces of a multi – scalar plane, that can be divided in at least three different levels: regional/local, national and international. All these levels are connected, having a strong influence in determining each actor's strategic resources and constraints.

The most important bargains take place in those nodes that can be placed in the upper reaches of global hierarchies, like financial centres or capital cities, where most of the MNEs' and NGOs' headquarters, international institutions and the state apparatus are located. In this line, bargains taking place in the most strategic nodes will have greater latitude in their influence over the rest of the less strategic nodes. However, the influence goes both ways, since bargains happening in the production nodes can also affect the long-term strategic decisions of the extractive MNEs if they manage to substantially change the rules, constraints or behaviour of the industry. Still, the higher the hierarchy of the node, the higher the probability that the outcomes of the bargain will have consequences in the rest of the levels.

The actors involved in the successive bargains are represented by diverse groups with various strategic objectives, which do not always represent the best interests for all the actors located in the other levels of the network. This emphasizes the relevance of considering the actors that bargain at different spatial scales; the relevance of sharing similar strategic objectives among actors located in several nodes at the same time; and how the different strategic objectives influence these negotiations. For these reasons, this definition incorporates the multi–scalarity of the bargains, by acknowledging the actors located in the regional, national and international nodes of the Chilean copper mining GPN. Hence, the incorporation of space in the proposed definition implies the existence of multiple levels in which bargaining power is exerted by actors located in at least one of those levels.

Certainly, the strategic resources, particular constraints and scope of influence are crucial for the proposed definition of bargaining power within an extractive GPN, and form the foundation of it. A more detailed explanation the role of bargains in defining bargaining power is developed in the next sections, where the bargaining models are explained.

### 3.4 FROM THE OBSOLESCENCE MODELS TO THE TWO – TIER BARGAINING MODEL AND BACK TO THE GPN

#### 3.4.1 Bargaining as strategic coupling

Power asymmetries in the bargaining process between the MNE and the local institutions in the mining GPN are decisive for reaching a strategic coupling and, thus, the development possibilities of the mining regions. The result of this dynamic bargaining will also have a spatial manifestation in the form of a mining cluster or enclave. In the former, the region will be capable of diversifying itself, developing new industries and better chances of achieving sustainable development, whereas in the latter it will become an unsustainable, dependent, mono–structure and exporter.

The bargaining models were initially known as ‘obsolescing bargaining models’ (OBMs), and have been widely used in the past for studying mining industry impacts in developing countries (Bergsten et al., 1978; Fagre & Wells, 1982; Kobrin, 1987; Lecraw, 1984; Moran, 1974, 1985; Vernon, 1971). These models were criticized and dismissed for being simplistic and for inadequately addressing the strategies of governments and firms (Jenkins, 1986; Vachani, 1995). However, they have been recently rediscovered as an important theoretical tool for studying the complex global relations of the production (Eden & Molot, 2002; Hennisz & Zelner, 2005; Nebus & Rufin, 2010; Ramamurti, 2001; Vachani, 1995). From these works, this research takes Ramamurti’s ‘two tier’ bargaining model as a starting point, since it provides a way to incorporate different actors from different geographical scales and their impacts on bargaining processes.

As previously mentioned, strategic coupling is achieved when regional agents and MNEs mobilize their specific resources to bargain, in a process where the bargaining power determines its outcomes. Hence, the bargaining position of an agent within the GPN is especially high when their resources are complementary to the strategic needs of the



contrary agent. However, this situation can change through the successive bargains taking place through time, which can happen when one or some of the initial conditions change. Bridge summarizes this relationship between the GPN and bargaining literature as follows:

'The architecture of the GPN approach (...) opens a space for addressing how the structure and pattern of the global oil production network affects the ability of resource-holding states to (re)negotiate ground rent. In essence a GPN approach, provides a relational perspective on Vernon's model of the 'obsolescing bargain' between firms and states' (Bridge, 2008, pp. 406, italic added).

Nonetheless, despite the explicit recognition of the relevance of the bargaining process in achieving strategic coupling, the theoretical connection between the GPN and bargaining literature has not been built yet within the economic geography or extractive literatures. This section tries to provide a first integration of those two bodies of literature, in order to develop an operational definition of bargaining power that can help to understand the socio-economic and spatial outcomes for the host region embedded in an extractive GPN. To do this, the bargaining model is updated and integrated into the GPN approach by considering the characteristics of the obsolescing bargaining (Moran, 1974; Vernon, 1971); and two tier bargaining models (Ramamurti, 2001) – thereby incorporating new global actors and relationships.

### **3.4.2 The original bargaining model and derivatives**

During the 70's and 80's, the OBM was the main approach to study the relations between the host country/region government and the MNEs. This model was initially proposed by Raymond Vernon in his book *Sovereignty at Bay* (1971) and expanded by several authors (Bergsten et al., 1978; Fagre & Wells, 1982; Kobrin, 1987; Lecraw, 1984; Moran, 1974, 1985). These works explore the changing nature of the bargaining between MNEs and resource rich developing countries, which are ultimately determined by their objectives, resources and limitations.

The model treats the interactions between MNEs and host countries/regions as a bilateral monopoly (Kobrin, 1987). It assumed that there was an inherent conflict between the objectives of the MNEs and the host country, leading to a bargaining process where both parties try to get the best conditions for achieving their goals. Such bargaining is a

positive sum game such that both parties voluntarily bargain and achieve absolute gains (Eden & Molot, 2002, pp. 361, *italic added*). However, the relative gains depend on the relative bargaining power: the greater one agent's relative bargaining power, the greater that agent's relative share of the gains (Eden et al., 2004). This bargaining power is, in turn, based on each agent's resources; the constraints they face and their capacity to exert coercion over the other agents (Brewer, 1992; Eden & Molot, 2002; Kobrin, 1987; Vachani, 1995; Vernon, 1971, 1977).

The OBM also assumes that initially, the MNEs are able to exert a stronger bargaining power for several reasons. First, MNEs are able to invest in several locations and are highly mobile before considerable sunk costs materialize. Second, MNEs have capital, resources and capabilities (such as technological expertise, access to foreign markets, and specific know-how of the industry) for extracting raw materials that the host countries usually do not possess. Thus, host countries/regions are compelled to offer attractive incentives to lure FDI (Eden & Molot, 2002; Moran, 1974; Vernon, 1971). Likewise, MNEs will use their bargaining power at this stage in order to get the most beneficial conditions for their exploitation, namely, tax exemptions and favourable legislation.

When MNEs decide to invest 'this event is generally celebrated by the signing of some sort of contract between the investor and the [host] government...[this] bargain is quite formal in character, and includes a series of commitments on the part of both parties' (1971, p. 54). Among these commitments, the foreign investors usually accept to carry on the exploration and exploitation of the ores, to pay taxes, to abide the law, to provide the infrastructure needed for the production in case is missing, to provide their labour force with the skills and conditions needed for their work and to promote economic linkages with local suppliers. The state, on the other hand, generally agrees to a series of self-denying commitments, such as not taxing MNEs, not preventing the importation of supplies or interfering with the remitting of profits abroad, and so on.

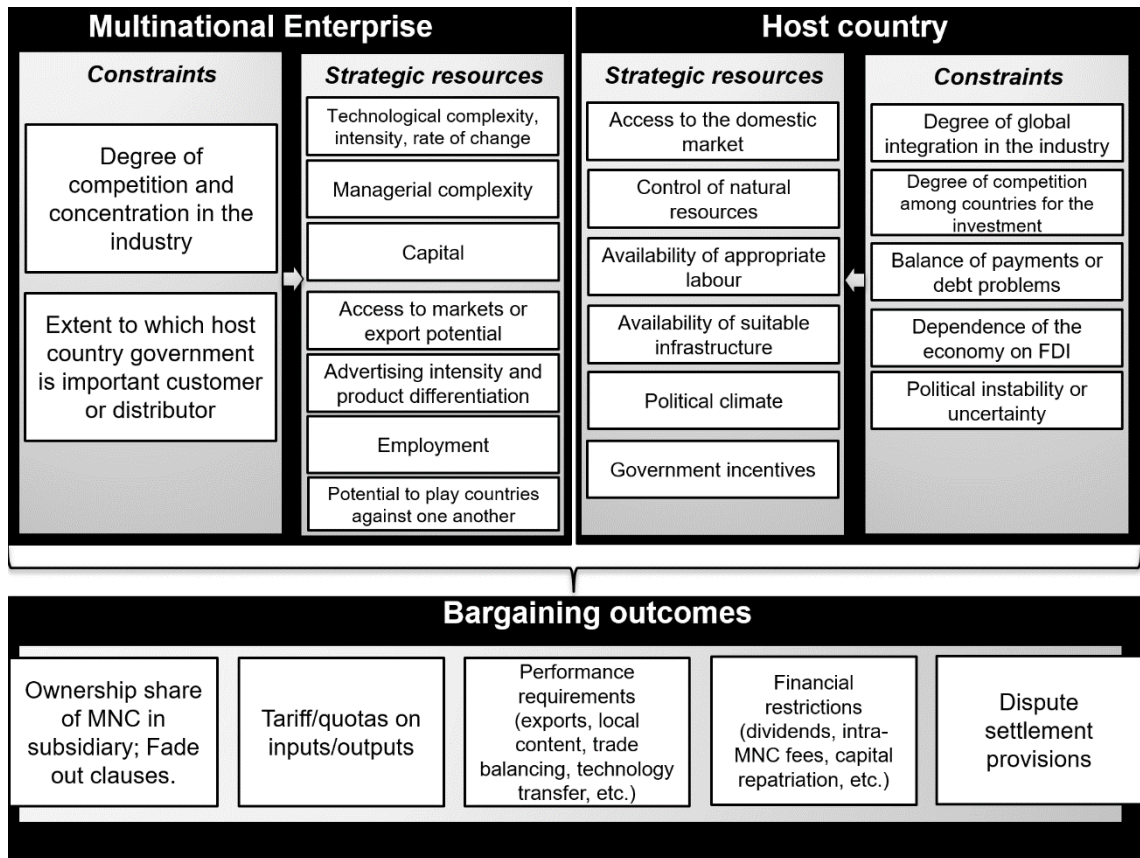
However, the bargains between MNEs and host countries/regions are expected to obsolesce over time. The longer the MNEs is in the host country/region, the more likely it is that the host region will perceive that it is not getting enough from the exploitation of the resource, especially if the investment turns out to be highly profitable and there are large remittances to the foreign parent (Eden & Molot, 2002). In the words of Vernon: '...almost from the moment that the signatures have dried on the document, powerful forces go to work that quickly render the agreements obsolete in the eyes of the government' Vernon (1971, p. 47).

The literature recognises several of these powerful forces, like the fact that once the investment is realised the large sunk costs provoke a shift in the bargaining power towards local institutions, which will be able to renegotiate the terms of the agreements to stimulate growth and development. Additionally, technological and knowledge spillovers, and economic growth in the host region can encourage the appearance of local suppliers and a better understanding of the industry, making the region less dependent of the MNEs. Hence, when the host region realizes that it holds enough bargaining power to change the original conditions, it will start a renegotiation process with the MNEs, in which it will impose stricter rules and fewer incentives. All of this aims to harvest better benefits and chances to achieve sustainable development. The region will also use this change to become less dependent of the MNEs by diversifying its local productive fabric and re-investing in private or state owned firms that can eventually substitute the MNEs.

Figure 6 summarises the main components in the bargaining process between the MNEs and host countries identified in the obsolescence bargaining literature. Both possess a set of power sources or strategic resources which provide them with their bargaining strengths. Additionally, their exercise of power is limited by specific constraints. Thus, according to Kobrin (1987) and Dicken (2011) the relative bargaining power of both actors is a function of two related elements: the relative demand for the resources that are hold or controlled by each actor; and the constraints that affect the exertion of bargaining power to reach each actor's strategic objective. These elements are crucial for the latter definition of bargaining power proposed.

Furthermore, host countries usually have to deal with greater constraints compared to the MNEs as is seen in Figure 6. This can be related to the higher mobility and flexibility of the later in the early stages and in some industries. However, despite their manoeuvrability, MNEs' behaviour still depends heavily on the nation-state behaviour, since they are the ones controlling the laws, political environment and natural resources. In sum, the main idea behind this model is that 'the scarcer the resource being sought (whether by a MNE or a host country), the greater the relative bargaining power of the controller of access to that resource and vice versa' (Dicken, 2011, p. 233).

**Figure 6: Main components of the bargaining relationship between MNEs and host countries.**



Source: Based on material in Kobrin, 1987; Ramamurti, 2001 and Dicken, 2011.

The OBM was later applied to other industries like manufacturing (Moran, 1985). More recently, several updates and revisions have also been made to the original bargaining model. Vachanti (1995) distinguished between static and dynamic bargaining outcomes. Moon and Lado (2000) expanded the bargaining model by recognizing that firm-specific resources are the base for the firm's bargaining power and rent generation. Eden & Appel Molot (2002) incorporated the possibility of states bargaining with latecomer firms in a process of sequential entry by rival MNEs. Nebus and Rufin (2010) acknowledged the different types of actors that participate in bargaining processes within production networks.

### 3.4.3 The Two Tier Bargaining Model

This research takes Ramamurti's (2001) extension of the original OBM as a base to incorporate the bargaining models into the GPN approach. This is because his proposal considers most of the previously mentioned contributions, while also incorporating the role of international institutions and their impacts on the bargaining outcomes, which have come to the fore in processes of globalisation. Ramamurti's model (2001) posits that the shift towards more 'friendly' host countries to FDI cannot be explained within the framework of traditional bargaining models like Vernon's (1971), since MNE–host country relations can no longer be viewed as a dyadic, two party negotiation, but rather as a dynamic, two tier multi–party bargaining process. Such change has been caused by the liberalization of FDI through bilateral negotiations carried out by industrialized countries, under the agendas of multilateral institutions. Industrialized countries have also, and most importantly, reduced or stopped official capital flows (like aid and multilateral lending) to developing countries, meaning that, by the time he developed his model, such countries were perceived as more dependent on private capital flows.

Hence, by addressing the relevance of international actors in the bargaining process, Ramamurti (2001) postulates a new two tier bargaining model (see Figure 7). Tier 1 bargaining occurs between host developing countries and home (industrialized) countries, taking place bilaterally or through multinational institutions (IMF, WTO). The bilateral bargaining between host and home governments are guided by variables like the magnitude of bilateral trade between countries, which side enjoys the bilateral trade surplus, how much aid the developing country is receiving, historical and cultural ties between the two countries, geopolitics, etc. Bargaining with multilateral institutions, on the other hand, is shaped by the borrowing country's balance of payments, its relationship with industrialized countries, its size, and its dependence on bilateral or multilateral aid, among other variables.

Additionally, tier 2 bargaining takes place between individual MNEs and host governments, which was the main focus of the original OBM. Such bargains are driven by micro variables, like the uniqueness of a MNE's technology or the scarcity and demand for natural resources hold by a country.

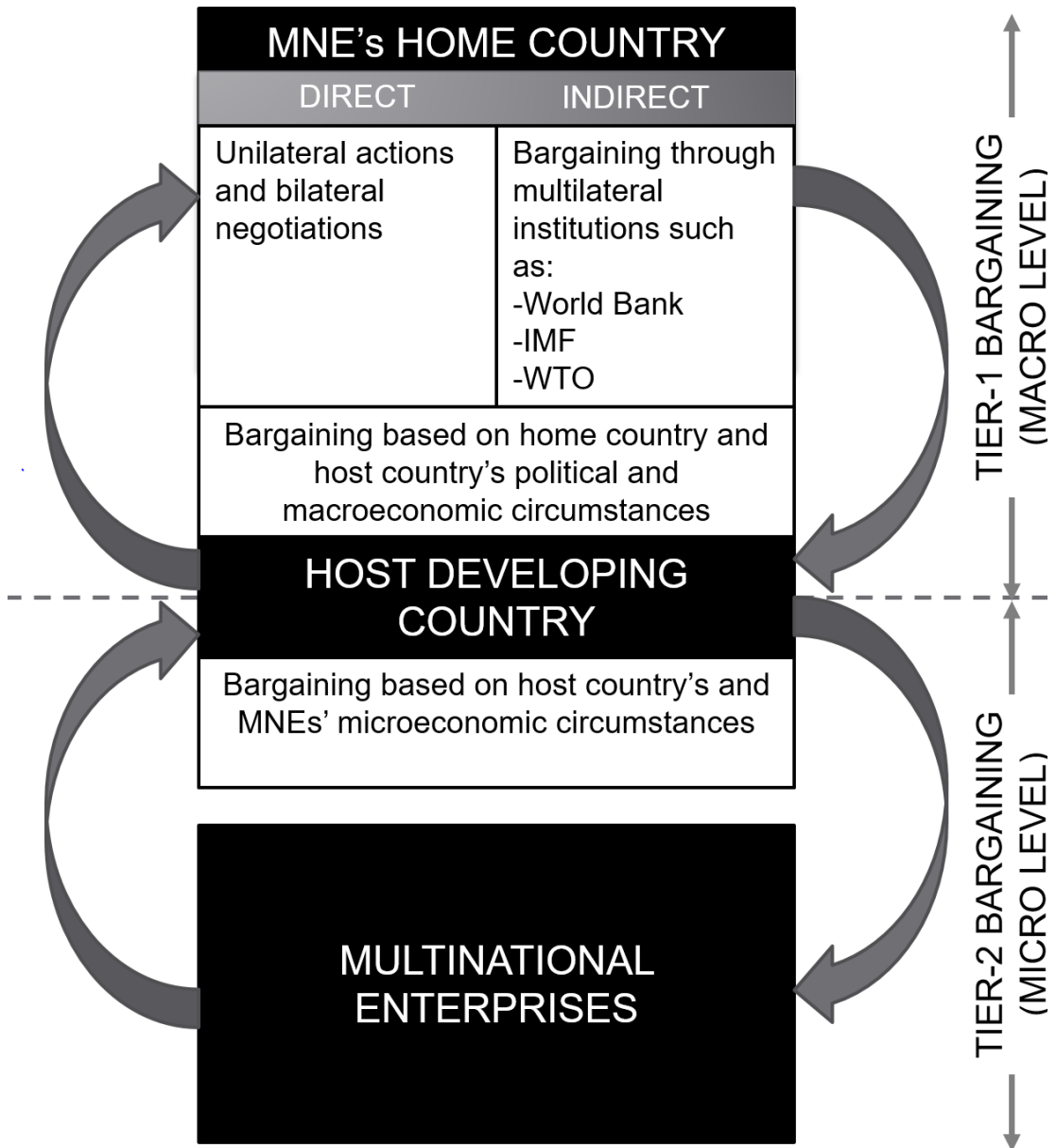
In this two tier bargaining model, industrialized countries use tier 1 bargaining to weaken host governments in tier 2 bargaining processes while, at the same time, improving their own position (Figure 7). Thanks to this, MNEs are now able to profit and protect their technological and intangible assets due to the high competition between developing

countries for FDI, caused by the decline of official capital flows. Moreover, Ramamurti (2001) claims that the ability of host countries to make MNEs compete against each other has weakened in the last decades.

Likewise, bilateral investment treaties, structural adjustment loans and multilateral deals imposed FDI liberalisation in developing countries, constrain the host countries' ability to limit foreign ownership, establish performance requirements, require domestic dispute settlement and regulate financial transactions. MNEs have been especially successful at doing this in countries with huge debts and weak states that have had to adopt structural adjustment programs, and in sectors with huge entry barriers due to the high costs of the investment (Ramamurti, 2001).

Thus, Ramamurti's approach basically postulates that, through tier 1 bargaining, home governments of MNEs have systematically weakened the ability of host developing countries to extract concessions from individual MNEs in tier 2 bargains. Consequently, given the same sources of bargaining power as in the past, MNEs ought to enjoy higher bargaining power today than before, while the opposite must be true for host countries. However, since Ramamurti's work (2001), this model has not been further developed, and even though most of his conclusions are related with the mining industry and its GPNs, he does not explain how this approach explicitly applies to them. In this sense, the next section incorporates some of the previously developed arguments of the bargaining models into the GPN of an extractive industry, by operationalizing how bargaining power is defined, and what elements should be taken into account while analysing the exertion of such power within a GPN.

**Figure 7: The two tier bargaining model.**



Source: Based on Ramamurti, 2001.

### 3.5 BARGAINING POWER AND THE INTEGRATION OF THE BARGAINING MODELS IN AN EXTRACTIVE GPN

Even though the GPN literature recognizes the crucial relevance of the bargaining power and process between the agents that participate in a GPN for regional development, it has not fully unpacked this concept, or incorporated bargaining models as part of its

analysis. Furthermore, the bargaining models themselves work with the notion of bargaining power, but they have linked it to the resources and the exertion of power instead of providing explicit definition of it. Thus, since power is the base for the achievement of strategic couplings, this section proposes an operational definition of the concept, which will be later used in the integration of the bargaining models into the GPN approach.

### **3.5.1 A proposed operational definition of bargaining power**

As one of its main contributions, this research proposes an operational definition of bargaining power. Such effort enables the analysis of how the different agents, especially host states and MNEs within GPNs, decide to use their strategic resources while facing their constraints, in order to achieve their strategic objectives. The way in which they decide to use those strategic resources, as well as the relative asymmetry in their bargaining positions, determines their chances of reaching a strategic coupling that is mutually beneficial. Hence, the cumulative outcomes of the successive bargains will determine, in the long run, the possibilities for reaching a sustainable development in the host region and country.

Here, the actors of the GPN are understood in the broad sense, meaning the sum of individual organisations or institutions. For the Chilean copper mining GPN these aggregated actors are: the copper mining MNEs, which comprise all the mining multinational enterprises operating directly or indirectly in Chile; the State, as the sum of all its institutions; and the civil society, when talking of all the citizens, NGOs and other civic organizations in a particular geographical area.

Moreover, this research considers that bargaining power is exerted in social interactions called bargains. These interactions are positive sum games, since bargaining power is assumed to be socially created by the agents based on their development of strategic resources, which can be a source of potential bargaining power. The quantity, quality and demand of those resources will determine if there is a bargain as well as each actor's bargaining position, but bargaining power cannot be equalled as the amount of strategic resources each actor hold. Bargaining power is not something that can be possessed or accumulated in a material way, since it is considered as a relational effect. Ergo, it could be said that holding and developing strategic resources is a mandatory but not sufficient



condition to, firstly, foster bargains between agents; and secondly, exert bargaining power.

Consequently, bargaining power is exerted when an actor *deliberately* uses one or more of its strategic resources in the successive bargains taking place within a particular GPN, in order to reach its strategic objectives, while also facing each actor's particular constraints. Both, the strategic resources and constraint of each actor, are continually changing due to the dynamic nature of both the bargaining processes and the GPNs; meaning that each actor's bargaining position will probably change over the successive bargains.

Furthermore, in order to use the bargaining power within a GPN approach, this research follows Allen's (2003) suggestion and it explicitly incorporates the influence of space over the bargaining process, by acknowledging that both the bargaining process and the bargaining power are intrinsically spatial. Hence, geography and location of the actors determine the scope of influence of each actor. Regarding the former, each bargain takes place in nodes at different points within a hierarchy, where the most important decisions are negotiated in those nodes highest within the hierarchy. Consequently, the higher within the hierarchy that a bargain takes place, the greater the scope of the outcomes. This is, in a certain way, an innovation over the current discussion, since it incorporates the bargaining models in the GPN approach, while also elaborating the relevance of space or geography in bargaining processes. Additionally, this research proposes that some actors can be operating in multiple spatial levels at the same time, namely the international, national and regional/local levels. This research mostly focuses on the first three, but recognises that a richer analysis would be made by also incorporating the processes taking place in the local level.

This definition of bargaining power rests in three different dimensions. Bargaining Power is then understood as the dynamic influence of one actor (A) of the GPN over others (B), when A actively utilizes its strategic resources and means to: firstly, make B do something it would not otherwise do in order to achieve its own strategic objectives; secondly, limit the scope of B's decisions in the short term by preventing the discussion of issues that are dangerous to A's strategic objectives; and thirdly, in the long term, when A is able to change B's perceptions of what are its real interests.

Hence, the dimensions proposed for understanding the exertion of bargaining power mirror the ones proposed in the power debate, and are vital for the comprehension of the bargaining outcomes in the short, and long terms, highlighting time as another relevant variable in the power analysis. Thus, *bargaining power can be exerted as:*

*episodic bargaining power and non–decisional bargaining power in the short term; and as a creation of a false consciousness or change in the agents’ perception as a result of the successful and continuous exertion of bargaining power from an actor over several bargains through time.*

The first kind of bargaining power, episodic bargaining power, takes its name from the analysis of Clegg (2002) and Dahl (1961) where bargaining power is considered intentional and active. It can be observed when A succeeds in its open attempt to force B to do something that he/she would not otherwise do (Dahl, 1968), through A’s utilization of its strategic resources and means in the degree A’s constraint allow it, and in order to reach its strategic objectives. This kind of bargaining power is extremely useful for unpacking the power relations between the agents, since it entails a focus on the actual process where bargaining power is exerted. Hence, episodic bargaining power is about decision–making situations, and cannot be equated to the strategic resources or reputation hold by the agents, since such resources can or cannot be mobilized during the bargain<sup>7</sup>.

A second kind of bargaining power proposed is the non–decisional bargaining power, taking its name from what Bachrach and Bachrach (1962) proposed in their work. Here, bargaining power is exercised by limiting the scope of decisions made in the bargaining process, when issues are deliberately left out of the agenda by one of the actors. In this case, A exercises power over B when A limits the scope of the political process to issues which are relatively inoffensive to A.

The third kind of bargaining power proposed is ideological bargaining power, which is more of an outcome of the continuous exertion of the previous two in successive bargains over a long period of time and, when established, it is present in the background of every negotiation where it slowly changes the ideology of the less powerful agents. Hence, ideological bargaining power refers to how continually strong bargaining positions in terms of episodic and non–decisional bargaining power can shape the perceptions of the less powerful actors in the long term, in order to ensure the acceptance of their role in the existing array of things. In this way, long term bargaining power asymmetries can cause a latent conflict between A and B by giving them a false consciousness or ideology. Consequently, A will try to reach its strategic objectives by

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<sup>7</sup> For example, a firm can use its wealth to finance political campaigns while looking to influence the legislation related to FDI; or to buy new computers. In the first case, the firm is using its resources to affect the conditions of the bargain whereas in the latter case the firm is not using its resources as a source of power.

affect B in a manner contrary to B's interests; by making B unaware of its real interests (Lukes, 2005).

It is important to notice that bargaining power can be exerted in all or some of these three dimensions in a progressive way. This means that it is necessary to exert bargaining power in one level, to be able to do it in the next one; which is located in a deeper socio-economic structure. The more levels are under the influence of the bargaining power of an agent, the larger and more pervasive will be its influence over the other agents, and the stronger the chances of having the upper hand in following bargains. This research mostly focuses on the episodic bargaining power, since focusing on the bargaining process is the first step to shed light on how power is exerted within an extractive GPN. However, the proposed definition incorporates the three dimensions, in the hope that future works will allow their full understanding.

In addition, table 1 shows how bargaining power is intrinsically spatial, having a geographical scope of influence in which the bargains held in the nodes with a higher hierarchy will most likely impact the less strategic ones, and sometimes, vice versa.

Furthermore, bargaining power is exerted in successive bargains; and heavily depends on each actor's capacity to develop its strategic objectives while also facing some particular constraints. Hence, the strategic resources and constraints are the key to understand how bargaining power is exerted as well as the cumulative outcomes of the bargains. Bargains will only take place when actors possess strategic resources that others need, and their bargaining power potential will be determined by how intensively the others demand such resources, as well as each actor's particular constraints.

Finally, as seen in table 1, bargaining power can be defined in terms of the three dimensions it operates, starting from the ones that can be most easily observed in each bargain, namely the episodic bargaining power; to the non – decisional bargaining power that involves a deeper level of manipulation; and finally the ideological bargaining power which relates to how an actor can modify the other actor's perception of reality in order to create a false consciousness.

**Table 2: Summary of types of bargaining power and their scope**

		<b>Type of bargaining power exerted in terms of its dimension</b>		
Actors actively and intentionally use their strategic resources, while facing their constraints, in the successive bargains in order to reach their strategic objectives by:				
<b>Spatial scale where the bargaining power is exerted</b>		<b>Episodic bargaining power</b>	<b>Non - decisional bargaining power</b>	<b>Ideological bargaining power</b>
↑ ↓	Regional	Making other actors do something they would not have done otherwise.	Leaving out the bargain issues that are dangerous for the achievement of their objectives.	Changing the perceptions of the other agents so they believe their strategic objectives are the same as the ones of the agent exerting this kind of power over them.
	National			
	International			

*Source:* own elaboration.

This research mostly focuses on the study of the episodic bargaining power between the state and mining MNEs located within the Chilean copper mining GPN in the international, national and regional levels. It does this, by establishing the host state and mining MNEs' strategic resources and constraints, and how they use them in the bargains that take place. However, the research also tries to briefly shed some empirical light over some aspects of the non–decisional bargaining power exerted in the Chilean case. It does not fully analyse either that type or the ideological bargaining power, since the aim of the research is to focus on the actual bargaining process between the state and mining MNEs taking place at different scales, and to present empirical evidence on how the most basic form of power can be analysed for extractive GPNs. Despite this limitation, the analysis of the bargains helps to determine the spatial outcomes for the host regions and nations within a GPN, something that has not been done so far. The next section details what sort of spatial outcomes could be expected as a result of bargaining processes.

## 3.6 SPATIAL OUTCOMES OF BARGAINING PROCESSES

This section explores the spatial outcomes of the bargain, in terms of two different outcomes: clusters and enclaves. The former implies sustainable growth and development; and the later unsustainable growth and dependence. Thus, this section explains the characteristics of these agglomerations, as well as their relevance for achieving a strategic coupling and regional development in an extractive GPN.

### 3.6.1 Historical description of the extractive enclaves and clusters

#### 3.6.1.1 The enclave and GPNs

From the beginning of the 20<sup>th</sup> century until the 70s, there was a strong academic perspective that questioned the benefits of the FDI over local development, giving birth to the concept of the traditional mining enclave. This was defined as an economic activity, geographically localized with limited forward and backward linkages with the local productive system, and whose property is mainly foreign (Cardoso & Faletto, 2007; Girvan, 1970; Weisskoff & Wolff, 1977).

The extractive regions of underdeveloped countries have been historically characterized by presenting economic enclave structures, marked by the geographical localization of the MNEs in the place of exploitation, the weak productive linkages with the productive local structure of the host region, the property of the foreign capital investment and the exploitation of low value assets (Cademartori, 2008; Gupta & Gupta, 1998; Phelps, 2008). Such geographical and productive isolation added to the income exports to the foreign countries were supposed to present a vicious circle for the local development, in which the enclave structure reinforced itself (Auty, 1980; Cardoso & Faletto, 2007; Conning & Robinson, 2009; Emerson, 1982; Girvan, 1970; Gupta & Gupta, 1998; Weisskoff & Wolff, 1977).

The enclave structure was kept from evolving into a more beneficial one, due to the excessive bargaining power that MNEs exerted during that period. This power was such that the MNEs established a social and spatial organization called Company Town or Industrial City, in which they controlled all the aspects of their workers' lives – housing, fun, money, transportation, and common areas – (Kerr & Siegel, 1954; Phelps et al.,

2015). The traditional enclaves were geographically isolated; had extremely limited relationships with the national economy; scant forward and backward productive linkages; and extremely focused on exporting products to foreign markets, while the profits were captured by the headquarters of the MNEs. This meant leaving in the host region just the necessary currency to maintain the productive process and to pay the government taxes, which hampered the generation of a virtuous circle to promote the local development (Cademartori, 2008; Cardoso & Faletto, 2007; Hirschman, 1958; Weisskoff & Wolff, 1977).

However, during the 70s, the concept of enclave was progressively crossed out because its definition abandoned the principal geographical and economical characterization, by including all kinds of signs of unbalanced growth, leading to a loss of precision, predictive capability and credibility as an analytic category (Hojman, 1983). Additionally, the emergence of the neoliberal model established by dictatorships in developing countries also played a big role the abandonment of theories linked to the dependency theory. This left a gap which was later filled by the more optimistic view, proposed by the cluster policies.

Thus, the benefits of this kind of GPN were extremely unbalanced towards the MNEs interests, creating an illusion of growth and development that was not sustainable in these regions due to the inexistence of a strategic coupling, the capture of value by the MNEs and the lack of strong economic linkages. As an extreme example of this unsustainable growth we have the case of Chile, which enjoyed a high growth rate thanks to the nitrate industry and its mining enclaves, until it all ended when the MNEs left the country (decoupling), leaving it sunken in the worst economic crisis of its history (Meller, 2007).

### **3.6.1.2 Clusters and GPNs**

In a trend that started during the 1990s, the importance of the FDI has been reassessed as the engine of regional growth, leading to the proposition of creating clusters based on large mining in Latin America, mainly fostered by international organisms such as CEPAL (Ramos, 1998). The change in the way in which the local impact of the mining MNEs is perceived, leads to question whether there has really been an evolution from the mining enclave to the mining cluster, where large mining companies promote local development

and, also, in which way the mining MNEs contribute to local development (Phelps et al., 2015).

The cluster trend has its origin in Becattini's (1990) work, which is based on the idea of industrial districts proposed by Marshall in 1890. This implies assuming the existence of positive externalities due to the agglomeration of firms in a geographical area. Recently, international organisations (CEPAL in 1998) as well as governmental organisations (CORFO in 2001 and the Chilean Government in 2008 in the case of Chile) have boosted the application of cluster strategies in mining regions in order to promote their economic development (Buitelaar, 2001; Lagos & Lagos, 2010; Ramos, 1998). They assume that there is a strategic coupling between the interests of the MNEs in the mining global production network and the regional institutions, which should lead to the regional development (MacKinnon, 2012).

An ideal type of cluster that could be applicable to the mining regions is Markusen's (1996) Hub and Spoke Industrial District, in which there is a few large firms (hubs) that are linked with a lot of local small and medium firms (spokes). This type of agglomeration faces some constraints in the case of the mining activity:

1. The mining sector is in the mature stage of his product life cycle, which probably implies the lack of agglomeration economies (Potter & Potter, 2011). This should act as a centrifugal force, contrary to the agglomeration.
2. The localization logic of the MNEs is determined by the 'location' in the OLI paradigm (Dunning, 1993), principally because the mining deposits are fixed in the space. Furthermore, the market power of mining MNEs causes that they locate in a type of region whose organization is closer to an 'Industrial Complex' (Gordon & McCann, 2000) than to other type of cluster. This implies that the relations between MNEs and the rest of the firms are formal, since MNEs are not willing to provoke outflows of knowledge spillovers. MNEs essentially try to maximize the inflows of knowledge for their own good, unless they have clear incentives to create technological spillovers (McCann & Mudambi, 2004, 2005)

Furthermore, several authors have stated that the presence of the MNEs in regions generate limited benefits to the host region development, because of: the confiscation of public assets and the internalization of the positive externalities of the MNEs; significant power asymmetries; and the generation of economic enclaves (Conning & Robinson, 2009; Phelps, 2008; Phelps et al., 2015). In this line, Phelps et al (2015) critique the tendency in the economic geography literature to assume that agglomerations formed

as a result of the extractive industry take the form of a cluster, when they can clearly show several characteristics of an economic enclave. Thus, they propose that within the expanding GCC/GVC/GPN literature, 'local and national industry development produces outcomes that are intermediate—those that represent neither the highs of industry [clusters] nor the lows of enclaves' (Phelps et al., 2015, p. 141). Hence, bargaining process will, more likely, have one of these intermediate spatial effects, which are multi-scalar and have different impacts on the possibilities for sustainable development of the host regions, as detailed next.

### **3.6.2 The intermediate spaces: multi-scalar enclaves and clusters**

In order to establish whether the spatial effects that the bargaining process can be sustainable in the long run for the host region/country, it is crucial to provide updated definitions of what is understood as a cluster and an enclave. In this sense, Phelps et al (2015) propose a removed definition for the economic enclave concept, where

[It] can be defined as a physically, administratively, or legally bounded territory whose geography or morphology is intimately related to the following economic characteristics: dependence on one or a few large firms; high specialization in one activity; and weak integration into the local economy, which is used primarily to access some local factors of production. As a result, the economic enclave is not able to generate localization economies related to specialization. In the short and medium term, enclaves can grow rapidly to contribute export earnings and have a positive net local economic impact, mainly based on internal economies of scale. This characteristic remains the main basis for enclave – led growth strategies. In the long term, however, a characteristic of enclaves is the lack of sustainability' (Phelps et al., 2015, p. 120).

This definition implies that an economic enclave is a form of strategic decoupling, between the MNEs and the host region of a particular extractive GPN (MacKinnon, 2012), which is the complete opposite scenario of what might be expected from a cluster form of agglomeration. Such decoupling entails that: value will be mostly captured by the MNEs; value enhancement within the host region/country is not a priority for MNEs; and that the degree of embeddedness of the mining MNEs is mostly determined by their sunk costs and spatial immobility of the natural resources. All of these can be caused by



bargaining power asymmetries within the extractive GPN, where MNEs are able to impose their will over the other agents. This is mostly likely to happen when host states are weakened by the international institutions or agreements, or when they choose to not exert all their bargaining power to maintain the 'FDI friendly' posture.

On the other hand, the cluster concept shares several elements with the enclave, like its territorial embeddedness, but it can be considered as the other side of the same analytical coin. Hence, based on the definition of an enclave proposed by Phelps et al. (2015), this research defines a cluster as:

a physically, administratively, or legally bounded territory whose geography or morphology is intimately related to the following economic characteristics: dependence on few large firms or on several small and medium enterprises; high specialization in one activity in the short run that leads to high diversification of the productive fabric in the medium – long run; and a strong integration into the local economy, which is used as a source of skilled labour, supplies and know – how. Thus, an economic cluster can generate agglomeration economies related to diversification. In the medium – long term, clusters can contribute to economic growth and the creation of a skilled labour pool and competitive SMEs that are able to provide products and services worldwide. Thus, one of the main characteristics of a cluster is its sustainability through the achieving of a strategic coupling among the actors involved.

Nowadays, however, the bargaining process is unlikely to produce pure enclaves or clusters in the extractive industry. In the particular case of mining, the recent apparition of mining camps allow the generation of diverse spatial effects on different scales of the GPN as Phelps et al (2015) report. Even though the mining industry has been associated with mining company towns (Cardoso & Faletto, 2007) and national enclaves (Singer, 1950), the new tendency toward mining being carried out in camps produce two additional scenarios in which the camp is somewhat integrated with agglomerations in the national and local level. Thus, some of the characteristics of an enclave have 'sprung their bounds', allowing the co–existence of mining enclaves and clusters in different scales.

Phelps et al acknowledge this new scenario, and propose that a new the emergence of the mining camps is associated with development outcomes that are intermediate, meaning, 'the mining camps as an enclave coexisting with measure of industry agglomeration elsewhere in subnational and national urban systems' (Phelps et al., 2015, p. 135). Henceforth, according to their classification, the bargaining process in a

mining GPN can produce: the traditional mining company town; a mining camp with agglomeration economies present in secondary city; a mining camp with agglomeration economies present in capital city; and the nation as an enclave (see Figure 8).

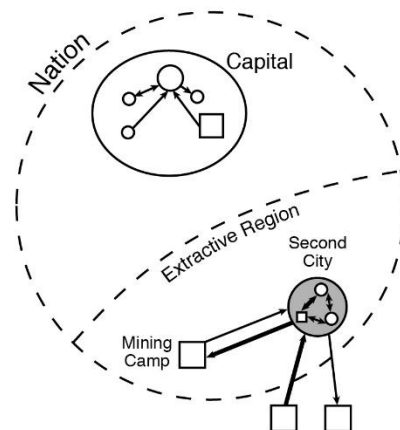
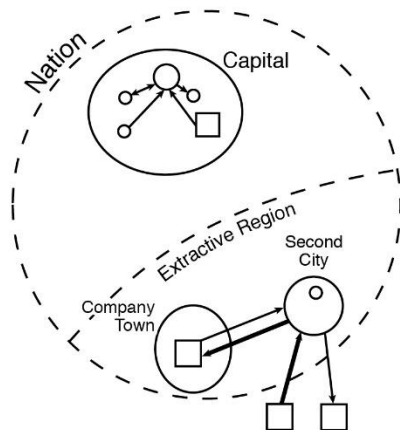
- a) The mining company town: it refers to the traditional mining town which was explained in the previous section, which is tightly spatially delimited and where all the productive factors and linkages are localized in places close to the ore. The very few economic linkages of this agglomeration with the host region and country, and the terrible working conditions for its labour force made it completely unsustainable. Yet, this form of enclave can still be found operating in some underdeveloped countries (FIG 8.A).
- b) The mining camp and agglomeration economies in secondary cities: it can be analogous to an oil platform, where the production is tightly delimited. Here, the labour force is brought to the extraction site for working long shifts and then be transported to their respective home cities. For Phelps et al, even though the mining camp is completely isolated from the rest of the region, some of the economic relations that take place on them may promote the apparition of clusters in a secondary city, through the development of mining service industries. However, the degree in which secondary cities can turn into competitive agglomerations is still unclear (FIG 8.B).
- c) The mining camp and agglomeration economies in capital cities: if agglomeration economies form, they will most likely create a cluster in a delimited part of the capital city. This since the capital is usually the main intermediary location of the global supply chain of mining production, and firms can benefit from its strong urbanization economies. Here, the country can benefit from the presence of mining MNEs because tax revenues and external economy effects concentrated in the capital city. However, the secondary cities of mining regions still show many characteristics of an enclave. This is the most likely scenario for small national economies, with a highly concentrated population in the capital and with a strongly centralized national government such as Chile (FIG 8.C).
- d) The national economy as an enclave: most of the enclave literature understands them in these terms (Singer, 1950; Weisskoff & Wolff, 1977). Here, mining camps exists as one of many dispersed fragments of production chains of international reach. However, the mining camp fails to produce any of the external economies typical of an industry agglomeration in every scale: mining camp itself, secondary in the mining region and capital city. Moreover, the MNEs capture most of the value, and little to none further value added. Likewise, there are significant imports of all factors of production at the

local and the national scale. Notably, there are significant leakages rather than linkages in the form of imports of technology and the international recruitment of labour (FIG 8.D).

**Figure 8: Three types of enclave: the company mining town (a), intermediation based on the mining camp (b and c), and the nation as an enclave (d).**

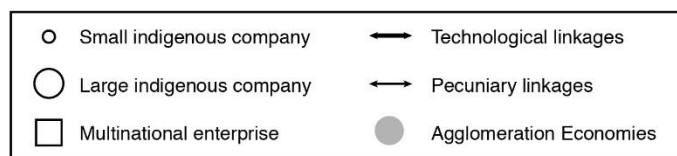
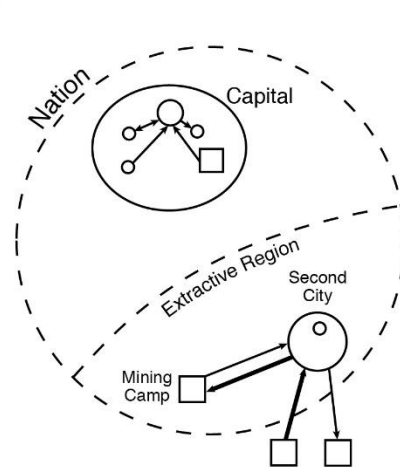
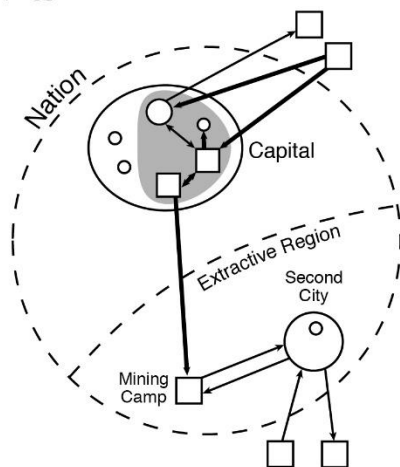
a) Company Town

b) Agglomeration Economies Present in Secondary City



c) Agglomeration Economies Present in Capital City

d) Nation as Enclave



Source: Phelps et al, 2015.

In sum, the economic enclaves were used widely in the study of undeveloped mining regions with a strong presence of MNEs until the 70s, when this model was abandoned due to its lack of conceptual severity and scarce explanatory capacity, caused by an over – use (Hojman, 1983). Furthermore, the economic geography literature has assumed

that the agglomerations formed as results of the dynamic bargains in the extractive GPNs are one of the several types of clusters, implying beneficial outcomes for the host region/country. However, there are several cases in which such clusters categories present characteristics that are typical of an enclave. Thus, in the last decades, this concept has been recovered in the academic literature, due to the unsatisfied expectations generated by many projects of FDI in the mining field, and the little impact that the cluster policies have achieved in many regions (Conning & Robinson, 2009; Gupta & Gupta, 1998; Phelps et al., 2015).

Henceforth, the appreciation of the enclave is crucial for understanding regional development outcomes. It is doubtful that the presence of large MNEs in mining regions can cause enough agglomeration economies to produce a multi-scalar cluster involving the secondary mining and capital cities due to the considerable bargaining power asymmetries in this industry, but there can be situations in which enclaves can co-exists with some forms of clusters. Such agglomerations will be determined by the successive bargains between MNEs and local institutions and actors, as well as the strategic coupling/decoupling that will take place as a result of them. The next section proposes the way in which this work will measure such processes and outcomes.

### 3.7 CONCLUSIONS

This section provides a theoretical way in order to achieve one of this research objectives, the incorporation of power in the extractive GPNs approach. It does this by introducing the main elements of the power literature, while also establishing the Three Dimensional Power Debate as the theoretical grounds for the proposed definition of bargaining power. Hence, there is a brief description of the three approaches: episodic, non-decisional and ideological power, while also highlighting the relevance of the strategic resources, particular constraints and scope later used for developing a bargaining power operational definition.

Moreover, the chapter also develops the main obsolescence models, and how these predict that resource rich nations will be able to exert more bargaining power after the initial investments are done by the mining MNEs. The section explains both the traditional bargaining models, and the most updated ones that consider two tiers of negotiations: a first tier taking place within the country's limits between the mining MNEs and states, and a second one happening in the international level between the host countries and

international institutions and home countries of the extractive MNEs. These models provide the idea that power is exerted by each actor in the successive bargains taking place in different geographical nodes of an extractive GPN.

Then the chapter makes two theoretical contributions of this research, by; firstly, incorporating the bargaining models into the GPN approach in order to empirically and theoretically unpack the concept of power; and secondly, providing three operational definitions of bargaining mirroring the three faces of the power debate: episodic, non – decisional and ideological bargaining power. This kind of power cannot be possessed or accumulated, but it strongly depends on the strategic resources and constraints that each actor holds and faces.

The outcomes of the successive bargains taking place in a particular GPN will also have very specific spatial outcomes, which can ultimately take the form of extractive enclaves, meaning unsustainable development, or clusters, implying a strategic coupling between the actors and better chances of sustainable development for the host region and nation. The methodology this research uses to analyse the bargains and their outcomes between the mining MNEs and the State are detailed next.

## **CHAPTER 4**

### **METHODOLOGY**

#### **4.1 OVERVIEW OF THE METHODS AND DATA UTILIZED**

The initial four research questions proposed in Chapter 1 were aimed at contributing to the discussion about how the mining industry affects uneven regional and national development, in the context of contemporary globalisation. In this sense this section describes how each question is addressed in this research, by explicating the methods and data considered for such goal.

Question one was answered by using the work of Bridge (2008) as the base to conceptually and empirically incorporate elements from the mining industry into the GPN 1.0 approach. This is done by focusing on bargaining between the agents, through the inclusion of bargaining models into the GPN framework. Question 2 was addressed by providing three operational definitions of bargaining power, using the concepts developed within the power debate. These definitions highlight the idea that the potential bargaining of each actor depends on the strategic resources it holds, and its exertion of the constraints it faces. Value capture will then be determined as an outcome of the successive bargains taking place within a GPN, as well as the bargaining power exertion between the main actors. Questions three and four are empirical in nature and require a deeper discussion of the methods used and so are the subject of the present chapter.

In order to tackle the implications of the bargaining power between all the agents involved in the mining GPN and the role the state plays in these negotiations, this research utilizes a case study analysis of the Chilean copper mining GPN. A Case study analysis provides the required design for achieving an in depth understanding about how these processes interact and influence each other, allowing the construction of a theoretical framework that considers the pivotal role of power over value and embeddedness of MNEs in the host region, as well as the implications for local and national development as a result of these relations.

For this purpose, the relevant nodes of this GPN are considered, namely: London (UK), where most of the headquarters are located and corporate decisions are made; Santiago, capital city of Chile and host of the national headquarters of the mining MNEs; and the Antofagasta Region, where the most important mines and ores are located. Primary and secondary data were gathered through these different scales. The former

comprises 50 interviews made in the three nodes between 2012 and 2016 to mining experts, CEOs, politicians, academics, and civil society representatives, while the latter comes from public databases, reports, newspapers, and firms' public information. Combined, these data permit a description and comprehension of the underlying processes in the bargains between the agents mining MNEs and the Chilean State as the base contributions of this thesis: an updated theory of mining GPNs that incorporates bargaining models and bargaining power, the unpacking of the power concept, and the re-evaluation of the state–firm relationship.

To achieve these objectives, the research uses the three bargaining power definitions previously established, in order to determine the strategic resources and constraints of each actor and the scope and relevance of such resources or constraints. These resources and constraints determine the bargaining position of each actor, which is extremely important to understanding how the bargaining processes take place. Additionally, the research analyses how the mining MNEs and Chilean State use (or not) their strategic resources while facing their constraints in order to reach their strategic objectives, in the continuous bargains taking place in every node of the Chilean copper GPN. In short, the research provides a picture of the winners and losers from bargaining along the mining GPN in three different ways.

Firstly, and most importantly, the research assesses issues caused by a highly unbalanced bargaining power distribution between the different actors. By using the operational definition of bargaining power proposed, this research discusses the evolution of its sources, distribution and exertion among the agents involved, focusing on state and the mining MNEs. Additionally, it also inquires the role of international institutions in this process, as the Two Tier Bargaining model suggests (Ramamurti, 2001). The consequences of this distribution determine the value capture and degree of territorial embeddedness of a mining MNE in the host region. Collective institutions are considered but not in depth, since they are not the focus of this work.

Secondly, the research evaluates how much value is captured by MNEs and the central region in the Chilean copper mining GPN. Value capture and distribution has been considered vital for the development possibilities of the host region, and can be captured by mining MNEs at the very beginning of the chain (Bridge, 2008). Conversely, Coe et al explain (2004) that value can be captured locally if the MNE re–invests in its subsidiaries, suppliers or local labour force. For these reasons this work analyses the relationship between MNEs, local firms and state, and the policies that both, state and MNEs, have implemented in order to maximize their value capture.

Thirdly, there is an assessment of the economic linkages between the mining industry and the local productive fabric. Economic linkages have been the traditional measure of the degree of territorial embeddedness of MNEs in the host region, due to their relevance for the diversification of its economy. However, in the mining sector, the increasing barriers to entry in the industry, might affect the kind of participation that local SMEs have. Local SMEs usually do not possess the capital required for overcoming these barriers, so their participation in the mining GPN may consist mostly as providers of basic services. This can cause weaker economic linkages between MNEs and local firms and a less diversified economy. This work analyses the economic linkages between MNEs and the local SMEs, in terms of their strength, localization and the power struggles between suppliers and mining MNEs.

The analysis of such categories can provide a strong evaluation of the chances that the Chilean mining GPN has to achieve a strategic coupling and, therefore, a sustainable form of agglomeration, namely, a mining cluster. On the other hand, if the chances of a strategic coupling are low, the Chilean mining GPN could be closer to an unsustainable form of agglomeration, in other words, one of the mining enclave formations proposed by Phelps et al (2015). A more detailed argument about why the case study analysis was chosen as the main method to respond the research questions is described next.

#### 4.2 RESEARCH STRATEGY: A CASE STUDY DESIGN

This research utilizes the case study analysis in order to give a response to its research questions. Such a method allows the understanding of a real life phenomenon in depth, while also considering important conditions that may be highly pertinent for comprehending the phenomenon of study (Yin, 2009, p. 18). It is an approach suited to addressing the complexity of relationships in the mining GPNs and the power struggles within them.

Case studies have been widely used 'for examining contemporary events [where] relevant behaviours cannot be manipulated' (Yin, 2009, p. 11). They rely on primary and secondary data and interviews with people involved in the events, all of which are used in this research. This analysis provides findings 'generalizable to theoretical propositions and not to populations or universes' (Yin, 2009, p. 15) which is one of the ultimate objectives of this work.



A case study has been defined by Yin (2009) in two parts: A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Moreover, the case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points; and as one result, relies on multiple sources of evidence, with data needing to converge in a triangulating fashion; and as another result, it benefits from the prior development of theoretical propositions to guide data collection and analysis.

The main strength of this method relies on its capacity to address real life phenomenon with fuzzy boundaries - a well-known characteristic of the GPN framework – yet also is compatible with theory building; in this case of the underlying processes between the bargaining power and its role in influencing value capture and local embeddedness.

#### **4.2.1 Single or multiple case studies?**

A common concern about the use of case study design in research is related with the choice between a single or multiple case study design, which is related with the external validity or generalizability of this approach. Bryman (2012, p. 67) exemplifies this worryment by asking ‘how can a single case possibly be representative so that it might yield findings that can be applied more generally to other cases?’. The response to this question usually involves a preference towards a multiple case study design, since the evidence gathered from multiple cases is frequently considered more convincing and, therefore, the overall study can be regarded as being more robust (Herriott & Firestone, 1983; Yin, 2009).

However, the main aim of case study research is to engage in a process of what has been called ‘analytic generalization’ by Yin (2009) and ‘theoretical generalization’ by J.C. Mitchel (1983), where researchers use extant theory as a guide to evaluating the empirical results of the case study. In this process, the investigator tries to ‘generalize a particular set of results to some broader theory’ (Bryman, 2012; Mitchell, 1983; Yin, 2009) meaning that the main strength of case study is not to expand the findings to a wider universe, but to contribute to theory development through the theoretical linkages observed in the features of the case study.

Moreover, Yin (2009) argues that it is vital to consider what kind of case study research (single or multiple cases) fits better with the research objectives, as both are useful in different situations. He explains that the rationale for single case designs cannot usually

be satisfied by multiple cases, since some of the cases used by the researchers are, by definition, more likely to involve only single cases. In this sense he identifies five situations where single cases are the best way to contribute to theory development<sup>8</sup>.

Since one of the main goals of this research is to update, test and develop theories regarding the mining GPN and its impact on the host regions, a case study approach is used. Furthermore, this research focuses on a single case study, namely the Chilean mining GPN. The Chilean case study has been considered as the most important copper producer worldwide and an example of development by international organisations, meaning that the theories related to FDI, growth and cluster generation have been widely accepted as true. Additionally, the Chilean case has also been historically depicted as an example of mining enclave formation and resource curse, and has implemented some of the most extreme neoliberal policies in Latin America, all of which make it a good critical single case study with which to appraise opposing theoretical views and the evolving nature of the bargains between MNEs and states.

Moreover, the Chilean case can be considered as representative of developing countries whose growth and development depends heavily on natural resources, especially mining. In addition, several longitudinal analyses have taken place before (Cademartori, 2008; Kobrin, 1980; Moran, 1974), where the power relationships within the Chilean mining GPN and its outcomes have been studied over several periods of time. All of this implies that the use of a single case study is appropriate for the aims of this research. However, there is still one decision to be made regarding to the number of units that will be part of the case study design, as explained next.

#### **4.2.2 Holistic and embedded case studies.**

Sometimes the same single case study involves more than one unit of analysis. This happens when within a single case, a subunit(s) are part of the analysis, in which case the design would be called an embedded case study design. Conversely, if the case

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<sup>8</sup> The critical case - chosen to test-out the hypotheses of a well-developed theory; the extreme case, whose analysis may provide invaluable theoretical insights, the revelatory case, used to observe previously inaccessible to social inquiry phenomenon; the typical case, which exemplifies an everyday practice or situation; and the longitudinal case, consisting in studying the same single case at two or more points in time.

study is focused only on the global nature of the case and not on its subunits, a holistic design is being used (Yin, 2009).

The holistic design is helpful when there are no subunits in the case, or when 'the relevant theory underlying the case study is itself of a holistic nature' (Yin, 2009, p. 50). However, while using this approach, the researcher could overlook the examination of a specific phenomenon, since the holistic approach focus on an extreme abstract level may result in a lack of clear measurements or data. Another weakness of this approach is that the research design might not be appropriate for the initial research questions anymore when there is a shift in the entire nature of the case study (Yin, 2009).

On the other hand, the embedded design allows the analysis of subunits within the case, allowing a more complex examination. The subunits can often add significant opportunities for extensive analysis, enhancing the insights into the single case. However, as Yin (2009, p. 52) warns 'if too much attention is given to these subunits, and if the larger, holistic aspects of the case begin to be ignored, the case study itself will have shifted its orientation and changed its nature'. This highlights the fact that an embedded case study should always return to the larger unit of analysis in order to provide a satisfactory answer to the original research question, and that is why this research design is appropriate for the study of the Chilean copper GPN.

A single case study design is relevant for the analysis of the Chilean case, since it shows features from the critical, representative and longitudinal types, which are mostly used in this kind of research. Moreover, due to the characteristics of the Chilean mining GPN, it is vital to examine its main nodes located in multiple scales: London (global), Santiago (national) and Antofagasta (regional). Hence, an embedded case study design is used, since it addresses the complexity of this GPN and the agents involved in it.

#### **4.2.3 Units of Analysis**

The unit of analysis of this study are the main nodes of Chilean mining GPN, which comprises London (UK), Santiago (Capital city of Chile) and the Antofagasta region in Chile (where most of the mineral are exploited). These places where chosen due to the following criteria:

The first node, London (UK), is where most of the mining MNEs that are based in Chile have their headquarters. Additionally, this is where the London Metal Exchange (LME)

is based, which is the most important centre for the trade of industrial metal worldwide. Together with this, the International Council of Mining and Metals (ICMM) and several mining NGOs are there. Thus, London is the central node where all the main decisions are made regarding to mineral prices (at LME), corporate behaviour and practices to achieve sustainable development in host regions (mediated by the ICMM) and global resistance and coordination to mining externalities (exerted by mining NGOs).

The second node, Santiago (capitol city of Chile), is where all the mining MNEs operating in Chile have their local headquarters. They concentrate there because the central government, its ministries and the most important institutions related to mining are located in the Chilean capital city due to its highly centralized political structure. Furthermore, it has the best transport links and access to the Region of Valparaiso, where the National Congress is located. Almost every single relevant legislative and investment decision regarding the Chilean mining industry is taken here.

The third node, the Antofagasta Region (Chile), is the place which holds most of the Chilean mineral ores, the highest concentration of mining projects and the ports where the minerals are shipped worldwide. It concentrates the world's largest deposits of copper, lithium and molybdenum. The whole region has a historically strong dependency on mining and most of its cities are engaged directly or indirectly with this industry. Additionally, this region has to deal with the mining industry's externalities leading to a strong presence of social movements, CSR policies and state involvement in mediating these conflicts between civil society, local SMEs and mining MNEs.

These three nodes are the most relevant ones in the copper mining GPN, and are where the primary data was collected through the multi-method strategy detailed next. The analysis was carried out for each node, while also considering the larger scope of the bargaining taking place in each location. The research used the primary information gathered from the interviews to experts in order to determine the strategic resources of both the mining MNEs and Chilean State, as well as the constraints they face, and also to understand how these actors use/or do not use these resources in the successive bargains taking place in each node. Secondary data was gathered as background information in order to better understand the reliability of the perceptions gathered in the interviews, and to visualize the trends in the bargaining processes, as well as the outcomes of such bargains for achieving strategic coupling and increasing the sustainable development possibilities of the host region and country. All of these elements are further developed in the next sections of this chapter.

## 4.3 RESEARCH METHODS

### 4.3.1 The need for a multi-method strategy

Since the early 1990's there has been a discussion about what are the best research methods when dealing with MNEs, elites and power imbalances in the international business, economic geography and, consequently, GPN research. This debate is part of a broader one, related to what can be accepted as a scientific method within social sciences, in which some social scientists focus on the statistical methods as the ultimate way to secure the validity and reliability of research findings, where others defend the view that qualitative methods are required to make empirical sense of the reality observed in a statistical analysis (Layder, 1993; Yeung, 1995).

Nowadays, the international business and economic geography research acknowledges the relevance of qualitative methods in their investigations - since it is now recognized that is almost impossible to achieve perfect replicability in any research dealing with the social world in open systems. Despite this shortcoming, qualitative methods are both valid, in the sense they help to make sense of the opinions and information collected; and reliable, meaning that some of them, such as the personal interviews, can be repeated by other researchers (Yeung, 1995).

Moreover, there is an overall consensus about the strength of using a multi-method strategy that comprises both intensive and extensive methods (Sayer, 1992). The former refers to the methods that allow a constant process of abstraction in which theories are produced, and whose primary source of data comes from qualitative research methods, especially from personal interviews. Extensive methods provide the background information to offer an exhaustive picture on the particular historical and geographical attributes of a particular phenomenon, using all sorts of secondary data sources (Sayer, 1992; Yeung, 1995). Since this research aims to make a theoretical contribution to the GPN and bargaining literature; to analyse the bargaining power exertion within the Chilean copper mining GPN; and to evaluate the role of the State in the bargains taking place with the mining MNEs, it addresses such issues by adopting both intensive and extensive methods. This allows a broader and richer understanding of the processes and outcomes involved in the study.

### **4.3.2 Qualitative and quantitative methods used**

Regarding to the intensive/qualitative methods, this research uses the personal interview for two main reasons. Firstly, as one of the main contributors to the GPN approach, Yeung (1995), explains, it is a much better technique compared to more common ones used for researching international business, such as postal surveys and telephone interviews. He argues that this method is especially relevant when the research is conducted in an urban context; when the objective is to deeply understand the processes and mechanisms of international business; and when flexibility is needed to both collect and analyse data, which is especially critical for researches focusing on firms operating simultaneously in several geographical locations. Since this research aims to understand the bargaining processes taking place in several nodes spread over different geographies, all these reasons seem to fit the research's needs.

Secondly, personal interviews are a well-established way to study elites or issues related to power asymmetries in economic geography, political science and international business research (Cormode & Hughes, 1999; Morris, 2009; Rice, 2010; Welch et al., 2002). This research does not define a copper mining elite, but it focuses on collecting impressions from what it considers informants who are either experts on the industry or have the capacity to shape and influence the bargains taking place within the copper mining GPN. Thus, the interviewees of this research have one or more of the following characteristics: occupy a CEO or high management position in a mining MNE or state owned mining firm; have a deep empirical or theoretical knowledge about the Chilean copper mining industry; have considerable experience in the copper mining industry; are currently (or have been) representatives of a group that has been affected or has bargained with the mining industry; are (or have been) part of a State led programme related to mining, or from a particular State institution directly or indirectly related to the mining industry.

Furthermore, since this research takes into account issues related to power in the interviews, it follows all the ethical implications of working with personal interviews depicted in the literature (Smith & Smith, 2006) and in the UCL's Research Ethics committee, in order to ensure the interviewees and researcher's safety. Hence, the interviewees were notified in advance about the aims and objectives of the research, permissions were asked to record the interviews, the recorded interviews were anonymized before the transcription, there was a preoccupation in keeping the

anonymity of the interviewees in the analysis and they were offered the chance of having access to the finished thesis if they wanted to.

Moreover, in terms of extensive/quantitative methods, this research uses secondary data gathered from official and private sources in order to provide a framework in which the bargains take place. This data is used to validate what the interviewees described as the main strategic resources, constraints that the Chilean State and mining MNEs hold and face, as well as the outcomes of the bargains hold between them. There are several quantitative analyses made in the research, such as an historical analysis of the mining GPNs developed by Chile and their consequences, the depiction of how some of the strategic resources and constraints have evolved in recent times, and what are the effects in some socio-economic indexes of the bargains celebrated in each node. The primary and secondary data used for both, the qualitative and quantitative analysis are detailed next.

#### 4.4 SOURCES OF INFORMATION UTILIZED

##### **4.4.1 Primary data: qualitative personal semi-structured interviews**

In order to have a representation of all the important nodes of the Chilean mining GPN, 50 semi-structured interviews were in London (UK), Santiago (Chile) and Antofagasta (Chile) between May of 2013 and June of 2016 by the researcher and, in some cases, with the first supervisor of this thesis. The participants were selected trying to have representatives from all the agents involved in the mining GPN, such as CEOs and representatives from most of the most important mining MNEs' worldwide and CODELCO, politicians and policy makers involved with the Chilean mining industry, international mining NGOs, mining unions, SMEs and MNEs that supply this industry, representatives of industrial associations, experts, academics and mining journalists.

From these, seven were conducted in London, twenty four in Santiago and nineteen in the Antofagasta Region. Two interviewees declined to be recorded, and forty eight of them agreed. Two interviewees were interviewed twice, due to their deep knowledge of aspects of the industry. All of the interviewees that accepted to be recorded also agreed for quotations to be used in the research. These interviews were conducted in Spanish and English, lasted from 30 to 60 minutes and have been transcribed by the author. All

of the interviews followed the UCL's ethical guidelines regarding to the collection and study of data related with human participants and, therefore, this research has the UCL ethical approval.

The discussion held in the interviews aimed mostly at issues regarding to their perceptions about: the main strategic resources and constraints of the mining MNEs and Chilean State; the nature of the relationship between the mining MNEs and Chilean State in each particular node; the strategic objectives and constraints of these actors, the bargaining process between these two agents; the perceived outcomes and implications of this process for reaching a strategic coupling between each actor's strategic objectives; the perceived scope of influence of the main actors; the chances of reaching sustainable development in the host region and country; and some specific questions related to the interviewee's position in the copper mining GPN (see appendices A, B and C for a copy of the interview sheet used in the fieldwork, the interview schedule and an example of one interview transcription).

In terms of the challenges and characteristics of the interview process, there were no problems in getting in touch with some of the main representatives of international organizations related to the mining industry in the London node. The interviews that took place in Santiago were aimed to relevant politicians, policy makers, CEOs of mining MNEs and from CODELCO, State institutions directly and indirectly related to the mining industry and experts. In this node, the main researcher had to use the elasticity of his positionality (Rice, 2010), meaning sometimes presenting himself as a PhD student from the Bartlett School of Planning, UCL, and at others as a PhD student, but also the son of a former Manager of CODELCO, since most of the CEOs working in the mining MNEs present in Chile also worked in CODELCO. This allowed access to several CEOs and managers in the national and regional headquarters, which in turn facilitated the contact of important politicians, policy makers and other experts related with the mining industry.

The interviews made in the Antofagasta Region took place mostly in the city of Antofagasta, and one in the city of Tocopilla. These were aimed to local experts, academics, SMEs suppliers, policy makers, local representatives, politicians and mining MNEs local CEOs and managers. In this node some of the interviewees asked the researcher to stop recording, since they were scared about possible retaliation from the mining MNEs to their businesses if their opinions were made public. In one case, after stopping the recording, one interviewee panicked and started to cry. All these opinions were not transcribed or recorded or mentioned in the research or analysis in order to



keep the interviewees' safety, but they were useful in understanding the relationships between the SMEs suppliers and the mining MNEs at the local and national levels.

**Table 3: Summary of the interviews realized in the three nodes during the fieldworks.**

<b>Location</b>	<b>Total number of interviews</b>	<b>Number of interviews by category</b>
London	7	International mining NGO volunteer (2) Director of mining NGO (1) Director of state owned mining MNE (1) CEO international mining association (1) Chilean politician and mining expert (1) Representative of the LME (1)
Santiago	24	Private mining experts (2) Academics (5) CEO of a mining supplier MNE (3) CEO of a mining MNE (5) CEO of a state-owned mining MNE (2) CEO of the Chilean Central Bank (1) CEO of the Mining Council (1) Directors and experts from state institutions related to mining (5)
Antofagasta	19	Private mining experts (4) Academics (3) CEO of mining MNE's subsidiary (2) CEO of local SME supplier of mining MNEs (2) CEO of a regional industrial association (1) Director of MNE's institution in charge of CSR policies (1) Politicians and former politicians (4) Representative of miners' labour unions (2)
<b>TOTAL</b>	<b>50</b>	

*Source:* Own elaboration.

#### **4.4.2 Secondary data**

Several secondary data sources are used in this research; most of the data comes from firms, NGOs, official statistics, research institutions and reports/compendiums related

with the mining industry. Among these, it is worth highlighting that there are two datasets that were provided by MNEs that have never been released to public, which contain information about their suppliers in Chile. One of these was provided by a supplier of the mining industry and the other from one of the most important copper mining MNE in the world. These datasets provide invaluable information about their relations with their suppliers, like where they are located, their origins and the amount of the transactions. Since this information is extremely delicate, valuable and strategic, the firms asked to be kept in anonymity.

Other relevant secondary data sources are the reports from international institutions, like the OECD, ECLAC, World Bank, ICMM, MNEs, London Metal Exchange, NGOs and United States Geological Survey (USGS). This information is related to economic indexes, trends of the mining industry in the world and issues related to the industry.

Equally important are the datasets collected from Chilean sources, like the Mining Ministry, COCHILCO (Chilean Copper Corporation), INE (National Institute of Statistics), Chilean Central Bank, Fundación Chile and several academic reports and news from local and national newspapers. Most of this data is related with longitudinal economic indexes, the evolution of the mining industry, the Chilean mining productive fabric and the relevance of mining in the socio-economic structure as a whole. The use of longitudinal data allows the study of the evolution of the case study. Most of these data sets are available for free in the World Wide Web.

Finally, three previous versions of the survey to SMEs in the Antofagasta Region were used. They were taken between 2006 and 2009, providing a vital source of longitudinal data for the representation of the linkages between mining MNEs and local SMEs. These datasets are relevant, since several firms have been surveyed in the three periods and the modules and questions have not changed dramatically (apart from the module about bargaining power incorporated in this version), allowing to describe their evolution.

#### 4.5 STRUCTURE OF THE ANALYSIS

The analysis is divided two parts, one historical assessment of the previous mining GPNs developed in Chile until 1973, and the analysis of the current copper mining GPN. Firstly, there is an historical analysis of the power struggles between the agents involved in the Chilean mining industry. This, in order to build up a picture of basic quantitative measure

of impact, as well as qualitative data on how these have been historically shaped by MNE structure and strategy and host national and regional government policy. This provides a valuable overview of national policies in the mining industry and the perspectives of MNEs and leading international advisors. The historical analysis is divided in three parts: A description of the 'nitrate golden era' (1810–1879), the 'copper era' (1920–1971) and a brief introduction to the present copper GPN (1973-present). These periods are condensed in one chapter that introduces the case study of the Chilean copper GPN in order to depict how the evolution of the bargaining power sources and exertion by the different agents involved have influenced the current power struggle and outcomes over local development, with a focus on tier 1 and tier 2 negotiations.

Secondly, the analysis focuses on the current copper mining GPN, developed from the early 1990s onwards. This is the main original empirical contribution of this research, comprising three chapters in total. It starts with a chapter focused on the strategic resources and constraints of the Chilean State, followed by other developing the strategic resources of the mining MNEs and their constraints. Then, there is a final chapter describing the bargaining process taking place in each node of the Chilean copper mining GPN. This part also focuses on the kind of bargaining power exerted by each actor and the scope of the outcomes of the bargaining processes. Finally, the analysis establishes what actor is capturing value, where this value is being captured, the degree of the territorial embeddedness of the mining MNEs with the local productive fabric, the implications of all of this for reaching local and national sustainable development through the mining industry, and the kind of agglomeration that is being produced in the host region.

## **CHAPTER 5**

### **THE CHILEAN MINING GPNS**

#### **5.1 INTRODUCTION**

Even from before its origins as a nation–state, the Chilean economy has been historically based and dependant on the exploitation of natural resources by foreign capital. Because of this extreme dependency, and the crucial role of Chilean minerals in the international mining industry, this research focuses on the Chilean case study as a way to provide a better comprehension of the exertion of bargaining power within extractive GPNS.

This chapter explains Chile’s participation in the mining GPN in terms of three periods, in which the bargaining power has shifted abruptly between the actors involved: the nitrate company town era (1810–1879), the copper era (1920–1971) and the current neoliberal age (1970’s-today). The history of the Chilean mining GPN case study is presented with a focus on the bargaining process between MNEs and the State, and its socio–economic and spatial outcomes. This frames the later discussion about the current bargaining process within the Chilean mining GPN and its implications for achieving a strategic coupling and regional development.

#### **5.2 THE CHILEAN CASE**

Chile, a recent (and only South American) member of the OECD, has a deep history of mineral dependency, from long before it was colonized by the Spanish (Mamalakis & Reynolds, 1965; Salazar, 2003). Such dependency has been the source of several economic bonanzas and crises; where the relationship between the actors involved in the Chilean mining GPN has been quite turbulent. Still, the Chilean productive fabric has been constructed around the extractive industry, especially mining. What started with the Spanish ‘conquistadores’ (conquerors) search for gold in the sixteenth century, evolved into the development of mining towns and camps around nitrates, copper and other metals. This section introduces the Chilean case and its relevance in the global mining GPNS, which is developed in the later sections.

Chile is located in South America, and borders Peru to the North, Bolivia to the North–East, Argentina to the East and the Pacific Ocean to the West. Its population is

18.006.407 inhabitants (INE, 2014); and its capital city is Santiago, which concentrates more than 40% of the national population<sup>9</sup>, most of the MNEs' local headquarters and Chilean political power. The country is organized in fifteen regions, which are the country's first level of administrative division. Its economic and political stability has been used as an example of economic success for OECD and Latin American countries, since it has recently experienced some of the highest growth in the Latin American region. In 2011, Chile more than doubled its GDP from 1988, reaching the region's highest GDP per capita with USD 17.312 and outrunning the OECD average rate. When compared with other emerging economies, the Chilean growth trajectory seems to follow the impressive Korean example but at lower rates (OECD, 2013a).

Chile's principal economic activity is mining, mostly exploited in the northern part of the country. This industry is crucial for the Chilean economy because it represents: around 13% of the total national production<sup>10</sup>; around a third of the national tax collection (Meller, 2013); an average of more than 55% of the national exports during the last twenty – five years (Figure 10); and an average of 37% of the total FDI materialized in Chile during the last forty years (COCHILCO, 2013). Chilean mining is vital not only for the Chilean economy but also for global markets, since it is, firstly, the world's biggest producer of copper (31% of the global production), iodine (64.4%) and lithium (36%); and secondly, holds the world's biggest reserves of copper (30% worldwide), iodine (24%), and lithium (55%), as well as considerable reserves of silver (15%) and molybdenum (16%) (USGS, 2015). Most of the reserves and production are located in the Antofagasta Region (see Figure 11).

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<sup>9</sup> Instituto Nacional de Estadísticas (INE), Population Projections for 2015.

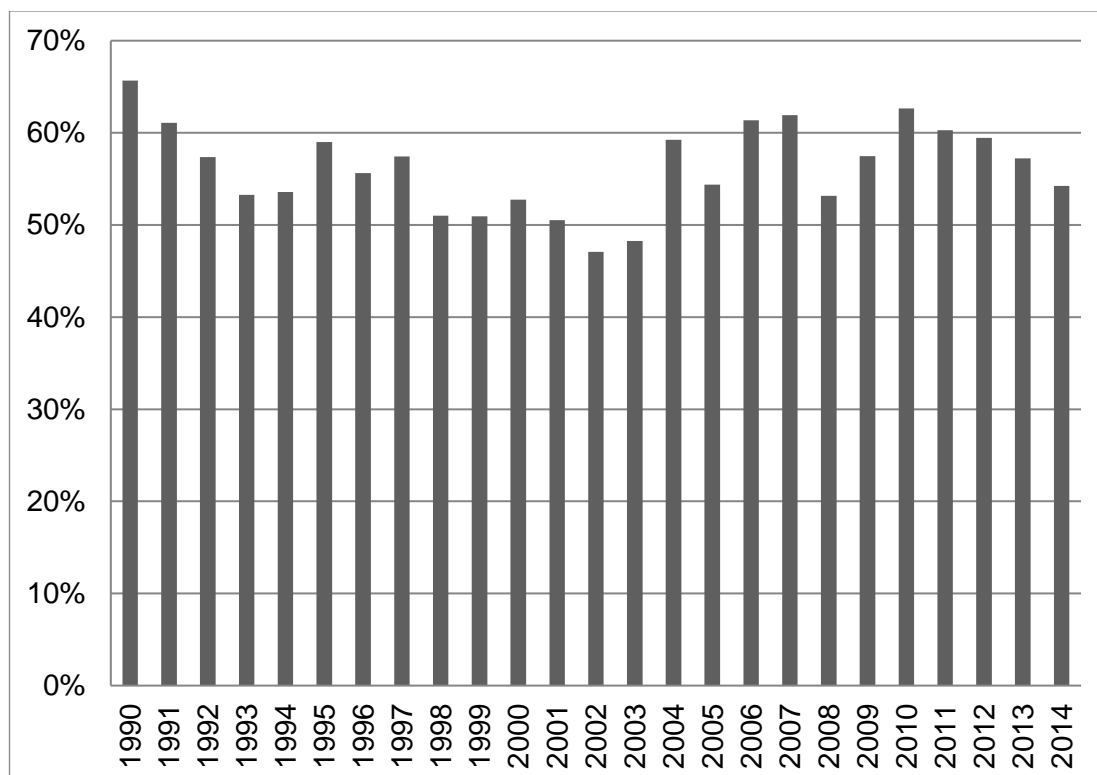
<sup>10</sup> Source: Banco Central de Chile (Central Bank) statistics about production by sector, 2015.

Figure 9: Map of Chile, the Antofagasta Region and its mining towns.



Source: Phelps et al., 2015.

**Figure 10: Participation of the mining exports in the total Chilean national exports (%).**



*Source:* Own elaboration by using data from the Chilean Central Bank.

The mining industry has had a deep impact both on the Chilean economic history, and on its social evolution. Mining was exploited since the pre-Columbian period but has intensified after Chile's independence (Mamalakis & Reynolds, 1965). Mining has allowed Chile to take part on the international trade by luring foreigner investors into the country, who quickly controlled the production of nitrates, gold, silver, copper and other metals, crucial for the development of industrialized nations. This early dependency around the mining sector and FDI was created, fostered and consolidated by the local political elite, interested in promoting national growth without regard for the social costs - a constant in Chilean history.

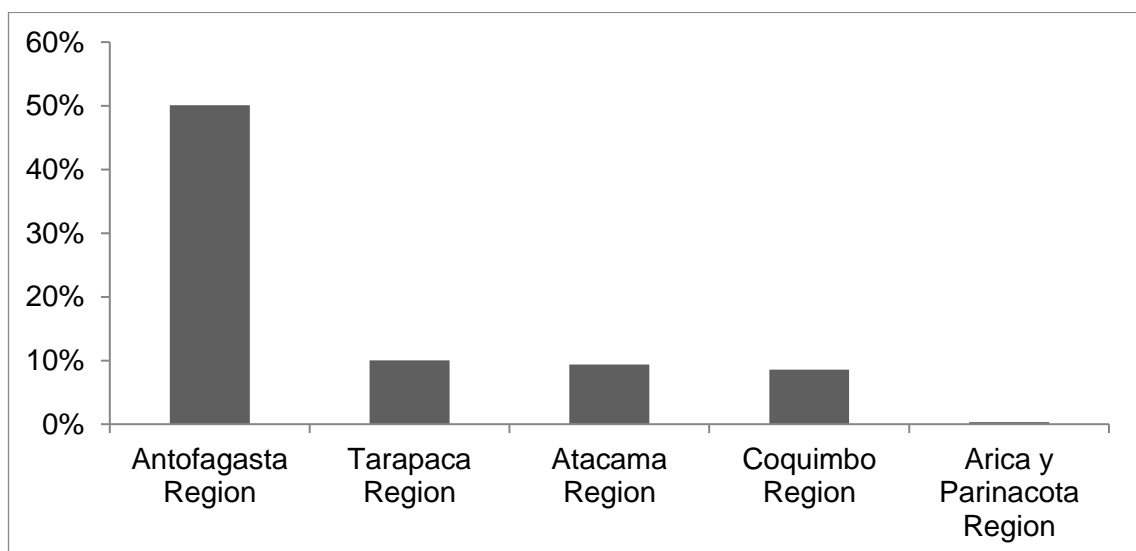
In particular, FDI and MNEs have played a crucial role in Chile's socio-economic development, where the power relationship between the State and the MNEs has passed through several phases. Each of these phases has had different outcomes: a strong liberal period during the nitrate era and the beginning of the copper era; followed by a nationalization period during the 1960's-70's; and the abrupt end of this period during the dictatorship of Pinochet. The latter famously adopted some of the most extreme neoliberal policies known to date (Harvey, 2005; Klein, 2007). These phases have

changed the way in which bargains took place, and how bargaining power has been exerted by the agents within the Chilean mining GPN.

Furthermore, today Chile has been largely considered as an example of economic development based on mining production by international organizations during the last twenty years, and its 'model' has been exported to other extractive nations. This, despite the fact that enclave policies were applied in Chile during the nitrate era; and nowadays cluster policies have been implemented at a regional and national scale. Both sets of policies assumed positive local and national development possibilities but had completely opposite outcomes for development.

Finally, most of the production and extraction takes place in the Atacama Desert, the driest of the world, with the extraction and production processes taking place under extreme circumstances. Specifically, more than half of the production takes place in the Antofagasta region (see Figure 11), making it one of the most important mining regions worldwide. Thus, this research focuses on the Antofagasta Region as the main node of mining production of the Chilean mining GPN due to its national and international strategic relevance. A brief depiction of this region's characteristics is developed next, which helps to frame the later description of the historical evolution of the Chilean mining GPN, its agents, power struggles and outcomes.

**Figure 11: Regional mining production share in the national mining production (average between 2008 - 2013).**



*Source:* Own elaboration by using data from the Chilean Central Bank.



### 5.3 THE ANTOFAGASTA REGION

The Antofagasta Region is located in the northern part of Chile, in the middle of the Atacama Desert (see figure 9). It covers 126.049,1 square meters and has a population of 622.640 inhabitants, representing 3.4% of the total Chilean population (18.000.000)<sup>11</sup>. Two cities stand out in the regional city system (Figure 9): Antofagasta, the regional capital, with a population of around 350.000 inhabitants (roughly 56% of the regional population), centre of the regional economic activity and main port of mineral exit; and Calama, a city with 138.000 inhabitants (22% of the regional population), located two hundred kilometres away from Antofagasta and right next to the Chuquibambilla mine. This is the biggest open pit mine of the world and is owned by CODELCO, the biggest copper state-owned firm worldwide.

Mining has historically been the region's main productive activity, with a strong presence of mining MNEs. The Antofagasta region has the biggest deposits of copper, iodine and lithium worldwide, as well as considerable reserves of silver and molybdenum (USGS, 2015). Thus, this region is extremely important for international markets, especially considering that Chile is the biggest copper producer worldwide with a third of the total production and 35.3% of the world exports (COCHILCO, 2013; USGS, 2015). The importance of the mining industry for the region is such, that nowadays it represents 57% of Antofagasta's regional product, which comprises 48% of the total national mining production (Banco Central de Chile). Furthermore, 96% of the regional exports are minerals<sup>12</sup>, copper being the most important - representing around 30% of the total national exports (COCHILCO, 2013).

The Antofagasta region is at least seven times more specialized in mining than the rest of the country, a clear sign of its dependency to the industry. Moreover, the region has historically received most of the FDI taking place in Chile, only surpassed by the Metropolitan Region (capital of the country). Consequently, the region has accumulated an average of 14% of the total FDI materialized in Chile in the last 40 years, 91% of which goes to the region's mining sector<sup>13</sup>.

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<sup>11</sup> According to INE, 2014: Proyecciones de Población (Population Projection) Database.

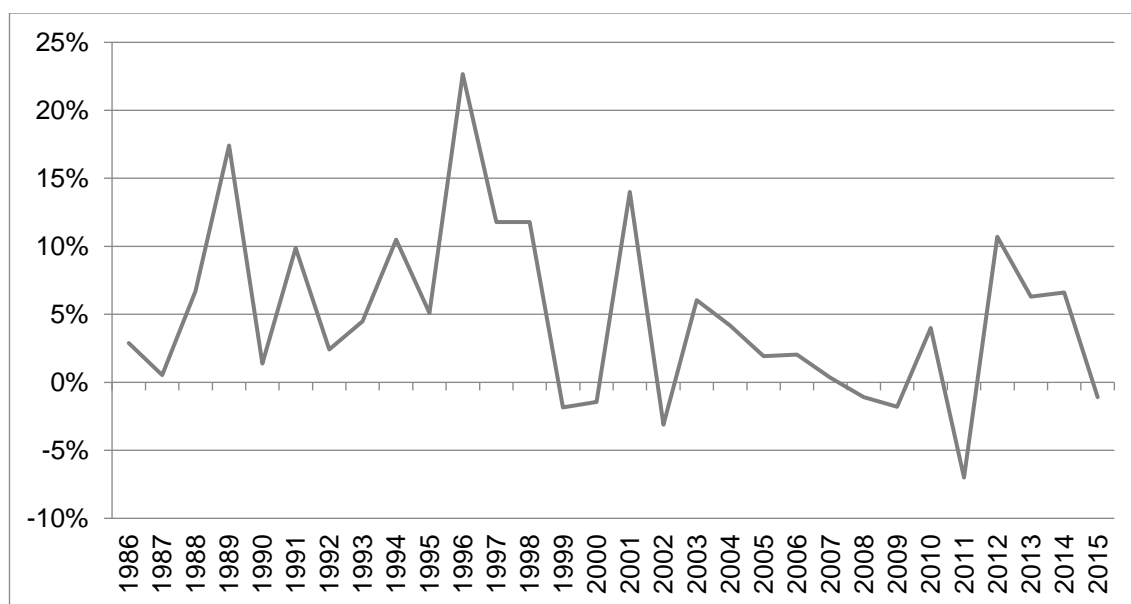
<sup>12</sup> According to data from the Servicio Nacional de Aduanas (National Customs Service).

<sup>13</sup> According to data from Comité Inversiones Extranjeras: Materialized Investment by Chilean Region and Sector Between 1974 – 2012.

Interestingly, during the last decade, the Antofagasta Region has been considered by several international institutions as an example of a ‘winning region’, due to its growth and perceived development based on the mining industry exploitation (CEPAL, 2009; OCDE, 2009; OECD, 2013a). These institutions have been impressed by the region’s average growth rate of 6%, and its GDP per capita of USD 48.000, which is about 2.8 times higher than the national average and even above the OECD average of USD 35.021 (OECD, 2013a).

However, most of the stunning macroeconomic results are driven by the mining industry’s sizeable production, and usually tend to disguise critical issues like the stark fluctuations in the regional growth rate (Figure 12) and the actual living conditions of the region, which are not as good as they ought to be according to these indicators. For example, the average household income per capita is considerably lower than the income per capita, at almost USD 9.000 (OECD, 2013a).

**Figure 12: Growth rate of the Antofagasta Region (1986-2015).**



Source: Own elaboration by using data from the Chilean Central Bank.

Furthermore, there are also other burning socio-economic issues, such as the higher cost of living in Antofagasta compared to other Chilean cities and regions; the effects the mining industry has had in terms of pollution and depletion of natural resources; the social impact of the FDI laws for the working class, citizens and indigenous population;

the impact over the health and quality of life of the population; and the economic sustainability in terms of what will be left after the mining bonanza is gone.

Additionally, the region faces three severe concerns regarding to its competitive position: the decrease in the copper quality ores due to their prolonged exploitation; and the insufficient amount of water and energy available for mining and social consumption. Since mining is intensive in the use of these two resources, and because it takes places in the driest desert of the world, water and energy supply<sup>14</sup> have become an urgent problem. The consequential increasing prices of water and energy have not only raised the already high regional cost of living, but also caused a loss of competitiveness of the Antofagasta Region and Chile compared to cheaper competitors, such as Peru or Zambia. These complications have been the source of several frictions between the social agents, the state and the mining MNEs.

Historically, the frictions between the agents of the mining GPN have been always present, shaping several state led policies regarding to the mining industry in the Antofagasta Region: from the early promotion of economic enclaves in the form of company towns during the nitrate era (1800s); passing through the nationalisation of the mining ores during the sixties and seventies; to the current period, where extreme neoliberal policies were imposed by the dictatorship. All these periods have had a particular bargaining power configuration among the actors, where bargaining power has shifted, sometimes abruptly, and some others very slowly, among them. The understanding of these historical dynamics in the complex relationship between the State, the mining MNEs and the civil society, can allow us to understand what is (and has been) the role of bargaining power over the development possibilities. Consequently, the main characteristics and dynamics of these three periods are detailed next.

## 5.4 THE NITRATE ERA AND THE RISE OF THE COMPANY TOWNS AND MINING ENCLAVES (1810s – 1879)

### 5.4.1 The dawn of the Chilean golden nitrate GPN

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<sup>14</sup> According to the INE (2011), the mining industry has used a relatively steady 34% of the total national electric production since 1997.

The history of the development of the Chilean nitrate GPN has been considered by some as the 'history of the delivery of the main natural wealth to foreign capitals' (Vitale, 2011) and a 'lost opportunity' (Meller, 2007). There is a wide belief that this situation ended up benefitting mostly the foreign investors, while also creating economic enclaves that were completely unsustainable after the bonanza was over (Cademartori, 2002). The Chilean nitrate story begins when, after independence from the Spanish Empire in 1810, the newly born Chilean State was too poor and weak to exploit its extractive resources and lead the economic development of the nation. Henceforth, the State opened the gates to FDI by implementing *laissez faire* policies, starting a period termed 'outward development' (Cariola & Sunkel, 1982; Salazar, 2003; Salazar & Pinto, 2002).

This stage was characterized by a high growth rate led by the exportations of natural resources. During 1860 – 1870 Chile was the main world copper producer, supplying between 40% and 50% of the world's total consumption (Salazar & Pinto, 2002), which helped to swiftly insert the country in the ongoing capitalist globalisation process. Such strategy paid off, as between the years 1830 – 1870 Chile achieved a period of prosperity never seen before. Since 1830, around 60% of the national tax incomes came from custom revenues, which allowed the stabilization of the internal political situation and the construction of basic infrastructure, like the train and telegraphic lines, ports, roads, schools and other basic urban services (Salazar & Pinto, 2002).

However, such dependency on international trade was a double-edged sword for the Chilean interests. National growth was extremely subordinated to international trade forces and fluctuations, since 80% of the Chilean exports were concentrated in the main four capitalist economies of the period - the United Kingdom, the United States, France and Germany -leaving the country exposed to external shocks. Due to this fragility, it was not surprising that Chile was one of the most affected countries after the economic crisis of 1870. Once the crisis hit the international markets, the country went from being the most important copper producer in the world, to contribute with only 5% – 10% during the 1890s (Salazar & Pinto, 2002; Vitale, 2011).

This economic catastrophe led the Chilean State to desperately look for new ores to exploit. Hence, this has been considered as one of the main causes of The Pacific War (or Nitrates War) that gave birth to the Golden Nitrate Era. So, in 1879, Chile won against the alliance between the Peruvian and Bolivian armies, gaining the control of the mining ores located in the current regions of Arica y Parinacota and Antofagasta, which were, and still are, extremely rich in mining resources such as nitrates and copper (Salazar & Pinto, 2002; Vitale, 2011). This promoted a new and stronger dependency on the nitrate,

especially saltpetre, known as ‘the white gold’ due to its relevance for the economic growth and national wealth.

#### **5.4.2 The nitrate bonanza and downfall (1880s – early 1930s)**

The Nitrate Gold Era started immediately after the end of the Guerra del Pacífico in 1883, when the Chilean State sold most of the nitrate ores to British foreign investors instead of nationalizing them. By the end of the war, the British investors owned 70% of the nitrate ores (Meller, 2007), laying the foundations of the close relationship between the Chilean State and MNEs. Led by the British entrepreneurs, Chile promptly recovered its relevance in the world mining industry as the biggest producer of nitrates worldwide. The rich and high quality mineral deposits, the high international demand for nitrates and the easy access from the ores to the sea through the ports of Iquique and Antofagasta<sup>15</sup>, allowed the transition from a broken country to a relevant world player (Meller, 2007; Vitale, 2011).

Hence, the period between the 1880s and the beginning of the 1930s is called ‘The Golden Nitrate Age’; due to an economic bonanza similar to the ‘gold rush’ in California. During this time, Chile witnessed a considerable increase in the national exports<sup>16</sup> led by the nitrate industry<sup>17</sup>, and a major increase in the growth rate and incomes of the state. The rising Chilean nitrate GPN comprised London as the centre of the mining MNEs headquarters; Santiago, as a strategic node where the foreign investors and politicians bargained new projects and further liberal legislation; and the newly acquired northern regions of Chile, where the extraction and production of nitrates took place in traditional company towns called ‘salitreras’ (Kerr & Siegel, 1954).

Some of the main characteristics of these company towns were their location next to the ores, and the replacement of the State by the company in several of its duties. The latter meant that public goods and services – such as housing, police, water, energy, public spaces, money and all forms of entertainment – were supplied and controlled by the company at a big expense, making the need for fiscal transfers from central governments

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<sup>15</sup> These secondary cities also acted as commercial nodes and intermediaries in the export of commodities (Phelps et al., 2015).

<sup>16</sup> Between 1890 and 1915 the national exports grew 325%. From this increase, half of the total national exports came from the nitrate industry in 1890, which reached a top of 70% before World War I (Mamalakis, 1971; Meller, 2007).

<sup>17</sup> Nitrate exports increased from US\$ 6.3 million in 1880 to US\$ 70 million in 1928 with a peak of US\$ 96 million right before World War I (Meller, 2007).

unnecessary (Phelps et al., 2015). Some of these company towns generated so much wealth, that they were known for bringing the best European shows to perform in their theatres.

However, these salitreras offered little joy for their workers and the local economies surrounding them. They were usually lured from distant places under the promise of well-paid jobs and a better life, only to find extremely harsh conditions in the company towns, such as: their location in the middle of the desert; wages paid in local currencies in the form of tokens, that could only be redeemed at local shops and other amenities (Phelps et al., 2015); and working conditions considered today as proto-slavery due to the inexistence of any kind of insurances, safety equipment or resting days (Salazar, 2003).

This was possible due to the tight relationship between the State and MNEs, where the former was mostly focused on providing the best conditions for the latter. This situation led to an increasing social unrest that ended up with the first general strike in Latin - American in 1890, where thousands of workers marched from the 'salitreras' to the port cities. Such mobilizations ended abruptly when the British MNEs convinced the Chilean government to take action, leading to the massacre of thousands of workers and their families by the army in several opportunities (Vitale, 2011). Sadly, this would not be the only time when MNEs managed to use the army in order to re-establish production in their mines.

In terms of the economic benefits for the host regions, the Chilean mining towns have been considered a prime example of economic enclaves, meaning that the production was tightly spatially delimited and isolated from rest of the productive fabric (Cademartori, 2002; Phelps et al., 2015). Thus, the company towns, or 'salitreras', were characterized by their weak economic linkages with the rest of the host regions; almost non-existent technological spillovers due to the tight vertical integration of the industry; the considerable exportation of rents to their headquarters, which reached about 6% of the Chilean GDP (Mamalakis, 1971); and the importation of most of the capital and technology necessary for the operation, which were not available in the country (Meller, 2007; Pinto, 1959).

However, the apparent indolence from the State regarding to the negative effects of the nitrate industry did not mean that its bargaining power was decreasing; on the contrary, thanks to the big push that it got from the mining taxes and export rights and the quantity and quality of its ores, the State was finally able to gain a significant role in the Chilean economy. In relative terms, the participation of the State in the national GDP increased

from 6% in 1880, to 14 % 1920 (Meller, 2007). Moreover, from the total incomes generated by the nitrate industry between 1880 and 1924, around a third part went to the State in form of taxes<sup>18</sup> (Salazar & Pinto, 2002). This meant that the State was finally able to invest in basic infrastructure vital to the later development of the mining industry.

The end of the nitrate bonanza started with the development of synthetic nitrate during World War I, which led to an abrupt end to the exploitation of nitrates when the Depression of 1929 hit the world. During this period, the price of nitrates fell resoundingly and, by 1932, the GDP per capita had fallen to 60% of its 1928 levels (Cademartori, 2002). As a result, Chile had to face a disastrous economic crisis that led to the closure and abandonment of most of the mining towns, today completely abandoned as ghost towns (see Figure 13).

**Figure 13: Nitrate Company Town named ‘Oficina Chacabuco’. It operated from 1922 to 1940.**



*Source:* Original picture, taken during fieldwork in 2013.

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<sup>18</sup> Which reached a peak in the decade of 1910 where 60% of the total national income came from the payments made by the nitrate industry (Salazar & Pinto, 2002).

### **5.4.3 The lost opportunity of the Chilean nitrate GPN**

Some of the main consequences of the Chilean nitrate GPN period were: the considerable value captured by the MNEs in the form of their high export of rents and utilities; and the transformation of Chile in a highly vulnerable and dependent industrial mono-structure and exporter country. Even though most the value was created and enhanced in the mining regions, the State's liberal doctrine let the British nitrate firms operate with complete freedom, which materialized in the creation of mining economic enclaves. Here, the company towns were never truly embedded with the rest of the territory, in the sense that they did not promote economic, social or technological linkages with the rest of the local productive fabric.

By guarding the foreign interests instead of the national ones, the Chilean State allowed MNEs to fully exert their bargaining power, not only within the company towns and host regions, but also in the rest of the country, by using their economic influence in order to crush strikes and promote further liberal legislation that served their purposes. Even though the State grew more powerful thanks to the increase in its income and the quality of the Chilean resources, it chose to protect the economic growth and FDI by siding with the MNEs. Thus, most of the bargains that occurred benefited the MNEs interests resulting in the impossibility of a fruitful strategic coupling between the national and foreign interests.

Consequently, the Nitrate Era period has been called as a 'lost opportunity', leaving the impression that after the downfall of the nitrate industry 'nothing was left in the country' (Meller, 2007; Salazar, 2003). It has been argued that the mining enclave policies were promoted to benefit only the few traditional groups allied with the foreign exporters, which hindered a broader process of vigorous domestic industrialisation (Cademartori, 2002; Moran, 1974). Nevertheless, this period also left some important basic infrastructure, crucial for when Chile found a new opportunity in the copper industry. This time, however, the Chilean State was better prepared to avoid repeating the same mistakes.



## 5.5 THE FOUNDATION OF THE COPPER GPN ERA (early 1930s – 1973)

### 5.5.1 The rise of the red metal

The severity of the nitrate crisis Chile obliged the country to re-consider its productive matrix and development strategies, leading to its rediscovery of the copper industry where it had historically been a major player. Luckily, since the early 1900's, the global copper demand had greatly increased due to the rise of electric power and the expansion of the construction sector in the world economies. Additionally, new technological advances made by the US in the mining technology made the big scale exploitation of low grade of copper ores (1% – 2%) profitable.

Consequently, the Chilean copper ores were attractive again, but the bankrupted Chilean State and entrepreneurs were not able to take over the copper industry. Hence, the state promoted a new wave of foreign investments, mostly from the United States, which financed several mining projects, such as the biggest open pit mine of the world, Chuquibambilla (1911); and the biggest underground mine worldwide, El Teniente (1914); both of which still hold their titles. By 1924 these mines were contributing with 80% of the total copper production in Chile. However, the State was not willing to repeat the disastrous experience caused by the unsustainable nitrate enclaves, increasingly augmenting its participation and control over the copper industry (Meller, 2007; Salazar & Pinto, 2002). This was the beginning of Big Copper Mining in Chile, which until 1970 added more than half of the total Chilean copper exports (see Table 2) (Meller, 2007).

### 5.5.2 The bargains between the Chilean State and the American MNEs

During the new copper era, the Chilean State showed a commitment in chasing its strategic objectives, namely, sustainable socio-economic development. To do this, it started a process of changing some of the initial – extremely favourable – conditions offered to the mining MNEs which, of course, caused a conflict with them and their home countries. Such clashes took place over several bargains, in a process that Moran (1974) described in detail while he developed his bargaining model by analysing the Chilean case.

According to Moran (1974, 1985) and Meller (2007), during the nitrate era, the mining MNEs had exerted an almost absolute bargaining power to achieve their strategic objectives, mostly due to the State's complicity. However, after the nitrate debacle, the State decided to take a more strategic approach in the bargain, by using its strategic resources and the advantage of the immense sunk cost related to the mining industry to its favour. Thus, as Moran (1974) and Vernon (1971) posit, the bargaining process can be separated in two periods: one before the investment, and one after the investment.

First, before the investment, the mining MNEs hold a considerable amount of bargaining power, since they concentrate the technological, financial and human capitals needed for the exploitation of the ores. They also have a deep knowledge of the industry, managerial and technical skills and established linkages with international suppliers and buyers. The high risk involved in the mining investments allowed the MNEs to make the countries compete and to exert considerable bargaining power, in order to secure generous rewards in case the project proved successful (Moran, 1985; Vernon, 1971).

Conversely, the Chilean State also held valuable strategic resources, such as the quantity and quality of its copper ores; the infrastructure needed for transport and mineral production left from the nitrate era; the easy access from the mines to the ports; the stable weather, labour force and capacity to provide fiscal incentives and favourable legislation. However, as shown in Figure 14, before every major investment commitment, the American MNEs were able to exert more bargaining power, securing higher returns from their copper investment. This bargaining power asymmetry was possible since the MNEs were still able to use their strategic resources, such as their monopoly over the capital, technological and network strategic assets, as a strong leverage for getting attractive conditions, while also pushing for further incentives and concessions. At the same time, the State had to sacrifice its participation in the copper returns, as is shown in the vertical fall that happens every time it had to negotiate a new investment (Figure 14) (Moran, 1974, 1985; Ramamurti, 2001).

Second, once the investment was materialized and proved to be profitable, the firms were unable to use the uncertainty and risk as an effective leverage in the bargaining process. Hence, after the costs were sunk, the power shifted from the MNEs to the Chilean State. Once the projects proved to be successful, the uncertainty and risk dissipated, creating what Moran (1985) calls a 'hostage effect' where the company was not able to (credibly) threaten to leave due to the large sunk costs involved. Simultaneously, Chile began to developing skills and expertise appropriate to the industry, which allowed to slowly increasing the critical mass of national human capital

that finally took over the American MNEs jobs<sup>19</sup>. This helped increasing the country's technical, managerial and bargaining skills, vital for later rounds of negotiations and improving its share in the returns of the copper industry (Figure 14) (Moran, 1974, 1985).

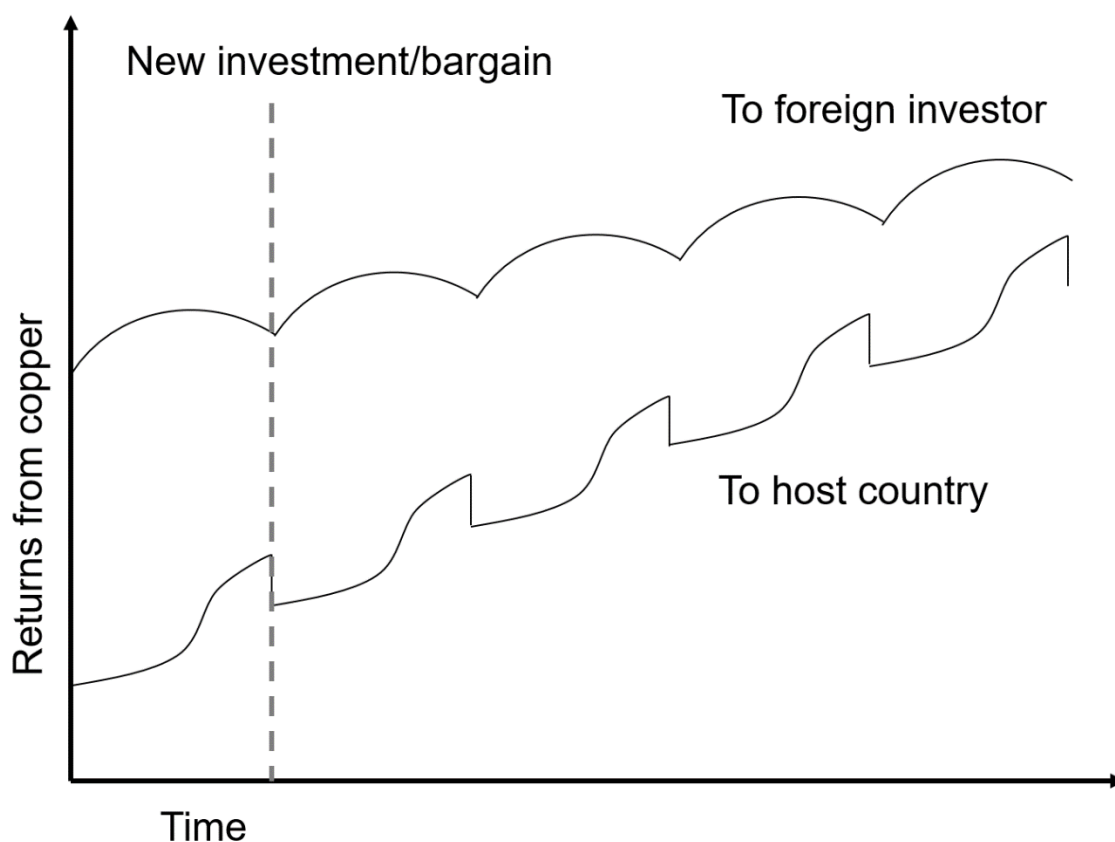
Later, once a new large lump of investments was negotiated (as shown in the dotted line of Figure 14), there was a new shift in the bargaining power towards the MNEs, since the State faced the situation of convincing FDI to materialize. This explains the brief fall in the Chilean capture of returns, which depicted its relative loss in bargaining power. Despite this, the bargaining State was still in a better initial bargaining position than in the previous period. Again, after the investment was successfully realized, the bargaining power shifted towards the State since, as Moran (1974, p. 165) puts it, 'as Chile... chipped away at ignorance and mystery, the esoteric value of the foreigner's services declined'. This implied that the fluctuations in the bargaining power became increasingly shorter; and progressively better for the country.

Thus, the more Chile advanced in its learning curve and the less risky the investments were, the more the country was able to exert its bargaining power to force renegotiations, adjustments or surtaxes, as a consequence of the shift in the balance of bargaining power (Moran, 1974). The more Chile was approximating to the end of this curve, the more the country had better skills and experience to operate the industry directly, which also diminished the cost of nationalism and the idea of expropriating and nationalizing the industry. This increasing bargaining power, added to the increasing socio-political outcry for moving away from 'dependencia', generated a climate in which a transversal set of voices raised claiming for higher taxes and the nationalization of the copper industry.

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<sup>19</sup> During the decade of 1960s, the El Teniente mine (property of Kennecott) had only 10 foreigners in a plant of 10.000 workers.

Figure 14: Relative distribution of returns of the copper industry.



Source: Based on Moran (1974).

Moreover, there was a growing concern during the 1950s about the American firms not investing enough to expand the production according to the national interests, which helped to create an increasing suspicion about the benefits of uncontrolled FDI. Despite having a considerable higher profitability compared to other countries<sup>20</sup>, Chile started losing participation in the world production of copper, which dropped from 21% (1945 – 1949) to 15% (1950 – 1959) (Meller, 2007). This was in line with the view that ‘copper was too important for the Chilean development to leave it in foreign hands’ (Meller, 2007, p. 34), something shared by most of the population and political elite. Furthermore, the American government intervened in several occasions in the Chilean copper industry in

<sup>20</sup> During the 1950’s the return rates of the copper MNEs were at least 19% per year in Chile compared to less than 10% elsewhere (Meller, 2007).

an unfavourable way to Chile, raising the country's discontent with the foreign investors (Mamalakis & Reynolds, 1965; Meller, 2007; Moran, 1974; Pinto, 1959).

All of these events led to a progressive distancing from liberal economic policy models and increasing discomfort with the American MNEs, which were seen as an obstacle to realizing the full economic potential of the copper industry; or even blamed as 'the cause of the country's underdevelopment' (Moran, 1974, p. 25). Thus, in order to reduce the external dependency and vulnerability of the economy and to take control over the 'engine' of the Chilean economy; the State starkly increased its participation in the national economy.

Since the copper industry was the main pillar of the Chilean economy, the State prioritized the revision of the initial conditions given to the American MNEs, leading to several bargains between them (see Figure 14). Due to the characteristics of the mining industry, new production or extractive investment comes in large discrete lumps, which forces the State and mining MNEs to have several bargains each time a new investment is planned. In each of these bargains, the bargaining power shifted according to the stage and level of uncertainty of the investment and the improvements of the Chilean learning curve regarding to the industry.

One way in which the State responded to these political pressures was by exerting its bargaining power to increase its share of value capture, through the increase of taxes to the MNEs. During the Big Depression, the copper companies were paying no more than 20% of taxes. However, during the Second World War, the country raised the taxes above 50%. By 1952, the total tax burden was above 65% (see Table 2). Furthermore, as Table 3 shows, the copper taxes contributed to more than one quarter of the total State tax revenues during the 1950s, and around 20% until the nationalization of 1971 (Mamalakis & Reynolds, 1965). Despite this considerable increase, the American MNEs were enjoying a period of economic success, and 'they did not begin to think seriously of abandoning or even cutting back on their Chilean operations' (Moran, 1974, p. 24; Salazar & Pinto, 2002).

**Table 4: Retained percentage of the gross profits in the Chilean big copper mining production (median of the annual percentage).**

<b>Before 1925</b>	<b>1925-40</b>	<b>1941-51</b>	<b>1952-60</b>	<b>1961-70</b>	<b>1971</b>
Around 11%	38%	58%	61%	66%	nationalization

Sources: Meller (2007) using data from (Mamalakis and Reynolds (1965); Pinto (1959)).

**Table 5: Relative participation of the big copper mining (BCM) in the Chilean economy between 1925 – 1970 (Annual average for each period).**

	<b>Share of total taxes</b>	<b>Share of national exports</b>	<b>Total BCM exports in MM US\$</b>
1925-29	4.5%	27.4%	127.9
1930-34	1.8%	25.3%	57.5
1935-39	4.8%	29.3%	66.8
1940-44	12.2%	39.6%	121.4
1945-49	16.2%	50.5%	265
1950-54	26.5%	50.2%	382.7
1955-59	26.3%	59.8%	439.2
1960-64	15.2%	56.2%	505.7
1965-70	19.9%	56.6%	936.9

Sources: Meller (2007) using data from (Mamalakis and Reynolds (1965); Pinto (1959)).

Finally, the continuous conflicts with the American MNEs created the ideal scenario in which the dream of ‘recovering control of the natural wealth’ and ‘restoring sovereignty over national development’ was finally within reach. By 1966, the president Eduardo Frei Montalva began the nationalization of the copper industry, with a partial expropriation of 51% of the copper mines, called ‘Chilenization’ (Salazar & Pinto, 2002). Thus, he proudly announced claimed that ‘this is the greatest battle that Chile has even won... A Second Independence!’ (Moran, 1974, p. 153).

Later, the socialist government of Salvador Allende finished the nationalization process in 1970, by expropriating all the copper mines while refusing to pay compensations to

the American MNEs. This and the threat of a socialist elected country in the context of the Cold War, caused the intervention of the American government, funding political groups to destabilize the Allende's government. This fostered the conditions leading to the coup of 1973, which saw neoliberal policies installed after the 'Chicago Boys'<sup>21</sup> took control of the economy (Meller, 2007; Moran, 1974; Salazar, 2003; Salazar & Pinto, 2002). During this whole period, the copper industry maintained the enclave logic present in the Salitre era, in which the big American copper mines at the beginning, and the newly created State owned mine during the 1960–70s, created company towns like Chuquicamata.

## 5.6 THE CHANGING ROLE OF THE STATE DURING THE COPPER AND NITRATE AGES

The main lesson from the nitrate and copper periods is related to the changing role that the State had in the bargaining with the MNEs. As discussed, the outcomes of such bargains have been crucial in determining the development possibilities of the host regions and country. What is more, even though Chile has displayed several periods of fast growth, it was not able to materialize such economic wealth into a more sustainable and diversified socio-economic fabric. Mining enclaves, or company towns, were the main spatial outcomes during these periods, in which most of the value was captured by the extractive MNEs. These spatial agglomerations materialized the participation of the State in the extractive production, and the way it exerted its bargaining power within the Chilean mining GPN.

In order to understand the role of the State in the Chilean society, it is compulsory to mention its evolution through history. Before the nitrate era, Chile was mainly an agricultural country, in which the political and economic power rested on an agricultural oligarchy. During the nitrate boom, a new oligarchy based on the production and exportation of mining resources, manufacturing and financial institutions was born, which was still very close to the agricultural oligarchy. Even though this new oligarchy was the most powerful one among the Chilean elites, it was unable to exploit the mineral ores, mostly due to their lack of experience, financial capital and the insufficient technology

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<sup>21</sup> They were a group of liberal Chilean economists that studied in the University of Chicago, under the tutelage of Milton Friedman. They became the most hard-core defenders and promoters of the complete liberalization and privatization of the country's assets.

and human capital available in the country at that moment. Henceforth, the best choice for the State was to lure FDI into exploiting the mineral wealth of Chile, by liberalizing the economy (Meller, 2007).

So, during the nitrate golden era and until the Big Depression, 'the possibility of earning foreign revenues from unknown mineral deposits was considered a windfall, and primitive forms of tax collection – frequently royalty payments – were the reward collected by governments ill – equipped to judge adequately how far they could push against the companies' (Moran, 1974, p. 164). The role of the State during this period was mostly as an intermediary between the foreign investors and the Chilean society, while using its bargaining power to capture a share of the mineral exports that allowed it to grow in scope and strength. Moreover, some internal political and business groups helped the mining MNEs to exert their bargaining power in order to get the best conditions for their production, in order to benefit themselves from the foreign presence (Meller, 2007).

Furthermore, after the Great Depression of 1929, the State started to gradually develop a new 'middle class' by transforming itself into the main job provider. It was the alliance between this new middle class and the workers that started the political pressure over the State in order to make it take a more dominant position in the socio-economic development that finally led to the nationalization. Hence, during 1940 and 1970 the State played different roles in the productive process, while also transforming itself in the most important socio-economic actor. Thus, during this period, the State was able to fully exert its bargaining power in order to get to maximise its capture of value within the extractive GPN. This also allowed the State to promote several social reforms, like a new constitution and legislation that improved the working conditions of the Chilean population, improved the distribution of incomes, enhanced the diversification of the productive fabric and reduced the dependency on foreign capitals (Meller, 2007; Salazar & Pinto, 2002).

Finally, the nitrate and copper eras share several characteristics, such as the extreme dependency on FDI and mineral extraction and the proliferation of mining towns. However, they also have stark differences in terms of the role of the state and how it exerted its bargaining power after each investment. As Moran (1974) argues, once the Chilean State started to move upwards in the learning curve regarding after it gained experience in the mining industry, it started to slowly trying to improve the conditions of the deal after the investments were made. All of this concluded in the State fully exerting its bargaining power in the nationalisation process of the early 1970s. All of this is summarized in Table 4, which depicts the main characteristics of these two periods in



terms of the GPN framework. This period in which the State was a major player in the Chilean economy, and a powerful agent within the Chilean mining GPN had an abrupt ending, with the coup of 1973 and the posterior neoliberal age.

## 5.7 THE VIOLENT ORIGINS OF THE NEOLIBERAL COPPER GPN (1973 – to date)

The coup of 1973 was the beginning of a deep transformation in the Chilean socio-economic structure. The horrors in human rights violations, political persecution and violence that the Pinochet's regime spread over the country provided the perfect state of shock and fear (Harvey, 2005; Klein, 2007) necessary for the extreme transformation suffered by the Chilean economy. This meant the shift from a situation in which the State was able to fully exert its bargaining power regarding to MNEs, to a one in which the State slowly – at the beginning – and then rapidly (during the 1980's) declined to participate in the economy. During this last period, the dictatorship applied extreme neoliberal policies, aimed to privatize, de-nationalize and bring fresh FDI to the country.

However, this was not an instant and smooth transition towards the neoliberal model. During the first two years, the dictatorship was cautious in its economic policies, since the country still was quite unstable and its political power was not yet fully established. Only in 1975, and after failing to limit high inflation rates and stabilize the economy, the dictatorship allowed the Chicago Boys<sup>22</sup> to take full control over Chilean economic policies (Salazar & Pinto, 2002). This meant a stark shift from a situation in which the State controlled and heavily intervened the economy, to a situation in which the whole economy was suddenly completely liberalized (Meller, 2007).

Thus, the neoliberal era was born, which essentially proposed a simple change: to completely denationalise the economy allowing the market forces to allocate and distribute the Chilean wealth. However, despite the wave of privatizations, the military government never thought about getting rid of the state owned CODELCO, due to its massive relevance for the Chilean economy and the army coffers<sup>23</sup>. The economic retreat of the State was fast, and by 1980 the public sector was already sold or returned

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<sup>22</sup> Their core policies were famously condensed in a document called *The Brick*, due to their toughness and length.

<sup>23</sup> Thanks to the 'restricted law on copper', 10% of the incomes generated by CODELCO's sales go directly to the Chilean army as a secondary source of income.

387 firms. Furthermore, the deregulatory policy implied the creation of a financial market and the openness to international trade, ending the protectionist policies put in place after the Big Depression (Salazar & Pinto, 2002).

**Table 6: Summary of the Nitrate and Copper Age.**

	<b>Nitrate Age (1980 - 1929)</b>	<b>Copper Age (1929 - 1973)</b>
<b>Bargaining power</b>	Mining MNEs are able to fully exert their bargaining power before and after making the investments in order to get the best conditions for them. They also replaced the State in several of its duties within the company towns. The State does not exert its bargaining power due to its lack of experience, financial and human capital and dependence on mining.	A more experienced State is able to exert its bargaining power every time a new wave of investments was made. By the end of the period, it is able to considerably improve the working conditions within the mining industry, as well as its economic linkages and relevance for the national budget. It fully exerts its power by nationalizing the copper industry.
<b>Value</b>	Mostly created, enhanced and captured by British MNEs in the form of exportation of profits. Some value was captured by the State in the form of basic taxes and custom duties.	Mostly created, enhanced and captured by the mining firms (American MNEs and State owned mining firms). A higher share of value is retained in the country due to higher taxes, the exportation of refined minerals and the nationalization of the industry.
<b>Embeddedness</b>	Mining towns almost completely isolated from the host socio - economic fabric. Economic linkages are few and weak; most of the technology, human capital and spare parts are imported.	State owned firms develop stronger socio - economic linkages with the rest of the productive fabric. Sense of national pride regarding to the 'recovery' or the copper industry.
<b>Strategic coupling</b>	Strategic coupling was unable to be reached due to the overwhelming bargaining power exerted by the British MNEs.	The State was able to reach several of its strategic objectives, but only some of the American MNEs (the ones that receive some compensation) were able to do the same due to the nationalization process.
<b>Spatial outcome</b>	Economic mining enclaves in the form of company towns completely run by the MNEs.	Economic mining enclaves in the form of company towns. Some of them were run by American MNEs and others by the State owned firms.

Source: own elaboration.

These policies were crystalized in the constitution of 1980, which made the newly adopted neoliberal system extremely difficult to modify in the later years. This led to the high concentration of economic influence in private groups (by 1979 the bigger 10 groups controlled 135 of the 250 private firms); an increasing gap in the income inequality (there were massive layoffs in the State apparatus due to its shrinking as well as the lower wages allowed by the liberalization of the labour market); and a speculative environment at a big social expense.

The enormous social cost was reflected in the stark increase in the unemployment rate, which in 1983 reached 28.9 % of the total labour force; the decrease in the participation of the industrial sectors in the economy due to the lift of the tariff protections<sup>24</sup>; a high decrease in the real wages which dropped 40% between 1970 and 1975 (Foxley, 1982); and an increase in the inequality<sup>25</sup>; all of which led to a critical augment in the poverty level of the Chilean citizens. Furthermore, despite the spread belief that the abuses committed during this period were necessary to generate growth and development, the average growth rate between 1973 and 1990 was only 3.7%, which is not significantly different than the yearly average of 3.86% between 1940–1973, or the 2.29% between 1880–1930 (Meller, 2007; Salazar & Pinto, 2002).

These poor economic achievements caused several protests which destabilized the dictatorship, leading to the plebiscite of 1988, in which (against all predictions) the Chilean people voted for returning to democracy. This finally happened in 1990, but not before the Chicago Boys approved the last laws to finish and secure the neoliberalisation process, turning the country into a place in which everything, from the educational to the pension system, was privatized.

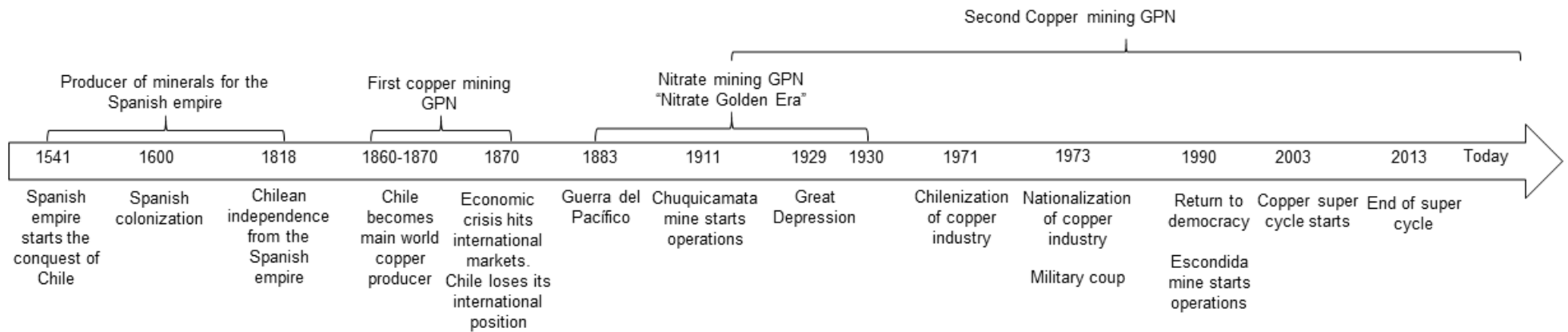
Later, during the 1990s, Chile witnessed a massive inflow of FDI that materialized in new mining projects, such as La Escondida (owned by BHP Billiton), the biggest copper mine in the world. Even though the new democratic government belonged to a coalition of left parties, the neoliberal policies were deepened and the State continued to retreat, setting the ideal conditions for the new mining MNEs to fully exert their bargaining power. This is the period that will be analysed in this research, since it extends to the current days.

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<sup>24</sup> The metal-mechanic and textile industries had a fall of 44% and 31% over their participation in the national GDP (Muñoz, 1995).

<sup>25</sup> Between 1969 and 1978, the two quintiles with lower incomes reduced their participation in the overall consumption from 19.8% to 14.5% while the quintile with higher incomes increased from 43.2% to 51% (Foxley, 1982, p. 69).

**Figure 15: Summary of the main historical events in the evolution of the Chilean Mining GPNs.**



Source: Own elaboration.

## 5.8 CONCLUSIONS

This section depicts the relevance of the Chilean case to the world mining industry, while also providing the historical context in which the mining GPN has developed in the country. Hence, Chile has always been a relevant actor in the global mining GPN, firstly as the biggest producer of nitrates, and later, as the main producer of copper. Interestingly, the relationship between the mining MNEs and the Chilean State has changed as the mining GPN itself has developed in the country. During the nitrate era, the British multinationals exploited the nitrates by developing what has been considered an extreme form of mining enclaves, building company towns next to the mining ores that were completely under the MNE's administration. In these enclaves, the firms substituted the State and most of its basic functions, while also exporting most of the rents to their home countries. However, thanks to the major incomes produced by the nitrate industry, the Chilean State was able to become a relevant socio-economic actor for the first time, and also enjoy a considerable bargaining position once the investments were made in the country. This was not used in order to foster sustainable development though, and despite some efforts in developing some basic infrastructure, the whole period finished in a major economic crisis.

The previous situation was fiercely avoided by the governments that nationalized the newly developed copper industry, which were desperate to avoid committing the mistakes leading to the nitrate downfall. In this period, the State not only develops a better bargaining position due to the quality and quantity of its copper resources, but it also fully exerts its bargaining position while facing the mining MNEs. This led to a strong break in the relationships between the Chilean State and mining MNEs, which according to some historians may have caused the US intervention in the coup happened in 1973.

The chapter finishes its historic representation of the Chilean mining GPNs by addressing the bloody origins of the current copper mining GPN. A deeper understanding of this copper mining GPN in terms of how the actors have related and bargained with each other, as well as the regional and national consequences of such bargains is developed in the following chapters by detailing the power resources and constraints that both, the Chilean State and the mining MNEs, possess. Some of these resources and constraints and the way bargaining power is exerted are similar to the ones depicted in the historic incarnations of mining GPNs, while some others are recent and have changed the way in which the bargains take place. Hence, the next chapter starts this

analysis with the actor in charge of promoting sustainable development, the Chilean State.

## **CHAPTER 6**

### **THE CHILEAN STATE: ITS STRATEGIC POWER RESOURCES AND CONSTRAINTS**

#### **6.1 INTRODUCTION**

The following sections take the proposed bargaining power definition and apply it to the analysis of the main actors in the Chilean copper GPN: The Chilean State and the mining firms (national and MNEs). The aim is to provide an empirical analysis of how bargaining power works, by focusing on its sources, constraints and how these promote or restrain each actor's exertion of it. Such analysis is crucial to understand how bargaining power influences value, embeddedness and, ultimately, the spatial agglomeration and development possibilities for the Chilean copper mining GPN. The analysis considers three nodes: The Antofagasta region, where the production takes place; Santiago, capital city of Chile; and London, where most of the most important decisions are made regarding to the copper industry.

Each actor of the Chilean mining copper GPN holds different strategic resources which can be used as a source of bargaining power in order to achieve their strategic objectives. Similarly, each actor also faces a particular set of constraints that will impede them for achieving such objectives. The following two chapter focuses on describing: the strategic resources they hold; how they are distributed; how actors face and overcome their constraints, and; the way they exert their resources in the bargaining process.

This analysis is done starting with the sources of power and the constraints of the Chilean State, followed by the mining firms. Later, the use of these resources in the successive bargains is developed, as well as the implications of this process in terms of value and embeddedness for the host region and nation. The civil actors are incorporated in the analysis of the other two agents, but not greatly developed, since the focus of this research is on the bargaining between the State and the mining MNEs. The period analysed is from 1990 (the year Chile returned to democracy) until the present day.

This first chapter focuses on the strategic resources and constraints of the Chilean State, which determine its later capacity to bargain with the mining MNEs. The selection of the strategic resources took into account what mining experts and current literature consider as the most valuable when the country and host region bargain with the mining industry, which can be grouped in: the quantity and quality of copper deposits found in the country;



its extremely FDI-friendly legal and taxation regimes; its political and economic stability; the high prices of copper due to the commodity 'super cycle'<sup>26</sup>; and the international perception of Chile as a 'land of opportunities' for FDI and new projects.

Likewise, Chile faces several constraints on fully exerting its bargaining power. These come from external as well as internal sources, and could present serious limits on achieving the country's strategic objectives, which are the focus of the second part. The various constraints identified were grouped in three broad categories: competitiveness concerns; issues related with the structure and functioning of the State; and political affairs, and their analysis provides the last piece for addressing the potential power and its scope that the State can exert while negotiating with the mining MNEs.

## 6.2 THE STRATEGIC RESOURCES OF THE CHILEAN STATE

### 6.2.1 The quantity and quality of the Chilean copper deposits

Chile's deposits and quality of copper have been considered 'World Class' (World Bank, 2006, p. 117). It is the largest copper producer in the world. Its share in world production was 30% in 2014<sup>27</sup> with a mining production of 5.7 million of metric tons (MT). As Meller (2007) notes, such production is much greater compared to the production of other relevant copper producers, namely China, Peru and the United States (see Figure 15). The stark increase in the production of copper relates to FDI attraction policies implemented during the Pinochet dictatorship, in the form of several laws and concessions that turned the country into a fiscal paradise.

As a result, the accumulated FDI that Chile received between 1990 and 2005 was almost eleven times the accumulated FDI that the country received between 1974 and 1989, a tendency that has continued in the last decade thanks to the high prices of the resource super cycle<sup>28</sup>. Most of this FDI was materialized in the mining industry, which explains

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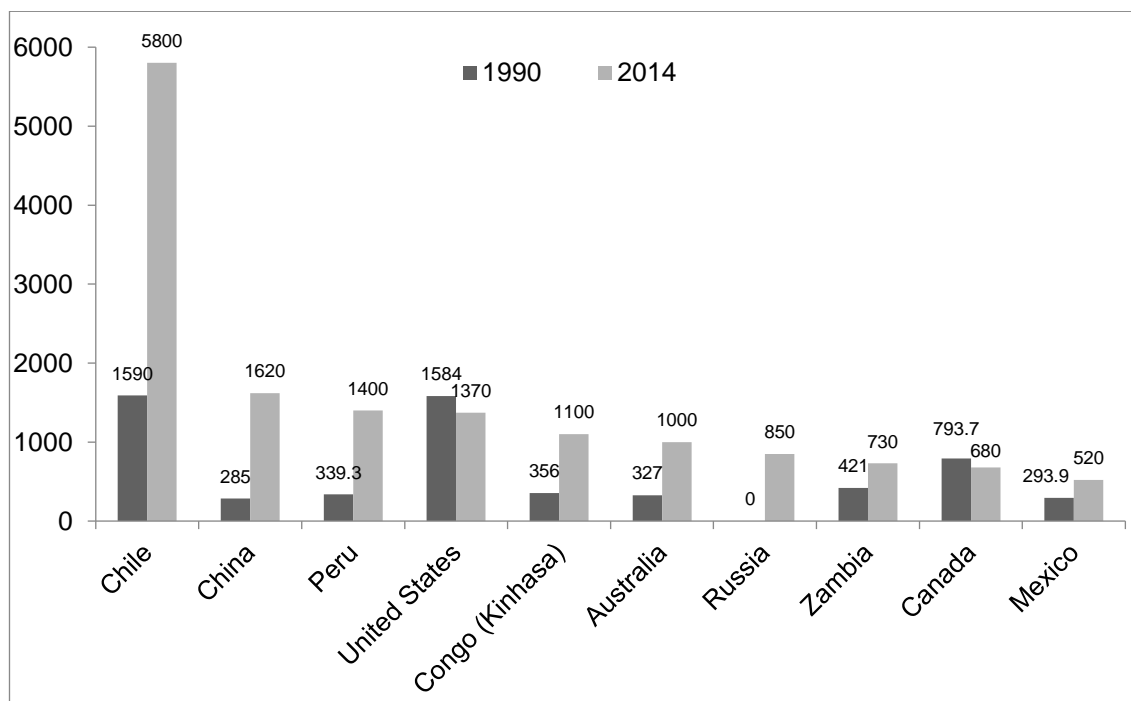
<sup>26</sup> A 'commodity super cycle' is a period where the prices of one or more commodities greatly increase for a decade or more, to then slowly return to the pre cycle prices. A comprehensive study about the reasons causing them is found in Erten and Ocampo (2013).

<sup>27</sup> According to the USGS data consulted in 2015.

<sup>28</sup> According to data from Comité de Inversiones Extranjeras (CIE) (Foreign Investments Committee) available in <http://www.ciechile.gob.cl/es/inversion-en-chile/estadisticas/>

the abrupt increase in the national copper production that went from 1590 thousand TM in 1990 to 5800 thousand MT in 2014 (Figure 15).

**Figure 16: Main producers of copper, 1990 - 2014 (thousands of TM).**



Source: Own elaboration according to data from USGS (2015); USGS (1994).

Furthermore, Chile has the largest reserves of copper in the world. As show in Figure 17, in 2014 the country concentrated 30% of the global reserves, nearly tripling the reserves hold by second and third places, occupied by Australia (13%) and Peru (10%) respectively (Meller, 2013). These reserves are exploited by several private and State owned projects and firms, from which two are vital for the worldwide copper market. The first is the state owned CODELCO<sup>29</sup>, the biggest copper producer firm of the world. Only in 2014 it produced 1,622 thousand of MT of copper, representing 29% of the national and 9% of global production. The second is the private mine ‘Escondida’ (owned mostly by BHP Billiton), the biggest copper producing mine worldwide. In 2014 it contributed 1165 thousands of MT of copper or 20% of the Chilean and 6% of world production.

<sup>29</sup> CODELCO is comprised by eight operations: Andina, Chuquicamata, El Teniente, Gabriela Mistral, Ministro Hales, Radomiro Tomic, Salvador and Ventanas.

**Table 7: Production of copper in thousands of metric tons (MT) and percentage of the Chilean participation in the world production (1950 - 2014).**

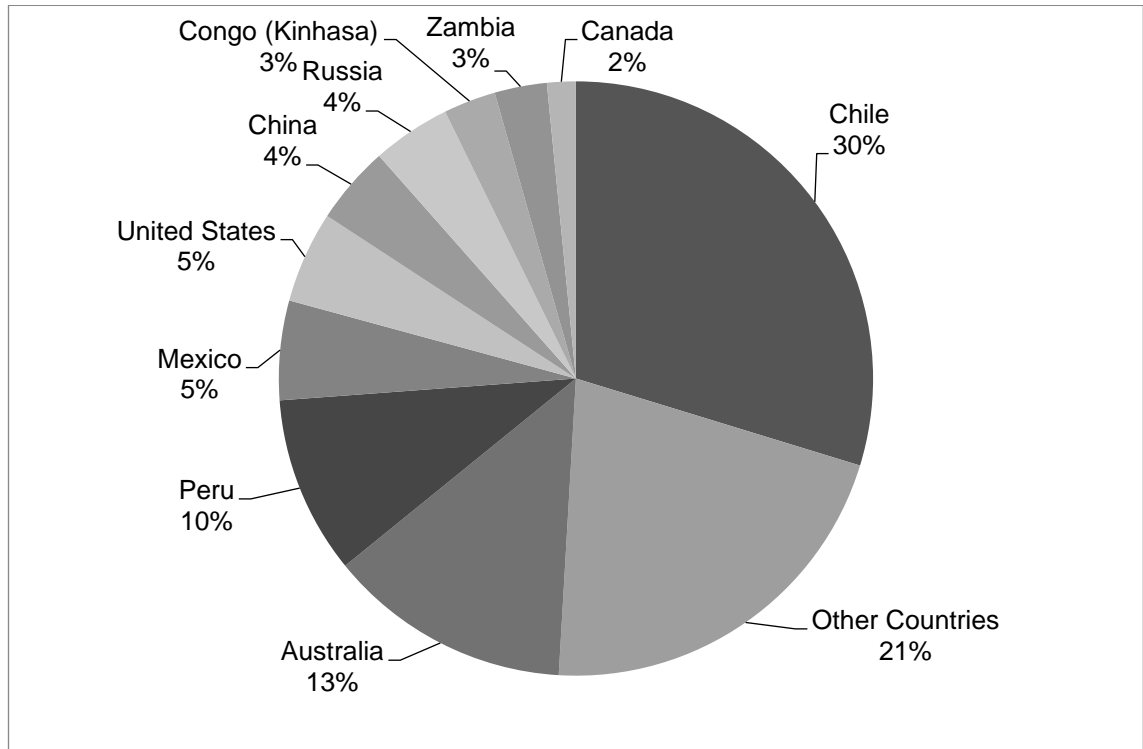
<b>Year</b>	<b>Chilean production (in thousands of MT)</b>	<b>Participation in the world production</b>
1950	363	15%
1960	532	13%
1970	692	11%
1980	1,068	14%
1990	1,588	18%
2000	4,602	35%
2010	5,419	34%
2014	5,747	31%

*Source:* Own elaboration according to data from COCHILCO (historical statistics).

The quantity and quality of the Chilean copper resources were also widely recognized by most the interviewees as one of the major strengths of the country. As one of the main Chilean mining entrepreneurs and representative of the Mining Industry stated ‘...when God created the world, He put his mining finger on the Second [Antofagasta] Region of Chile’ (INT8).

Such resources were considered as highly strategic by all CEOs interviewed from the mining MNEs, who admitted that they would not be able to find similar deposits in other countries. They all agree that these deposits were very important when the firms decided where to invest, and for how long. Similarly, both the Chilean State, through its public servants and politicians; and civil society, represented by civil representatives and NGOs recognize that Chilean copper deposits are extremely important when bargaining with the foreign agents with a view to achieving sustainable development, something that mirrors what Moran (1974) found in his study.

**Figure 17: Share of world copper reserves in 2014.**



Source: Own elaboration according to data from USGS (2015).

### **6.2.2 Legal and taxation regimes favourable to FDI**

Chile is also known for its extremely FDI-friendly legal and taxation regimes. It is considered a ‘tax heaven’ for mining investments worldwide – a strong selling point for bringing new FDI into the country. The FDI friendly attitude started with the dictatorship in 1973, mostly due to the strong influence of the ‘Chicago Boys’, and it has been deepened during the democratic governments that came after the return to democracy in 1990.

Thus, the previous nationalization of the copper industry during the previous democratic governments, during Eduardo Frei Montalva and Salvador Allende’s periods, was deconstructed through a series of laws approved during the Dictatorship and expanded by subsequent democratic governments (Acuña, n.d.; Alcayaga, 2005). Nowadays, Chile is being sold internationally as a very attractive destination in terms of legal security and stability for FDI, since its legal framework comprises both constitutional and legal provisions. Such laws are detailed next:

### **6.2.2.1 Laws approved during the dictatorship period (1973 – 1989)**

Initially the 'Junta Militar'<sup>30</sup> established in their new national Constitution of 1980 that the State 'is the absolute and infeasible owner of all mineral wealth, including all mines' (Comité de Inversiones Extranjeras (CIES), 2012, p. 60), due to its strategic relevance for the economy of the country. However, the Junta later approved several laws that opened the country to FDI, while also providing irresistible tax incentives for new projects. The most important were the 'Ley de Renta' (Income Tax law); the 'Decreto Ley 600' (DL. 600); and other laws liberalizing the mining industry, each of which contributed to make the country attractive for FDI in the following ways (Íbañez, 2003):

The ley de Renta (income tax law), established in 1974, decrees that the taxable income for the firms will be the 'operational taxable income', which is the result between the gross income minus the cost related with the production and sales. This law allows the consideration of several items as part of the production costs, which diminishes the taxable income. Among the most important, there are: the accelerated depreciation of assets, meaning that the production expenditures related to this concept increases in the short term; the payments for financial services, allowing the firms to deduct the financial cost of a loan obtained; the transfer prices, where the mining MNEs sell their products to their subsidiaries at a higher price than the market price, increasing their production costs; and the contributions or donations for cultural and educative ends, mostly materialized through CSR, that also allows a reduction in tax.

The DL. 600, established in 1974, is the main legal regulatory framework for regulating the FDI. It is a 'law contract' between the Chilean State and the firms that secures the tax invariability of paying a unique tax for all the investments that entered the country embracing this law. This tax cannot be modified unilaterally, and it lasts from a minimum of ten years for up to twenty years for investments over 50 million dollars. This legal contract is above the national sovereignty, meaning that is not controlled or influenced by the State in any form, since an autonomous organism (the Comité de Inversiones Extranjeras CIES / Foreign Investment Committee) is the one in charge of signing it on behalf of the State.

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<sup>30</sup> The Military Junta was a form of government adopted between 1973 and 1978 during the Chilean dictatorship. It was comprised by the Commanders of the army, air force, navy and the General Director of the police.

Thus, the CIES approves new investments only based on their compliance with the Chilean legislation, without considering any other variables. The logic behind this is to limit the discretion of the State in the approval of new investments. Consequently, as the Foreign Investor Guide published by the CIES (2012) establishes, the main principles behind the DL.600, which are the: economic freedom; non–discrimination and; non–discretionality of procedures and legal security.

Finally, the Ley Organica Constitucional de Concesiones Mineras (Constitutional Organic Law on Mining Concessions) and the Código de Minería (Mining Code), approved in 1982 and 1983 respectively, are the specific laws regulating the mining industry in Chile. These laws establish a stark break related to the previous Chilean mining legislation, mostly regarding the role of the State in controlling and granting mining concessions. Both establish that the public authority is unable to decide whether to authorize or not a mining concession a priori. They also create conditions in which the mining concessions given to the firms last indefinitely. Moreover, they also provide a really strict set of retributions from the State to the MNEs in case of expropriations, and discourage public investment in the mining sector. These laws effectively privatized the mining industry in Chile (Alcayaga, 2005; Íbañez, 2003).

#### ***6.2.2.2 Laws approved during the Democratic period (1990 – to date)***

After the return to democracy, FDI-friendly laws and policies were deepened by the new governments of La Concertación as a way to consolidate the neoliberal ideology prevailing in Chile. Two are particularly important: the law 18.985, and the failed attempt at introducing royalty payments (Alcayaga, 2005; Íbañez, 2003). The law 18.985, approved in 1990, establishes that the sale of mining belongings is exempted from income tax and it changed the mining taxation from a presumed rent regime to an effective rent system. This is vital, since the taxes based on the presumed rent were related to the sales of mineral, independently of the profits or losses of the mining firms. Conversely, the taxes collected from an effective rent are calculated and paid only if the firm has profits. Furthermore, only the big mining firms that produce at least 36.000 tons of copper per year can use this form of taxation.

This law also creates the ‘costo de pertenencia’ (ownership cost). This allows the mining MNEs to include as a cost the depreciation of their natural reserves, which can be subtracted from the taxable income, instead of paying that cost to the Chilean State.

Hence, not only the mining MNEs do not have to pay royalties for exploiting the natural resources in Chile, but the mining concessions are conceded for free by the Chilean State to the foreign investments.

Later in 2005, the law 20.026 was approved, which is wrongfully known as the Mining Royalty law. A royalty can be considered as the rent MNEs pay for exploiting, using and profiting from the natural resources and land owned by the State. There were two attempts to create a royalty in Chile, one in 2004 that tried to establish a real royalty, but did not succeed; and a second one in 2005, that is not a real royalty, but a specific tax for the mining industry. The latter was approved as the law 20.026, and is only applicable for the investments made after 2010, since the previous investments were made under the DL.600 that provides them with tax invariability. However, this new law also provides tax invariability for 12 years for the firms that accepted it (until 2017) and it actually contributed to lower the taxes paid by the mining MNEs, so most of them decided to embrace it.

A New Royalty law, or law 20.469, was also approved in 2010, as a way to support the reconstruction of the zones affected by the earthquake of 2010. It is also a specific tax for the mining industry; and it considers an extension of the invariability period of six years and a rate that varies between 5% and 14% for the new mining projects and for those that already have signed a contract with the State as of 2018. This new taxation system was voluntary, but 94% of the mining companies adopted it due to the incentive of tax invariability until 2023 (six years more compared to the previous royalty law) (Minería Chilena, 2013).

All these laws have established Chile as one of the most attractive countries for investing. The Fraser Institute annually ranks states, provinces and countries according to their investment attractiveness by asking to the mining company officials. In this rank, Chile has been among the top 13 most attractive countries to invest in the world since 2005, and the most attractive one in Latin America since 2010. Furthermore, according to the World Bank (2006, p. 195), it is one of the countries with the lowest total effective tax rate, as Table 5 shows. Thus, the tax legislation caused by the extreme neoliberalisation of the Chilean society (Harvey, 2005; Klein, 2007) has played a vital role in luring FDI into the country, and it has been recognized by most of the interviewees as one of the country's strongest resources.

**Table 8: Foreign Investor Internal Rate of Return (IRR) and Total Effective Tax Rate for a Model Copper Mine in Selected Countries and States (2003).**

Country	Foreign investor IRR (%)	Total effective tax rate (%)
Lowest taxing quartile		
Sweden	15.7	28.6
<b>Chile</b>	<b>15.0</b>	<b>36.6</b>
Argentina	13.9	40.0
Papua New Guinea	13.8	42.7
Zimbabwe	13.5	39.8
Philippines	13.5	45.3
Highest taxing quartile		
Indonesia (non-COW 2002)	11.2	52.2
Poland	11.0	49.6
Ontario, Canada	10.1	63.8
Uzbekistan	9.3	62.9
Côte d'Ivoire	8.9	62.4
Burkina Faso	3.3	83.9

*Source:* Adapted from World Bank (2006) which used data from Otto (2002).

### **6.2.3 Political, economic and tax stability**

When asked about the main strategic resource that makes Chile stand out from the rest of mining countries, there is a strong agreement among the interviewees pointing to its 'political, economic and tax stability'. Stability is a vital strategic resource for mining MNEs, due to the long term nature of their investments. Mining MNEs seek to establish 'long term relationships' in countries that provide 'economic, tax and legal stability' (INT 23) or what they call 'clear rules of the game' (INT 38). This has also been a major argument favouring investing in Chile, in a world market filled with several mining competitor countries, such as Peru or South Africa, and has been widely promoted by the national agencies in charge of bring FDI into the country (INT 23).

The genesis of Chilean stability is in the XIX century, where 'the institutions replaced the decisions of the citizens, who were considered immature and ignorant, for an institutional base that was able to preserve the republic and common good from the wisdom of the



oligarchy' (Mayol, 2012, p. 79). Such change happened by a process where politics as an exercise of social power was supplanted by a naturalization of the institutions, 'which should be allowed to work' (Mayol, 2012). This was deepened during the dictatorship, through its exertion of extreme violence and terror over the population, and it continued after the return to democracy. In the later period, the country adopted what has been called the 'politics of the consensus' as a way to avoid political dissent during the fragile first days of the democracy, since a return to a military government was still a real possibility (Meller, 2007; Moulian, 2002).

The politics of consensus assumes an 'imaginary harmony', in which the dissent regarding the characteristics of the economic, political and tax model imposed by the dictatorship has largely disappeared (Moulian, 2002). Such consensus has been expanded through the continuous advance of the neoliberal model, and it has cemented the obsession with stability and support to FDI that the country has, becoming what has been called 'a market ideology' (Lukes, 2005). As an academic put it, 'Chile has sold internationally its macroeconomic stability. That was what the dictatorship sold and that is what [the country] keeps selling nowadays' (INT 38). This is perfectly summarized in a report from the CIES to promote Chile as a 'Land of Opportunities', where they claim that:

'Chile is a safe and reliable place in which to do business. This is borne out by risk rating agencies which have maintained or increased their ratings for Chile, highlighting its political stability, low level of public debt, the health of its financial system and the solidity of its macroeconomic system at a time of external crisis' (Comité de Inversiones Extranjeras (CIES), 2013, p. 19)

Furthermore, the Chilean economy has shown a stable growth rate of around 5% on average during the last two decades, while also expanding enough to pass from a debtor to a creditor country in international terms – with Chile now one of the 38 countries members of the New Arrangements to Borrow (NAB) from the IMF, contributing with 1,360 SDR millions to this fund<sup>31</sup>.

Thus, Chile has been considered an example of a stable country, where the rules of the game are pretty much static, or modified only after reaching agreements between the State and mining MNEs. Investors have repeatedly cited this as a major reason for

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<sup>31</sup> The SDR is an international reserve asset, created by the IMF to supplement its member countries official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies.

considering investing in the country (Hiep Dang, Director of McAfee Labs, Quoted in Comité de Inversiones Extranjeras (CIES), 2013, p. 8) (Jon Segovia, Partner and Director of Solarpack, quoted in Comité de Inversiones Extranjeras (CIES), 2013, p. 38).

**Table 9: Ranking of the top ten copper producing countries, according to new investments encouraged by their political stability (2014).**

Response	1	2	3	4	5
Canada	55%	32%	10%	2%	1%
Australia	48%	37%	9%	5%	1%
United States	43%	34%	20%	3%	0%
Chile	37%	42%	18%	4%	0%
Zambia	24%	38%	29%	5%	5%
Peru	17%	41%	29%	14%	0%
Russia	14%	14%	7%	43%	21%
Mexico	14%	48%	31%	7%	0%
China	11%	32%	26%	21%	11%
Congo	0%	10%	19%	55%	16%

1: Encourages investment	2: Not a deterrent to investment
3: Mild deterrent to investment	4: Strong deterrent to investment
5: Would not pursue investment due to this factor	

*Source:* Own elaboration using data from the Fraser Institute Survey of Mining Companies 2014.

This is reflected in Chile being considered as the third most stable country in Latin America; and the fourth among the main producers of copper after Canada, Australia and the United States, by the Fraser Institute Survey for 2014<sup>32</sup> (See Table 6). In this survey, 37% of the sample agreed that its political stability encourages investment. Additionally, the same survey locates Chile as the second most secure<sup>33</sup> country in Latin

<sup>32</sup> The survey was circulated electronically to over 4,200 individuals between August 26 and November 15, 2014. Survey responses were tallied to rank provinces, states, and countries according to the extent that public policy factors encourage or discourage investment. A total of 485 responses were received for the survey, providing sufficient data to evaluate 122 jurisdictions.(Fraser Institute, 2014).

<sup>33</sup> This includes physical security due to the threat of attack by terrorists, criminals, guerrilla groups, etc.

America, where half of the sample considers that they would invest there because of this reason.

#### **6.2.4 High copper prices**

Another pivotal variable in Chile's strategic position is the extremely high copper prices caused by the commodity super cycle started in the early 2000s. This brought fresh FDI into the country, materialized in expanding previous mining projects and new prospecting of new ones. To illustrate this, in 2001 only 23% of FDI made in Chile was materialized in the mining industry, while in 2011 it reached a maximum of 61%<sup>34</sup>.

The world commodity price rise started in the early 2003, and it was not significantly affected by the global decline caused by the 2008 crisis. Even more, commodity prices showed signs of recovering quicker than the global economic output level. One of the main factors pushing the commodity boom was the increasing use of commodities worldwide from the beginning of the 2000s; as well as the inability of the commodity producers to match the growing demand due to supply constraints proper of the industry.

This expanding demand for commodities was exceptionally strong in China, since its rapid economic growth increased its need for resources, to expand its infrastructure and to satisfy its internal demand of consumables (Canuto, 2014). By 2013, China absorbed around 42% of the world mining minerals; including oil, copper, aluminium and iron, among others; and 55% of the global steel (Lagos, 2013). Furthermore, China's copper demand also experienced a continuous increase, going from importing 11.4% of the world copper production in the year 2000, to 39.8% in 2013<sup>35</sup>. Thus, China has played an extremely important role in the increase in the commodity prices so far.

##### **6.2.4.1 The Copper Super cycle**

Copper price rises commenced in 2003 giving birth to the copper super cycle that lasted until 2013 – as shown in Figure 18 by the period between the two dotted vertical lines.

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<sup>34</sup> According to data from COCHILCO and the Comité de Inversiones Extranjeras (CIES).

<sup>35</sup> According to data from COCHILCO.

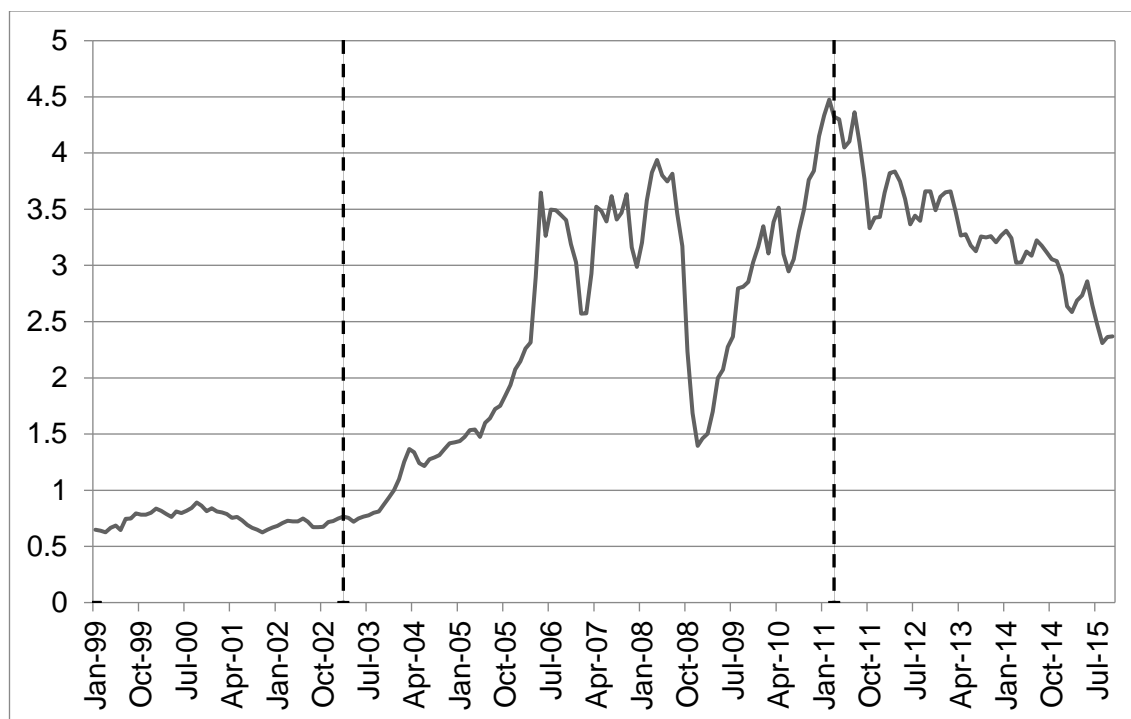
This expansion was so pronounced, that the copper price went from an average of 0.73 US\$/lb between January of 1999 and January 2003; to a maximum of almost 4.5 US\$/lb in February of 2011, meaning an increase of more than 500%. Even though the prices were affected by the crisis of 2008, they quickly recovered and even surpassed their previous levels. Consequently, these extremely high copper prices generated extremely high profits. In the words of an interviewee from the Chilean Central Bank:

'the profits are so big due to the copper prices ... that they [the mining firms] were willing to double the wage of a worker from another industry, in order to convince him to do the same job but in the mining industry... so if you are willing to do that is because you have margin to do it' (INT12).

This period's outstanding profits meant that several mining companies passed 'from being the poor relative of the [global] economic family, to be the richest' (INT3), allowing several of them to be part of the influential group of the Financial Times Stock Exchange 100 Index (FTSE). In 2012, right before the end of the copper super cycle, the Chilean firm Antofagasta Minerals managed to have the most profitable stock among the copper mining MNEs.

Finally, according to Lagos (2013), there is enough evidence to think that the demand of copper will keep increasing in the following years, due in part to the increasing demand of the BRIC countries, but the current slowing down of the Chinese economy casts serious doubts about this. However, and despite China's deceleration, the copper prices are still above 2 US\$/lb, more than double the prices at the end of the 1990s. Moreover, the increasing demand for metals from the other BRIC countries, together with the cyclicity of the extractive industry, will probably cause a recovery in the metal prices, making the copper industry still very attractive to invest.

**Figure 18: Nominal Monthly Copper Price between January 1999 and October 2015 (U\$ Dollar/lb).**



Source: Own elaboration with data from COCHILCO.

### 6.2.5 The brand of Chile as a ‘land of opportunities’

One of the most important assets held by the Chilean State is the brand of Chile as a ‘Land of Opportunities’ (Comité de Inversiones Extranjeras (CIES), 2013). This has been widely promoted around the globe to cause a good impression among foreign investors and international institutions. It also received the previous names of ‘The Latin American Jaguar’, an ‘example of development’ and a ‘leader in Latin America’. All of these have tried to establish the idea of Chile as a model among its peers, in a marketing campaign that also looked to establish an internal ideal of Chile as an envied country, perfect for a society obsessed with nationalistic feelings, the idea of being competitive and individual success (Moulian, 2002).

Among the main characteristics used to promote the Chile brand by the CIES (Comité de Inversiones Extranjeras (CIES), 2013) – and recognized by most of the interviewees – are: its socio – economic stability; its friendly and trustful business atmosphere; its insertion into the world economy; and its competitiveness. For the specific mining

industry, the latter refers to the Chilean weather, infrastructure, human capital, strategic location for headquarters and mining culture. Some of these characteristics (like its stability) have already been previously addressed, so this section focuses on the good business climate in Chile, its international integration, and its competitiveness in the mining sector.

#### **6.2.5.1 The Chilean business climate**

One of the main accomplishments of embracing the neoliberal ideology, was the construction of a consensus regarding the market as the ultimate provider of growth and development. Such ideology was initially established by the dictatorship, through the reversal of the nationalizations; the privatization of public assets; the opening up of natural resources to private and unregulated exploitation; the privatization of social security and; the facilitation of foreign direct investment and free trade (Harvey, 2005), starting a process that lasts until today, where the idea of free market and the dismantling of the State was imposed through what has been called a 'shock therapy' of terror and violence (Klein, 2007).

The neoliberal policies achieved their aims, establishing the perception that 'the really important thing about the Chilean business is that free markets did work their way in bringing about a free society' (Milton Friedman interview quoted in Klein, 2007, p. 117). This led Chilean society to completely embrace the free markets as a way of achieving personal wealth and, ultimately, freedom. Such ideology fostered the obsession in generating the best climate for making business as the best way to accomplish growth and development. Even though this 'Chilean Model' has been challenged in the last years (Mayol, 2012; Mayol & Ahumada, 2015; Moulian, 2002), it still holds a very deep grasp on the country's culture and economic policies.

Hence, Chile's major strengths as a foreign investment destination are its longstanding and well-functioning market economy; open foreign investment regime; strong fiscal position; sophisticated capital markets and the world's most extensive network of free-trade agreements (FTAs) (Economist Intelligence Unit, 2014). All of this is reinforced by the legislative structure which – in addition to its tax exemptions and protection for FDI – ensures labour flexibility and special access to strategic resources, giving it wide international recognition. The country holds 13<sup>th</sup> position in the Business Environment Ranking of the Economist Intelligence Unit (EIU) in 2014, leading the Latin American

Countries on a par with developed economies in North America, Europe and Asia (Economist Intelligence Unit, 2014); and the 41<sup>st</sup> position in the World Bank Ease of Doing Business Ranking of 2015, which considers 189 economies (World Bank, 2014).

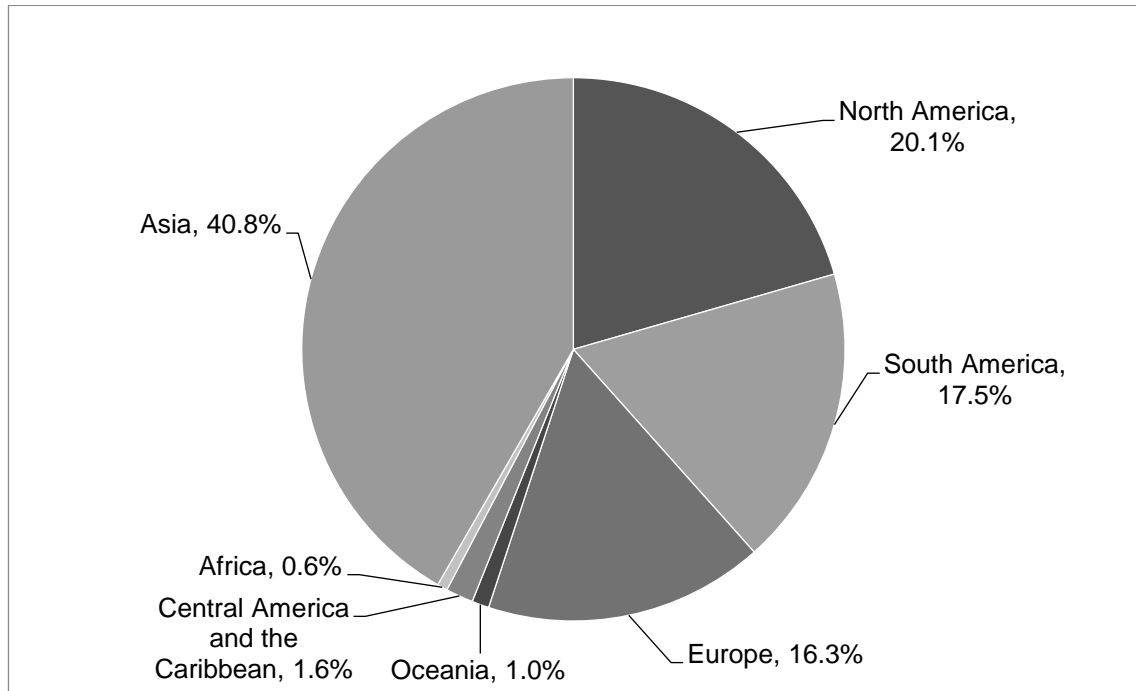
#### ***6.2.5.2 Chile as a globally connected strategic location for headquarters***

Chile has turned into a strategic location for MNEs to establish their Latin American headquarters, due to its geographic location, its numerous trade agreements and the costs of installing new offices, all of which are attractive for the expansion of their mining production networks (Coe et al., 2004). Its location allows privileged access to the Pacific Ocean through the west and to the Atlantic through the South, as well as several of the most relevant markets in Latin America such as Argentina and Brazil.

Additionally, the country is extremely connected with global markets. Chile has signed the largest number of FTAs in the world: fifteen FTAs involving 21 countries; six Agreements of Economic Complementation involving 10 countries, three Association Agreements involving 32 countries and one Agreement of Partial Scope with India, all of which sums 25 trade agreements with 68 countries. This means that the country has expanded its domestic market of around 17.6 million inhabitants to one of more than 4,000 million potential consumers around the world, that represent more than 80% of the global GDP (Comité de Inversiones Extranjeras (CIES), 2013).

The most important commerce zones in terms of their participation in the Chilean external commerce are: Asia, with almost 41% of; North America, with 20%; and South America, with around 18% (see Figure 19). The commercial interchange between Chile and the Latin American countries (comprising the ones in South and Centre America) represents almost 20% of the Chilean external commerce, meaning that the trade agreements between the country and the rest of Latin America is secondary in relevance after Asia.

**Figure 19: Distribution of the Chilean external commerce by geographic zone 2014**



Source: own elaboration with data from DIRECON (General Direction of International Economic Relationships).

Furthermore, according to the UBS investment bank (2015), Santiago is one of the world's 18 least expensive cities for the installation of foreign companies. In its 2015 Price and Earnings Report, the Chilean capital was in the 54<sup>th</sup> position out of 71 cities in the ranking where first place indicates the most expensive city (Zurich) and New York is the basis of comparison<sup>36</sup>. Additionally, Santiago has been also considered to have one of the lowest office rental costs of Latin America and praised due to its strong and stable open financial market (Comité de Inversiones Extranjeras (CIES), 2013).

### **6.2.5.3 Chilean mining competitiveness**

Chile is also well known in the world mining industry for some particular characteristics that make it stand out as an outstanding place for mining investments (Phelps et al.,

<sup>36</sup> The report considers the cost of a basket of 122 goods and services according to European consumption habits and including three rent categories (UBS, 2015).



2015). Among these, the CEOs of the mining firms, politicians and experts interviewed agreed that the most important are: its weather, infrastructure, human capital and mining culture. In the words a CEO of one of the most important mining MNEs, 'the attractive thing [about Chile] is that it is a country of low risk, with a qualified working class, with a good environment, and easy access, [together with] the climate conditions!' (INT 32).

The Chilean weather in the mining regions is especially privileged. Since most of the mining production is located in the Atacama Desert, the operations do not have to deal with rain, or extremely cold/hot climates that can stop the exploitation of minerals. In this region, the average temperature in the day varies from 25 to 35 degrees Celsius, and in the night from five to minus one degree. Since it is considered the driest desert of the world, 'it usually does not rain at all, which is exceptional for the operations. In other countries, such as Brazil, there are rainy periods where you have to interrupt the operations periodically, here that almost never happens' (INT 32). This has been considered as a 'very important advantage', since this weather helps to create 'the (...) environment to make mining happen' (INT 9).

Moreover, the good and proper infrastructure key in the development of a mining project largely already exists. As recognized by several CEOs, '[Chile] has ports, good highways, which in other environments require more investment and that many times make not possible to development projects' (INT 32). In the mining regions 'the biggest distance from a mine to the closest port is 200 kilometres, with paved roads and cities like Antofagasta and Calama, with hospitals, churches, parks, (...) so it has a tremendous infrastructure' (INT 8). This has been achieved through a constant investment in connectivity, thanks to the State's effort and the private sector participation in the Public Works Concessions Program. Created in 1991, such initiative has allowed the modernization of the country's highways, bridges, and other road infrastructures (Comité de Inversiones Extranjeras (CIES), 2013).

Likewise, the country's ports are considered as some of the most important for sea connections in the South Pacific (USI, 2014). As another source of connectivity, the telecommunications in terms of mobile telephony and internet have also expanded greatly during the last decades. All of this is reflected in the ranking regarding to the Networked Readiness Index, where the country holds the 54<sup>th</sup> place out of 143 countries in terms of best infrastructure, and the 37<sup>th</sup> position in terms of the individual, business and government usage of information and communication technologies (World Economic Forum & INSEAD, 2015).

Lastly, another strategic resource held by Chile is the quality of its human capital working in the mining industry, generated thanks to its long mining tradition. According to several CEOs, politicians and experts, the country ‘...has a critical mass of professionals that neither Argentina nor Peru has in this moment’ (INT 9). As one of the CEOs of the most important mining firms worldwide explains ‘you will not find 100.000 grown men dedicated to mining anywhere else in Latin America, I mean, Chile has them if we consider technicians, professionals and from other areas like construction’ (INT 9).

In fact, several of the CEOs that now work for the mining MNEs started their careers working in CODELCO, which they universally consider as the best school for learning the intricacies of the mining industry. Moreover, the country has several academic institutions that have trained professionals focused in the mining industry, such as Mining Engineering, Geology, and others; as well as mining institutes (such as the CIMM, Fundación Chile and TEC) and postgraduate degrees, which have been specifically designed and created with the mining firms to provide the best educational skills for the industry.

Another important element is the internationally recognized quality of the Chilean working force. The Global Talent Index of 2015 considered Chile one of the ‘biggest gainers’ in terms of fostering an environment that encourages talent. This index seeks to assess the talent trends at international level through a benchmarking index of talent environments in 60 countries, and Chile moved from the 31<sup>st</sup> hold in 2011, to the 26<sup>th</sup> position in 2015, being one of the best performers of Latin America (Economist Intelligence Unit, 2015). Similarly, is common for Chilean professionals that have worked in the mining industry to initiate their own business as mining suppliers, due to their deep knowledge of the industry’s needs and market niches.

Together with all these strategic resources, the Chilean State also faces several particular constraints that hinder its bargaining position. Thus, the potential bargaining capacity of the State will be determined by the strategic resources developed in this section, but it will be hindered by the will of the governments negotiating with the mining MNEs and the constraints the country faces. Such constraints are considered next.

## 6.3 THE CONSTRAINTS OF THE CHILEAN STATE

### 6.3.1 Competitive concerns

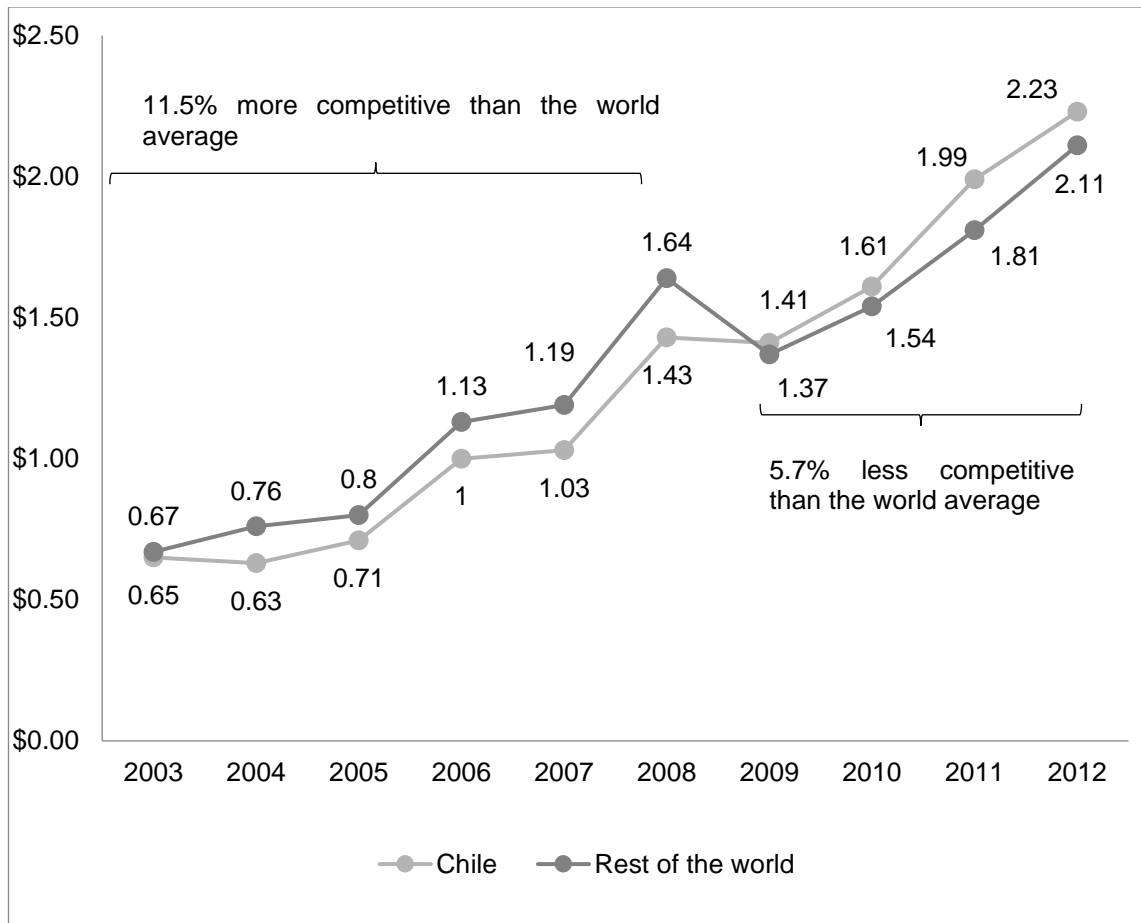
As previously developed, Chile holds several competitive strengths. However, it is also facing a worrying scenario regarding the quantity, quality, price and dependence of some of the resources that the mining industry needs to produce, meaning a relative loss in the relevance of some of its strategic power resources as Moran (1974) predicted. This is a shift from its previous position, in which the country had lower total production costs in the copper industry than the world average. As Figure 20 shows, since the start of the copper super cycle in 2003 and until the beginning of the 'sub-prime' mortgage crisis in 2008, the country was 11.5% more competitive than the rest of the world average, whereas from 2009 until 2012 it has been 5.7% less competitive than the world average (Consejo Minero, 2014a). Consequently, the Chilean mining position is currently facing a considerable loss of comparative competitiveness.

This loss of competitiveness has been attributed to an increase in the total production costs of copper which, according to the experts interviewed (Consejo Minero, 2013, 2014a), in turn, stems from a number of factors: the decrease in the copper ore grade, the water and energy supply; the quantity of human capital; the dependency of FDI and technology imports; the falling prices of copper; the future likelihood of a possible substitute for copper; and new countries competing for leadership in the copper industry. Each one of them is explained next.

#### ***6.3.1.1 Decrease in the quality of the copper ore grade***

During the last decades, and fostered by the increased exploitation of the copper super cycle, the Chilean copper ore grade has decreased considerably. Its quality went from 1.29 in 2000 (COCHILCO, 2009) to 0.71 in 2014 (COCHILCO, 2014), meaning a decrease of 44% in 14 years. A further decline can be avoided by investing in mining exploration, which is what has happened lately. In 2012, the mining industry investment in exploration reached an historical peak of US\$ 1.305 million, representing 5% of the world total investments in this area that year (Consejo Minero, 2013). However, the tendency is to a further deterioration in the quality of the copper ore grades.

**Figure 20: Total Costs (C3 = Cash costs+ Depreciation+ Interests+ Indirect costs) of the copper mining in Chile and the world 2003 - 2012 (US\$/lb).**



Source: Consejo Minero (2014a) with data from COCHILCO.

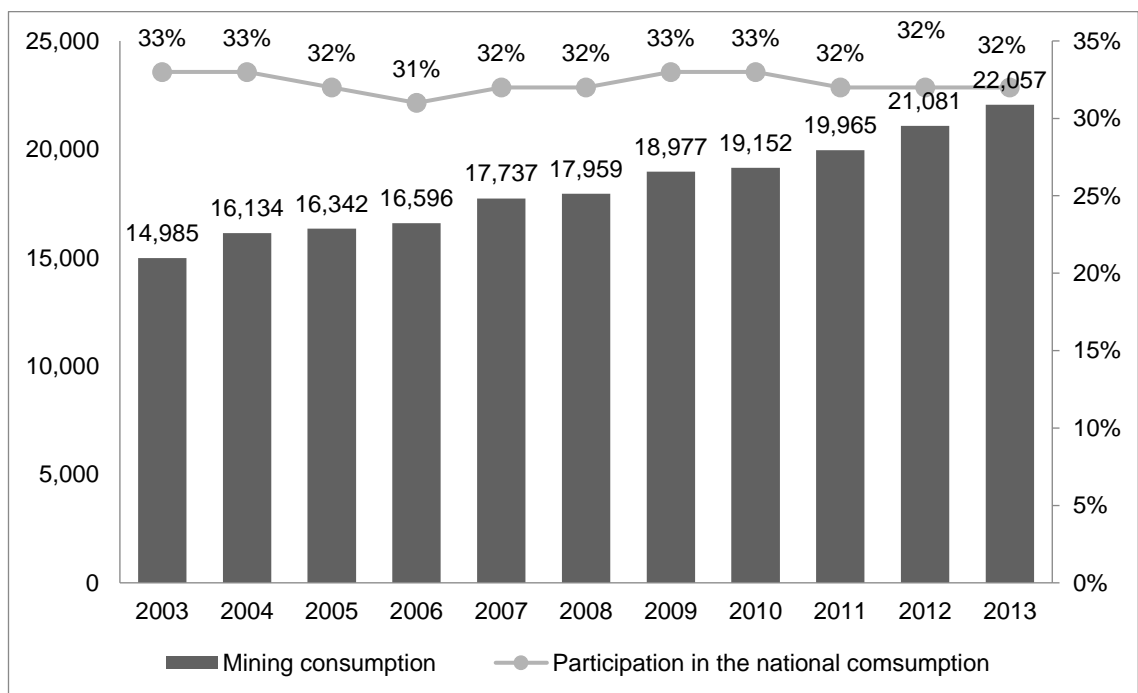
### 6.3.1.2 Energy supply issues

The cost of energy is remarkably important for the mining industry since it is a strategic resource for the functioning of the mines. Its variations can have a stark effect on the viability of a project, since the expenditure on energy usually represents 20% of a mining firm operational costs (Consejo Minero, 2014b). In Chile, the mining industry is the most energy-intensive one, absorbing around one third of the total energy consumption, with an increasing demand that grew from 47% between 2003 to 2013 (Figure 21). However, the Chilean position is weak in terms of its energy prices compared to other mining nations. As several studies show, the energy prices are the highest of Latin America, double the prices of Peru, its main competitor, while also being considerably higher than

other copper producers like Australia and Canada (Comisión Permanente de Recursos Naturales, 2012; Consejo Minero, 2014b; CSIRO, 2014; Korinek, 2013).

Thus, there is an excess of demand of electric energy by the Chilean mining sector that is not being satisfied, and which is likely to worsen due to the future opening of new mines and projects. This challenging situation has been exacerbated by an increasingly more active and organized civil society due to their cultural appraisal of the negative externalities associated to energy production (Bebbington, 2009; Bridge, 2009), which has questioned the availability, costs and means of supplying electricity, as well as its economic and environmental sustainability (Consejo Minero, 2014b). These new political movements have managed to stop several new power plants, and have pushed for stronger environmental legislation and the consideration of renewable energies, leading to a situation where the mining firms are contemplating building their own energy capacity rather than relying on public infrastructure (CSIRO, 2014).

**Figure 21: Energy consumption by the Chilean copper mining industry and its participation over the national consumption between 2003 – 2012 (GWH).**



Source: Consejo Minero (2014b) with data from COCHILCO, CDEC – SING and CDEC – SIC.

### **6.3.1.3 Water supply insufficiency**

Most of Chile's copper mines operate in the Atacama Desert, located well above sea level in an arid environment. This means that to make water available and ready for use in the production process, it must be desalinated and pumped into the mountains, a process that is both expensive and energy-intensive (CSIRO, 2014). Since the 2000's and fostered by the copper super cycle, the increases in mining production and the fall of mining ore grades have resulted in mining companies processing larger quantities of material. Thus, in 2007 the mining industry used around two thirds of the total water received in the Antofagasta and almost a more than one third of the total amount of water used in the mining regions of Arica and Parinacota; Antofagasta; and Atacama (Badal, 2014). This led to projections that suggest an increase if the demand for water resources from 350 Mm<sup>3</sup> in 2012 to 500 Mm<sup>3</sup> in 2020 – an enormous challenge due to the extremely dry conditions of the environment (CSIRO, 2014).

Recently, the country has not been able to fully satisfy this demand, causing diverse tensions in the copper industry (Consejo Minero, 2014b). Thus, several mining firms have developed alternatives, such as the desalination of sea water. However, pumping the water from the coast to the mine sites mines requires increased energy consumption. The cost of removing salt from seawater in Chile is around US\$ 5 per cubic metre, which in the US costs only \$2.3 and 2.8 in Mexico (Jamasmie, 2013). Even though some firms have already established desalination plants, others are still evaluating the idea. This increasing trend has led to a substitution of 10% of the continental water resources by desalted water (COCHILCO, 2013; Consejo Minero, 2013). Still, it could be argued that Chile's water troubles may be caused by the energy challenges it faces. If new energy sources are developed and energy costs decline, desalination will become a more cost-efficient option (CSIRO, 2014).

Other aspects of the water supply constraint are the fierce competition for water use among the various sectors of Chile's economy, especially mining versus agriculture (Budds, 2004; CSIRO, 2014); and the strengthening of civil society and indigenous movements. Similar to the energy issue, civil society organisations have resisted and even stopped projects related to the concession or trade of water rights in the Atacama Desert located in indigenous territories, or involving pollution and/or depletion of water sources in protected natural areas (Bebbington et al., 2008; Bebbington & Williams, 2008; Larraín et al., 2010). Moreover, the energy and water issues have only arisen recently, but they have become a main concern for the Chilean copper industry. As a

CEO of a mining MNE explains 'you can have a tremendous resource, you can have a tremendous ore, but you start slowing down because you don't have energy, you don't have water, issues that twenty, thirty years ago were not a problem, we were not concerned about them at all!' (INT22).

#### **6.3.1.4 Scarcity of advanced human capital**

Chile's mining history and culture has produced highly skilled professionals for the national and international mining industry. However, the supply of skilled workers of the country is not enough for the demand of the industry anymore, meaning the existence of a 'thin labour market' that hinders the chances of reaching a strategic coupling (Coe et al., 2004). This raises challenges related with the relevance of this factor in the rise of the labour costs, and the increased turnover rate due to the 'stealing' of workers (CSIRO, 2014; Innovum Fundación Chile, 2014; OECD, 2013b).

Moreover, the gap between the supply and demand of human capital is expected to keep increasing, reaching its maximum once most of the projects planned for the medium term are finally functional (OECD, 2013b). As Figure 22 shows, the gap in the supply of workers is projected to increase more than five times for the period 2014–2023, mostly in the areas of maintenance and fixed plant and mobile equipment operators (CSIRO, 2014; Innovum Fundación Chile, 2014). However, these estimations should be considered with care, since they are based on projected investments, greatly affected by the fall of copper prices and the end of the super cycle.

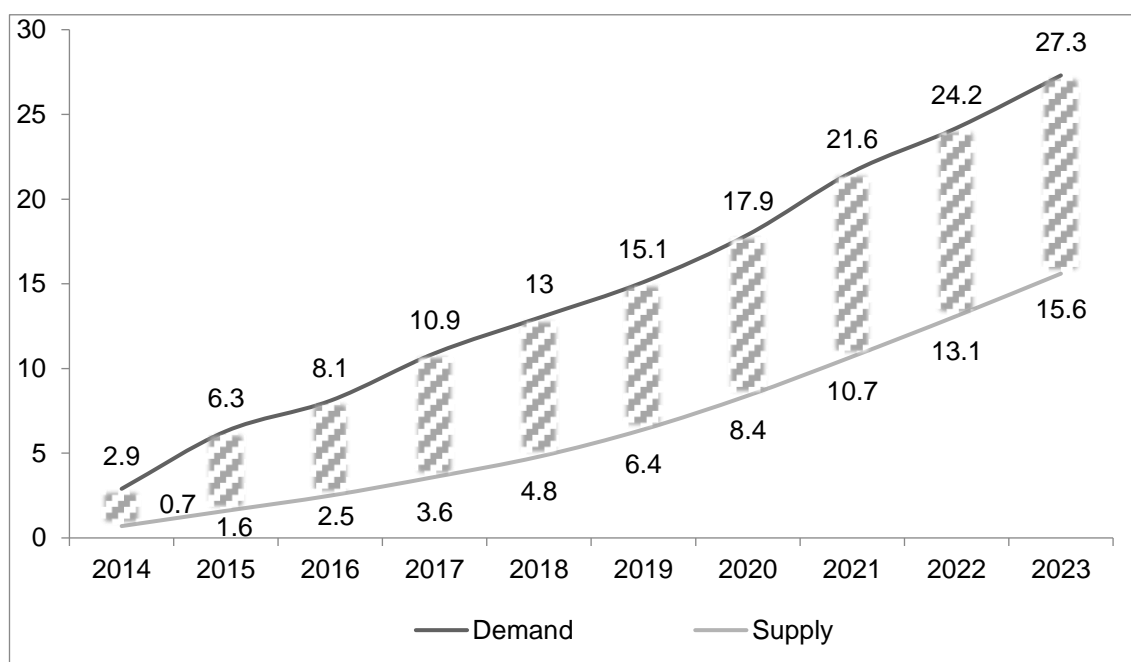
Still, the constrained growth in supply has been an ongoing issue where both the Chilean educational system and the characteristics of the industry have played an important role. Mining is not a popular career track for Chilean students or a priority area of development for the national educational system, despite the fact that the Chilean mining industry pays the highest salaries in Latin America. This is related to the distance and extreme conditions of the work sites, the poor image of the sector, and the low relevance of mining-related disciplines in the national educational system (Consejo Minero, 2014b; OECD, 2013b). Recently, however, the mining MNEs have shown some initiative by creating the Council on Mining Skills, which coordinates and adjusts the needs of the industry with the programs being provided in the Chilean educational institutions, having a moderate success (CSIRO, 2014).

Furthermore, several experts also warn about a huge lack of advanced ‘innovative professionals’, able to create new technological solutions and firms; and to facilitate knowledge spillovers between the big mining firms and the rest of the productive fabric in the mining regions. This concern is exemplified in the words of an expert academic:

‘It seems that the innovation in the mining industry is relatively few [...] and is realized by the mining MNEs, so in that sense I believe that the big mining industry has not generated a critical mass of innovative professionals, or knowledge spill overs’ (INT 38).

Thus, Chile not only faces a matter of quantity for working at the mines, but also the lack of human capital for helping to develop a self-sustainable productive fabric around the main big mining industry that could stand the eventual departure of the mining MNEs.

**Figure 22: Projection of the aggregated supply and demand of workers for the big Chilean mining industry (in thousands of people).**



Source: Innovum Fundación Chile (2014).

### 6.3.1.5 Other factors influencing Chilean competitiveness

There are several other factors mentioned by the experts interviewed that seem to be having an impact on Chilean competitiveness, like: the possibility of a potential substitute



for the copper; the rise of other copper competitors; the historical technological dependency; and the current fall in the copper prices.

The potential for a possible substitute for copper has been an issue that, although is not considered as a real threat yet, brings back painful memories related to the end of the nitrate era due to the invention of synthetic nitrates. The most important potential substitute is the graphene, which shows even better properties than copper<sup>37</sup> (CSIRO, 2014). However, graphene is still produced only at a laboratory level, meaning that the costs are still extremely high. Some estimations claim that the cost of obtaining one kilogram of graphene is close to US\$50.000 (Consejo Minero, 2014b). Moreover, copper not only has several applications not only as a conductor of electricity but also has anti-microbial properties and is resistant to corrosion and is highly recyclable, making it difficult to fully substitute.

Yet, this does not mean that the chance of repeating the economic debacle caused by the fall of nitrates is not a possibility in the medium/long term. As the report made by CSIRO (2014) explains, if it becomes feasible to produce graphene or another copper substitute at a competitive cost, it could be a relevant factor causing the 'collapse of the Chilean copper industry'.

The rise of new competitors in the copper industry has also been considered an issue which could threaten Chilean dominance worldwide. As shown in Figure 15, Chile is by far the main producer of copper worldwide. However, there are several other countries; such as China, Peru, Congo and Australia; that have greatly increased their participation in the world production. By focusing in the development of their copper mining industry, these countries increased their participation in the production of copper from a 14% share in 1990 to 27% in 2014 (Figure 15).

The strongest competitor is Peru, since is the second copper producer in Latin America, and the third worldwide. It has almost 10% of the total copper reserves and it is the only South American country that confirmed and met all the Extractive Industries Transparency Initiative (EITI) requirements. It became a signatory to this agreement partly to overcome its main weakness - political instability. The increase in Chilean production costs related to energy and water issues and decreases in the quality of its ores, have made Peru more attractive as a destination for mining FDI were it not for the

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<sup>37</sup> Copper has been considered the best electric conductor, but studies have shown that graphene would have a 60% higher electric conductivity (Consejo Minero, 2014b).

country's inability to create stronger political stability and to offer safe and attractive conditions for FDI.

**Table 10: USPTO patents in the copper mining industry 1976 – 2006.**

Total number of actors in the mining industry	501	100%
Total number of firms and suppliers with patents	46	9%
Total number of patents	1519	100%
Number of patents assigned to Chilean companies	4	0,26%
Number of patents assigned to foreign firms with operations in Chile	1515	99,74%

*Source:* Based on Bas and Kunc (2009).

**Table 11: Regional distribution of the patent requests of the copper mining industry, 2000 – 2009.**

Region	Total	Total without mining firms
Metropolitana	75.8%	68.8%
Antofagasta	10.7%	14.1%
Valparaíso	5.2%	7.4%
Biobío	2.1%	3.0%
Iquique	2.1%	3.0%
Tarapacá	1.9%	1.3%
O'Higgins	0.9%	1.0%
Coquimbo	0.7%	0.7%
Araucanía	0.2%	0.3%
Maule	0.2%	0.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

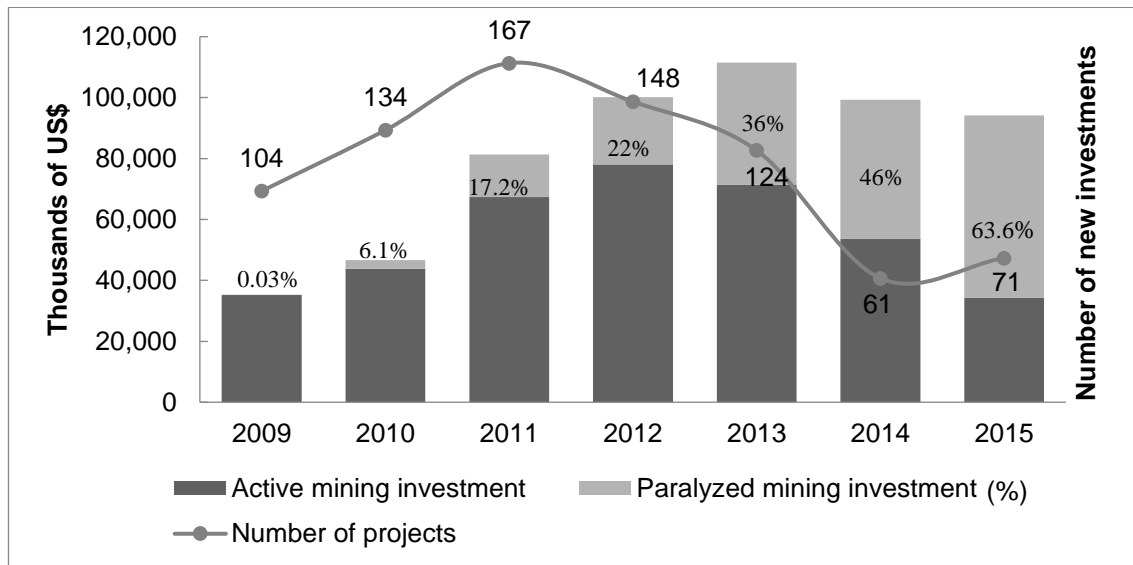
Fuente: Atienza, Lufin, Soto, Cortes, et al. (2015), Atienza, Lufin, Soto, and Cortés (2015).

The historical technological dependency of the country on overseas economies has also been a recurrent concern, where the experts interviewed agreed that the Chilean position does not seem to have changed much from its earlier technological dependency. As a CEO of a mining MNE in charge of the supply chain explained 'normally all the technology comes from abroad, I mean, everything that is machinery and related to the operation plants, everything that has to be with the technology for producing copper is absolutely imported, here we do not make trucks, we do not make any of that, everything comes from abroad' (INT 21).

This lack of technologically-intensive industries connected to mining at national and local levels has been analysed in two studies. The first, made by Bas and Kunc (2009), showed that at a national level, 99.74% of the mining patents assigned by the United States Patent and Trademark Office (USPTO) between 1976 and 2006 were granted to mining MNEs; and only a trivial 0.26 % to the Chilean firms (Table 7). The second, done by Atienza, Lufin, Soto, Cortes, and Falabella (2015) finds that, for the period 2000–2009, 41.3% of the 1,090 requested patents belonged to Chilean firms, individuals or institutions. Interestingly, as Table 8 shows, these patent requests are substantially concentrated in the Metropolitan Region. This contrasts with the situation of the Antofagasta Region which, despite being the second region in terms of numbers of patents, has a much lower share of all patent activity than one might expect given its share of mining output. Consequently, firms and individuals with technological capacity are not locating in the mining regions (Atienza, Lufin, Soto, Cortes, et al., 2015).

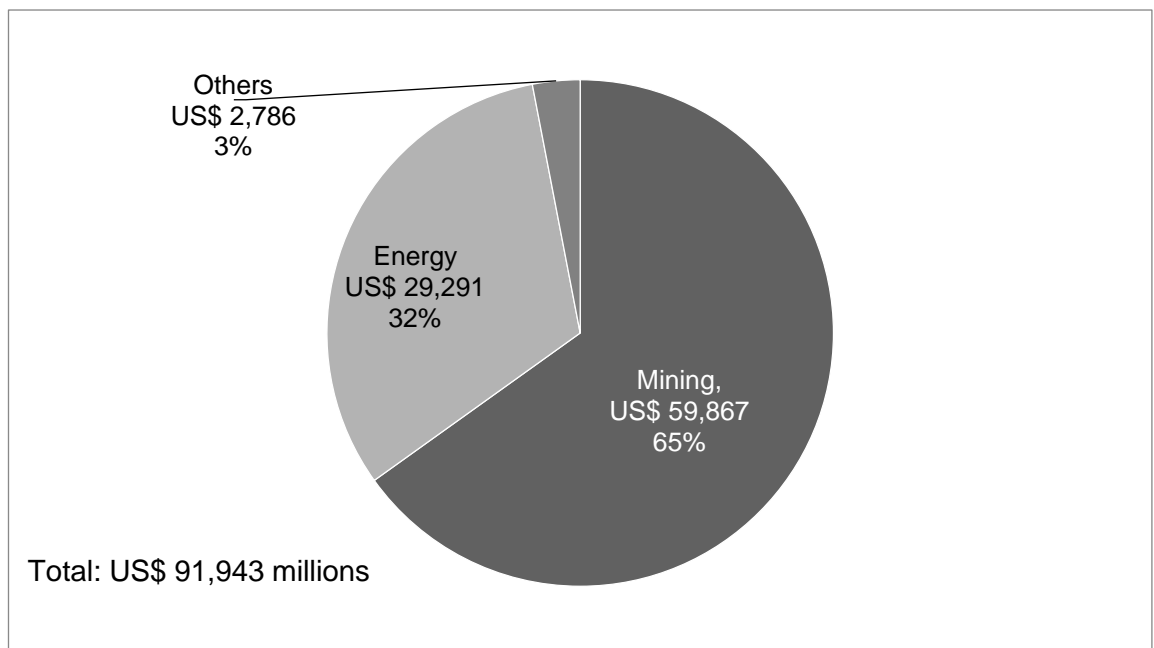
More recently, the fall in the copper prices caused by the end of the commodity super cycle, has been one of the main causes for a substantial halt in investments related to the mining industry. As Figure 18 shows, the copper prices have gone through a continuous decrease since February of 2011, where they peaked at 4.47 US\$/lb; dropping to 2.36 US\$/lb in October of 2015, almost half of its previous maximum. During the same period, the number of new investments in the mining industry declined 57%; while the proportion of the paralyzed investments increased from representing less than 1% of the total investment in 2009, to 63.6% in 2015 (Figure 23). Likewise, the energy sector, closely related to mining, suffered a halt in investments equivalent to a third of the total paralyzed in 2015, a sum that reaches 97% of the total if the mining sector is also considered (Figure 24).

**Figure 23: Investment projects in the Chilean mining industry in millions of US\$.**



Source: Own elaboration with data from SOFOFA (2014).

**Figure 24: Total unrealized investment in September 2015 in millions of US\$.**



Source: SOFOFA (2015).

### **6.3.2 The structure, size and operation of the Chilean State**

A second major constraint identified, relates with the size, characteristics and the way in which the Chilean State operates. This is a decisive issue, since these factors determine the way in which the State can exert its bargaining power. Moreover, the State is the only agent sizeable enough to have a strong bargaining position while facing the mining MNEs, and the way in which is organized and operates affects the possibilities of reaching a strategic coupling (Moran, 1974; Vernon, 1971). This section develops these issues, focusing on the structure, internal organization, relative size, role of CODELCO and political issues that may constrain the Chilean State.

#### **6.3.2.1 Structure and organization**

The country is organized in fifteen regions, which are subdivided in provinces (provincias) and boroughs (comunas). Today, the country has 54 provinces and 346 boroughs. In terms of its administration and government, the Republic of Chile is a single, democratic and presidential State, conformed by several autonomous institutions. The executive power resides in the President of the Republic, who is Head of the State and of the Government simultaneously. The President names the Ministers of the State, which are his/her direct collaborators in governing and administering the State. There are twenty two Ministries, each of which has regional Ministerial Secretaries and Sub-Secretaries (SEREMIS) (Figure 25).

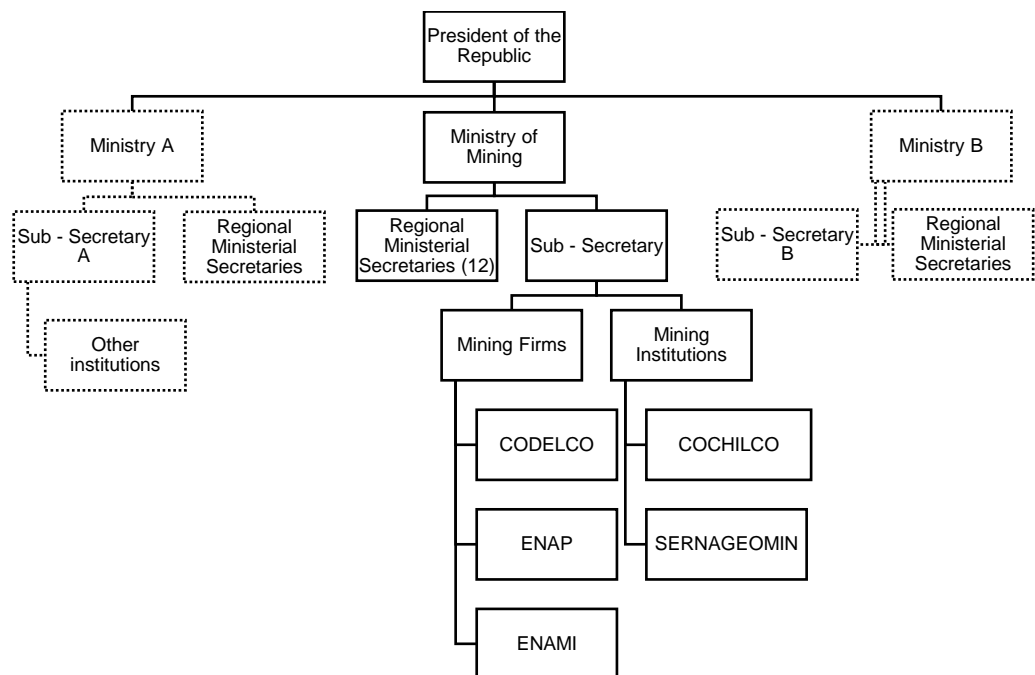
At a regional scale, each region has its own Regional Government, which depends directly on the central one located in Santiago. The main authority is the Intendente, which is named by the President and is his/her representative over the regional territory. The regional administration belongs to the Regional Governments formed by the Intendente and a Regional Council. Additionally, each province is in charge of a Governor, which is also appointed by the President. Locally, the administration belongs to the Municipalities, which are formed by a Major and the Municipal Council. The local Majors and Councilmen are democratically elected, being the only ones that are not chosen by the President.

Regarding the mining industry, the sector depends on the Ministry of Mining. As Figure 25 shows, the Ministry has one Sub-Secretary located in Santiago and Regional Ministerial Secretaries spread all over the country. The Mining Regional Ministerial

Secretaries are located in most regions, and they are led by a Regional Ministerial Secretary (SEREMI). These organizations help the Intendente of each region to coordinate, elaborate and execute the mining policies, plans, budgets and projects that the Regional Government considers appropriate.

The Ministry of Mining is also in charge of three state owned mining firms and two mining institutions (Figure 25). Among the former, the Ministry supervises the National Mining Firm (ENAMI); the National Oil Firm (ENAP); and the National Corporation of the Chilean Copper (CODELCO).The Ministry also oversees two important mining institutions, namely the National Service of Geology and Mining (SERNAGEOMIN) which objective is to advice the Ministry of Mining and to contribute to develop mining and geological policies; and the National Commission of Copper (COCHILCO), a specialized technical institution which also advises the Ministry of Mining.

**Figure 25: Organization of the Chilean State and the Ministry of Mining.**



Source: Own elaboration.

### **6.3.2.2 Centralism and bureaucracy**

The Chilean State's organization has been considered extremely centralized and bureaucratic from its outset, creating issues relating to the who and where of decision-making, influence concentration and a high degree of 'bureaucratic inertia' (Pollitt, 2000). The President and all the Ministers are located in Santiago, the capital city, holding a substantial capacity to make decisions that affect every scale and dimension of the Chilean society. Furthermore, the regional, provincial and comunal centrally allocated authorities play only a representative role of the central power in the regions, being absolutely unable to make any sort of relevant decision. Some democratically elected Mayors do their best to improve their local socio-economic conditions but they lack the power and means to provide sustainable solutions. All this fractures the local, regional and national political arenas, leaving most of the bargaining taking place in Santiago.

The bureaucracy of the Chilean State has also become a main issue. Most of the interviewees considered the Chilean State slow and inefficient, where technocrats and bureaucrats have taken an undue relevance in taking decisions that were previously considered a matter of political concern (Silva, 1991). This has affected the governance of the regions and country, and the functioning of the mining industry. A very experienced politician, both as a State employee and as a democratically elected representative, explained the process of getting social projects approved:

'... you take a lot of time to formulate a project, and to get it approved and technically accepted you have to wait at least five years, and when you have it accepted it is already obsolete. Hence, the decisions are not being made in a political-strategic way, but we [the Chilean State] are so bureaucratized that the bureaucrats are the ones making them, technicians that are behind a desk doing a mathematical calculus' (INT 33).

The politician also adds that '...the decisions are not being made with a political strategy, with a long term vision, but they are being made with an investment criterion, if [the project] is profitable or not' (INT33).

Moreover, the big mining industry, represented through the Mining Council, also shares these concerns. In his presentation, the executive president of the Mining Council (Villamarino, 2015) points out that a mining project usually requires more than 500 permissions, which are usually delayed due to the high State bureaucracy. In this sense, the public institutions in charge of approving them do not possess enough public servants to do the job in a reasonable amount of time. Furthermore, the different public institutions

have different criteria for approving projects, which also change continuously through time; and is common that several public institutions have to provide different permits for issues that are pretty similar (Villamarino, 2015). Lately, there have been some attempts by the mining industry to solve these issues, but so far the main opinion is that they still persevere and slow down several vital processes for the normal operation of the industry.

### **6.3.2.3 The relative size of the Chilean State**

The relative size of the State has also turned into a constraint, especially after the neoliberal policies that slashed its level of public expenditure and total tax income, aimed to the withdrawal of the state from economic life (Harvey & Harvey, 2007; Silva, 1991). Regarding to the former, OCDE data reports that from 1990 to 2014 Chile spent an average of 10% of its GDP on public expenses – one of the lowest expenditures among those countries included in the study. During the same period, Chile had an average total tax revenue of 19% over its total GDP. This figure put Chile as the second lowest in terms of tax revenues collected. Hence, the OCDE data shows the Chilean State's modest presence in the Chilean economy. All this hugely impacts the size and capabilities of the State institutions, since funding is crucial for their basic operation.

Hence, the lack of economic presence has led to develop State institutions with a minuscule size and lacking attributions. In the mining industry, the State's core institutions are awfully funded and unable to make important decisions in an autonomous way. For example, the SERNAGEOMIN, in charge of supervising the safety of the mines, does not have the capacity to fulfil this essential role due to budget constraints and limited attributions in case infringements are found. This caused the world famous incident of the thirty three Chilean miners, trapped 700 meters underground for sixty nine days in 2010. When the accident happened, the SERNAGEOMIN only had 18 people supervising the safety in the mines in all the country (Rodrigo Alvarez, National Director of SERNAGEOMIN in an interview for ADN Hoy, 2015).

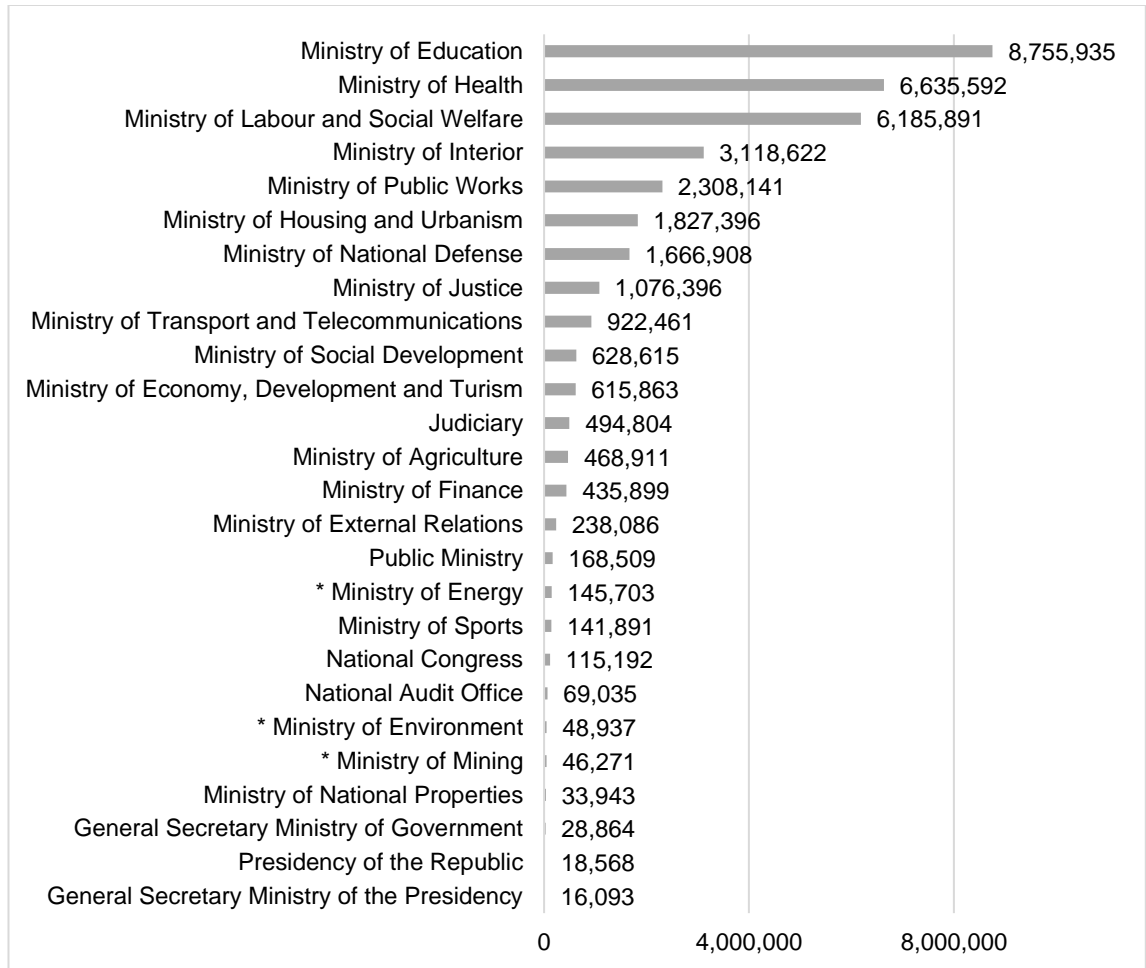
Moreover, the Mining Ministry is the least well-funded of all the strategic Ministries. As Figure 26 shows, the planned budget for the Ministry in 2016 only contemplates 46,271 thousand million pesos. This is less than 10% of what the Ministry of Agriculture may receive, a sector that only represents less than 3% of the national production. Even when the aggregated planned expenditure in all the ministries related to the mining industry is considered; namely, the Ministry of Energy, Ministry of Environment and Ministry of



Mining; the amount only reaches half of the planned spend on the agricultural sector. Thus, the ministries related to the mining industry are not able to play a relevant role in reaching the strategic objectives of the country, or in solving the burning issues that Chile is facing in terms of its mining competitiveness.

According to some local entrepreneurs and representatives, the reason for this lack of support to the mining industry is rooted in a traditional anti-mining bias from the centre of the country: '...sometimes you hear some people with an anti – mining bias, where it would be almost desirable for Chile to forget its minerals, to not exploit its minerals' (INT14). In this line, an academic from Antofagasta posits that the central political power located in the capital is still 'in the hands of the landowner aristocracy' or 'the wine surnames' (INT 15), historically associated with the agricultural sector. This political elite '[is] still in charge of the country' (INT 15) and associate mining with the traditional image of the miner covered in dust and with a shovel - an image they associate, in turn, with poverty and underdevelopment and, thus, try to avoid. Hence, the State is not prioritizing a strengthening of its bargaining position vis a vis the mining industry.

**Figure 26: Projection of the Chilean State Budget planned for 2016 (Millions of Chilean Pesos).**



Source: National Budget Direction (Dirección de Presupuestos, 2015).

#### **6.3.2.4 Underutilized role of CODELCO.**

Since its creation in the early 1970s, CODELCO has become the most important State owned firm in Chile, and the biggest copper producing firm of the world. From 1971, the firm has generated more than US\$ 115.4 thousand million (in 2014 prices), 60% of which happened between 2004 and 2014 due to the copper super cycle. During this period, CODELCO's exports represented 18% of the total Chilean exports, and it contributed to the Treasury with 12% of the incomes of the Central Government (CODELCO, 2015; Rodríguez et al., 2015). Thus, the firm has been considered the

master girder<sup>38</sup> or the nation's wage<sup>39</sup>, but also a source of proud and international recognition. However, the firm faces several issues regarding the ageing of its operations and lack of financial support for capitalizing new projects, hindering its potential as an engine of a sustainable mining industry.

CODELCO's financial issues are the most serious. Nowadays, CODELCO is still the biggest copper producer worldwide, but it has to keep reinvesting in finding new ores and expanding the existing project's lifespan in order to keep the title. Lately, CODELCO's capacity to do these has been troublesome, facing several problems in obtaining the capital it needs to keep itself competitive. CODELCO '...has to appeal to its owners, which is the state, in order to get capitalized, and the state has millions of needs, it is not in its mind to capitalize CODELCO' (INT28). This has brought serious capitalization problems to the firm, as one CEO from CODELCO disclosed:

'[In 2012 CODELCO] asked for a budget of 4,000 million dollars for 2013... but they [The State] gave it 1,000! (...) So this makes it difficult to sustain the levels of production that we have today (...) there has to be investment, we have to generate projects (...) what is happening is that CODELCO has to go out to the world banking system to get into debt, to ask for loans, but that is never enough for what CODELCO requires, meaning that you have to postpone some investments and projects (...) so we start losing the competitive position we have in the market' (INT22).

These issues, added to the recent fall in the copper prices, have strongly impacted the Chilean economy. According to the newspaper *La Tercera*, what the Treasury received from CODELCO in 2015 was 40,3% less than what the State was expecting and 49% less compared to what received in 2014 (Agurto, 2015). Hence, there has been a lost opportunity in strengthening CODELCO's position, both as the main contributor State revenues, and as an enhancer of national/local competitiveness. This opinion is shared by two experts, who explain that 'it is curious that a country as liberal as Chile does not allow its biggest firm to follow the same market rules (...) and there you realize that there is no planning, because the State sees CODELCO as an income source, but not as a source of competitiveness' (INT28 – 29). However, CODELCO and BHP Billiton have implemented a programme called Worldwide Class Suppliers, which involves the

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<sup>38</sup> As depicted by President Eduardo Frei in his speech after the 'Chilenization' of the copper industry in 1970.

<sup>39</sup> As depicted by President Salvador Allende in his speech after the nationalization of the copper industry in 1971.

capacitation and support of some selected mining suppliers to make them able to compete internationally, but the results have not been very auspicious.

Thus, there are many critical voices regarding to what has been the role of CODELCO compared to what it could potentially achieve. As an academic explained:

‘CODELCO should be an engine of (...) knowledge, it should be an engine promoting the local cluster, but it is not, (...) one could think ‘well it is a public firm, and because of that it could be used as an incubator of national innovative businesses’ but is it happening? No, what is really happening is that CODELCO is behaving similarly to any multinational firm’ (INT38).

When comparing CODELCO’s behaviour to a MNE, the academic is remarking the idea that the mining industry has been widely considered as ‘too oriented to the costs and too little oriented to the value’ (INT24). This means that, when making decisions about suppliers and cooperation agreements, all the mining firms usually focus on prices as the decisive variable. Consequently, the firm is missing its opportunity of becoming the main breeder of the new ideas for the mining industry, which could improve the sustainability of the productive fabric, and strengthen the State position when bargaining with MNE. The latter is crucial, since if some mining technology were produced within the country, the State would not depend on the MNE’s capacity to bring it, lowering their bargaining power.

### ***6.3.2.5 Political issues constraining the Chilean State***

The last major hazard to the bargaining power of the Chilean State is associated with political issues, some of which are structural, while others have emerged gradually after the return to democracy in 1990. The Chilean State has been unable to cope with these, since it has kept a strong commitment to the neoliberal principles of ‘not interfering with the markets’, since neoliberalism has become an hegemonic discourse where it has become incorporated into the way Chileans interpret, live and understand the world (Harvey & Harvey, 2007; Lukes, 2005). This commitment has been interpreted as leaving market forces work to find the solutions for most of the political and economic troubles, considering such issues as ‘problems between privates’ (INT26, p.4; INT30, p.6). Thus, the Chilean State plays a ‘subsidiary role’, letting the markets work, and intervening only in cases of extreme difficulties (Mayol, 2012).

Moreover, the Chilean State is an extremely centralized one, meaning that most of the relevant decisions are taken in the Central Region. This leaves local governments and institutions powerless and unable to have fair negotiations with the big mining industry, or with the central state itself, something that has been noticed even by international institutions (OECD, 2009; PNUD, 2015). Furthermore, the fact that the successive governments have not been able to share a common development policy has also become an important concern, leaving the country aimless in terms of a long term development strategy.

All of these have awakened the long dormant civil society, which has challenged the neoliberal model and its consequences, demanding structural changes and long term sustainable solutions. This social movement has been transversal, multiscale and tenacious, and has been able to change the status quo in the relationship between the State and the mining MNEs.

### **6.3.3 Constraints related to policies**

Since its origins, Chile has centralized its economic and political resources in the Central Region. The causes for this have been quite diverse, such as the geomorphic characteristic of the territory; the early difficulties to establish a sovereign State; the annexation of sizable territories caused by wars; the judicial and administrative heritage left by the Spanish empire based on the French Centralism; and the historical allocation of the economic and political elites in the capital of the country (Boisier, 1992; Tagle, 2014). All of this has generated a discourse and perception in which the county is divided in two symbolic spaces: 'Santiago' and 'the regions'. This opposition is built over an axis of political-economic domination, in the 'centre-periphery' kind of fashion. In this way, Santiago is considered the centre of the economic, politic, administrative and cultural life, the source of 'civilization'. The regions, on the other hand, have been historically perceived as the exact opposite. The further the region from the capital, the less 'civilized'. All of this has been materialized in the widely spread phrase among the Chileans, 'Santiago is Chile', which perfectly summarizes this situation (Miguel, 2010).

This centralism is not only spatial, but also institutional. As mentioned before, Chile has historically had an administrate concentration in the hands of the President of the Republic who delegates to his/her Ministers, Intendents and other representatives, in what has been considered a 'presidential Caesarism' (Boisier, 1992). This extreme

centralization has led to a dissociation between the regional representatives of the Central Government (Intendente, Governor, SEREMIS), and the democratically elected ones. The latter see their capacity to represent their voters seriously reduced, since, as a well-experienced politician explained, ‘the big decisions, the strategic ones, they are not been taken here [in the Regions], they are been made in the Central Government’ (INT33). Even though they could have local support from their communities, the locally elected representatives simply do not have the capacity to bargain with the big mining industry. In the words of a representative from one mining city:

‘even though we have the local power, we lack the tools and resources, I mean, we are here barely doing our job, we govern our communes with [the resources that] we have (...) which are very poor (...) the State looks to the other side; we have a governor and intendente, but they are like the Colony, like the governors from that period who were there to represent [the Spanish Crown], but nothing else, so they do not have any real power. So, we [the municipality] have to take care of everything without any resources or tools’ (INT34).

Nowadays, this centralization seems to obey the need of the central government to control every aspect of the socio–political and economic life in the country. For the mining regions and cities in particular, there is a consensus that the Central State, specifically the Treasury, is not willing to allow local bargains and agreements between the regional elected representatives and the big mining industry. The reason lies on the crucial relevance of the mining industry, and the need of the central government to concentrate all the benefits from the industry in the capital, so it can decide how and where relocate them. Consequently, the local and regional institutions are left in a defenceless position. As summarised by a mining expert: ‘the local [and regional] governments do not weigh a shit’ (INT13). Unable to exert any considerable economic, political or cultural influence, the regions seem doomed to accept the mining MNE’s will. However, a strong ‘regionalist movement’ has risen, comprising politicians, civil society and other actors, which has continuously grown in strength.

Additionally, the Chilean State shows a stark discontinuity in its economic policies, caused by the successive governments from different coalitions and the absence of a long term development strategy. Chile has two main political coalitions: the Alianza por Chile, comprising right wing parties traditionally associated with the wealthier and supportive to the dictatorship part of society; and the Nueva Mayoría (formerly known as the Concertación), formed by the self–declared ‘centre and left wing’ parties. Despite the artificial difference between coalitions, both of them have deepened the neoliberal model

and share similar economic ideologies in their praxis. Moreover, after every presidential election, the winning coalition reset the socio-economic policies and programmes applied by the previous government, making impossible to plan and carry out long term policies. As a former person in charge of mining industrial policies explained:

‘sadly, here [in Chile] we make policies according to who is in power so, (...) if there is a change in the [the coalition] governing, everything that was made is deleted, it is erased quickly, and new programmes are created, new projects, so unfortunately there is no continuity ... and sometimes you start lifting powerful, big things, but sadly you are stopped half way through’ (INT20).

This discontinuity is associated to a far-reaching issue, which is the total absence of a national or local development strategy. Until the 1970s, the Chilean State had an extremely active role in implementing its development policies, aimed to the improvement of the extractive sectors as well as the industrial ones. Moreover, the neoliberal structural reforms of the 1970s and 1980s completely modified such approach. In these reforms, the aim was to take the State out of the economy.

After the return to the democracy and until the mid-2000s, there was a continuous national discussion about the development model that Chile should follow, and the role the State should play in making it happen. Several were considered, such as the ‘European welfare States’, the ‘development based on mining clusters’ and the ‘American’ models. However, this discussion has completely disappeared from the current politic agenda. Some attempts to build a local and national development strategy were outlined, such as the ‘Estrategia Regional de Desarrollo’ (Regional Development Strategy) for the Antofagasta Region in 2000 (Gobierno de Chile, 2000), and the ‘Mining Cluster Policy’, and a ‘National Competitiveness Strategy’ in 2007, proposing building several clusters based on the extractive industries and services, but all of them have been abandoned by the State or erratically revived and forgotten in the same way Pollitt (2000) proposed . There has been a recent attempt in 2014 to create a development strategy for the mining industry, but it has not been implemented yet and shows important shortcomings like ignoring the sub-national dimensions and the power asymmetries within the industry (Comisión de Minería y Desarrollo de Chile, 2014).

This lack of continuity in development policies and absence of development strategies is considered a decisive weaknesses of the Chilean State, leading to a situation in which the country ‘(...) [only] make[s] the policies according to who is in power’ (INT 20). This lack of a long term vision of what the country wants to become, has created a widely spread perception that the Chilean State ‘improvises’ in each scale, since there is no

shared and internalised ultimate objective for the country and its regions. Moreover, efforts to build a development strategy are continuously erased or reset after a new coalition gets the presidency. An example of this is the mining cluster policy, which has been proposed and resurrected several times, but '[as soon as] a new government arrived, there was a change, we started from scratch, [the new government] revised all the policies and said 'no, [the development strategy] is not related with the cluster, is related with other things' (INT31).

Hence, this lack of a development strategy weakens the bargaining position of the State in every level in relation to the mining MNEs; something that contrasts with the pre-dictatorship State in which 'it had a long term vision where the things were not in terms of this or the next government but in terms of how are we [the Chileans] are going to keep moving forward by having a short, medium and long term planning' (INT26). This situation also makes it impossible for the state to define its strategic objectives and try to achieve a strategic coupling with the mining MNEs. Furthermore, the absence of a development strategy worries the mining MNEs too, leading some of them to propose development strategies and policies for the region and country such as the 'World Class Suppliers Programme' and the 'CREO Antofagasta', in which they 'invite' the State to contribute.

Finally, there is the issue of the emergence of civil society organisations during the last decade. Even though the civic unrest and mobilization greatly helped to destabilize the dictatorial government which led to the return to democracy, this movement lost most of its verve due to the promises of a fairer and less violent country. During the 1990's and early 2000's, while the country opened its economic frontiers and deepened the privatization of the State, Chile gave the appearance of growth and progress, with little social unrest. However, the structural contradictions of the Chilean neoliberal model led to an increasing sense of dispossession and betray. In 2005 and 2006 this growing unrest was spearheaded by the university and secondary students, the beginning of what became a transversal social movement that questioned the roots of the neoliberal model. This movement reached its peak in 2011, where it was supported by civil movements representing every aspect of the Chilean society, such as unions, elderly people, environmentalists, indigenous associations and many others.

This outrage known worldwide as the Chilean Student Revolution managed to set a transcendental critique focused on the deepening of the neoliberalism which created abysmal inequalities, despite the apparent economic growth – a characteristic that shared with the Arab Spring and the Occupy Movements – all under the banner of 'No



al Lucro' (No to the profit logic). Even though that banner could sound confusing for people not familiar with recent Chilean history, it represents the resentment felt that every aspect of society should be ruled by market forces. The market in Chile had proven to be largely imperfect, as shown by the several scandals related to oligopolistic and monopolistic behaviour from the big firms, further increasing the social unrest (Mayol, 2012; Mayol & Ahumada, 2015).

Hence, this new empowered civil society managed to put several issues that were previously ignored in the political arena, such as environmental and indigenous concerns. The former has led to an increasing pressure from the civil society that has stopped massive mining and electric projects and investments such as the thermoelectric Castilla and the mining projects Andina and Pascualama. This pressure has also taken form of new and stricter regulation of several previously unregulated spaces, allowing the formerly powerless civil society to use legal mechanism for defending their interests. The new regulation has enabled civil society 'recourse to justice, which stops [the projects] and obliges them [the firms] to do more studies (...) something that five, six, ten years ago was not like that, it did not happen, but today it does. [The firms] have to be more careful because [the legal environment] is a little bit more restrictive, more demanding for them' (INT 28-29).

Furthermore, there is an increasing tension related to the signature of the 169 Convention from the International Labour Organization by the Chilean State. This convention is a legally binding international instrument, which deals specifically with the rights of indigenous and tribal peoples, and based over the pillars of non-discrimination, consultation and participation. In this sense, the Convention requires that indigenous and tribal peoples are consulted on issues that affect them, engaging in a free, prior and informed participation in policy and development processes that affect them (ICMM, 2016).

These requirements have caused several legal battles between the mining firms and indigenous population, and have increasingly become a tool used by the civil society to achieve their objectives. Furthermore, this trend has also brought a new breed of 'specialized lawyers, groups of lawyers dedicated to environmental issues, as well as to [deal with] the relationship [between the communities and] the firms' (INT 28-29). Such process has considerably raised the number 'litigations', between civil society and firms, something that has created a new and more stressful situation for the mining companies as well more empowered communities.

Conversely, the mining MNEs complain that starting new projects is 'not as easy as before (...) because before to start they have to carry expensive studies, which are also time consuming, while also facing more norms, laws and restrictions' (INT 28-29). Most of the CEOs from mining MNEs and firms interviewed mentioned this as a considerable weakness for the Chilean country, while also stating they do their best to avoid litigation due to all the problems involved with it, such as bad press and the delaying or stopping of projects. Their strategy is to apply CSR policies and negotiate directly with the affected communities, since they are always 'open to dialogue' (INT37). When this is not enough, they hire the best law firms and use their political links, since they have access to 'the whole police apparatus of the Chilean State' (INT26), to tip the balance in their favour.

#### 6.4 CONCLUSIONS

This chapter started focusing on the strategic resources currently held by Chile and that can contribute to its bargaining position when negotiating with the mining MNEs. Among these, there are: the quantity and quality of copper deposits found in the country; its legal and taxation regimes favourable to FDI; its political and economic stability; the high prices of copper due to the commodity super cycle; and the international perception of Chile as a land of opportunities for FDI. As expected, most of them are related with what the traditional bargaining models propose as strategic resources for the host countries, such as: access to the domestic markets, control over natural resources, availability of appropriate labour, suitable infrastructure and political climate and government incentives (Fagre & Wells, 1982; Moran, 1974; Vernon, 1971). Since some of the strategic resources held by the Chilean State are only found there in the quantities and quality that are attractive for the mining MNEs, they really differentiate the country over its peers and competitors, meaning that they can provide great potential power. Hence, the Chilean State holds enough resources to bargain the conditions for reaching sustainable development regionally and nationally.

However, these strategic resources hold by the Chilean State are offset by the considerable constraints it faces, which restrain its exertion of its bargaining power. The national State faces several internal issues that are affecting the country's competitiveness such as the decreasing in the copper grades and the scarcity of water, energy and human capital, all of which have risen the costs of production. This, together with the recent fall in the copper prices, have put the mining firms in a challenging position regarding to their access to such crucial resources and their costs projections.

Moreover, the extremely centralised structure of the Chilean State; the national and regional relative size compared to the mining MNEs; and the way it operates, heavily restrain the capacity of regional governments. This centralised national government leaves little to no space for regional governments to bargain with the mining MNEs, being unable to draw the best out of the mining industry. Plus, the relative size compared to the mining MNEs can be considered quite modest and continuously shrinking, mostly to the continuous privatizations and neoliberal policies imposed and still deepened. This means that most of the times the Chilean institutions (national and regional) are underfunded and understaffed. Consequently, they do not have the capacity to fulfil their functions, which truly hinders the State's bargaining capacity at every scale.

There are several political issues that have changed the political stability of the Chilean country. The extremely high level of political and economic centralization not only impedes fast and participative decision making in the regions, but it also concentrates the economic and political resources in the capital city of Santiago. Additionally, and more worryingly, the Chilean State completely lacks a medium/long term development strategy in all its levels, mostly caused by the fast retreat of the State from the economic arena, the mono-dependency on the copper industry and the continuous reboot of policies when new governments reach power.

Lastly, the recent political outburst witnessed by the Chilean society has led to a situation of political upheaval, where civil society has managed to press the State for a bigger and stronger participation in the socio-economic issues. These movements have criticized and questioned the roots of the neoliberal model, while also putting concerns on the political agenda that were previously neglected such as environmental, indigenous and distributive issues. This has led to more regulation of the mining industry and the empowerment of social movements, something seen by mining MNEs as a threat to political stability.

The next chapter makes a similar analysis of the strategic resources and constraints that MNE have. All of this to finally understand how the State and firms use these resources and face their constraints when bargaining with each other.

## CHAPTER 7

### MINING MNEs: THEIR STRATEGIC POWER RESOURCES AND CONSTRAINTS

#### 7.1 INTRODUCTION

This chapter continues the analysis of the sources of power and the constraint of the second actor studied in this work, the mining MNEs. However, before doing that, it firstly depicts how the Chilean copper mining industry is organized and structured, which will facilitate the later analysis of the mining MNE's strategic resources. The chapter then proceeds to establish which strategic assets are held by the mining MNEs, how they differ from the ones found in the traditional bargaining literature, and how they can be used as power resources in bargains struck with the other agents of the Chilean mining GPN. Such resources have been divided into two groups: strategic resources internal to the firm; and the resources that are related to the connections and linkages of the firms with the other actors. Subsequently, the constraints faced by mining MNEs are shown, which can be grouped in two broad categories: the lack of mobility of mining MNEs and the recent relevance of public image in order to get the social licence to operate. Interestingly, these constraints differ from the previously established in the bargaining literature, due to the specific characteristics of the Chilean mining GPN, which opens new empirical and theoretical challenges for the mining MNEs in reaching their strategic objectives.

#### 7.2 CHARACTERIZATION OF THE MINING MNEs IN THE CHILEAN GPN

The Chilean mining sector is comprised by several copper producer firms, led by the State owned CODELCO, the main copper producer of the world. Nowadays, CODELCO is divided in six mining divisions<sup>40</sup>, located all over the country (see Table 9) and has shares in firms related with mining exploration in Chile and overseas. The rest of the main copper producers in Chile belong to private capitals, which are subsidiaries of the most important mining MNEs worldwide. At a national level, the main copper producer mines are Minera Escondida, Minera Los Pelambres S.A. and Anglo American Sur, owned by BHP Billiton, Antofagasta PLC (a Chilean MNE) and Anglo American

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<sup>40</sup> In the mining jargon, *divisions*, *mines* and *projects* mean the same, and will be used indistinctively in this work.

respectively; all of which are crucial copper producers in the world copper scenario (see table 9).

Moreover, the most important private firms in the Chilean big mining industry are grouped in the GMP10<sup>41</sup>: the ten largest private copper companies that had subscribed to the DL. 600 in 2001, where they accounted for 90% of private sector mining production and the bulk of mining taxation from this sector, a position that still holds today (COCHILCO, 2013). The mines comprising the GMP10 are Escondida, Collahuasi, Los Pelambres, Anglo American Norte, Anglo American Sur, Candelaria, El Abra, Zaldívar, Cerro Colorado, and Quebrada Blanca. Their ownership structure is quite diversified, with the participation of the main mining MNEs like: BHP Billiton, Freeport McMoran, Barrick Gold, Teck, Rio Tinto, Glencore Xstrata, Anglo American, Sumitomo Metal Mining, Mitsubishi Materials and Antofagasta PLC (See table 9). The latter is the only Chilean mining MNE of the group, and it has become a main player despite its relatively short life. All these companies trade their copper production at the London Metal Exchange, the world centre for the trading of industrial metals, and share similar internal, external and contextual strategic resources.

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<sup>41</sup> GMP10 comes from *Gran Minería Privada – 10* (Great Private Mining – 10).

**Table 12: Property Structure of the Main Mining Copper firms in Chile, their location and production for 2012.**

By Firm	Owners	Region of production	Production in kMT year 2012
<b>Codelco Chile</b>	<b>Chilean State</b>		<b>1646.5</b>
Division Radomiro Tomic	Chilean State	<b>Antofagasta</b>	427.8
Division el Teniente	Chilean State	O'Higgins	417.2
Division Chuquicamata	Chilean State	<b>Antofagasta</b>	355.9
Division Andina	Chilean State	Valparaiso	249.9
Division Gaby	Chilean State	<b>Antofagasta</b>	133
Division Salvador	Chilean State	Atacama	62.7
<b>Other Producers</b>			<b>3425.3</b>
Minera Escondida Ltda.	BHP Billiton (57,5%); Rio Tinto (30%); JECO Corp (10%); JECO 2 Ltd. (2,5%).	<b>Antofagasta</b>	1075.9
Minera Los Pelambres S.A.	Antofagasta PLC (60%); Nippon LP Resources (25%); MM LP (15%).	Coquimbo	417.7
Anglo American Sur S.A.	Anglo American (50,1%); JV Codelco-Mitsui (29,5%); Mitsubishi Corp. (20,4%).	Valparaiso	416.6
S.C.M. Doña Inés de Collahuasi	Xstrata Copper (44%); Anglo American (44%); JCR (12%).	Tarapaca	282.1
Minera Esperanza	Antofagasta PLC (70%); Marubeni Corp. (30%).	<b>Antofagasta</b>	173.2
Cía. Minera Spence	BHP Billiton (100%).	<b>Antofagasta</b>	166.7
S.C.M. El Abra	Freeport McMoRan (51%); Codelco Chile (49%).	<b>Antofagasta</b>	153.7
Cía. Minera Zaldívar	Barrick Gold (100%).	<b>Antofagasta</b>	131.1
S.C.M. Candelaria	Freeport McMoRan (80%); Sumitomo (20%).	Atacama	122.8
Minera El Tesoro	Antofagasta PLC (70%); Marubeni Corp. (30%).	<b>Antofagasta</b>	105
Carmen de Andacollo	Teck (90%); Enami (10%).	Coquimbo	79.8
Cía. Minera Xstrata Lomas Bayas Ltda.	Xstrata Copper (100%).	<b>Antofagasta</b>	73.3
Cía. Minera Cerro Colorado	BHP Billiton (100%).	Tarapaca	73.1
Quebrada Blanca	Teck (76,5%); Grupo Hurtado Vicuña (13,5%); Enami (10%).	Tarapaca	62.4
Empresa Minera Mantos Blancos S.A.	Anglo American (100%).	<b>Antofagasta</b>	54.2
Minera Michilla S.A.	Antofagasta PLC (74,18%); Inversiones Costa Verde (15,3%) Otros (10,52%).	<b>Antofagasta</b>	37.7

Source: Own elaboration using data from COCHILCO and Consejo Minero.

## 7.3 THE STRATEGIC RESOURCES OF THE MINING MNES

### 7.3.1 Strategic resources internal to mining MNES

Traditionally the most relevant strategic resources for the mining MNEs' bargaining capabilities have been related to their internal structure and assets. According to the interviewees, such resources can be grouped in the internal structure and organization of the firms; and the quantity, quality and scope of the strategic assets hold by them, something already noticed by the bargaining literature (Moran, 1974; Vernon, 1971). In terms of structure, the mining MNEs have adopted a global presence as the selected way to organize themselves, in order to get the most of their productive processes (Dicken, 2011). This international and multi-level organization, has allowed them to benefit from a higher adaptability to market changes, and the chance of influencing all the main nodes where pivotal decisions are made. Furthermore, their internal strategic resources allow them to access to several critical supplies in quantities, and under conditions that are usually not available for developing local and national States.

#### ***7.3.1.1 Internal structure and organization***

The mining MNEs present a geographically scattered structure, being able to influence several levels of the copper mining GPN, sometimes even simultaneously, in the same way Bridge (2008) depicted for oil. As Figure 27 depicts, the mining MNEs are organized in a main headquarter, a regional division or mineral group, and their subsidiaries. The main headquarter is located in the central decisional node or home country and is in charge of the most relevant and sensitive decisions, having the broader international scope of influence. The regional division or mineral group has the second biggest sphere of influence, and is responsible of all the subsidiaries of a broad region, such as a continent or group of countries; or producing a certain mineral, like the copper group, iron group, etc. Finally, the subsidiaries are located in the host countries and regions, and they produce and export minerals. The subsidiaries are divided in a national headquarter, located in the capital city of the host country and in charge of the total national production and investments; and the divisions, mines or projects, located next to the ores where the minerals are exploited and exported.

In the Chilean case, the mining MNEs located their headquarters in their home countries, such as England, Australia and Canada. All of them have representatives in London, the most important node in this industry, since it is where almost 80% of all the non-ferrous metal futures businesses are transacted<sup>42</sup>. Moreover, Santiago hosts several copper divisions' headquarters from decisive players, such as BHP and Anglo American, which control all their subsidiaries producing copper worldwide from the Chilean capital. Likewise, Santiago is also where all the copper mining MNEs have their national headquarters, due to its political relevance both nationally and internationally. Finally, the copper mines are located mostly in the Antofagasta region, where the ores are located and exploited.

This division of functions in the different levels of the mining MNEs is strongly related with the degree of autonomy each subunit has. Said autonomy decreases the closer the subunit is to the production site, a fact that is unlikely to be challenged (Phelps & Fuller, 2000). Likewise, the internal structure of the copper mining MNEs is centralized in main nodes and higher levels of direction, especially in relation to investments or long term decisions. Regarding to this, the CEOs of the mining MNEs interviewed agreed that every decision requires a different type of approval, related to its complexity, criticality, risk, amounts involved and scope.

Thus, '[the local subsidiaries] have autonomy to make decisions until a certain amount of investment (...) and when they overcome a certain limit, they need more sophisticated levels of approval' (INT 39). This also applies to the multiple negotiations and bargains. The more important they are for the industry and mining MNEs, the higher the level of approval needed. Hence, in the Chilean mining GPN, the most sensitive decisions and negotiations take place in nodes like London, or the MNE's home countries, whereas for the Chilean mining production, 'the negotiations (...) take place in Santiago' (INT 33), as a politician explained.

Hence, this multi-scalar influence is summarized in the words of the representative of a London based international NGO related to mining: '[mining MNEs] have offices here in London, they have offices in several parts of the world and they operate in different environments. That impacts over the power asymmetries, since they have access to all the levels, from the local government to the national government, the regional government and the British government' (INT 2). This is a crucial advantage over the

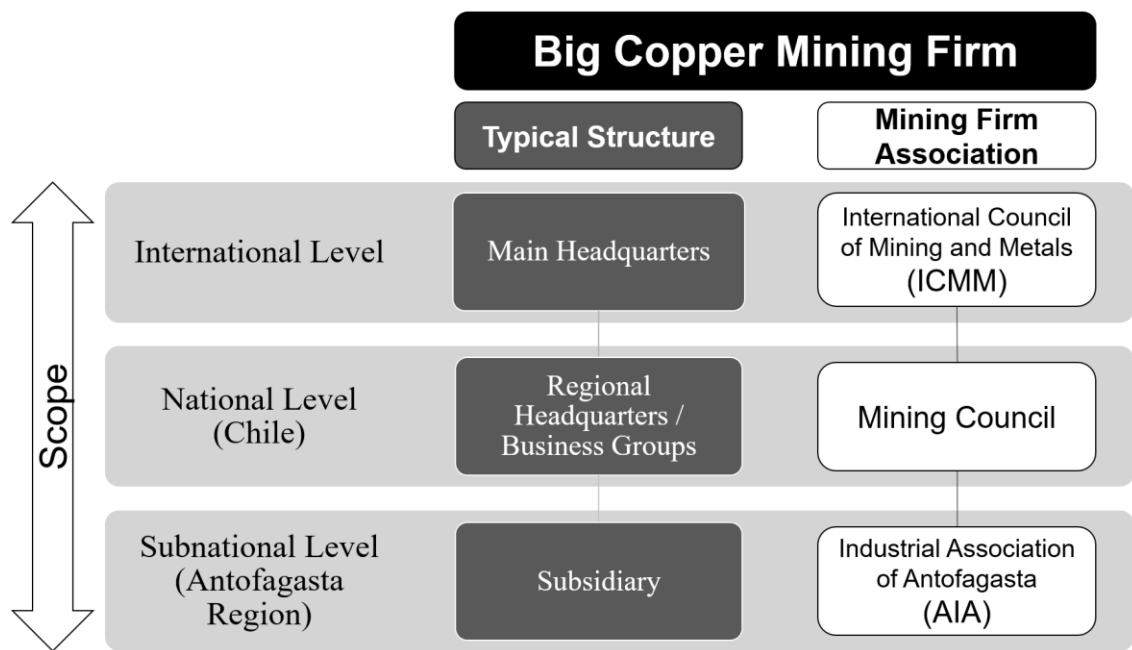
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<sup>42</sup> These transactions take place in the London Metal Exchange (LME).



other agents of the GPN, such as the state and civil society, since their international scope is far more limited.

**Figure 27: Organization and scope of a typical big copper mining firm in the Chilean mining GPN.**



Source: Own elaboration.

Another strategic resource is the mining MNE's flexibility and adaptability to the market changes, especially in comparison to the State owned CODELCO. Mining MNEs usually have a more horizontal structure, with a more flexible labour force; fewer levels of control and bureaucracy; and a detailed planning based on cost saving; allowing them to quickly change and adapt to the dynamism of the globalised copper industry. As a CEO from a mining MNE explained '[our firm] is not a firm that has an inertia that means that in order to turn a little it has to pass through twenty thousand bureaucracies. The decision making process [in our firm] is fast, we act quickly when facing shifts in the market' (INT 27).

This dynamism relates to the horizontal structure and characteristics of the MNE's labour force. Mining MNEs usually have less workers than State owned firms, and their workers are hired to make different jobs in order to quickly adapt to the needs of the firm. In the words of a mining MNE's CEO who worked in private firms and CODELCO 'in the American firm where I worked, there were five secretaries for (...) all the CEOs of the

company (...) Here [at his current job], which is a Vice – presidency, we have only one secretary. In CODELCO there was one for every floor, which decreased its productivity' (INT 10). Additionally, a mining expert explained that mining MNEs hire workers, not specialists. By this he means that '[in the mining MNEs] today you will work here, tomorrow (...) you could work somewhere else. So that is the big difference [with CODELCO], they are modern firms that can be handled with few people' (INT 13). Likewise, the outsourcing of the labour force has also helped making the firms more flexible by effectively diminished the union's participation and coordination among workers.

Furthermore, the adaptability of the mining MNEs is also improved by their detailed planning of their activities, based on a continuous improvement strategy to lower their production costs. Since '[in the mining industry] there is no thorough knowledge of the long and medium terms' (INT 10), most of the mining MNEs plan only for a brief period, usually four months. This responds to their need of adjusting themselves not only to the typical fluctuations related to the production of copper, but also the fluctuations of financial exchange markets. According to several CEOs of mining MNEs, the firms are always looking to adapt as quickly as possible to these shifts, so when they face a problem they 'do not complicate themselves (...) they just want to solve the issue, (...) [they focus in] the solution and then quickly keep moving forward' (INT 10).

Moreover, since the copper prices are decided in the financial markets, the mining MNEs are continuously trying to increase their productivity as a way to boost their profits. Hence, they focus on cost savings, incorporating new technologies, and constantly upgrading their internal processes. Likewise, the multi-scalar scope of the mining MNEs allows them to harvest several other strategic resources, such as access to international capital, information, markets, technology and labour force. These assets are vital for the bargaining process within the GPN as noticed by the bargaining literature, and have historically provided the mining MNEs of advantages that are difficult to reproduce by the other actors involved.

### **7.3.1.2 Strategic assets**

Traditionally, the bargaining literature has listed several bargaining power resources hold by the mining MNEs as detailed in Chapter 3 (Moran, 1974; Ramamurti, 2001; Vernon, 1971). Among these, access to financial and physical capital by the mining MNEs have

been decisive when bargaining with host countries and regions, since their enormous reserves and access to these assets allow them to undertake the massive investments required to start a mining project (Moran, 1974; Vernon, 1971). Furthermore, it is still argued that the host State and regions do not usually have enough access to financial or physical capital to start their own mining endeavour. Hence, they have lured FDI through several incentives, creating a ruthless competition among resource rich States in order to get fresh FDI.

Today, the financial capital held by the mining MNEs operating in Chile is still a major strategic resource. These firms are relevant global players, being listed in the most important world rankings, such as the FTSE 100 and Forbes. Regarding the FTSE100, five mining MNEs located in Chile are listed by the London Metal Exchange (2016): Anglo American, Antofagasta PLC, BHP Billiton, Glencore and Rio Tinto. Likewise, several of them are also ranked in the top 200 Forbes World's biggest Public Companies of 2015, such as BHP Billiton in the 50<sup>th</sup> position; Rio Tinto in the 105<sup>th</sup>; and Glencore holding the 110<sup>th</sup> (FORBES, 2015). All this illustrates the great profitability of the industry and the considerable amount of capital that the firms have available.

The FDI flow has been considerable since the 90's<sup>43</sup>, but it has increased markedly since the beginning of the copper super cycle in 2003. As Figure 28 illustrates, the mining MNEs' presence over the total investments made in the big copper mining industry has grown extremely rapidly in just one decade. Likewise, the investment made by the mining MNE went from 816 million US\$ in 2003 to 9,372 million US\$ in 2013. During the same period, the private copper investment grew extremely fast, 31% on average, reaching the enormous growth rate of 79% and 77% in 2009 and 2012 respectively (Figure 28). This FDI expansion happened despite difficulties faced by the industry at the time, such as the economic crisis of 2008 and the end of the commodities super cycle.

More interestingly, MNEs' investment went from being directly proportional to what CODELCO was spending in 2003, to double in 2013, while also keeping a more stable growth rate in their investments (Figure 28). Likewise, the mining MNEs' continuous investment have also increased their production capabilities, allowing the private mine Escondida – owned by BHP Billiton – to produce almost three times what Chuquicamata – owned by CODELCO – was producing in 2012 (Table 9). Thus, CODELCO has been overtaken both as the main mining investor in Chile and as owning the main copper mine.

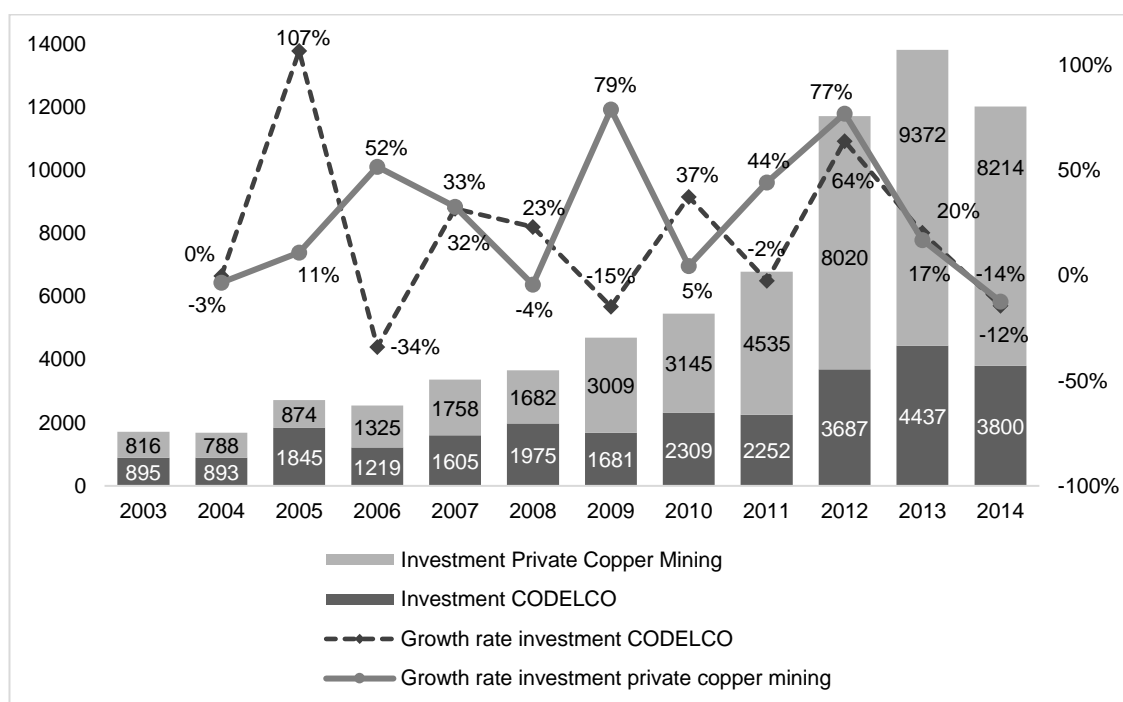
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<sup>43</sup> According to Bridge (2004b), Chile accumulated 17.6% of the total mining investment worldwide between 1990 and 2001.

The increasing FDI entering the country could be explained by the extremely high utilities present during the copper super cycle (Figure 29). Between 2002, just before the super cycle and 2010, just before the end of it, the utilities before taxes for the GMP10 firms increased over twenty six times. This created the impression of the copper industry as a 'cash cow' whose benefits 'should be milked as soon as possible'. The president of a regional workers' union explained that 'the rate of which [the mining MNEs] earn their utilities is so high that (...) today [the investment that a mining MNE] pretended to recover in ten or twenty years [is being recovered] in less than half that time' (INT 36). Mining investments are usually planned to create returns over ten to twenty years. Recovering the total investment in half that time implies exceedingly high profitability.

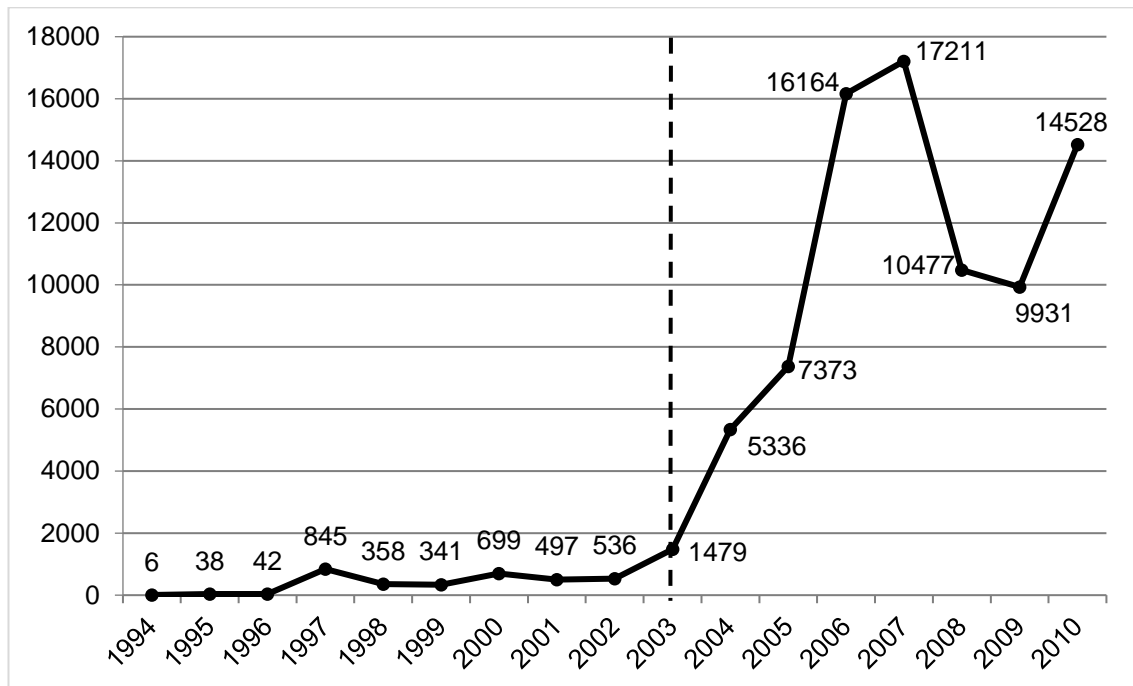
Moreover, even though all of the GMP10 firms obtained 'gigantic rents' (INT 12) during this period, some of them reaped even bigger benefits. The most astonishing case was Escondida, whose utilities before taxes went from 776 million US\$ in 1999 to 5,635 million US\$ in 2010. Such extraordinary profitability caused a feeling of endless bonanza, leading the mining MNEs to keep developing new or upgrading old projects in the country.

**Figure 28: Total Investment of the big copper mining firms in Chile and growth rate of such investments (Millions of US\$).**



Source: Own elaboration using data from Consejo Minero (2014b).

**Figure 29: Utilities of the GMP - 10 before taxes (Millions of US\$).**

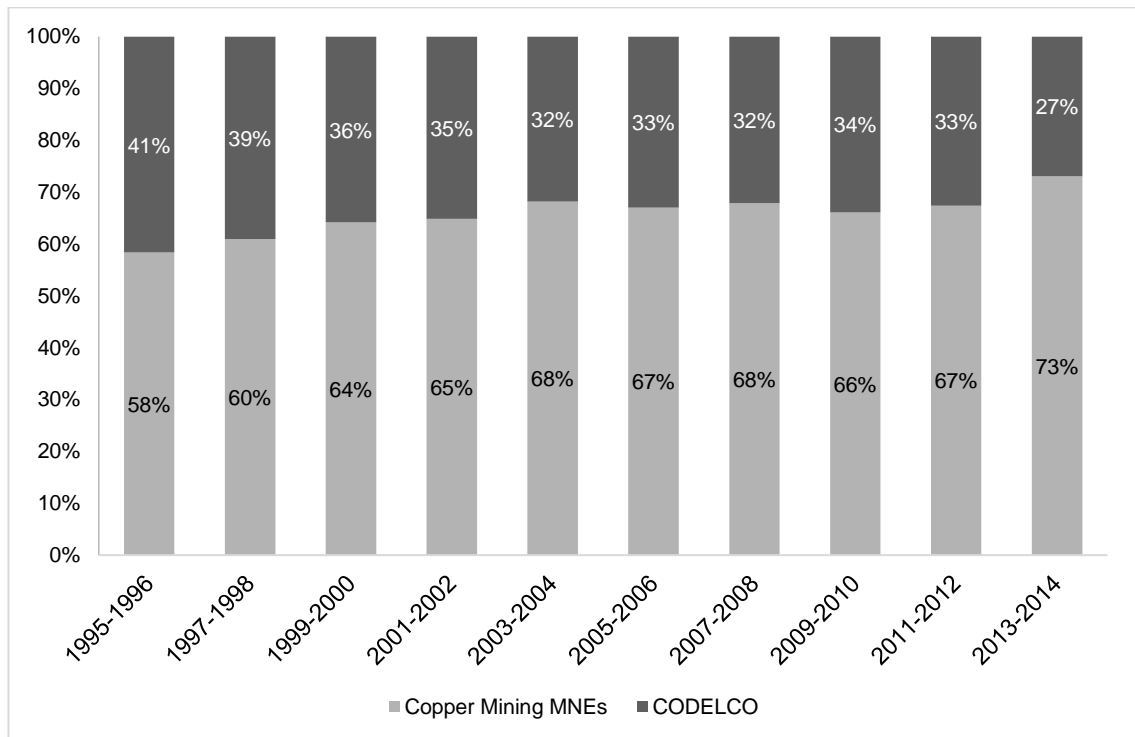


Source: Own elaboration using data from CIPER (2015).

Another traditionally recognized strategic resource for the mining MNEs is their access to external markets and information (Moran, 1974). This is granted by their global presence, allowing them to gather relevant information about markets and trends. However, in countries like Chile where there is a strong State owned mining firm (CODELCO), this access is not monopolised by the mining MNEs, since CODELCO trades its copper production worldwide in the same industrial metal exchange centres. There, all the copper firms trade their production, while also gathering and sharing strategic information about the industry's trends and projections.

More recently there has been a steady increase of mining MNEs' participation in the total national copper exportation and, by extension, the world's markets, going from 58% in 1995 to 73% in 2014 (Figure 30). Hence, the mining MNEs' massive size and increasing relevance in the national and international copper production allow them to gather information from more markets and customers than CODELCO. Furthermore, the mining MNEs usually also produce other minerals, hence, they belong to several mining GPNs simultaneously; meaning they have a broader knowledge of the mining industry in general, in terms of markets, trends, challenges and projections.

**Figure 30: Participation in the total copper export by exporter (1994 - 2014).**



Source: Own elaboration using data from COCHILCO (2014).

A final internal strategic resource is the mining MNEs' access to new technologies (Moran, 1974). The competitive issues within the Chilean mining industry, such as the lowering the ore grades and the insufficient energy and water supplies, have led the copper mining firms to push for new technologies in order to make the lower grade ores profitable. An example is found in Escondida, which 'has managed to build the first desalination plant in Chile and has currently approved a project (...) to supply water to all the future projects related to Minera Escondida. Thus, it has marked the tendency respect to what the copper industry is doing' (INT32).

However, in the Chilean copper mining GPN, technology is not developed by national firms, but it 'usually comes from outside (...) everything that is related to the copper production is technology absolutely imported' (INT 12). This has created an extremely high dependence on MNEs producing or importing these technologies. Thus, the Chilean productive fabric is currently unable to create relevant technological advances in a constant way, and it mostly focuses in adapting imported technology.

Nonetheless, this technological gap between the overseas and Chile's productive is being dealt with by the mining MNEs. The foundation in 2010 of a programme for creating

'World Class Suppliers' aimed to produce tailored technological solutions for the firms' specific problems in Chile, is a strong attempt to level the field promoting the apparition of firms that could become local technological suppliers. Still, the results of the programme are far from expected (Valdes, 2016) and the copper industry keeps importing technology, deepening the technological dependency of the country.

### **7.3.2 Strategic resources related to the firm's networks**

Mining MNEs are also rich in their connections with several key actors in the copper mining GPN. The nature of some of these relations is close, where both parties benefit; whereas others are established over more vertical ties, based on the others need of the mining MNEs as a consumer, employer or benefactor. These linkages and relations have been nurtured through several years and they constitute an extremely handy resource when influencing actors in the GPN. In this line, the bargaining literature has traditionally considered the international, national and local political and entrepreneurial class; their working force; their suppliers and the civil society of the host country and region as the most relevant ties between the mining MNEs and international institutions (Fagre & Wells, 1982; Moran, 1974; Vernon, 1971).

Furthermore, these relations can spread over different decisional nodes and are usually complex, deep and hard to follow. They can be seen as extremely sensitive, especially regarding to the links between MNEs and the political class; or highly polemical, like the relations between the firms and the labour force or civil society. Moreover, some additions to the bargaining literature are added by considering new forms of network resources, like the mining associations, CSR policies and the firm's image as creator of employment.

#### ***7.3.2.1 Linkages with the political elites***

As depicted in Chapter 5, copper mining MNEs operating in Chile have always shared a strong bond with the local political and entrepreneurial elites (Salazar & Pinto, 2002). Such relations play a key role in the decision-making processes taking place at every node, by setting a more favourable ideological, legislative and cultural environment towards FDI and the development of the private mining industry (Moran, 1974). As a representative from a mining related NGO explained:

'In Chile, the political and multinational sectors are very close, they usually move in the same circles (...) and this is another mechanism they [the mining MNEs] use for making political pressure, because most of the times those elites share a common interest, they have a similar vision of development, of neoliberalism' [INT2].

The scope and depth of these ties are extremely difficult to map. Yet, is possible to examine how mining MNEs interact with the political and entrepreneurial classes in different locations by looking at: first, how they relate and use international institutions and their home countries' governments; second, how they group themselves in international, national and local associations; and third, how they directly or indirectly influence the political class through lobby firms.

In terms of the relationships between the mining MNEs and international institutions, the recent developments in the bargaining literature (Doh & Ramamurti, 2003; Nebus & Rufin, 2010; Ramamurti, 2001) consider the international institutions and bilateral investment treaties as pivotal players in the tier 1 of the bargaining, meaning the macro or supra – national level in the two tier model. Thus, international institutions, such as the World Bank and IMF, have 'determined the agenda of developing countries' (INT38) by giving the resource rich countries loans in times of crisis, with the condition of applying strict structural adjustment plans to liberalise their economies, creating a vicious cycle of dependency and a loss of national sovereignty in most cases.

However, as an academic expert on mining explained,

'This period [where the international institutions were extremely influential] has finished. The famous crisis of the Washington consensus happened and brought several critiques to these plans (...) Today these international agencies have fallen into some disrepute, nobody believes in them too much, so even though they still have certain influence, it is a lot less than in the past' (INT38).

Recently, some resource-rich developing countries, like Chile, passed from being debtors to being lenders (as seen in Chapter 6), meaning that Chile has 'graduated from the dependency of the IMF and other multilateral organisms' (INT5), since 'the country does not need their resources' (INT12). These opinions summarize something unexpected according to the two tier bargaining literature: international institutions and multilateral organisms do not have the same influence they had in other periods. However, 'the situation is different for countries that do need rescue or financial aid (...) in such countries, the discussion about this issue must be really different' (INT12).



Furthermore, mining MNEs still rely on their influence over their home countries as a strategic resource (Moran, 1974; Phelps & Fuller, 2000). As a representative of an international mining related NGO explained, 'The British based companies can rely on UK government diplomatic power (...) so, the UK government will exert its authority over other national governments in order to get those national governments to adopt policies that are friendly towards British multinationals' (INT42). In this interview, he provided several examples about the British government actively interfering to persuade the local government 'to allow mines to go ahead' (INT42). In Chile there is a consensus about mining MNEs establishing their links with strategic political actors at the main decisional nodes of the Chilean copper mining GPN by supporting political campaigns, grouping themselves in trade associations and using lobby.

Regarding to the support of political campaigns, the Chilean law 19.885 allows firms to donate money with political objectives to politicians running for office, while also preventing disclosure of the exact amount. However, it is highly likely that politicians know who is contributing to their causes, since nothing stops the firms letting them know if they want to. Moreover, firms donating under this law can receive a reduction of 1% in their net taxable income corresponding to the year of the donation. Hence, just between 2005 and 2013, more than 60 million US\$ were spent on supporting candidates to the parliament from the two most important political coalitions in Chile, The *Alianza* and the *Nueva Mayoría* (Urquieta, 2014).

There are two major copper producers contributing to the Chilean politicians' aspirations: Barrick and Antofagasta Minerals (owned by Antofagasta PLC) (Matamala, 2015). According to the Departamento de Estudios Económicos y Tributarios de la Subdirección de Estudios del Servicio de Impuestos Internos (2015), Barrick only donated in 2006 and 2013, while Antofagasta Minerals contributed in five periods. Consequently, Antofagasta Minerals – which belongs to the Luksic group, one of the most influential in Chile and Latin America – has been the main donator to political campaigns in Chile. Thus, the historical relationship between the political and multinational elites identified by Moran (1974) is still highly influential (Salazar & Pinto, 2002).

The mining MNEs have also established indirect relations and exerted influence over the political elite, through their participation in several mining associations in all the levels of the GPN (as seen in Figure 27). Such associations present themselves as promoters of sustainable development through mining for the host region and country, allowing their members to enjoy a position of status not only within the industry, but also in the political

context they develop. This is a new strategic resource to be considered by the bargaining literature.

Moreover, the mining associations can also become a platform for lobbying since they organise or attend to activities with the most relevant political actors, allowing the mining MNEs to build and strengthen strategic relationships with key agents. Dinners, seminars, and meetings have proven extremely helpful spaces for discussing issues that are or will affect the industry, such as new legislations, tax exemptions and other conditions in every level of the GPN.

At the international level, the most important mining association, is the International Council of Mining and Metals (ICMM). This is a London based organization whose main goals are to 'highlight its members as leaders of the industry and to elevate the standards of the industry as a whole' (ICMM, 2016). Its global relevance, as one of its CEOs explained, comes from the fact that 'it gathers twenty two of the biggest mining and metal producers of the world and thirty four national and regional commodities organizations' (INT4). All the big mining firms of the Chilean copper mining GPN are members.

The ICMM is setting international standards for the mining firms – which are mandatory for its members – to get the social licence to operate, essential in this industry. Moreover, the ICMM actively aims to create collaboration links with all the actors involved in the metal mining GPNs, meaning home and host states, stakeholders in every level and, more recently, indigenous population. However, this relation is usually quite asymmetrical, due to the size and multi-level access to all sorts of resources that the Council Members have, compared to the other smaller and more dispersed stakeholders, in the same way as the CSR critiques predicted (Frynas, 2005; Hilson, 2012). The preoccupation with sustainability issues has given the ICMM's members a high status, especially in the main decisional nodes of the mining GPNs.

At the national level, the big copper mining firms are also affiliated to the *Consejo Minero* (Mining Council), located in Santiago. Its members produce 96% of the national copper and around a third of the world total, which is why despite having a very small staff<sup>44</sup>, is considered an extremely relevant actor in the copper mining GPN. The Council's main goal, according to one of its CEOs, is to 'promote good public policies for the mining industry (...) and to make the quality of the mining industry known (...) by permanently working with the authorities, government and members of the Parliament' (INT 40). In

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<sup>44</sup> According to their webpage [www.consejominero.cl](http://www.consejominero.cl) the whole organisation is comprised of four people in their executive committee, seven in their executive team and three administrative staff.

the Mining Council, firms are members through their mining projects, meaning some firms hold several memberships. Each member has a vote, hence, the mining MNEs have a bigger presence and authority over the Council's decisions.

The Mining Council explicitly does not interfere with issues related to the business dynamics between their members, but they do represent their members' position when their interests may be affected. For example, when new legislation related to the mining industry is being discussed, the Council has meetings with high representatives from the government in order to present the Council member's views backed with their own studies. The Mining Council has a strong presence in the Chilean copper mining GPN, and it has a friendly and close relationship with the political elite. The Council is also part of the ICMM, and organizes annual events in the form of dinners or seminars where important politicians and actors of the Chilean copper mining GPN are invited to assist and present, which have become crucial spaces for lobbying.

At the local level, all the big copper mining firms belong to the *Asociación de Industriales de Antofagasta* (Industrial Association of Antofagasta or AIA), a regional association that groups big mining firms and other big and SMEs companies operating in the Antofagasta Region. The AIA is explicitly focused on achieving sustainable development for the region, through their promotion of mining cluster policies aimed to diversify the productive fabric. This focus has sometimes caused tensions between their associates, especially between the local suppliers of the mining industry and the big mining firms.

The AIA represents its associates on the local public and political arena, and is an important player in the copper mining GPN. It organises the biannual International Exhibition of the Mining Industry (EXPONOR), which takes place in Antofagasta. The EXPONOR has become one of the most important mining exhibition worldwide, since it gathers crucial actors from the copper mining GPN: CEOs of the mining MNEs; international and local SMEs suppliers; and national/international politicians and entrepreneurial elite. Thus, EXPONOR is a decisive space to influence positions relating to the sustainability of mining in the Region of Antofagasta and the country.

Furthermore, mining MNEs rely on lobbying, which can be done individually, through lobby firms or through some of the mining associations. At the international scale, lobbying activity is a quite regulated, transparent and common practice. However, lobbying has just recently been regulated in Chile<sup>45</sup>, and there is still a major perception

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<sup>45</sup> With the promulgation of the law N.20.730 in 2014.

that the lobbying process is 'not transparent' (INT28) and not 'as regulated as we would like' (INT12). This feeling is based on the several legal vacuums in the legislation, like the deregulation of meetings that take place outside the country and the fact that the law only affects the people receiving the influence and not to the ones exerting it.

Mining MNEs operating in Chile have lobbied through specialized firms, by themselves, and also by using the Mining Council. As an academic and politician explained, there is a wide perception that the Mining Council 'keeps a permanent practice of lobbying with the political leaders. They organize dinners for them, meetings ... they are always influencing them' (INT43). The Council is very open about this, as a CEO of the Mining Council claimed 'The Mining Council (...) goes and let the government know our position about a certain normative. Additionally, during the presidential campaigns, we also try to have a more proactive attitude by saying "these are the ideas that we have for a future government"' (INT40). Likewise, an expert who was in charge of a local development agency further exemplified this situation, claiming that 'if you start putting problems to the [mining] industry... they have a club, don't they? The Mining Council, and the club gathers and (...) sends its lobbyist' (INT16b).

On the contrary, the AIA has also played a role in lobbying defending the copper industry's interest, but with a strong local focus. This sometimes differ with the big mining MNE's interests, since the AIA is especially concerned about the sustainability of the industry for the host region and country through the support of local SMEs. The AIA has historically raised points related to the decentralization of Chile, the acknowledging of Antofagasta as the 'Mining Capital of the World' (INT14) and in creating a mining cluster to diversify the local productive fabric. This approach diverges from that of the Mining Council and some mining MNEs, which have framed the sustainability of host regions and countries within the CSR policies that the industry should have.

### ***7.3.2.2 Corporate Social Responsibility***

During the last decades, mining MNEs have actively promoted Corporate Social Responsibility policies (CSR) as a way to actively engage with their host regions and nations, turning them into a new strategic resource. This trend started in the early 1990's, where CSR changes its focus from exclusively maximizing the profits of the shareholders (Friedman, 1970) to including all the stakeholders of the firm, increasing the welfare of the society in general (Meller, 2013). Thus, mining MNEs are implementing CSR policies

to improve the mining industry's image and, consequently, getting the social licence to operate. This has become a world standard for mining companies, since today 'there are several investors demanding them [the mining MNEs] to do something about them [CSR policies], and not only to do them, but to show them and to communicate them properly' (mining expert, INT3).

Moreover, CSR policies have proven to be a crucial resource since, as the former CEO of a local industrial association and entrepreneur explained:

'The strength that [the CSR] has is that the community will be more friendly towards the mining firm, since the mining firms (...) are taking a natural resource and polluting (...) meaning that the firm is interested in being friendly with the city, because who is going to expel them tomorrow and say 'Yankee go home?' the people (...) so [the mining MNEs] have to find a way to keep the people happy. [The building of] stadiums, beaches (...) is a way to keep a friendly relationship' (INT 8).

The CEO of a mining MNE in charge of its CSR policies further developed this by stating that 'we [the mining MNEs] basically have (...) to generate relationships of trust and mutual benefit; specially to make the communities close to our operations (...) seeing the insertion of our projects in their communities in a positive way' (INT 17). To do this, they work together with the 'civil organizations and local governments (...) trying to benefit the maximum number of people within those communities and having a special care about not replacing the role of the State' (INT17). Hence, the leverage that CSR policies can provide reaches both the civil society and the host governments located where they implement them.

The originator of this trend in Chile was BHP Billiton through Minera Escondida, which currently allocates 1% of its pre-tax profits to long-term community development plans 'that seek to improve quality of life and provide the necessary resources' (BHP Billiton, 2015). Only in 2014, BHP Billiton invested US\$33 million in 'social development projects' while its Foundation implemented initiatives for another US\$3 million (BHP Billiton, 2015). Moreover, BHP has also actively promoted initiatives such as the World Class Suppliers Programme and the *Creo Antofagasta*. The former is a joint project with CODELCO and the support of some State institutions, aimed to create suppliers intensive in knowledge. The latter is a public-private initiative aimed to generate a plan for the sustainable development of the Antofagasta city. Likewise, Escondida has also funded several other initiatives such as the new stadium (Figure 31), football playfields, artificial beaches, research buildings, hospitals, as well as many other social projects through its *Fundación Escondida*.

Correspondingly, every mining MNE operating in Chile has developed CSR policies. Anglo American, for example, focuses on educational and entrepreneurial issues, like the *Delta Programme*, which works with talented children learning advanced topics at the local universities. As an academic involved in the Delta Project indicated, it 'is not cheap [1000 US\$ dollars per student], and the firms were fighting for it, but Anglo American took it and never let it go, because it gives them a great public image' [INT31]. Another widely marketed CSR initiative is the *Calama Plus Programme*, a public–private collaboration led by CODELCO joined by FreePort McMoran and Glencore. This initiative involves an investment of US\$1.000 million and aims transforming Calama, a mining city perceived as 'weak, precarious, with a smell and vision of a mining camp and a weak infrastructure' [INT 14], into a sustainable city (Meller, 2013).

These are just some examples of the magnitude that CSR policies have reached in the Chilean copper mining GPN. In a survey taken in 2004 of ten big mining firms, all of them declared that they sought to identify and analyse the expectations and demands of groups affected by their business and make studies of the environmental impacts of their products. They also established that they aim to keep transparent and non–abusive relations with their employees, suppliers, clients and other actors, and 90% claimed that they include the social action in the general process of strategic planning of the firm (COCHILCO, 2005).

This commitment to CSR policies has been well received by host states, concerned shareholders and part of the civil society. For instance, in the 2014 Ranking of Chile's Most Respected Companies (Gfk Adimark, 2014), Minera Escondida was located in the 8<sup>th</sup> place and it has been consistently in the top ten during the previous nine years. It was also awarded for third year in a row with a Big Tick by UK – based business in the Community, an organization that seeks to draw attention to best corporate practices internationally (BHP Billiton, 2015). Likewise, Antofagasta Minerals, Anglo American, and several other mining MNEs have also been awarded for their CSR, highlighting the overall positive perception that the mining MNEs have managed to cultivate among the civil society and the host state in every level.

Consequently, the mining MNEs have gained reputation through their CSR, since part of civil society now believes that 'it is in [the mining MNEs'] DNA to compromise with the environment where they produce' (Former CEO of an industrial association and entrepreneur based in Antofagasta, INT8). Hence, CSR has facilitated obtaining the social licence to operate, turning into a new strategic resource to be considered by the bargaining literature.

**Figure 31: Regional Stadium of Antofagasta.**



*Source:* Original picture, taken during fieldwork in 2016.

### ***7.3.2.3 Image as creators of employment and higher wages***

Nowadays, there is a strong perception in Chile about the mining MNEs being both crucial job creators and paying wages far higher than the national average. People outside the mining industry see with astonishment the high production bonuses that miners receive, and the local and national States are thankful every time there is a new project waiting to start producing. This impression has been continuously fed by the mining MNEs and has become another new relevant resource to be considered in the bargaining literature.

Regarding the first and most important argument, the MNEs have spread the idea that the Chilean mining industry has provided a considerable amount of employment in the country. As Figure 32 shows, when the direct and indirect employments created by the mining industry are considered, the participation of the industry reaches an average of 8% of the total employment from 2004 to 2015. The participation of the mining industry peaked in 2012 – 2013 reaching a 12% of the national average, starting a descent just after the super cycle ended. The copper mining industry, in particular, provides most of the employment of the Chilean mining industry. According to COCHILCO (2014), the copper industry has provided an average of 78% of the total employment in the mining sector between 2004 and 2013, a trend that is most likely to continue.

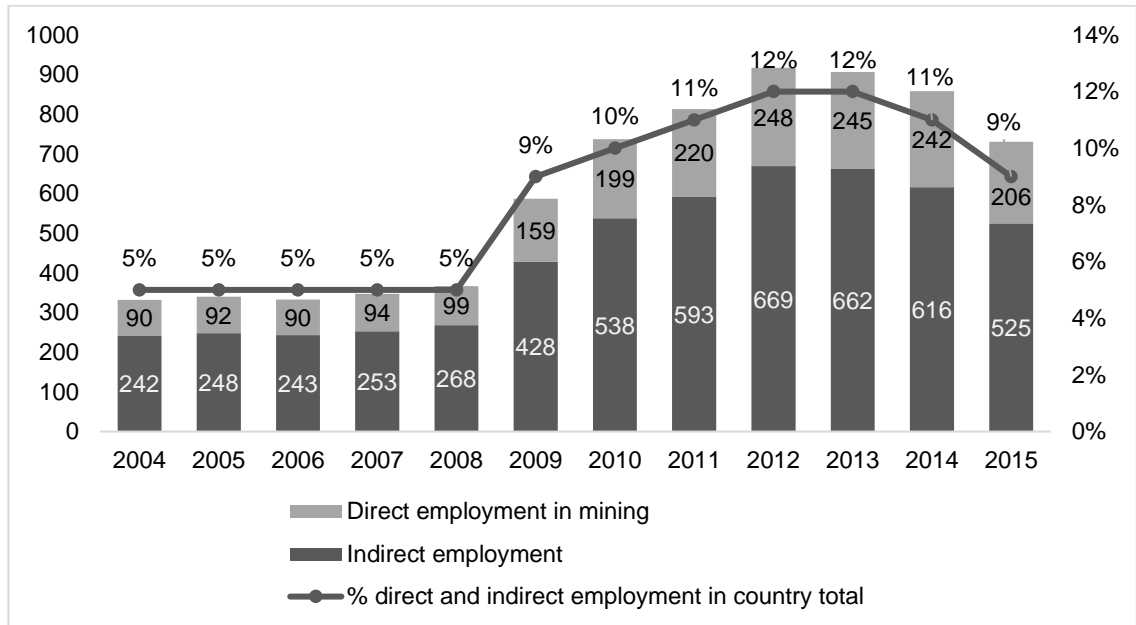
However, most of the impact of the mining industry in national employment comes from the indirect and not from the direct employment generated. According to COCHILCO (2014), the direct employment produced by the mining industry only reaches an average of 1% for the same period, but this is not what the mining MNEs report. Figure 32 is built and presented by the Mining Council in their reports (2014a, 2016) using data from INE and COCHILCO, but it was not possible to obtain the data or reports they used to build the indirect employment index, or to find what they understand as that concept. Moreover, there has been a strong trend to increase the number of subcontracted employees in the industry. According to data from SERNAGEOMIN, the mining industry has increased the number of subcontracted workers from 12% of the total workforce in 1990 to almost 70% in 2014, raising several questions regarding the quality and conditions of the subcontracted employees and the overall impact of the mining industry on employment.

The second argument relates to the mining wages paid by the mining MNEs, compared to the other sectors. According to data from the INE, the Chilean mining industry has the highest salaries in the country, an increasing trend since 2004. This is exemplified in Figure 33, which shows the taxable income of the mining industry labour force in 2015. During that year, the mining industry doubled the national average and was 25% higher than the incomes of the financial intermediation sector, the second best paid industry of the country. Additionally, the mining industry pays production bonuses yearly, which have reached amounts over twenty million Chilean pesos per worker at the end of the super cycle (Vera, 2013). This is almost 30 times the country's taxable income average in 2015, and 80 times the current legal minimum wage of 250,000 Chilean pesos (around 250 British Pounds and 380 USD).

All of the above has caused a perception across civil society, politicians and policy makers that the mining MNEs greatly contribute to the employment and incomes of the Chilean labour force. This has led to a distorted perception of reality, where the relevance of the mining MNEs to labour is exaggerated. As an interviewee from the Mining Ministry established 'for each job created in the mining industry, six new indirect employments are formed' [INT5] when in reality only an average of 2.7 indirect jobs are created for each new direct one (Consejo Minero, 2014a). Hence, mining MNEs have been able to create the impression that they are crucial for the labour market, when mining is not a labour intensive industry. Mining MNEs have used this impression as leverage when they bargain, by widely using the phrase 'we [the mining MNEs] create so many jobs and if we leave, there would be a lot of unemployment since there would be so much people jobless' [Major of a city in the Antofagasta Region, INT34].

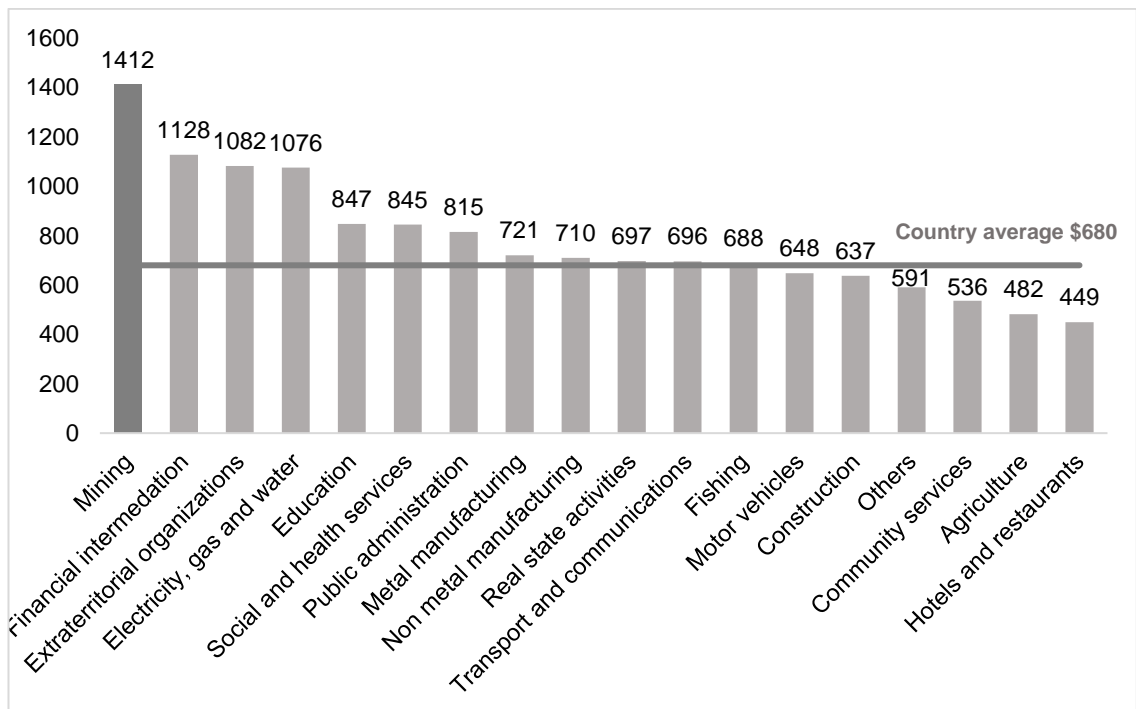


**Figure 32: Direct and indirect employment generated by the mining industry and participation in the country total 2004 - 2015 (thousands of workers).**



Source: Consejo Minero (2014a, 2016) based on data from INE and COCHILCO.

**Figure 33: Monthly taxable income by economic sector in 2015 (thousands of Chilean pesos).**



Source: Consejo Minero (2016) using data from the SAFF.

#### **7.3.2.4 The monopsonistic position**

Finally, mining MNEs operating in the Chilean copper mining GPN also enjoy a monopsonistic position while dealing local suppliers. Even though this is not entirely related to the mining MNEs' bargaining position with the host local and national states, it is crucial for determining the host economies' possibilities of creating, enhancing and capturing value through the diversification of the productive fabric, which is the base of local sustainable development. This is another strategic resource that has not been considered yet, which could be interesting to add into the bargaining literature.

The ten most important private firms in the Chilean big mining industry (GMP10) represent most of the private total mining production. This means that, besides from CODELCO, the big copper mining industry is concentrated in a small number of firms. These mining firms are, in turn, controlled by even fewer mining MNEs, such as BHP Billiton, Freeport McMoran, Barrick Gold, Teck, Rio Tinto, Glencore Xstrata, Anglo American, Suitomo Metal Mining, Mitsubishi Materials and Antofagasta PLC. This implies that the local suppliers located in the host region and country are in a greatly disadvantaged position when bargaining with the mining MNEs.

The mining suppliers are many, small, geographically concentrated and extremely economically dependent on the few mining firms. According to Fundación Chile (2014), the Chilean mining industry had 5,998 suppliers registered in the REGIC<sup>46</sup> database in 2012, most of which were micro or small suppliers (66%) that have less than 50 workers. A considerable amount of these provide services of support and equipment provision (64%) and are mostly located in the Metropolitan Region, where 62% have established their headquarters. The Antofagasta Region is the second one with most headquarters, but only 12% of the suppliers have chosen to locate there.

Moreover, the suppliers are highly dependent on the mining MNE's demand. 37% of the suppliers declared that they sell more than 60% of their production to the mining industry, which grows to 63% when considering the suppliers that sell more than 41% to the mining industry. All this has given the mining MNEs a considerable amount of bargaining power over their suppliers, as the CEO in charge of a mining MNE's provision explained 'when there is more competition regarding to what you want to buy, obviously you will have more power to influence the supplier' [INT21].

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<sup>46</sup> Database of mining suppliers.

Additionally, the monopsonistic market structure of the mining industry has led to situations in which the mining MNEs can fully establish the conditions of the contracts and trades, due to the extreme dependency of the SMEs to their hierarchical relationship with the mining MNEs (Phelps, 1996). As a mining expert explained, the mining MNEs usually tell their suppliers 'if you like them [the conditions the MNEs offer] good, if you don't, you know where the door is (...) which resembles the feudal times a lot' [INT16a]. Likewise, the mining MNEs have also used this in the bargains the host local and national states, by highlighting their relevance in the creation and later subsistence of the SMEs suppliers. This is a considerable power resource in the bargains, since the SMEs are the ones that provide most of the national employment, 65% of the total, which turns into 80% for the case of the most vulnerable population (Avanza Chile, 2015). Henceforth, mining MNEs have effectively turned the monopsonistic market structure of the Chilean mining industry as an important bargaining tool with the host States and, more importantly, the local suppliers.

Summarizing, this section described the internal and external strategic resources they hold when bargaining in each node. However, just as with the Chilean State, the potential bargaining power will be hindered by the constraints of the mining MNEs. The next section finishes the analysis of the mining MNEs by analysing these constraints, and how they differ from what the traditional bargaining literature predicted.

#### 7.4 THE CONSTRAINTS ON THE MINING MNEs

Despite its recent developments, the literature about bargaining between MNEs and the State identifies only two elements constraining the bargaining position of the MNEs: the degree of competition and concentration in the industry, and the extent to which the host country government is an important customer or distributor (as seen in Figure 6, Chapter 3). For the specific case of the mining industry, Moran (1974) considers an additional, but pivotal constraint: the sunk costs MNEs incur due to the nature of the production.

In the Chilean mining GPN, however, the first two constraints do not apply. Even though the copper industry has fewer producers compared to other industries, the firms do not compete among themselves in the regular sense, since all their production is traded in the stock exchanges of London, New York and Shanghai, the same places where the prices are set. Since they cannot control the demand for copper or the prices, their only

objective is to decrease the production costs, which is why they have formed alliances between them by way of the previously mentioned industrial associations.

The sunk costs identified by Moran (1974), on the other hand, have become just a part of a broader constraint, namely, the lack of mobility of mining MNEs. Moreover, the interviews with experts and secondary data analysed suggest an additional constraint that could constrain the MNE's from fully exerting their bargaining power: the relevance that public image has taken the last years to get their social licence to operate. This section explores these constraints that MNEs face when using their strategic resources as bargaining power while negotiating with the Chilean State.

#### **7.4.1 The limits to being footloose**

One of the main arguments in the traditional bargaining model of the mining industry, states that 'with the investment sunk and successful, the host country [was] in position to bring pressure for renegotiation' since 'in the perception of the foreign companies, the host country (now strong) can begin to cheat them (now weak)' (Moran, 1974). By this, Moran was referring to a decisive element decreasing the footloose capacity of the mining MNEs: their sunk costs in the form of investment already made and the firms' stock of capital goods. This research tries to enrich this perception, by finding several others elements that decrease the MNEs' capacity to leave the host region such as: the profits generated by the industry; the medium term plans represented by the investments projected; and the exit barriers the host country has. All of these can shape constraints on the MNE's exertion of power in successive bargains with the State.

According to most of the interviewees, the first and most crucial variable influencing the firm's decision of staying in the host region and country is the profit they get from participating in a particular GPN. An expert of the Chilean Ministry of Mining illustrated this by stating that '[Among] the elements that the mining firms evaluate when deciding to invest or start, suspend or a project or finish a mine, the most important factor [is] the price [of the commodity], I mean, whoever tells you anything else is wrong' (INT5). In this sense, the Chilean copper mining GPN has generated outstanding profits during the time of the commodity super cycle (Figure 29, Chapter 7). Consequently, even though the copper prices have decreased since 2013, the industry is still generating considerable profits, meaning the mining MNE's will not leave.

Furthermore, as depicted in Chapter 6, the country also has several other characteristics that allow the maximization of profits for the mining MNEs. As an expert from COCHILCO explained:

'Chile is the only country that makes things so convenient for extracting rents ... it gives its rents away! (...) in the natural resources industry it is really difficult to value the rents extracted ... think that they [the mining MNEs] get the returns for their capital and the returns for rents, so it is almost impossible for them to leave' [INT28-29].

All of this makes the experts conclude that mining MNEs' project the image that they are footloose 'as a bluff (...) they use this to do something very typical of the industry, which is to lower the costs' [INT15] and 'to put pressure, it is part of the lobby they do' [INT 28-29]. Similarly, when the CEOs of the mining MNEs were asked about the footloose capacity of their firms, they recognised that it is highly unlikely they abandon the Chile since:

'when the firm decides to develop a mining project it is because there is a long term relationship, and Chile is an attractive economy [where] several big firms have installed their operations and investments; and all the big mining firms have operations in Chile, so they see it as an attractive country, making it very difficult for them to leave' [Superintendent of Investments of a mining MNE, INT 32].

Hence, once the investment is made, it is difficult for the mining MNEs to abandon the hosting spaces due to the scale and type of the projects. Copper mining is a capital intensive industry, which requires lumpy investments for starting new projects or upgrading established ones (Moran, 1974). Accordingly, investments are planned for long periods – ten to twenty or even thirty years – meaning that the firms will only leave the host region if the exploitation and production stops being profitable and as long as they are able to do it.

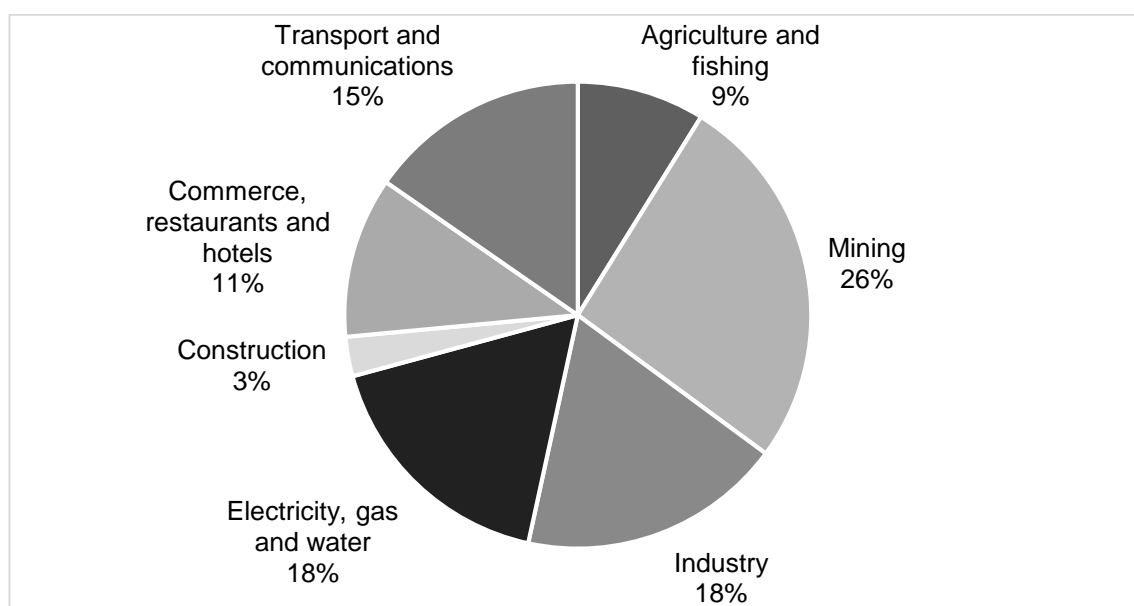
Likewise, the mining MNEs have greatly invested in Chile, specifically in the Antofagasta Region, which concentrates around 37% of the total FDI materialized in the country. The investment realised by the mining MNEs in Chile has significantly increased since 2003 from 816 to 8,214 million US\$, an increase of 907% in only eleven years (Chapter 7, Figure 28).

**Table 13: Accumulated FDI between 1990 - 2010 in millions of US\$.**

Sector/Year	1990/2000	2001/2010	Total 1990-2010	Total 1990-2010 %
Agriculture and fishing	980	355	1,336	1.4%
Mining	19,287	11,909	31,196	32.0%
Industry	7,045	3,486	10,531	10.8%
Electricity, gas and water	11,332	8,429	19,762	20.3%
Construction	1,234	641	1,876	1.9%
Commerce	1,324	4,066	5,391	5.5%
Transport and communications	4,011	7,062	11,073	11.4%
Services	12,362	3,814	16,176	16.6%
<b>Total</b>	<b>57,575</b>	<b>39,762</b>	<b>97,341</b>	<b>100.0%</b>

Source: Meller (2013) using data from the CIE.

**Figure 34: Composition of the stock of capital between 1996 - 2012 in percentages.**



Source: Own elaboration using data from the Central Bank.

Moreover, Meller (2013) shows that the mining industry has concentrated most of the investment between 1990 and 2010, followed by electricity, gas and water, another sector deeply related with the industry performance (see Table 10). Both sectors receive

52.3% of the total accumulated FDI during that period, depicting the relevance the mining industry in alluring FDI. Most of this investment has been allocated in new projects, upgrading old ones and building the infrastructure needed for supplying the energy and water the industry needs to operate. Thus, a relevant part of the investments made by the mining MNE's have turned into fixed capital.

Likewise, the capital stock that the mining industry has in Chile is another way to understand the mining MNE's sunk costs. As Figure 34 shows, the mining industry accumulates most of the capital goods produced for the period between 1996 and 2012, followed by electricity, gas and water. Figure 34 does not represent the services and housing sectors, since their inclusion do not allow to have a grasp of the development of productive potential in a country (Meller, 2013). Furthermore, Table 11 shows that the net stock of capital accumulated by the mining sector for the eight year period of the commodity super cycle almost doubles the amount of the period just before it. Electricity, gas and water also increased in absolute terms, as the expansion of the industry created new demands for such supplies, leading to the approval and construction of several power and water plants. Consequently, the net increase in capital goods by the two main industries related with the mining production, reinforces the decrease in the mining MNEs' footloose capacity.

Regarding the future stocks of capital, the projected investments of the mining sector are forecasted to keep increasing despite the current fall of copper prices (Table 12). This since, in the words of a mining MNE's CEO, 'you [as a mining MNE] are willing to have a long term relationship [with the host country]' [INT32]. Moreover, when both mining and the energy sectors are considered, they represent up to 72.4% of the total projected investment (Table 12). This projection was made by SOFOFA in 2014, after the end of the commodity super cycle, which also considered the cancelled projects by the mining MNEs. Thus, despite the lower copper prices, the mining MNEs seem to be expecting market recovery, a common feature in the copper industry. Hence, the mining MNEs still have several new and reinvestment projects planned for the medium term, which will go together with the expansion plans of the energy capacity of the country.

**Table 14: Net stock of capital by sector at constant prices in Million of US\$.**

<b>Sector</b>	<b>Accumulated 1996-2003</b>	<b>Accumulated 2004-2011</b>	<b>% over total 1996 - 2003</b>	<b>% over total 2004 - 2011</b>
Agriculture and fishing	45,110	56,257	4%	4%
Mining	95,639	189,050	9%	12%
Industry	84,114	123,278	8%	8%
Electricity, gas and water	80,355	115,667	7%	7%
Construction	13,351	17,365	1%	1%
Commerce, restaurants and hotels	50,185	75,227	5%	5%
Transport and communications	50,118	117,124	5%	7%
Financial services	44,325	94,150	4%	6%
Housing	448,262	567,673	42%	36%
Social and personal services	161,571	229,037	15%	14%
<b>Total</b>	<b>1,073,030</b>	<b>1,584,827</b>	<b>100%</b>	<b>100%</b>

*Source:* Own elaboration using data from the Central Bank.

**Table 15: Projected investment, 2014 - 2018 in millions of US\$.**

<b>Sector</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>After 2018</b>	<b>Total general</b>	<b>Total (%)</b>
Commerce	728	442	468	1,619	277	60	3,593	2.0%
Energy	3,634	7,698	21,521	18,414	13,082	11,424	75,772	42.4%
Industry	247	764	1,182	2,092	1,024	644	5,953	3.3%
Infrastructure	257	2,029	3,553	761	3,784	19,043	29,427	16.5%
Mining	196	3,201	1,745	7,666	12,260	28,578	53,645	30.0%
Services	429	246	680	1,002	263	1,977	4,597	2.6%
Tele- communications	102	375	1,716	1,384	0	0	3,577	2.0%
Tourism	62	101	61	82	39	1,947	2,292	1.3%
<b>Total</b>	<b>5,655</b>	<b>14,856</b>	<b>30,926</b>	<b>33,020</b>	<b>30,729</b>	<b>63,673</b>	<b>178,856</b>	<b>100.0%</b>

*Source:* SOFOFA (2014).

Additionally, the mining MNEs also face exit barriers that diminish their footloose capacity, such as the geographically-located and capital intensive nature of the mining industry; and the legislation about the procedures to leave the exploitation in terms of



minimizing the impact for the environment and host communities (Phelps et al., 2015). In Chile 'it is not as easy to close a mine whenever you want' [Mining expert from the Mining industry, INT5] since, 'there are some very complicated laws for closing a mine that imply high costs, since they [the mining MNEs] have to dismantle the installations, to pay the workers, so the decision is not easy' [Mining Expert, INT13].

Finally, other copper mining countries do not offer the same incentives as Chile for mining exploitation and rent capture like: the FDI friendly legislation, ores, access to markets and political stability, which together with the others mentioned in Chapter 6 make the country extremely 'sticky' for copper investments. Henceforth, these characteristics are considered so desirable that even the approval of new laws such as the tax reform, or some presidential candidates and movements claiming for the nationalization of the industry, will not 'spook the investments' [INT12] as the projected investments of Table 12 show. Consequently, these attributes are also influencing a decrease in the footloose capacity of the MNEs to leave the country. Henceforth, the profits made, the investments already materialised and planned, the stock of capital goods, the exit barriers of the industry and the host region and country's characteristics are all issues that could seriously hinder the mining MNE's bargaining position by decreasing their footloose capacity.

#### **7.4.2 The role of public image**

The recent years have been characterised by the uprising of social movements all over the world, showing a more empowered civil society. Even though this research does not focus on this issue, it directly affects the mining MNEs' functioning. Chilean civil society has shown an increasing capacity to organise itself in order to assure that the exploitation of minerals do not cause negative externalities, and secures a sustainable form of development. Hence, this newly empowered civil society has developed the capacity to stop or obstruct ongoing projects - despite its scale, stage of development or even level of investment – if they consider that the MNEs are or will cause more harm than good. An academic illustrated this point when talking about what the president of a mining MNE told him: 'look, nowadays we [the mining MNEs] can have all the permits, the environmental ones, legal ones, governmental, but if a local community does not want a certain investment we are screwed [sic]' [INT41].

Likewise, there is a new breed of shareholders investing in the mining MNEs, which are concerned with the impact of mining over their host communities. These conscientious shareholders will disinvest if the mines are under civil criticism or involved in a major scandal. Additionally, home governments also play a part, by fining or putting MNEs on trial. Hence, the public image has turned into a critical issue for the mining MNEs in order to keep or get the social licence to operate they need in every node of the GPN.

In Chile, the mining industry seems to have a poor image, shared by the political elite in Santiago and the population living in the non-mining regions. Regarding the former, a representative of a local industrial association posits that 'they [politicians in Santiago] have some sort of anti-mining bias; that is almost desirable for Chile to forget about its minerals, to not exploit them' [INT14]. This has happened as 'the mining industry is concentrated in the north, so is not a topic that is internalised by the political leadership and by the authorities that usually do not know about the mining issues ... they consider the mining industry only a cash machine' [INT14].

Moreover, the geographical location of the mining industry has also created a feeling of detachment in the southern regions. Hence, as a Vice-president of a mining MNE explains, 'The country is fractured (...) so the [southern] Chilean person will ask you 'what has the copper given to me? Nothing!' so the person does not see the benefits. Thus, this country does not love the mining industry' [INT11]. There is also the perception that 'mining is something distant, dangerous (...) it has several difficulties and you are away from your city and family for several days (...) the people still has the notion of [the miner] as someone with a shovel and a pillory' [CEO of the Mining Council, INT40].

Nonetheless, the Chilean population does acknowledge the vital role of mining in the national economy. According to a survey made by Moffat et al. (2014) to 1,598 Chilean citizens all over the country, most of them agree that mining is central for Chile and that it contributes significantly to its economy and future prosperity. However, the same work finds a critical perception of the consequences of the industry for the local and national development, especially related to issues of property structure, negative externalities, equity in the distribution of impacts, and governance capability.

Regarding to the property structure, Moffat et al. (2014) found that the population is worried about Chilean dependence on mining and FDI, creating the belief that foreign property of the mines should be restricted; and that the mining resources should be exploited by national mining firms. Moreover, the population surveyed also perceives several social and natural negative externalities from mining like: the decrease in the quality and quantity of the water resources; the negative effects over the quality of life of

the host communities in terms of cost of life, income distribution and health issues due to pollution. These negative opinions are stronger in the mining regions, but also shared by the rest of Chile.

Likewise, the unequal distribution of benefits and costs of mining has caused disbelief in the capacity of the local and national governments in regulating the industry. Interestingly though, the results also show a strong conviction that the civil society is able to defend its interests by itself and to influence the governmental policies related to the mining industry. Such belief may be rooted in the recent empowerment of the social movements led by the student protests. All this depicts a challenging scenario, where the mining MNEs may not have the trust needed to get their social licence to operate. As an academic summarized, 'there is still the image that they [the mining MNEs] come to exploit the country and take everything away' [INT15].

The mining MNEs have tried to fight this negative perception by implementing different CSR policies as it was previously established. However, there are several critical voices questioning the real utility of such policies. As a mining expert posit:

'Now the mining firms (...) have a good neighbour policy in which they help with some things, they build some schools, they give laptops to poor children (...) but those are just aspirins, I mean, they do not have a real preoccupation for the city (...) they do help, but only for specific cases, and I would say that is mostly to improve their public image, but not as a serious policy' [INT13].

Hence, there is always a latent suspicion about the real objectives of the CSR implemented by the firms, since they are seen as 'a whitewash of their public image' or 'a form of charity' [INT38]. This is reinforced by the relatively small amount of money assigned to such policies, usually up to 1% of the mining MNEs' utilities; and the lack of real commitment. The latter refers to CSR policies being short term transfers 'whose effects are erased in a very short time' [INT38], which are not aligned with the long term strategic objectives of the host states and the civil society. Hence, several products of the CSR policies are now abandoned, unable to be used or have even decreased the quality of life of the targeted population as the critiques of this policies predicted (Campbell, 2012; Frynas, 2005; Hilson, 2012).

For example, several touristic lookouts and a small museum located nearby built by Minera Escondida (BHP Billiton) in the southern part of Antofagasta, are completely abandoned due to the lack of maintenance (Figure 35). When consulted about this, people from BHP explained that the maintenance of such places was not their

responsibility. The mining MNEs have also changed dirt football fields for new payed fields with fake grass (a luxury in the world's driest desert), lighting and changing rooms, but at a high cost. As a local expert in development issues explained, 'the children are now playing in the streets! They can't play in those football fields since they cost 60 thousand Chilean pesos per hour [around £60]'. Thus, the perception is that since big mining firms know they will be here for a long term, 'they try to make people greet them in the streets instead of cursing them' [academic expert in mining, INT41] by using CSR policies. The issue is, however, they do not give what the community needs or wants.

**Figure 35: Abandoned lookout built by Escondida (BHP Billiton) outside Antofagasta.**



*Source:* Original picture, taken during fieldwork in 2016.

Moreover, there is a second kind of CSR policies being implemented, involving several actors and the joint planning and upgrading a host city or a group of suppliers. These have been praised and criticised, but most of them are long term strategies whose results are difficult to evaluate today due to lack of information. However, they have managed to somehow counterbalance the negative image of the CSR policies only based in transferring goods or infrastructure to the community, since they have tried to integrate efforts between a wider range of actors, like host governments, local associations, academics and politicians.

Additionally, the mining MNEs have also faced difficulties trying to achieve a common view/discourse when facing critiques, scandals or new regulations. Despite this and their organisation by way of the Mining Council, they have failed several times in forming a tight block. As an example, when the royalty law was being discussed in the parliament in 2010, there were opposite views about it within the members of the Mining Council. As a member of the Mining Council explained 'at the beginning there was going to be a common vision [about the royalty], but there were firms that did not follow it, that stepped aside, so there was a break-up and they [the mining MNEs] started to blame each other' [INT40]. This ended up with the resignation of the Council's president and the public perception of severe internal organisational issues.

Likewise, the Council does not have strict rules about the expected behaviour of its members, in the sense that, if one of them is involved in a major scandal (environmental, political, etc.), the Council will probably not take any actions against it. In the words of a member of the Council:

'it is not that we have a strict ethical code saying 'if someone misbehaves and contaminates the rest of the industry it will be expelled from the Mining Council', such attribution does not exist (...) and we are working to have, I don't know if something as strict as that, but at least a procedure (...) for when some of [the mining MNEs] fucks it up [sic] in something that has national public impact at least informs the Mining Council, (...) so we can say 'these are the firm's arguments and what is on the newspapers is distorted' [INT40,p.8].

This discoordination has weakened both the Mining Council's public image as well as their members, since there have been cases when mining projects have been shut down by political pressure from civil society groups, such as what happened with the Pascua Lama project. Pascua Lama is an open pit U\$8.5 billion dollars mining project, owned by Barrick Gold. The project was heavily criticized by environmental and civil organisations due to its impact on nearby glaciers, leading the Chilean government to open a case against the mine. In 2013 the firm was fined with U\$16 million dollars due to 'very serious' violations to the country's conservational laws, the largest ever imposed in Chile, and instructing Barrick to halt the project (Jamasmie, 2015). When this happened, the president of the Mining Council recognized that Barrick made big mistakes, but it did not take any actions against the firm, something that took a great toll on the Council's and its members' public image.

Even though Pascua Lama is a gold and silver mining project, is not the only one questioned or forced to stop its operations in Chile. The negative image of the mining

industry among the Chilean population, especially in their host regions; the empowerment of the civil society; the lack of governance shown by the government; and the lax legislation and inspection capacity of State's institutions, have led the mining MNEs to hold several struggles with the local communities as predicted by Bebbington (2009; 2008). Indigenous associations, national and international NGOs, consumers, professionals, academics and unions have joined forces several times to bring the mining MNEs' to court, due to their failure to fulfil their environmental, consultative and employer's duties.

As a consequence of this civil unrest, several copper mining projects have been fined and or cancelled due to strikes, lawsuits and local/national and international mobilisations. Just to mention some cases: BHP Billiton's Escondida, fined for anti-union practices in in 2011 and 2015 (San Juan, 2015a); Anglo-American's Los Bronces, fined for 'serious and very serious' environmental violations in 2015 (San Juan, 2015b), and El Soldado in 2014 and 2015 for destructing native species and grave environmental violations (Emol, 2014; Minería Chilena, 2015); SCM Lumina Copper's Caserones, fined due to 17 environmental violations in 2015 (Mining Press, 2015); Antofagasta Mineral's Los Pelambres, fined for serious environmental violations and destroying archaeological sites in 2013 and 2014 respectively (El Mostrador, 2014). This pressure has also stopped the construction of new hydro and thermoelectric plants aimed to supply energy to the mining projects, such as the thermoelectric Castilla in the north and Hidroaysén in the southern part of Chile.

All of the above has led to a situation in which the mining MNEs have faced several trials started, and supported, by most elements of civil society: locally, nationally and internationally. Thus, since now 'the requirements are higher due to millions of reasons (...) there has been a higher level of judicialisation (...) hence one would hope that there would be an intention from the mining MNEs to solve these issues, since at the end they are the ones that will have to stop their projects' [Mining Ministry expert, INT5]. In this line, the mining MNEs have tried to communicate their intentions to the local communities, in the words of a CEO in charge of such relations 'the important thing is that we [the mining MNE] irrefutably believe and work hard on the genuine establishment of relationships of trust with our interest group (...) through openness and transparency in the dialogue about what we do' [INT27].

However, this strategy has not given the expected results since the lawsuits keep increasing, especially due to environmental, labour and community related issues. Furthermore, despite civil society's limited same financial resources compared to the

mining MNEs, they have managed to win several crucial trials, stopping projects and causing fines. This has led the mining MNEs to fear the judicialisation of processes and inspections, which can greatly increase the opportunity cost not only in monetary terms, but also due to the time invested in the trials and their loss of respectability. Thus, the mining MNEs will do everything in order to reach agreements with the communities to avoid going to the courts. As a CEO of a mining MNE explained 'a bad deal is better than a good trial, I mean, with the trials nobody wins' [INT27].

Likewise, the relatively bad image of the copper mining industry, has also led some concerned shareholders to put pressure on the mining MNEs' headquarters. This pressure has also come from international NGOs; whose goal is promoting sustainable development in the host communities. As the leader of one of the most important ones, located in London, explained 'several groups in recent years have used existing non-judicial international mechanisms, notably, complaints procedures of the organisation for economic cooperation and development, to bring complaints against companies in their home countries' [INT42].

## 7.5 CONCLUSIONS

Mining MNEs hold several power resources than can be used in their bargains with the other actors in the Chilean copper mining GPN. Most of these are aligned with the ones predicted by the traditional and more updated bargaining models, some others have lost their relevance, while new strategic resources have also emerged. This chapter developed the main characteristics of the mining MNEs, to later describe the internal and external strategic resources they hold.

In terms of their features, the mining MNEs operating in the Chilean copper mining GPN are few, concentrate most of the copper production and hold the most relevant mines. Moreover, the internal strategic resources hold by the MNEs identified are in line with the ones proposed by the bargaining literature, meaning the firms' internal structure and organization; and the strategic assets they hold. The former has allowed them to have multi-level influence, and a higher dynamism and flexibility to adapt to market changes; while the latter relate to their access to substantive financial and physical capital, massive utilities, external markets, information and new technologies.

Interestingly, the extremely relevant role of the international institutions for the two tier bargaining models literature (Ramamurti, 2001), has lost its relevance for the Chilean

case. Since Chile is a debt free country, such institutions have lost influence over its economic policies and to tilt the balance of the bargains in favour of the mining MNEs' interests. This opens the question about how relevant are these institutions in a post Washington Consensus world, where the structural adjustment policies are widely dismissed in most of the extractive countries and regions due to their incapability to bring the long wished development.

Furthermore, mining MNEs hold several external strategic resources, related to their connections with the host economic environment and agents of the copper mining GPN. In this sense, mining MNEs have developed strong relationships with the political elites in all the relevant nodes of the GPN by financing campaigns and lobbying. Additionally, they have evolved by organizing themselves in multi – level industrial associations, using CSR policies, spreading the image as job creators and payers of higher wages in order to get status and a social licence to operate; while also using their monopsonistic position as leverage in their bargains with the host states and suppliers. This evolution should be considered in the bargaining literature, since they have successfully shaped the host communities' perception about mining. The identification of such new strategic resources could be considered a subsidiary contribution of this thesis.

Regarding to the mining MNEs constraints, and contrary to the traditional bargaining models, the analysis finds that both, the degree of competition and concentration in the industry; and the extent to which the host country government is an important customer or distributor; are not relevant for the Chilean case. However, Moran's suggestion about the sunk cost being an extremely important constraint for the mining MNEs once they are made, still holds but with some new additions. In this sense, this section explains that the sunk costs are part of a broader constraint, which is the decrease in the footloose capacity of the mining MNEs. Hence, such constraint is explained by the level of profits the mining MNEs get from the industry, the amount of investments they have materialised in the form of capital goods, the projected investments for the medium and long term, and the exit barriers present in the industry.

Additionally, there is a second major constraint identified, related with the role of the public image to get the social licence to operate. The empowerment of the Chilean civil society occurred since the 2000's has created a situation where the social actors have managed to organise and raise their voices against what they perceive as negative effects of the mining industry. These critiques focus on the extraction, transport and exportation of copper, but also on related industries like energy and water supply. The mining MNEs have tried to counter–balance this trend through the implementation of two



types of CSR policies: one focused on the transfer of goods, services or infrastructure to the host population; and a second, concerned about developing host cities and suppliers conjointly with the local agents. The first has been heavily criticized by all the sectors of society due to their short-term and vertical imposition, whereas the second one is still difficult to evaluate due to the lack of information.

All of these have increased the number of judicial processes against mining MNEs. Thus, the once defenceless communities are now able to get mining MNEs fined, stop projects and put pressure on the State to supervise and augment the regulations regarding to the social, environmental and labour impacts of the mining industry. Additionally, the public image is a multi-level issue, since not only the local communities, but also the conscientious shareholders and home states are alert about the scandals related to the mining MNEs. When major scandals exploit, such agents can also pressure over the mining MNEs' main headquarters. Consequently, the public image has turned into a double edged sword, since it can greatly facilitate getting the social license to operate, or it can cause the stopping or total closure of projects if the civil society's demands are not satisfied.

The next chapter explains how these strategic resources are used in the bargaining processes by the State and the mining MNEs, and how their constraints impede them for fully exerting the bargaining position. The analysis of such processes will be vital to understand the possibilities of achieving a strategic coupling between both actors' objectives which, in turn, will determine the possibilities of sustainable development of the host region and country.

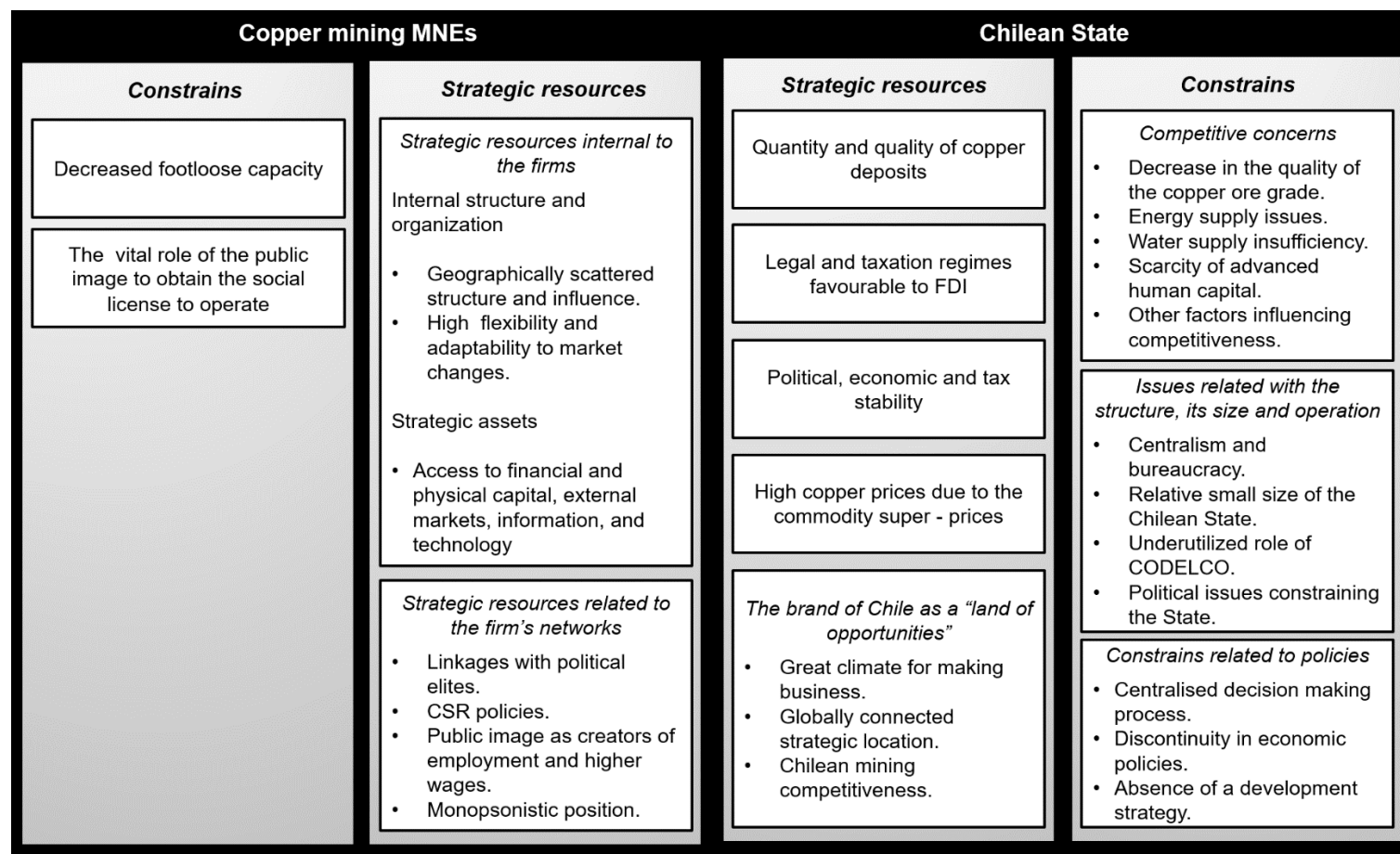
**CHAPTER 8**  
**BARGAINING BETWEEN MINING MNEs AND THE STATE IN THE CHILEAN**  
**COPPER MINING GPN AND ITS SPATIAL OUTCOMES**

8.1 INTRODUCTION

The previous chapters have detailed the strategic resources and constraints of the main actors of this study, the copper mining MNEs and the Chilean State. Both are crucial for addressing the successive bargains taking place between them, as well as their consequences. This chapter analyses how these actors have (or have not) used their strategic resources while facing their particular constraints (as summarised in Figure 36) during the last copper GPN period.

How the actors have bargained has also determined how much value is captured in the host region and country, as well as the degree of embeddedness of the mining MNEs. All these have implications for the sustainable development chances of the Antofagasta Region and Chile, something analysed in the last part of this chapter. Moreover, this section starts by resuming a significant and unexpected finding: that contrary to what the recent bargaining literature predicts (Moon & Lado, 2000; Nebus & Rufin, 2010; Ramamurti, 2001), multilateral arenas are not as important as they ought to be for the Chilean case.

**Figure 36: Main components of the bargaining relationship between the copper mining MNEs and the Chilean State in the Chilean copper mining GPN.**



Source: Own elaboration.

## 8.2 MULTILATERAL INSTITUTIONS AND BI (MULTI) LATERAL AGREEMENTS

As a starting point, it is important to address the role that the international institutions play in the successive bargains that take place between the Chilean State and the mining MNEs in the London node. According to Ramamurti (2001), the bargains taking place in tier 1, between the host country and the MNE's host country, will be indirectly influenced by the action of some multilateral institutions, such as the IMF and the World Bank; and directly, through the signature of bi(multi) – lateral agreements.

Regarding multilateral institutions, Chile's financial health has strengthened since the early 1990's as a result of it shedding much of its international debt, and hence, the country 'does not depend on [the multilateral institutions] financially, we [Chileans] do not have obligations with them, as the matter of fact we lend them or we supply funding to the International Monetary Fund' (Expert from the Chilean Central Bank, INT 12). This means that 'Chile is out of the requests and rules that these [multilateral institutions] put on the [borrowing] countries' (Mining expert, INT28), so the bargains taking place between the Chilean State and the mining MNEs are relatively free of the influence of such institutions. There are relations with those institutions, but their nature is reduced to exclusively technical issues since they have lost their capacity of 'pulling strings over political discussions' [INT12]. This is an unexpected finding, since most of the updated bargaining models highlight the relevance of such institutions in the bargains.

Conversely, Chile's extensive network of free trade agreements (FTAs) has greatly shaped the bargains during the last decades. Mining MNEs are always looking for the best conditions to operate, which usually means countries with fewer regulations. Hence, 'the governments in [the mining MNEs'] host countries advocate for free trade' (INT1), by constantly pressuring for FTAs. For Chile, these agreements consist in long lists where the State promises a series of self-denial behaviours, such as not taxing certain items, not establishing trade barriers, not taking over the private property and a long etcetera. The number of FTAs hold by Chile have been widely used by the state as a strategic resource to lure mining FDI into the country, while also constraining its bargaining position, since they 'impose a series of restrictions ... which are not only related to commerce' (INT 31).

In this sense, Chile has recently signed the Trans-Pacific Partnership Agreement (TPP) in 2016, considered 'one of the most ambitious free trade agreements ever signed' (BBC News, 2016) since the signing countries represent 40% of the total world commerce. This FTA has been widely criticised due to the secrecy of its development and the serious

restrictions it imposes for the host countries by establishing several limitations in terms of intellectual property, labour and environmental laws. More importantly, there is great concern about the potential loss of sovereignty of the signing countries, since the MNEs are able to sue the signing countries if they violate any aspect of the agreement, greatly reducing the signing States' bargaining position (Wofford, 2015).

Furthermore, the TPP does not directly affect the copper mining industry, since it focuses on other industries, but it may affect transversal issues such as labour conditions, intellectual property and environmental requirements, all of which are vital for mining. This is worrying since, as the representative of an international mining NGO explained, the TPP 'mirrors the kind of free trade agreement between North America and Central America, where companies are able to sue national governments for changing things (...) there is currently an example of a company suing a national government for raising the minimum wage' [INT 42], raising questions about what should be the limits of such agreements and the real socio – political and economic consequences of them.

Thus, despite what the updated bargaining models predict, multilateral institutions' capacity to directly influence the bargains taking place within the Chilean copper mining GPN is quite limited today, since the country's economic health has made it relatively independent from such institutions. Bilateral agreements, on the other hand, have greatly increased their relevance in directly influencing the bargains between the Chilean State and the mining MNEs, mostly due to the high number of FTAs signed by Chile since the mid 1990's. The role of these agreements has significantly increased as a result of the recent signing of the TPP, which raises several questions regarding to the Chilean State sovereignty and capacity to exert its bargaining power in the bargains. A glimpse of how these bargains take place in the London node is presented next.

### 8.3 BARGAINS IN LONDON

There is a general consensus among the interviewees about London being where the most relevant bargains take place, since they set the framework in which mining MNEs will operate. As a professor puts it, these crucial meetings happen close to Westminster since 'it symbolises the power of England (...) it is not a marginal place within London, it is the centre itself!' [INT26]. Here, both actors, the Chilean State and the mining MNEs, use their strategic resources in the bargains in order to foster new flows of FDI into the country and to get the best conditions to operate, which are their main strategic

objectives. The mining MNEs use activities organised by the LME, the ICMM or by themselves in the form of expos and seminars; while the Chilean State actively organises meetings and activities to promote the country and establish negotiations through the Chilean Embassy in the UK. This section provides a sense of the decisions that are made in those spaces, as well as how the actors exert their bargaining power.

On the one hand, the mining MNEs are completely aware of their strategic resources (see Figure 36), and they share a common goal summarised as maximising their profitability. Therefore, they aim to get the best conditions to operate when bargaining with the potential host countries. They are also conscious of the constraints they face, especially regarding to the increasing difficulty of getting the social licence to operate. This is why they have tried reaching a consensus about how they relate with the host countries and regions, while simultaneously minimising their sunk costs. To reach this consensus and to lobby with the extractive countries, they use at least two arenas: the LME annual dinner, used for lobbying; and the meetings at the ICMM, where they decide how to get the social license to operate.

On the other hand, the Chilean State is also aware of its strategic resources which it fully uses to lure FDI into the country, which is its prime objective in this node. The Chilean State is also familiar with the constraints it faces (Figure 36), and works to assure to the potential investors that plans and policies are in motion to solve its competitive issues. The country organises several events through the Chilean Embassy in the UK, such as the *Chile Day*, where several ministers, politicians and entrepreneurs go to London to give presentations, hold meetings and celebrate dinners with the actual and potential investors and politicians from the mining MNEs' home countries, promoting Chile as the best place for copper investments.

Hence, once the bargains take place in this node, both actors are well informed about their bargaining position and will actively use their strategic resources to reach their objectives. The mining MNEs fully use the key assets they hold, such as their access to financial and physical capital, information and technology in order to demand the Chilean State for the best conditions to operate. Likewise, the Chilean State actively promotes the unique aspects of the copper mining industry in Chile, such as the quality, quantity of the copper resources, weather, infrastructure while also emphasizing the political stability of the country and the FDI friendly legislation it has. The outcomes of these bargains mostly set up the legal framework in which the mining MNEs will operate as well as the amounts of FDI that will materialize in the medium and long terms.

The bargains take place in several instances, but this research recognized at least three: the annual dinner organized by the LME, the ICMM and the relations between the firms' home countries and the Chilean State. Regarding to the first one, the LME's annual dinner is considered 'the most important mining dinner of the world' [INT14] and is used by the mining MNE to lobby with the Chilean politicians and businessmen to get the best conditions to operate. In the words of a mining expert 'all of our executives [referring to politicians and businessmen], all of them! and (...) executives from all over the world, particularly from the producing zones, all of them travel to London to that dinner, to hear what is said there, while wearing a tuxedo' [INT14].

It is not possible to really know the details of the negotiations held in this dinner, but the interviews made clear that it gave birth to important changes in the Chilean national legislation and incentives promoted by the mining MNEs, who seem to use this instance to successfully exert a form of episodic bargaining power over the Chilean State. The State, on the other hand, seems to also use this opportunity to heavily promote the country to potential investors, or to convince current ones to increase their investments. Of course these decisions are made in the headquarters, but it is worth acknowledging that the Chilean State also exerts some degree of episodic bargaining power by luring FDI into the country.

The second space for shaping the bargains used by the mining MNEs is through the ICMM. This institution was created with the sole purpose of changing the world's perception about mining, so the mining firms get the social licence to operate. In the words of an important representative of the institution:

'what we [the ICMM] have tried to do is to change the discourse, or to propose that change, and stop talking about revenues, which is what people say when talk about mining, the revenues and how much we will capture from the rents (...) what we [propose is talking about] how the benefits are distributed, how the benefits of the mining industry reach the people' [INT4].

The ICMM has established the adoption of ten principles as mandatory for its participant mining MNEs, in order to promote the sustainable development of the host regions and countries. According to their webpage, they have four programmes: social and economic changes; environment and climate change; health and safety; and materials stewardship; all of which depicts the extension of their approach.

However, most (if not all) of the ICMM's members have been accused of violating labour and human rights, as well as creating several grave negative externalities in the form of

pollution, destruction of natural environments and others in the host regions and countries. Hence, the ICMM has helped to create the misconception that the mining MNEs are addressing the root of relevant social issues such as indigenous rights or their environmental footprint, while they are actually not willing to fully address the most polemical or transcendental aspects of such issues unless the host country obliges them.

A third instance for bargains are the international relations between mining MNEs' home countries and the Chilean State, based in the shared discourse of developing and nurturing a mutually beneficial exchange. This is exemplified by the invitations that several mining MNEs make to Chilean Ministers to their headquarters 'in Australia and London where [they are] very welcomed, since the firms are very interested in knowing about how their subsidiaries are operating in Chile and what are the Chilean needs' [CEO of a State owned mining firm operating in London, INT3]. In these private meetings, as well as in the other activities organised by the Chilean Embassy such as the *Chile Day*, the Chilean State promotes the country by displaying all the strategic resources the country has to offer.

All of these resources are extremely valuable and demanded by the copper mining MNEs, since there are no other countries offering the same operating conditions for producing, in terms of incentives, infrastructure and quality/quantity of resources. Hence, the Chilean government is able to exert a considerable amount of episodic bargaining power over the mining MNEs, by convincing them to invest in the country. These bargains have been perceived by both actors as 'balanced (...) not an abusive relationship where one obtains more than the other, but rather a constructive relationship' [Managing Director mining firm based in London, INT3].

However, Chile is currently facing several issues jeopardizing its relative bargaining position in the previously mentioned international bargaining instances. The fall in the copper prices due to the end of the super cycle; some serious competitive issues related to the lack of water, energy, human capital; the newly empowered civil society raising issues about the negative externalities caused by the industry; and the apparition of potential competitors, have all had an impact over the FDI flowing into the country.

The discontinuity in the economic policies and lack of long term development strategies have also affected the international bargain. This, since the focus has been on encouraging FDI in the exploring and extractive part of the production chain, but not in the developing of a more diversified productive fabric through knowledge spillovers. In consequence, each time the Chilean country faces a new threat, the whole country's economy stumbles, strengthening the mining MNEs bargaining position. Hence, the



Chilean State is currently facing a relative loss in its international bargaining position, which can be further endangered if it does not overcome its internal weaknesses.

Furthermore, the outcomes of the bargains taking place in this node have several implications for the Chilean country as a whole, and for the Antofagasta Region in particular. Since both are extremely dependent on the copper industry, the amount of the FDI decided; the copper prices and demand; the perception of the mining industry; and the legal framework in which it will operate in Chile, will have deep consequences over the nation and region's economy and development possibilities. Thus, the relevance of this node cannot be emphasized enough. Whatever is decided in London will ultimately determine the country's economic sustainability. However, there is another node which is almost as important as this, which not only has influence over the whole Chilean country and Antofagasta Region, but whose bargains can also shape the world copper industry. This is Santiago, and is discussed next.

#### 8.4 BARGAINS IN SANTIAGO

In order to comprehend how the bargains take place in the capital city of Chile, it is necessary to understand the context of the negotiations because Chile has very particular set of characteristics in terms of its ideology and the way it perceives the relationship between the different levels of the States and the private world. Such a perception has been shaped by decades of neoliberal policies that have deeply permeated all levels of the Chilean society, leading to a situation where a significant part of the population has naturalised the fact that the markets should be left alone and the State should not interfere. This has allowed the emergence of a national state which sees any form of interference in the markets as something that goes against the relations between the private sector actors involved, becoming a largely passive observer of the issues between civil society and the mining MNEs, in the same way Bridge (2004a) posited; forgetting all the valuable lessons from the Nitrate Era, becoming another example of what Pollitt (2000) called 'Institutional Amnesia'.

Even though this posture may sound attractive to the mining MNEs, it actually creates a vacuum where they have to deal with all sorts of matters that should be concerns of the State. Additionally, civil society has significantly increased its empowerment, putting pressure on the regional and national State to address some crucial issues related to the effects of mining over the environment and population, forcing the State to bargain with

the mining MNEs. This section develops these points, as well as what have been the kinds of bargaining power exerted by the agents in each bargain.

#### **8.4.1 The Chilean obsession with free markets**

After years of neoliberal policies implemented since Pinochet's dictatorship, deepened after the return to democracy, most of Chilean society has been imbued with the idea that free markets are sacred and that any sort of State intervention would cause chaos and political/economic instability. Accordingly, since the 1990's the Chilean State has stepped back from its role as a conductor of economic policy, aiming at sustainable development from the mining industry. In the words of a mining expert:

'The State kept the model installed by the military government during the decade of the 1980's which was a model exclusively centred in providing the guarantees to materialize investments, securing the private property rights and ensuring stability through clear rules of the game. This was left installed and, unfortunately, during the 1990's a good part of the mining policies were based on that (...) [and now] the Ministry of Mining is one of the weakest as a consequence of this (...) because it was a ministry that nobody cared about and that followed the policy of not doing anything' [INT 14].

This is a key point, since Chile has based its promotion strategy on selling its stability, on not being 'like our neighbours, who change the rules of the game every time they have the chance' [INT28], something greatly appreciated by the mining MNEs due to the long term profile of their investments. In the words of the Vice President of a mining MNE 'the most important for an investor is [a country] that has clear rules and that is not changing them every three or four years' [INT11]. This political stability and the Chilean State's commitment to free markets are embodied in the Constitution of 1980, which, despite being approved under dubious conditions by the dictatorship, is still operative today and strongly limits the state's actions in the economy.

Hence, Chile's outstanding conditions to operate in terms of its political and economic stability is based; firstly, on the 1980s political constitution: and secondly, in the widely spread opinion by the political class that 'the rules of the game have to be completely stable, and that if twenty five years ago particular [conditions] were offered, those rules of the game cannot change' [INT38]. Interestingly though, since most of the mining MNEs participate in other extractive GPNs in which the initial conditions are regularly re-

negotiated, some of the mining foreign MNEs' CEOs are actually 'puzzled about why we [the Chilean State] do not do it', since 'countries in general, even the developed ones, change the rules of the game (...) due to the changes and evolution they experiment. [The mining MNEs] understand that no rule is written in stone' [INT 28-29].

Nonetheless, it would be naïve assuming that the mining MNEs did not promote this ideology, since they have historically defended the (neo) liberalisation of the markets of the Chilean mining GPNs; even pressuring the British and American states to take an active role when their interests were endangered. As a professor explains, the mining MNEs have actively helped to 'establish the discourse that the rules of the games could not be changed' [INT38] which ultimately transformed into the dominant discourse.

Consequently, Chile, despite having the best conditions to operate in the copper industry in terms of resources, infrastructure and incentives; and the extremely high price of the copper super cycle; is obsessed with the idea of not changing the rules of the game, something summarised in the endlessly repeated phrase by every Chilean government after the return to democracy: 'we have to let the institutions work'. Hence, the mining MNEs have successfully exerted non-decisional bargaining power by leaving potential changes in the level of State intervention completely out of the political agenda, while also exerting ideological bargaining power by changing the Chilean perception about the desirability of having a national state not willing to even consider negotiating new conditions with them.

Moreover, the mining MNEs have actively promoted free market discourse by using the threat of leaving the country if the initial conditions/rules of the game change. When consulted about this, the representative of the ICMM established that 'if the price goes down [the mining MNEs] will close the project, and they [the mining MNEs] are doing it, they are closing mines, because they will not lose money (...) the mining firms have a social role but there is no obligation to provide jobs if they are losing money' [INT4]. This opinion summarises the mining MNE's continuous reminding of their footloose capacity, assuming they can always find another place to exploit if the rules change too much at their expense. However, the industry is anything but footloose, and the conditions offered and strategic resources hold by the Chilean country are far too good to leave. Even some of the mining MNEs' representatives acknowledge the lack of substance of this threat, by calling it the 'typical bravado' of the mining MNEs [as coined by a Mining Council CEO, INT 40].

Furthermore, the active promotion by the mining MNEs' and the political elite of respecting the status quo has led to an outdated legislation governing the industry and

a complete lack of initiative from the State. As an example, the most important laws framing the mining FDI: the DL. 600, established in 1974; the political constitution; the organic law on mining concessions; and the mining code, both effective since 1983; have not changed in more than 30 years. Likewise, the mining MNEs have successfully helped establish the idea that if a change happens in the rules 'the mining MNEs will leave and we [the Chileans] do not have national firms able to take care of the mining production' [INT38].

This fear has taken a deep grasp of the Chilean society, leading to a significant portion the population actively resisting any substantial changes in the legislation. Hence, the Chilean governing class and mining MNEs have somehow justified the detachment of the national state, that only 'makes sure things are being done according to what is written [in the laws] but not according to their spirit' [academic, INT26]. This has led to a situation where the State's institutions have even developed a sense of pride about its passive role, which is curious, since every single other case study consulted related to mining industries as well as all the bargaining models, assume that the State will wish to fully exert its position in a series of bargains with mining MNEs. All these, are further evidence of the exertion of both non-decisional and ideological bargaining power by the mining MNEs.

This Chilean State's passivity within the country contrasts with its passion in the international circuits, and it has been a constant trend from the beginning of the new copper mining GPN in the early 1990's. This situation contradicts the bargaining models' prediction of a strong first bargain in order to set the initial conditions of production, since the Chilean State has refrained from exerting its potential bargaining power with the mining MNEs, reducing its role as a mere witness. When consulted about how these initial bargains with the mining MNEs were arrived at, a member of the CIE (institution in charge of attracting FDI) posited 'there is no bargaining process at all! In Chile, one of the things we repeatedly tell to the investors is that (...) if you want to invest in Chile, you just invest in Chile, there are no obstacles in getting the visas or that sort of things, there are no great difficulties' [INT23].

Likewise, a mining expert of the Ministry of Mining further supported this opinion by explaining that 'there are absolutely no negotiation for starting a new mining project, I mean the country is open to anyone that wants to do it or develop it (...) there are no previous conversations between the [Mining] Minister, the firm only has to do what is said in the [Chilean] legislation' [INT23]. These statements are illustrative how the two

major institutions in charge of the initial bargain with the mining MNEs have openly decided not to do so, letting the legal framework do that for them instead.

Moreover, the mining MNEs have become used to this way of doing things, and when asked about the initial bargains they held with the Chilean State, most of the firms shared the opinion that 'as private firms, we do not have too much interaction with the government' [Superintendent of a mining MNE, INT32]. As another CEO of a mining MNE further explained:

'the [mining] firms do not have too much people dedicated to relate with the State (...) [we understand that] this is the law and we have to follow it and that is how we work, there is nothing beyond that (...) we only have to comply with the law and if the laws change, if this [change] is not convenient for our business, we will leave, but we comply with the law' [INT10, p.8].

Hence, the initial bargain is dominated by the mining MNEs, and the role of the State is reduced to verifying the compliance of the legislation by the mining MNEs, in order to get all the permits they need to operate. Even for the concessions of lands and minerals, which have historically caused intense bargains between the State and mining MNEs in Chile, 'there are no negotiations (...) the law establishes a mechanism to access a concession that is open, (...) is like buying a flat, a real state, exactly the same thing' [Expert from the Ministry of Mining, INT5]. Hence, during the first bargain 'there is no power struggle, the Chilean State is just a pawn in the power scenario of the copper industry (...) since it provides full concessions to the to the firms (...) which in legal terms means that the true owners of the copper are, in fact, the multinationals' [Academic, politician, INT43].

This lack of initial bargaining is another unexpected finding of this research, since all the bargaining models assume that both actors will engage purposefully in successive bargains, especially before the investment is materialised. During what should be the initial bargain, the State acts as a mere witness, by making sure that the rules are abided by, creating the perception that the relationship between the mining MNEs and the State is extremely friendly, and that the mining MNEs are exemplary law abiding citizens, when in reality the mining MNEs are in a position to take full advantage of their bargaining position.

Henceforth, due to the very particular characteristics in which the initial conditions are set for the mining industry, it is difficult to identify the bargaining processes taking place at that point since, apparently, there are none. The mining MNEs dominate this phase,

partly due to the neoliberal ideology deeply established in the Chilean society, and partly due to the mining firms' continuous threat to leave. The former can be considered as a successfully created false consciousness or ideology, through the imposition of the mining MNEs interests over the successive bargains that took place since the 1990's, or what this research calls ideological bargaining power. This ideology has created an institutional framework in which the State initially bargains indirectly through the institutions in charge of checking if the mining MNEs fulfil all the legal requirements.

Moreover, the mining MNEs have continuously controlled the political agenda by opposing updates to the rules of the game through the threat of leaving, something that can be considered as an exertion of non-decisional bargaining power by the mining MNEs in the initial bargains. Finally, the mining MNEs continuously exert their influence in order to improve their operating conditions, by making the State keep liberalising the labour market, weakening the unions and criminalising the strikes, all of which can be considered as a form of episodic bargaining power exerted by the mining MNEs.

Hence, in terms of the initial operating conditions bargained in the capital city of Chile, this research finds that MNEs have exerted the three forms of bargaining power defined here: episodic, by influencing the Chilean State to keep developing better conditions for the mining MNEs to operate; non-decisional, by successfully avoiding the issue of changing the current mining legislation meaning a control over the political agenda; and ideological, by making the Chilean society to defend a status quo that clearly favours the mining MNEs strategic objectives, at their own expense.

The Chilean State, on the other hand, exerts little bargaining power in the initial bargain, due to its obsession with avoiding negotiations since those instances are perceived as an intervention in the free markets. The bargaining literature does recognize a more favourable position for the mining MNEs in the initial bargains, but not on the scale apparent in the Chilean case. However, the pressure from a newly empowered civil society has led the State to somehow change its passive position in the later bargains, pressuring for changing some of the sacred rules of the game. This has caused several reformulations of the bargains between the Chilean State and the firms, in a process detailed next.

#### **8.4.2 The new bargains and empowered civil society**

From the early 2000's, Chilean civil society has experienced an awakening, where it has left the post-dictatorship slumber to become increasingly active in demanding an improvement on the living conditions. Spear-headed by the student movement, this newly empowered civil society has not only claimed for better education, but for a better distribution of incomes and rights; a change in the outdated environmental, labour, tax and constitutional legislation; and a deep critique to the neoliberal system by looking to end the profit culture; something that can be summarised in a deep judgement of the role of the Chilean State and development path followed since the return to democracy.

This social effervescence has also involved the mining industry, due to the crucial role it plays in the Chilean society and economy. Civil society groups have started to demand a better distribution of the gains of the copper GPN, as well as a shared recognition of its worst consequences, pressuring the State to fulfil its role as the organisation representing the people's interests by challenging the once immobile rules of the game.

It is relevant to highlight that most of the interviewees used the expression 'empowered civil society', acknowledging the increasing bargaining power that such actor has developed since the 2000's. This empowerment means that the civil society 'is more engaged, and does not relent (...) nowadays is not just going to a place start drilling (...) they [the mining MNEs] have lost that capacity and they know it' [Academic, INT15], causing the halt of several extremely ambitious projects due to their negative impacts over the local communities; such as Pascualama (Barrick Gold), Pelambres – Caimanes (Antofagasta Minerals) and various power plants, just to name a few. Hence, the mining MNEs have had to 'make a big effort with the communities, with the people whose quality of life that will be affected by these projects, by being very convincing and clear about the mitigation actions [they will implement] for the impacts of their projects' [Director of processes of a mining firm, INT22], since otherwise they will not be able to get the social licence to operate they need.

This empowerment is also captured in the survey made by Moffat et al. (2014) to 1,598 citizens all over Chile, where most of the interviewed perceived that: the national governments are not able to demand responsibilities to the mining MNEs; the current legislation and legal system are not enough for securing the mining MNEs to do the right thing; the Chileans have a low opportunity to participate in the decisions the State makes about the mining industry; and the industry does not listen and respect the opinion of the communities.

Conversely, the same survey found that people believe they can: successfully defend their collective interests and influence the government policies related to mining; make

the industry doing what is right; and force the consideration of the local communities in order to get the permissions to operate. Hence, this survey encapsulates the new attitude of the Chilean population, which does not accept the usual posture defended by the mining MNEs and Chilean elites where 'the State should not intervene in the conflicts between the civil society and the firms', since 'those are problems between privates, and because of that are only regulated by the supply and demand laws' [Union representative, INT30].

Consequently, the pressure coming from the civil society has forced the Chilean State to take a more active role, leading to the creation of new institutions for supervising compliance with environmental, labour and other laws. This process has also started the discussion about changing of the rules of the game governing the mining industry. It is worth noticing that when asked about how they perceive these changes, the representatives of the mining MNEs interviewed agreed that 'everything is completely negotiable' [supply manager of a mining MNE, INT21], but when the Chilean State pushed forward laws directly affecting the industry, such as the royalty or changes in the tax system, the opinion of the firms is a lot more cautious, as a Superintendent of investments of a mining MNE explained:

'Look, what characterises Chile is its stability in the tax system, and the investment in Chile strongly depends on the foreign investment, so any change in the regulatory system, such as specific taxes and (...) royalties are usually well studied, those are not things that you apply from one day to the other' [INT32].

Interestingly, the same interviewee later acknowledges that the mining MNEs are always alert to changes in the legislation, evaluating the impacts of such changes in the profitability of the firm, but he also notices that such scenarios 'do not generate big impacts in the results of the company' [INT32]. This means that the mining MNEs' discourse about how new legislation can lower their profits rates significantly enough to make them leave, could be just a smoke screen to prevent any significant change in the neoliberal ideology threatening their bargaining position.

The discussion of the royalty mining law projects in 2005 and 2010 serve as a good illustration of the intense exertion of bargaining power by mining MNEs taking place when there are proposals to change legislation is by the State in order to benefit the civil society. The first royalty law failed by becoming a specific tax for the mining industry, mostly due to the full exertion of the mining MNEs' influence. According to the interviews, the firms used every single strategic resource at their disposal in order to stop the new regulations, especially the ones related with their linkages with the Chilean political class.



They did this by heavily lobbying the national congress through the Mining Council, and separately by using lobby firms and financing political campaigns; threatening to cut the advertisement of the magazines and newspapers that support or inform about the protests; increasing their CSR expenses and, of course, repeatedly threatening about leaving the country.

Regarding to the second royalty law, a member of the Ministry of Mining explained the bargaining process that took place in 2010, in a context after an earthquake, where the Chilean government needed more revenues in order to start the reconstruction:

'We [the government] tried to negotiate, not to impose something (...) since we did not pretend to discourage [the mining MNEs] (...) we made the changes for having a more immediate revenue now, but that gives certain guarantees [to the firms ] for the future (...), I mean, if I am going to raise your taxes, there will also be more protections, like a fixed tax rate for a longer period of time (...) We did a very serious work to see what variables were influencing the firms to make their decision, and [that is why] when the law was approved there was a 99% acceptance of the firms' [INT 5].

However, this person does not mention that it was not a royalty that was finally approved in 2005 and 2010, but a specific tax income which is something completely different. This, since the specific tax is not a payment for using the land and the natural resources contained in it, but just a percentage of the net utilities of the mining firms. Thus, the Chilean State not only failed in passing a royalty law for the second time – something basic in every mining country –, but it also improved the initial conditions for the mining MNEs by giving them a further tax invariability.

According to some of the interviewees, this can be explained by 'the blatant intervention [of the firms] in the political world (...) these multinationals (...) put money on every side [of the political spectrum] so the one that gets elected will be demanded to play for them' [INT30]. Such opinion has been supported by the recent scandals transversally affecting the whole political class, related to bribes, corruption and illegally funded campaigns by firms, such as what has happened with the nitrate firm SOQUIMICH (The Economist, 2014), CORPESCA (Pérez, 2015), Penta and other high profile cases (The Guardian, 2015). Hence, even though these scandals do not directly involve a copper mining MNE, they have somehow shed light on the strong influence that the private sector has over the Chilean political class. The best example of this in the mining industry is the fact that, since after the last royalty was discussed in 2010, 'the topic has not been touched again' [INT38], something attributed to the 'lobbying and financing political campaigns, which is a vicious cycle' [Mining expert, INT28].

Other ways in which the mining MNEs have tried to stall the changes in the rules of the game have been through the control of the mass media and an active expenditure in traditional CSR policies. Regarding the former, a journalist explained that when the media informs about an issue that damages the public image of the mining MNEs or is against their strategic objectives, such as pollution or labour problems, 'there is always a pressure, since you know that the newspaper is not supported by the sales, but by the advertisement, which constraints you' [INT 30]. He explained how when they publish a story that bothers the mining MNEs, they usually have to publish another one in a more positive tone, in order to balance the public opinion. Furthermore, the mining MNEs have also tried to get people on their side by doing CSR activities in the form of building stadiums, beaches, or by giving money to NGOs, which worked in the short term, but is now heavily criticised since it is perceived more as an image whitening than a substantial contribution.

However, despite the considerable influence of the mining MNEs, the Chilean State has also been able to make some significant gains. Several institutions and laws have been created in order to make sure the mining MNEs are fulfilling their duties with the local communities, environment, and labour force. Among these, the environmental tribunals were created in 2012, in order to solve controversies related to the environment; there is a reform in the tax and labour legislation going on; there are some regulations regarding to the consultation process that has to take place between the mining MNEs and the indigenous communities before starting a project; and more importantly, there is a constitutional process happening during 2016 aiming to create a new constitution, where crucial issues such as the role of the State in the economy, the decentralisation of the political power and the desirability of the neoliberal model are being discussed.

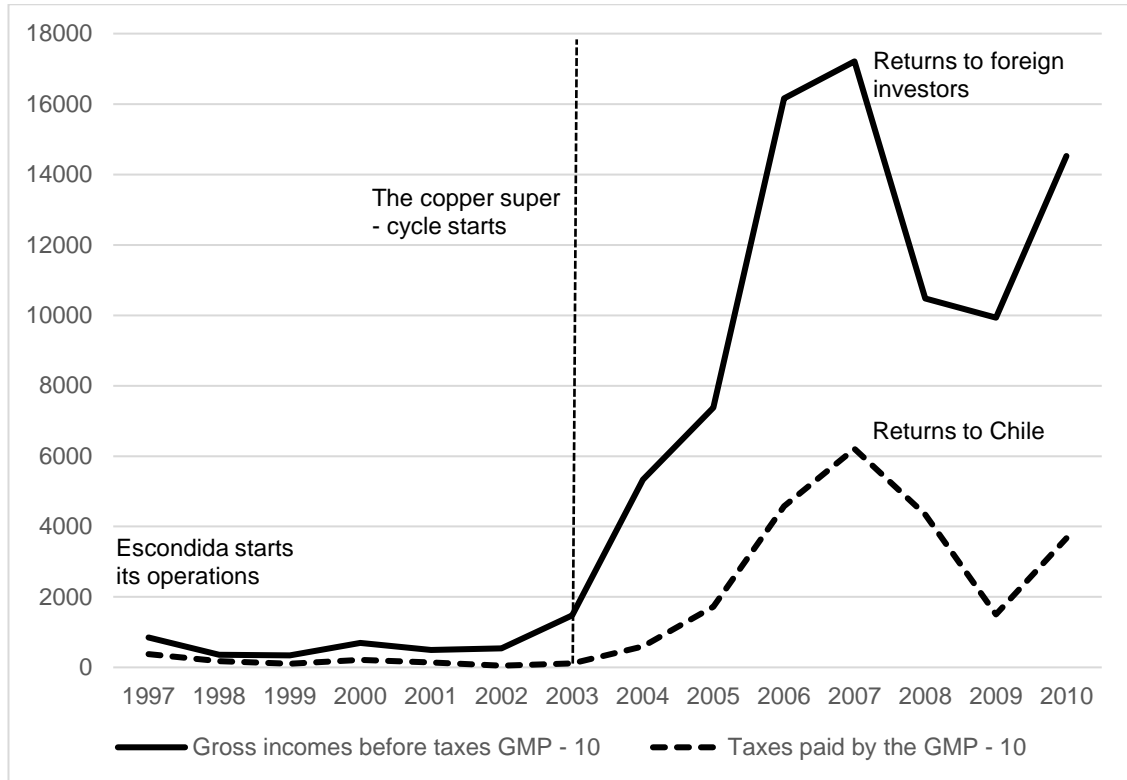
Finally, and returning to the key concepts related to bargaining power, it could be said that the mining MNEs have exerted a considerable amount of episodic bargaining power over the Chilean State in the successive bargains that have taken place during the last decade, especially when such bargains are about changing the rules of the game that frame the Chilean mining industry. Here, the mining MNEs have actively used both their internal and external resources to impede further changes in the legislation. Regarding to the former, the mining MNEs have continually threatened to leave the country if the conditions change too much, meaning that the country would lose access to the firm's strategic assets depicted summarised in Figure 36. Additionally, the firms have also used their connections with political elites in order to hinder the discussion of new laws; have put pressure on the mass media that supports such discussions; and tried to get support from the civil society through CSR policies.

Hence, mining MNEs have successfully exerted; on the one hand, episodic bargaining power by stopping the two attempts to change the current legal status quo (such as creating a royalty) and, on the other, non-decisional bargaining power, by effectively omitting further discussions about the issue. However, the state has also been able to make some gains, by creating new institutions and laws that oblige the mining MNEs to change their behaviour. Hence, the Chilean State has exerted some degree of episodic bargaining power, but not in the same magnitude as the mining MNEs since it has had to face the limitations imposed by the dominant ideology that markets should be left alone, and the fear of scaring away the mining firms. Nonetheless, this constrain is slowly being fought by an increasingly empowered civil society, which has managed to pressure the Chilean State for some significant changes in the current legislation. This may have the potential to defy the actual neoliberal ideology constraining the State's will to fully exert its bargaining power.

One way to understand which agent has been exerting more bargaining power in the bargains taking place in Santiago is to return to what Moran (1974) proposed in his book. There, he proposed observing which actor is capturing the benefits of the mining activity after each bargain (shown in Figure 14, Chapter 5). Hence, a way to measure changes in the bargaining position of an actor is to look at the returns that both, the mining MNEs and the Chilean State, are getting from the participating in the copper mining GPN. According to the traditional bargaining models, after the FDI is materialised, there should be an expected shift in the bargaining position from the mining MNEs towards the host state, which would be represented in a decrease in the distance between the returns to foreign investors and to the host country (Moran, 1974).

The analysis for the Chilean case is depicted in Figure 37, which considers the returns that the foreign investors represented in the GMP – 10 and the Chilean State have received between the years 1997 – 2010. This is an interesting period, since 1997 was the year the first major mining project (Escondida from BHP) started producing, and it takes into account how the trends changed after the beginning of the copper super cycle and the 2007 global crisis.

**Figure 37: Moran's bargaining diagram applied for the Chilean case between 1997 and 2010 in millions of US\$.**



Source: own elaboration using data from CIPER and COCHILCO.

Hence, according to Figure 37, the returns to foreign investors have largely and increasingly surpassed the ones flowing to the Chilean State in the form of taxes paid by the copper industry. Moreover, this gap between the two has significantly increased since the start of the copper super cycle, only briefly decreasing after the 2007/2008 global crisis. Consequently, and contrary to what Moran proposed, the Chilean State has not been able to shorten the distance with the mining MNEs, meaning that the firms have been able to exert their bargaining power successfully since the beginning of the current copper mining GPN, while also strengthening their overall bargaining position.

This has deep implications in terms of who is capturing value and, more importantly, the possibilities of achieving sustainable development in the host territories. The figure shows how the mining MNEs have captured most of the bonanza produced by the copper super cycle which, according to the GPN literature, is a sign that a strategic coupling between the Chilean State and the mining may not arise - since the firms simply have a

better chance of imposing their interests in the bargains at the cost of the Chilean State's strategic objectives. The implications of the relatively stronger bargaining position of the mining MNEs achieved at the national level are further developed in a later section, after the analysis of the bargains that take place in the Antofagasta Region.

## 8.5 BARGAINS IN THE ANTOFAGASTA REGION

One of the most relevant differences between the regional and the national bargains found was the open conflict between the discourses regarding the role the State should play in promoting a sustainable development based on the mining industry. The national discourse assumes that the national State should not negotiate with the mining MNEs, clashing with the regional uproar for a more active role of the State in developing the host mining regions - which grows stronger the closer the actors are to the production sites (Bebbington, 2009; Bebbington et al., 2008). However, the same regional politicians that advocate for a stronger State, consider bargains with the mining MNEs as something that should not be done. In the words of an important regional politician:

'We could not talk about a bargain! Because our institutions [referring to the Chilean State] do not allow it! To me, [to bargain] even smells bad, because I could not be negotiating with a mining firm! (...) so you cannot talk about bargains, there are no bargains, they should not exist!' [INT33].

This highlights the depth of the ideological bargaining power exerted by the mining MNEs, which has spread all over the country and crystallised in the people's automatic defensive response when asked about bargains directly. Thus, the mining MNEs have successfully helped to reinforce the neoliberal ideology so deeply into the Chilean population that even its main critiques are not able to get rid of its influence when aiming for a stronger state. Nonetheless, this influence gets weaker the more localized the bargain is held, since the bargains that take place in the cities or municipalities located next to mining production have to deal directly with the consequences of the industry, making them less influenced by the dominant neoliberal ideology, and thus, less sensitive to the exertion of ideological bargaining power in the negotiations.

Furthermore, the kinds of bargains taking place in the Antofagasta Region are completely different in scope, intensity and aims compared to the ones in Santiago or London. The regional State representatives have to face several constraints in terms of their

comparative size with the mining MNEs and the completely centralized political regime and resistant bureaucracy in Chile. Besides, the region itself is quite centralised, where the regional capital city of Antofagasta concentrates most of the political institutions and positive externalities associated with the mining industry.

The bargains take place at different levels within the region, where the regional interests are represented in two main political actors: the intendentes at a regional scale, who are elected by the central government to represent the president in the regions and vice versa; and the mayors, in the local scale, who are democratically elected to administrate the municipalities and cities. This section depicts the bargains that take place in the region between the mining MNEs and the local state, as well as their relevance for the overall copper mining GPN.

### **8.5.1 The bargains between the regional government and mining MNEs**

In terms of the bargains taking place at a regional level between the regional government and the mining MNEs, the interviewees firstly and constantly mentioned two considerable constraints on the region's bargaining position: the centralisation of the most strategic decisions in Santiago; and the high level of bureaucracy that limits the actions of the regional representatives. Regarding the former, an opinion broadly shared is that 'everything depends on Santiago, the decisions are made by Santiago, the resources go to Santiago, from the desks in Santiago they decide what happens in our municipalities' [city mayor, INT34].

This centralism is ultimately embodied in the polemical figure of the intendente, who is unilaterally designated in Santiago by the president in order to govern the region. Most of the intendentes of the Antofagasta Region have been heavily criticized by the local population and representatives of the municipalities and cities since, despite being in charge of the most important copper producing region of the world, they are perceived as 'not representing us [the cities] (...) because instead of understanding or listening to what is happening in the municipalities, they question the social movements and the mayors and do not sit to work together with them' [mayor, INT34].

The criticism focuses on the perception that the intendentes mostly defend the position of the central government instead of the regional and local interests, while also interfering in the bargains that may take place between the municipalities and mining MNEs. Hence,

the intendentes have sometimes facilitated the exertion of non-decisional bargaining power by the mining MNEs by effectively leaving relevant issues out of the regional government agenda. Moreover, the few intendentes that try to go against this trend are not only limited by the president's will, but also 'by the government structure, which makes impossible for you [as an intendente] to get too creative (...), since at the end, the only thing that matters is the economic criteria' [former intendente, INT 33], which could be understood as a way to defend or deepen the current neoliberal ideology.

Additionally, the mining MNEs do not relate with the regional and local governments 'in a horizontal way' since 'they have the certainty (...) that when they have serious problems or want to tackle very strategic issues, they have to deal with the ministries at a central level. Even their headquarters are in Santiago, so they only maintain some level of philanthropy or a relationship [with the regional and local representatives] which is rather formal' [INT33]. This lack of embeddedness with host territory has been shown when the regional government was trying to develop a long term agenda with the mining MNEs, where 'they were invited to build it (...) to share projects so they could visualize which ones were going to leave installed capacity in the region, but they never compromised, quite the opposite' [INT33]. All of these, heavily constraints the bargains between the regional state and the mining MNEs, and shows an overall lack of intentions from the mining MNEs about actively engaging with the region's necessities and demands.

However, despite the relative indifference of the mining MNEs, some bargains have taken place between the intendencia and the mining firms, where the former has been able to exert some degree of episodic bargaining power, but only when the latter have been interested and willing to do it. This usually happens when the regional government bargains in order to build new infrastructure such as highways or ports, which benefit both the mining firms and the region. Nonetheless, as a former intendente explained, when these bargains have taken place and even reached a strategic coupling between both actors' interests, the central government has not allowed the necessary permissions.

Apparently, the central government does not want to promote these regional bargains, since 'they would not have the power to decide' [INT33] the terms and conditions of such agreements, which may ultimately strengthen the bargaining position of the regional and local government not only while facing the mining MNEs, but also the central State.

Moreover, when some intendentes have insisted on forcing bargains with the mining MNEs regarding issues they are not comfortable with, such as the negative externalities

of the industry, the firms directly exert their influence over the political elite in Santiago, in order to stop the situation and prevent such issues from reaching the political agenda. As a mining expert explained:

'When an intendente starts putting problems to the [mining] industry, they [the firms] go to the Mining Council and say 'the intendente of the Antofagasta Region is being a pain in the ass [sic], so we should go and talk to the President [of the Republic]', then they go there while also sending their lobbyist and say 'you know what? The intendente is being a pain in the ass' so what does the President does? He says [to the intendente] 'what the hell are you doing there?' (...) this is because they [the intendentes] lack the political influence to produce a change' [INT 16A].

Hence, at the regional level there are stark difference in the capacity to exert every kind of bargaining power between the regional government and the mining MNEs. The latter focus their bargains to the capital city of the country, exerting episodic and non-decisional bargaining power indirectly over the region through Santiago, while also looking to deepen the neoliberal ideology by exerting ideological bargaining power in every node of the copper mining GPN.

The exertion of the ideological bargaining power can be observed by looking at other State institutions operating in the region, such as the SEREMIAS, which limit their actions to act only as an intermediary when a conflict arises. Hence, they 'do not have the attributions to get involved unless a law is violated' [former SEREMI, INT 18] reproducing the central discourse of a detached state. Furthermore, these institutions have a very weak presence for actually doing something else, like establishing bargains with the mining MNEs, or even fulfilling their obligations, since they are heavily under staffed and working with limited budget and attributions. As regional politician explained:

'When I was an intendente, the Mining SEREMIA had four people in total: the SEREMI, a secretary, a driver and an intern (...) the SERNAGEOMIN had 17 inspectors for all the region! (...) and when I asked the central government to increase the people they said that (...) they considered the State had too much fat' [INT33].

The Mining SEREMIAS are the direct representatives of the Mining Ministry in the regions, and SERNAGEOMIN is the organization in charge of regulating the mining activity. Hence, both are crucial State institutions holding several strategic resources that could be used in bargains, which is not the case. Consequently, there is a shared opinion in the region that the Chilean State is 'weakened in the central Ministries, in the regional



services, it is weakened in the whole country' [INT33], something in line with the neoliberal ideology imposed by the ideological bargaining power from the mining MNEs.

Nonetheless, despite the relative weakness of the central State's regional institutions in bargaining with the mining MNEs, the municipalities and cities of the Antofagasta Region have managed to pressure the mining MNEs to bargain about certain issues, through several strikes, mobilisations and protests. It is in this level where the conflict between the mining MNEs and the local communities reaches its highest point.

### **8.5.2 The bargains between the local government and the mining MNEs**

Similarly to the differences in the bargains at the national and at the regional level, the local governments have a yet more rebellious and critical position towards the mining industry they host. Most of the cities and municipalities located next to the production ores, or that serve as ports for exporting the copper, have to deal with the immediate externalities caused by the mining industry, since they are perceived as 'dormitory cities, which do not receive the proportional social retribution in terms of expenses in education and health compared to what they contribute to the national production' [INT28,]. Hence, the host local spaces receive most of the negative externalities from the industry, like all sorts of pollution causing various catastrophic diseases; raising cost of living; lack of diversification in the productive fabric; family issues due to the shift system; high commutation rate; and a strong presence of unregulated sexual commerce among many others.

Thus, the representatives of the host local spaces have historically raised their demands in order to create a sustainable development path based on the mining industry, by pressuring the regional and central governments to take a more active role in supporting the local bargains with the mining MNEs, and in putting some relevant issues in the regional and national political agenda. However, despite the joint effort between the local society and its political representatives, the crucial bargains needed in order to reach a strategic coupling between the local and private strategic coupling have not been free of restrictions.

The most relevant constraint for the local bargains is the issue of centralism, both at a national and at a regional level. The local representatives have tried to overcome this matter by creating the Association of Mining Municipalities, which gather mayors from

most of the mining cities. This, since as a mayor explained ‘we have been years talking and drinking coffee [with the central State and mining MNEs], (...) so we thought it was time to take more concrete actions’ [INT34]. By concrete actions he meant two things: first, celebrating direct bargains between the host cities and the mining MNEs, to make them lessen the negative externalities over the cities and the region, while also developing a sustainable and diversified productive fabric; and second, bargains with the central state in order to secure a fairer distribution of the mining revenues for the local cities and region.

Consequently, the local representatives have tried to reverse this situation by continually calling for bargains with the mining MNEs in order to increase the value captured in the Antofagasta region and cities, but such efforts have been systematically hindered by the national state. An example of this is provided by a former mayor, who explained that ‘we [the mayors of the mining cities] have tried to [bargain] that 100% of the taxes related to mining (...) should be paid in the locality, but we have not been able to achieve that (...) because of the centralism of our country’ [INT33]. Hence, the national State is not willing to allow a greater bargaining position of the local representatives, since the copper industry ‘is the main resource that this country has, and thus the Treasury will not resign to allow all or even part of the money coming from it to stay here [in the Antofagasta Region]’ [INT33], something that hinders the local capacity for exerting episodic and non – decisional bargaining power.

Thus, the local governments have had to deal with the restrictions imposed from the central State before being able to bargain with the mining MNEs since, paradoxically, the municipalities lack the tools and resources for doing it, even though they are next to the biggest and richest copper ores and mining projects of the world. This situation is so serious that the city mayors ‘are barely governing and taking care of our [the mayor’s] duties (...) because our budget is extremely poor’ [city mayor, INT 34]. Furthermore, the lack of autonomy of the local governments is worsened since they ‘cannot even decide about several issues related to their budget’ [INT28]. This situation has enraged the region’s civil society and representatives of its cities, while also creating a wide perception that only the negative effects are distributed in the region while all the positive externalities concentrate in Santiago.

The belief that nothing is being left in the mining regions has been nourished by the continuous scandals related to mining MNEs capturing the State’s strategic resources; such as the water, where mining firms enjoy full concessions of the scarce water resources; and energy, in the sense that the region has extremely high energy prices

due to the mining industry's demand; while also facing several fines for polluting the environment and cities with arsenic and lead. Because of this, the Region has seen a strong uprising from the indigenous communities to recover and secure their water access in the driest desert of the world, as well as several strikes and manifestations from the people of Tocopilla, the city located right next to thermoelectric plants. Regarding to the pollution issue, the Antofagasta Region has cancer as the biggest cause of death (Rojas, 2014). The mining MNEs are fully aware of this situation, which they call environmental dumping, and they recognise this 'will be punished, sooner or later' [CEO mining MNE, INT9].

What is more, the central State has not only not addressed this situation, but it has also directly interfered in favour of the mining MNEs when there have been manifestations and strikes, which has only deepened the feeling of injustice and the idea that the region is a sacrificed space, leading to more manifestations as a way to pressure the central State and mining MNEs (Reyes, 2015). Again, the Chilean's national state passivity has facilitated the exertion of both non-decisional and episodic bargaining power by the mining MNEs in the region by securing the freedom of the markets.

This perception of 'sacrificed spaces' is related not only to the high level of negative externalities, but also to the lack of amenities and proper infrastructure and the high cost of living. In this sense, mining workers 'prefer to live in other cities, because [Antofagasta] is too expensive, so they leave their families in cheaper regions, they [the mining workers] just pass through the city' [Mining journalist, INT37]. Hence, when mining workers are sent to live in some of the cities located next to mines, like Calama, they see this 'as a punishment, which is not compensated by your wage at all' [INT28]. This image is further explained by the CEO of a mining MNE 'if you get the option to live in a city with amenities and good quality of services like Santiago, (...) you will try to stay there, you spend the higher wages you get in Antofagasta coming to Santiago' [INT10].

Moreover, the mining MNEs are not interested in bargaining with the local authorities. When bargains do happen, is in a situation extremely asymmetrical for the local agents since 'each mining firm has an incredible strength in the region it operates, because they are located in regions where there are no other sources of industrial development' [Mining Firm representative, INT3]. The mining MNEs know the restrictions the local representatives face, the dependency of the regions of the mining activity, and also take full advantage of established discourse about mining regions 'having no power' and that 'every time there is a conflict, the authorities have to go from Santiago [to solve it]' [INT28].

Hence, the firms use those constraints in their favour to avoid bargains that may go against their strategic objectives. This leads to several situations in which the local agents continually try to establish bargains with the mining MNEs but ‘the CEO of a mining MNE will only attend you if he wants to, and if you need to talk to him he will not care at all because who is going to oblige him? Nobody.’ [Former director of a regional agency, INT16A].

Despite the above, the local representatives have been using their strategic resources, as well as making alliances with the civil society in order to oblige the mining MNEs to engage in some bargains by threatening their social licence to operate. These alliances have become stronger since, as a mayor explained ‘we [the mayor’s office] stand up with the people in the streets and join them until the end, which meant to be detained and to suffer the same repression [ordered from Santiago] the people did’ [Mayor, INT34]. Responding to this, the mining MNEs have chosen to direct such bargains into the CSR field, by ‘making the local governments participating in the activities we organize related to labour and sustainability issues, such as the support to SMEs’ [CEO Mining MNE, INT21]. Hence, the firms consider incorporating some representatives and social actors into their CSR policies as what they call the model of the ‘three legged table’, where private firms relate with the State and the civil society in a sign of ‘the good and direct relationships as allies’ [Director CSR related organization, INT17].

These kinds of negotiations mostly consist in deciding what and where the mining MNEs will build football stadiums, artificial beaches or others, all of which are ‘visible things where the [mining MNEs] can plant their sign (...) which is ten times worth the price of what they bought!’ [INT33], a broadly shared opinion. Lately, the mining MNEs have developed more ambitious CSR programmes, such as the World’s Suppliers, the CREO Antofagasta, and the Calama Plus, created in order to tackle issues such as how to develop the local productive fabric, the cities and to secure the socio – economic sustainability of the host region.

Moreover, according to the mining MNEs, they have been forced to develop these programmes in order to secure some basic infrastructure in the Region, since there is no continuous national or regional development strategy currently aimed at this. As a former person in charge of a development programme posit ‘we [the Chilean State] do not have long term development policies, we do policies according to who is in power (...) there is no continuity!’ [INT20]. However, the results of such private development strategies have been far away from what was promised, sometimes even deepening the same issues they were supposed to solve. Hence, the policy gap left by the national state and

high centralisation is a backlash for the mining MNEs, making them reconsider if promoting the neoliberal ideology is in their best interest.

Finally, the local communities and representatives have managed to bargain about what they consider crucial issues for the sustainable development but these negotiations only take place when the laws oblige the mining MNEs to do so. Some examples are the bargains taking place due to the ILO 169 convention, which obliges the mining MNEs to make a consultation to get their social licence to operate. However, the mining MNEs are the ones organizing the consultations, bringing support from experts that use advanced technical language inaccessible for the local indigenous communities. Moreover, as an academic who participated actively in several of these bargains explained, the mining MNEs can potentially tackle all the relevant issues for the communities, 'everything is negotiable', but 'none of the agreements [of these bargains] is [legally] binding' [INT26]. Moreover, the mining MNEs have been involved in several scandals over bribing local community representatives (Miño, 2015; Sargent, 2013) 'in order to divide them [the community], to make them not oppose the project' [INT26], since the law only demands to have a consultation.

Additionally, the mining MNEs are also backed up by the Central State, which sends its intendentes or other representatives to the consultations. The Central State formally participates in every part of the bargaining process between the communities and mining MNEs, but it

'intervenes all the decisions, (...) but in favour of any action the firm requires, because its role is to facilitate that the firm does what it has to do to make the project happen, but when something goes wrong and the problems start, the State does nothing, cannot do anything (...) because they consider this 'as a problem between privates' (...) so the people is defenceless, in an absolute defencelessness' [INT26].

Consequently, the mining MNEs have full control of the discussion, being able to decide what topics are addressed and what not, hence fully exerting non-decisional bargaining power. The central state and sometimes even the regional representatives intervene but only in favour of the mining MNE's interests, being present in every part of the bargain 'bringing all the people from the environmental impact assessment system, with all its apparatus, but [they] only attend to serve the coffee!' [INT26]. Consequently, when the mining MNEs face the local communities regarding to any negative externalities, where they can dominate the agenda, neglect agreements made in the consultation and use the Central State as a bodyguard of their interests, exerting a large amount of episodic and non-decisional bargaining power over the regional and local actors.

This concludes the analysis of the regional bargains and this section which posited that there are different kinds of bargains taking place in each node of the Chilean copper mining GPN. The outcomes of such bargains will also differ in terms of spatial scope. Such outcomes are crucial for understanding the chances that both the country and the Antofagasta Region have for reaching sustainable development through mining, as will be shown next.

## 8.6 BARGAINING OUTCOMES IMPLICATIONS FOR VALUE CAPTURE AND TERRITORIAL EMBEDDEDNESS

All of the previous bargains taking place in the different nodes of the Chilean copper mining GPN have deep implications for the sustainable development possibilities of the country and the Antofagasta Region. However, the lack of initiative shown by the central State, as well as the constraints it has imposed over the regional and local bargains have been an unexpected finding. The mining MNEs have fully exerted the different kinds of bargaining power in each node, whereas the Chilean State has acted more as a witness instead of actively taking place in the negotiations, as the theory predicted.

Additionally, the linkages between the Chilean political elite and the mining MNEs have also strengthened the dominant neoliberal ideology of free markets, underpinning the ideology that the State should not intervene at all. This ideology is not shared by the regions which have to deal with the direct outcomes of the mining activity. Hence, this section offers a glimpse of the effects of the bargaining processes over the possibilities of the Chilean country and Antofagasta region to capture value and the degree in which the mining MNEs are embedded in the national and regional territory.

### **8.6.1 The problems of having a national State not willing to exert its bargaining power**

As previously mentioned, the mining MNEs have had to face a considerable backlash associated to the inactivity of the witness Chilean State they helped to create. The lack of a clear development strategy and planning at the national and regional level have caused a loss in the mining industry competitiveness, meaning higher operational costs due to the lack of energy, water and human capital needed to produce - something

exacerbated by the decrease in the copper prices and the quality of the ores. Furthermore, the inadequate planning of the mining cities and mining supplier capabilities, among several other issues that should be addressed by the Chilean State, have led the mining MNEs to intervene in areas that are outside their field of expertise, such as creating development strategies for the whole nation and mining regions. These strategies can be separated into two kinds: development of proper infrastructure in the host region and cities; and development of productive inputs.

The regional strategies aim to develop the necessary infrastructure and amenities in the mining cities and regions in order to secure the exportation of minerals. Some examples are the CREO Antofagasta, and the Calama Plus programmes. Regarding the development of productive inputs, the mining MNEs have built several technical training institutes, schools and helped institute degrees related to mining in order to develop better human capital; while also actively promoting a cluster policy to upgrade their suppliers. The cluster policy is a clear example of how far the mining MNEs have replaced the State, since this was born as a continuation of the mining cluster initiative started by the Chilean State in 2008 quickly fading in 2010. Some mining firms, such as BHP and CODELCO, understood that a better set of suppliers, capable of providing advanced technological solutions was crucial for their development, and thus, decided to state the World Class Suppliers Programme, also initially known as the Mining Cluster.

Both initiatives have been born due to the indifference of the State to tackle these issues, where the mining MNEs have taken the lead inviting the national, regional and local representatives to contribute in programmes whose aims have already been defined by them. However, these programmes are far from achieving their initial objective. The World Class Suppliers programme, for example, aimed to 'produce 250 world class supplier by 2020' [CEO of a mining MNE directly involved in the programme, INT39], a date recently changed to 2035, due to the inability of the programme to develop such suppliers based on the weak involvement of the mining MNEs and the Chilean State (Valdes, 2016).

The other programmes have also faced similar criticism due to their failure in producing the promised outcomes (El Nortero, 2012; Huerta, 2013). This has turned into a considerable issue for the mining MNEs since, as a professor argued, the Chilean central state has adopted a witness position where it believes that 'the big firms should take care of [the social issues] (...) transferring all the social responsibility to the firms' [INT41]. The mining MNEs are out of their field of expertise when they create development policies and strategies, leading numerous failures and rising frustration. In the words of

a mining CEO 'until when will we [the mining firms] have to do things to solve social issues?! We pay taxes!' [INT11].

Hence, the national state's passivity and detachment from the mining industry has turned into a distraction and a source of problems for the mining MNEs; while also leaving the Antofagasta Region and the country completely aimless in terms of its development path. The central State is mostly worried about 'letting the institutions work' while capturing most of the value produced, while the Antofagasta Region has tried to develop some medium and long term development strategies to redistribute the capture of value locally, and to increase the degree of territorial embeddedness of the mining MNEs. Hence, the question of who captures value and where it is captured turns into a crucial issue in order to evaluate the sustainable development chances of both the Antofagasta Region and the country as a whole.

### **8.6.2 Who, where and how? Value capture and territorial embeddedness**

From all of the information presented above, it is especially clear that the *mining MNEs are capturing most of the value within the Chilean copper mining GPN*. As Figure 29 in Chapter 7 (Utilities of the GMP - 10 before taxes) and Figure 37 (Moran's bargaining diagram) show, the magnitude and speed in which the mining MNE's utilities have grown since 2003 has long overcome the returns that Chile is getting from the copper industry. Only between 1997, when Escondida started, until 2010, the GMP10 accumulated 85.000 million US\$. This is 3.6 times what the Chilean State received from taxes, which was almost 24.000 million US\$ during the same period. To have some perspective, BHP initially invested around 836 million US\$ during the 90's to start Escondida (Minería Chilena, 2014), the largest copper producer in the world, a sum that represents less than 1% of the total accumulated utilities from the GMP10 between 1997 and 2010, meaning the whole investment has been far recovered.

Hence, the mining MNEs have successfully captured most of the benefits of the copper mining industry and the super cycle, since they have had the upper hand in most of the bargains celebrated along the whole copper mining GPN. The mining MNEs have exerted the three proposed forms of bargaining power in each node, making the Chilean State and regions adapt their behaviour so the firms could achieve strategic objectives, namely, maximise their utilities. Not only this, but they have also contributed to the development of a indolent and detached national state by feeding the free market



ideology, where the central state not only limits its actions to merely observing that laws are being abided by, but it also impedes bargains between the regions and communities and the mining MNEs.

Moreover, due to the extreme centralism of the country, most of the value kept within Chile stays in Santiago. The capital monopolises the crucial bargains with the mining MNEs, collects their taxes and re-distributes the incomes from the mining industry to the rest of the country in the form of regional funds for promoting the development – which, significantly, do not reflect each region's contribution to the national income. As Table 13 shows, the Antofagasta Region only receives an average of 3% of the fiscal spending despite its crucial contribution to the country's GDP and exports. The same table shows how the Metropolitan Region concentrates most of the total investment for the period available, a third of the total, something confirmed by the director of a mining agency:

'In the case of Chile, 99% of the revenues from mining is going to the central government and the redistribution is an issue, there is not a fair policy, so the regions are not comfortable with the tax situation' [INT47].

This extreme centralization of public expenditure and value capture not only affects Antofagasta, but also the whole mining region located in the northern part of the country. As Table 13 shows, the four most important mining regions: Arica and Parinacota, Tarapaca, Antofagasta and Atacama, concentrate less than 10% of the total fiscal expenditure between 2013 and 2015. This contrasts with the central regions of Valparaíso and Metropolitana, concentrating an average of 40%; as well as the rest of the southern regions, which sum around 45%.

Hence, the mining regions, especially Antofagasta, only capture value directly through the patents the mining MNEs pay, and the CSR expenditures, which are not proportional to their contribution to the national wealth at all. Similarly, these regions capture value indirectly through the fund called *Fondo Nacional de Desarrollo Regional* (National Fund for Regional Development), a grant fund based on projects, and what is left in the local supplier companies and workers that live in the region. All these have been considered insufficient by all the local politicians, experts and representatives interviewed. A transversally shared explanation for this concentration was that the political and entrepreneurial elite live in Santiago or in the southern cities, as well as most highly paid workers of the mining MNEs. These groups represent the political Chilean elite, which controls the allocation of public funds through the Treasury. Consequently, the political and entrepreneurial elite will promote the expenditure of public funds in the cities where they reside, Santiago or other Southern cities, using the mining regions only as a

place to work. This phenomenon creates a secondary source of value capture by the central and southern regions, through the commutation of mining workers to the mining regions.

**Table 16: Fiscal spending assigned by region. Values in million pesos of 2015.**

Region	% of the total	% of the total	*% of the total
	2013	2014	2015
Arica and Parinacota	1.72%	1.80%	1.82%
Tarapacá	2.18%	2.33%	2.30%
Antofagasta	3.44%	3.23%	3.25%
Atacama	2.09%	2.13%	1.96%
Coquimbo	4.47%	4.77%	5.00%
Valparaíso	11.30%	10.91%	11.02%
Metropolitana	29.24%	28.93%	30.14%
O'Higgins	5.32%	5.10%	5.00%
Maule	6.72%	6.51%	6.17%
Bio Bio	14.10%	13.64%	12.93%
Araucanía	6.99%	7.34%	7.68%
Los Ríos	2.81%	3.09%	2.85%
Los Lagos	6.22%	6.73%	6.41%
Aysén	1.45%	1.50%	1.38%
Magallanes	1.95%	1.97%	2.10%
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*The year 2015 is missing some data.

*Source:* Own elaboration using data from the Observatorio del Gasto Fiscal en Chile, DIPRES and INE.

The long distance commuting of mining workers has become a relatively new characteristic of the Chilean mining industry, a process facilitated by the higher wages and benefits offered, the shift system and decrease in transport costs that allows the fly-in, fly-out of the labour force, the high living costs of some of the mining regions. This issue is especially pervasive in the Antofagasta Region, which according to Atienza et al. (2012) and Aroca and Atienza (2008) has the highest net rate of regional commuting in the country. They estimate that, in 2002, around 10% of the total workers in the region

were commuting from other parts of Chile, reaching around 18% in 2016 according to the data from the INE. From these, 75% belong to activities directly related to the mining industry, and most of them live in Santiago or other southern cities, where they spend the most significant part of their wages. Hence, the high commutation is another way through which a significant portion of value generated in the Antofagasta Region is captured in Santiago or other regions; while also reinforcing the idea of Antofagasta as a sacrificed space.

Related to the commuting issue, is the composition of the labour force hired by the mining MNEs. This has drastically changed from being completely integrated into the firms in the 1970's, to a situation where almost 70% of the total labour force working on the mining MNEs is now subcontracted or outsourced (Atienza, Lufin, Soto, & Cortés, 2015; Atienza, Lufin, Soto, Cortes, et al., 2015). Hence, the mining MNEs have outsourced all the parts of the production chain which are not considered extremely strategic (Phelps et al., 2015; Urzúa, 2012). Moreover, the labour conditions offered to the outsourced workers are a lot worse compared to the workers contracted by the mining firms, in terms of lower wages, less benefits and scarce possibilities to form unions. This has created all sorts of social issues, but also an additional way to capture value in other regions, since most of the workers hired by the mining MNEs commute; whereas the outsourced workers usually live in the cities close to the mining ores due to their lower wages.

Another way in which value is captured either by the mining MNEs or other regions is related to how the mining MNEs interact with the local productive fabric and communities. Such issues are directly intertwined with the *degree of territorial embeddedness of the mining MNEs*, in the form of the economic linkages developed by the mining MNEs with the local suppliers, which are the most strategic actors in developing a diversified and sustainable economic local development.

The economic linkages developed between the mining MNEs and the local SMEs suppliers have been a traditional way to understand the level of territorial embeddedness in the mining industry. This is a decisive element, since the number, quality and kind of economic linkages developed within the region will determine the potential diversification that the productive fabric can develop, ultimately meaning increasing the chances of reaching sustainable socio – economic development.

The economic linkages of the copper mining MNEs with the Antofagasta Region have been profoundly studied recently, to respond how sustainable is the regional economy if the main foreign firms decide to leave the country (Aroca, 2001; Cademartori, 2002, 2008). These studies have mostly found that, contrary to the nitrate era, the copper

mining MNEs have developed a great number of economic linkages with SMEs regional suppliers. However, they also found that most of the linkages developed are related to products and services that do not require or promote new technological advances. Most of the purchases made by the mining MNEs in the Antofagasta Region are related with basic services such as catering, transport and accommodation; and some basic goods for feeding and maintaining the labour force in the mining camps, all of which are activities that will not survive if the mining activity ceases.

Moreover, there is an extreme dependency of the mining suppliers from the mining MNEs as it has been shown by the works of (Atienza et al., 2009; Atienza et al., 2012; Atienza et al., 2006). They interviewed 447 SMEs in the Antofagasta Region in 2005 and 597 in 2009, finding that around two thirds of the sales of such SMEs are direct supplies for the mining industry, and that almost 85% of the sales of the direct and indirect SME suppliers of the mining industry are concentrated in only one client (Atienza et al., 2012). This trend was underlined by a politician who explained that ‘the degree of dependency of some of our [local] medium entrepreneurs who depend almost 70% on one contract is disastrous’ [INT33].

Hence, the monopsonistic nature of the mining industry due to their hub and spokes topology, and the dependency developed by the local SMEs supplying them, have led to some very unequal relationships. This relates to what Phelps (1996) argues by stating that, despite the rise of networks, buyer supplier relations are often hierarchical and involve dependency. In this sense, the mining MNEs defend the idea that they aim to have a ‘pact (...) win–win agreements’ [Superintendent mining MNE, INT32], but the reality shows exactly the opposite. For the critics, the mining MNEs ‘are not collaborative with their partners’, since ‘the mining industry is too cost orientated and not very value orientated (...) so the prices are extremely relevant’ [CEO of a big supplier, INT24]. This focus on prices means that ‘at the end several of the decisions are taken considering the cheapest suppliers instead of the most efficient ones’ [mining expert, INT25] since ‘in general in the mining industry you only compete through costs, you have to keep the costs low despite what happens with the [copper] price’ [Superintendent mining MNE, INT32].

Consequently, the initial bargains held between the mining MNEs and the local SMEs suppliers are ‘extremely asymmetrical’ since when ‘a supplier that is small and has a contract with a [mining MNE] and the [mining MNE] needs to reduce costs, it will immediately say to the supplier ‘hey, lower the cost by half or get out of here’ and the [supplier] is obliged to reduce costs’ [mining expert, INT28]. Moreover, the SMEs

suppliers do not have the capacity to bargain with the mining MNEs, as ‘they do not know how to defend their business and are always fighting for getting the biggest part of the cake’ [Mining expert, INT20], an opinion that highlights how successful have been the mining MNEs in making the suppliers compete instead of joining forces to improve their bargaining position.

Thus, the asymmetrical bargaining situation has allowed the mining MNEs to fully exert their bargaining power over the SMEs suppliers in several dimensions. As an example, the decrease in the copper prices has caused the unilateral renegotiation by the mining MNEs of several contracts, since:

‘As soon as the copper [price] starts going down, the first thing they [the mining MNEs] do is to renegotiate their contracts with the SMEs, I mean, the first thing they say to the SMEs is that they ‘have to be solidary’ [INT20]. However, when ‘the copper [price] goes up they do not tell us [to the SMEs] ‘look we are better now, so we will going to give you more now in order to compensate for the period in which you had less profits’, that does not exists’ [CEO of a local SMEs supplier, INT24].

Additionally, the mining MNEs usually pay their suppliers on a deferred basis, which can take 30 or even 60 days after they received the good or service purchased, something imposed through a culture of fear where the SMEs do not dare to question the mining MNEs position. A mining expert that worked with the SMEs suppliers explained that ‘several SMEs entrepreneurs came [to me] asking for help! Asking me to please tell the mining MNEs to pay! Because (...) the entrepreneurs hired personal and supplies, and the [mining MNEs] (...) say ‘this month we are going to pay to this or that supplier or we are going to invest the money’ (...) so they [mining MNEs] can negotiate as they want, there are no restrictions for them (...) and sadly several entrepreneurs have gone bankrupt and lost everything’ [INT20].

Regarding the fear culture, while interviewing the CEOs of the mining SMEs suppliers some of them requested not be recorded and one began crying when asked about their firm’s relationships with the mining MNEs, because they were afraid of possible retaliations. One of the CEOs of a SMEs supplier disclosed that when any SME tries to ask for better conditions, the mining MNEs immediately say ‘that person is complicated, we should set [him/her] aside (...) so I have to be very careful’ [INT 19]. Even the big suppliers are affected by this, since as the CEO of one of such firms with international scope and based in Santiago explained, the mining MNEs do not take it very well when the suppliers actually do not comply with unilateral renegotiation of prices and conditions:

'They [the mining MNEs] get angry and do not invite you [to negotiate] in two years! (...) there is a lot of discomfort, and they take it very personal, which is not the case with other industries (...) the mining culture is different than the other industries, because they are somehow convinced that they are the wage of Chile, and thus, all the ecosystem surrounding them has to do what they want (...) and the small firms generally surrender to this, but is not the case of our firm' [INT24].

Not only this, but the mining MNEs also demand high quality and standards in the production of the goods and services they require, as an expert regarding to the local SMEs explained 'if you [as a supplier] do not have a management system from the start (...) if you are not certified it means that you are not a reliable firm, so they [the mining MNEs] will not consider you' [INT20]. This attitude has created two problems: one related to the high indebtedness of the SMEs suppliers since the certificate process is quite expensive and the industry requires several certifications; and another associated with the mining MNEs demanding high quality standards and low prices, all of which destabilizes the SMEs and make them exit the market.

Hence, despite the fact that there are programmes such as the 'World Class Suppliers' promoted by some mining MNEs, as well as a discourse promoting strong partnerships and linkages with the local suppliers to develop technological spillovers and collaboration, the relationship between them to develop innovations 'is quite asymmetrical (...) since the suppliers want to get paid by the innovation and for all the human capital they use, and not only for the man – hours they spent (...) because they [the mining MNEs] only pay the man – hours and not all the test and errors that happened in order to bring them a new knowledge' [INT28]. All of these issues have led to a creation/destruction rate of firms in the region that is above the national average (Atienza et al., 2009; Atienza et al., 2012).

More critically, recent research shows that around 75% of the suppliers of the mining industry are located in the central region, and only around 25% in the Antofagasta Region (Valdes, 2016). This reinforces the value capture in the Central Regions, while also raising several doubts about how beneficial is the mining industry for the host region. Moreover, the supplying network of the mining industry is globally spread, and most of the strategic goods and services are being imported to the country by the mining MNEs. This leaves the Antofagasta Region specialized in routine tasks, with scarce technological content, making the creation of a diversified local productive fabric based on goods and services with a high content of value added, extremely difficult (Phelps et al., 2015).

Hence, the mining MNEs' degree of embeddedness with the local fabric, one of the most relevant for the local sustainable development, is extremely weak, since they have the upper hand in all the bargains taking place locally and nationally when facing their suppliers. This has permitted the capture of most of the value by the mining MNEs; and the capture of whatever value is left in the country by the Metropolitan Region. The latter being done by concentrating the fiscal expenditures, commuters and the strategic suppliers of the mining industry. However, several cluster policies have been promoted in order to make the territorial distribution of value more equitable with the host regions and to change the previous enclave formation, raising the question: is the Antofagasta Region closer to a sustainable cluster or does still have elements from an unsustainable enclave?

### **8.6.3 Sustainable cluster or unsustainable enclave based GPN?**

What can be called the mining cluster/enclave debate in the copper mining GPN has been present from the early 1990's, and today and twenty six years later is far from concluded. It started as part of the discussion of a national development strategy in Chile, when the ECLAC was heavily promoting clusters as a way to diversify the local productive fabric; to reach the elusive sustainable development in resource rich regions; and to avoid the re-appearance of the disastrous traditional mining enclaves. Later, cluster policy was promoted by the local industrial association AIA and it materialized in the Regional Development Strategy 2000–2006, which promoted the creation of a mining cluster and the Antofagasta Region. At this point, the cluster policy became the flagship of the Regional government, and had a limited participation of the mining MNEs. The mining cluster augmented its scope, becoming a national policy in 2008 as part of the National Competitiveness Strategy, where the national clusters were thought as a viable option. Hence, in 2008 both cluster policies, the regional and the national, coexisted, with a larger participation by the mining MNEs, the national and local states and local associations (Atienza, 2015).

However, in 2009 the newly elected right wing government stopped the State's active participation in the cluster policy, since they believed in a 'no discrimination policy' between the different productive sectors and in the 'separation between business and development' [INT45]. In this context, BHP decided to start the Mining Cluster Program of World Class Suppliers. This brief story of the cluster policy has a common denominator, the overall assumption that there is an instant strategic coupling between

the mining MNEs and local/national strategic objectives (Yeung, 2016), and that this coupling will occur naturally thanks to the free market forces leading to a sustainable development for both the host region and country.

Lately, the discussion about the mining cluster has taken another turn, in which the last mining policy, the Alta Ley programme, does not even mention the word cluster once, while also only focusing on the national scale, completely ignoring the regional dimension (Comisión de Minería y Desarrollo de Chile, 2014). Moreover, some influential academics have been promoting the idea that if there is a mining cluster, it encompasses a national scale, meaning a national mining cluster. This idea clashes with what the local associations and politicians in Antofagasta aimed with the cluster policy, who pretended to develop more and better economic linkages between the mining MNEs and the region. Hence, there are two major collapsing views about where should the mining cluster be located. The national cluster view is summarised by an academic from Santiago, expert on the mining industry:

'They [the local associations in Antofagasta] invented this concept of cluster in Antofagasta, and they said that the cluster existed in Antofagasta, because it was the main producer of copper, which I think is not a very intelligent idea, because if you look at the data, the cluster is located here [in Santiago] (...) 80% of the companies have headquarters here' [INT48].

This opinion has been heavily criticized by academics, local industrial associations, local SMEs and local politicians and representatives of the Antofagasta Region, all of which highlight the relevance of the positive externalities that a specialized agglomeration around the big copper mining industry for the local development possibilities. An interesting statement summarizing this shared opinion comes from a politician, who posited that this shift from the regional to national scope had to do with a 'dispossession' of value from the centre. In the politician's words:

'In my time [as a representative] I had the feeling of dispossession in the sense that the [central] government of that period installed the cluster in Santiago, and that is when they started talking about a national cluster. The mining cluster had been located here [in Antofagasta], its director and everything were here in the region, (...) but it moved to Santiago (...) and that caused us to lose control absolutely (...) because we are such a centralised country, our resources are managed so centrally through the Treasury, which decides what and where to spend, that obviously they [the central government] wanted to have the control of these topics' [INT33].



All this discussion also assumes that the traditional nitrate enclaves have been overcome long ago in Chile. However, there is a growing body of empirical works which disagree with this vision. The works of Cademartori (2008) and Phelps et al. (2015) have asked if the enclave logic is really a thing of the past, or if there are some elements of it still pervading the mining industry, operating under a new form. In this sense, is possible to create two opposite ideal types of agglomeration that can develop in a mining region, based on the Marshallian externalities: the existence (or not) of a thick labour market, economic linkages and knowledge spillovers in the Antofagasta Region.

By doing this, it has been found that the Antofagasta Region is closer to what can be considered a modern mining enclave rather than a hub and spoke cluster à la Markusen (1996). This since, despite the regional growth rate shown during the last copper GPN era, the labour market is functionally specialized in routine physical tasks with limited decision-making capacity and largely depends on outside workers; the economic mining MNEs have weak linkages with the productive fabric; and there is a limited vertical transference of knowledge from the headquarters of the mining MNEs to the local firms. All these raised several questions about the sustainability of the regional growth and long term possibilities for local development.

Furthermore, the work of Phelps et al. (2015), posit that the enclave formation can be considered as part of the *dark side* of belonging to a mining GPN. Their work offered a deeper interpretation of the several intermediate implications that the current mining camps may have in terms of developing agglomeration economies or new forms of mining enclaves. This research finds that the Chilean copper mining GPN is a good example of how the traditional enclave has opened its fences in the sense that, despite the abandonment of the traditional mining towns, the newly developed mining camps around the ore, the shift system and the commutation of workers, could mean that the enclave is not tightly delimited into a specific territory but is spread all over the regional and national territory. Hence, they conclude, there is evidence that Chile represents a nation as enclave due to the lack of significant localization economies in the Antofagasta Region, but that this is also debatable due to the signs of something of an agglomeration of mining services suppliers in Santiago (Phelps et al., 2015).

Considering all the above, there is no absolute response to which kind of agglomeration is being produced by the Chilean copper mining GPN. However, the evidence seems to show that the current agglomeration is closer to what can be considered a modern mining enclave at a regional and national level. At a regional level, there are no signs of strong localization economies or Marshallian externalities needed for the development of a

mining cluster. At a national level, there is a high value capture by the mining MNEs, a strong mono-dependency on the copper industry, a scarce development of technologically advanced suppliers, or activities that add value within the country.

All of this is complemented by the findings of this thesis regarding to the stark power asymmetries between the regional and national State and the mining MNEs. The detachment from the mining industry developed at a national level has impeded the national state to hold bargains with the mining MNEs, while also deterring regional bargains between the local representatives and the mining MNEs. This has caused a strategical void, where the mining MNEs have had to assume the State's role in developing a regional and national development strategies for the mining industry, in order satisfy their needs of basic inputs and services usually provided by the state.

Moreover, the Chilean copper mining GPN is not only dependent in an economic sense, as all the previous works about the mining enclave demonstrated, but also in a deeper way through the neoliberal ideology that shields the mining MNEs from being pushed to bargain better conditions for both the nation and host regions. Likewise, the mining MNE's continuous exertion of their episodic and non-decisional bargaining power over the regional and national actors have led to a situation in which the growth shown by the mining industry is not sustainable, since the country has not developed a diversified productive fabric; it has not been able to increase its share of value captured; and centralises both the direct economic benefits as well as the indirect ones in the Metropolitan Region. All this reinforces the idea that the current copper mining GPN is closer to the dark side, in the form of a regional and national mining enclave, rather than the promised sustainable cluster, since the country and the Antofagasta region have not been able to reach a strategic coupling with the mining MNEs due to the stark bargaining power imbalances.

## 8.7 CONCLUSIONS

This chapter has developed the bargains taking place in the three most important nodes within the Chilean copper mining GPN, namely, London, Santiago and Antofagasta. In each node, the mining MNEs operating in Chile and the Chilean State use their strategic resources in a different way, some times more aggressively than others. The London node is the one where the main bargains take place for all the copper mining industry, since is where the copper is traded and the main headquarters are located. Here, the

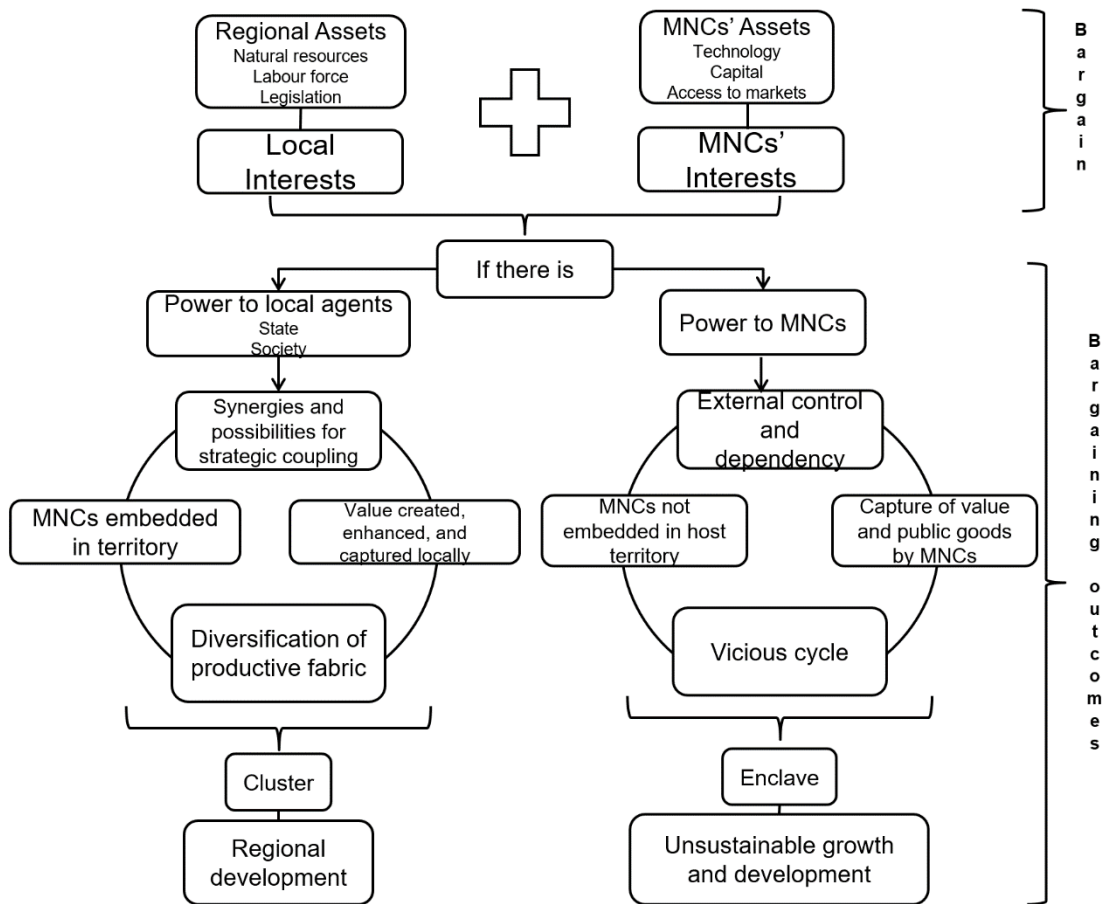
Chilean State uses every chance it has in order to promote further FDI into the country, by marketing all the strategic resources the country has. On the other hand, the mining MNEs also try to get the best deal in order to keep investing.

Furthermore, and contrary to what the theory proposed, there are not too many bargains taking place in Santiago. The Chilean national State has become detached and passive, by reducing its participation in the economy to just making sure the mining MNEs abide the current regulations. Hence, the mining MNEs have been able to fully exert their episodic, non-decisional and ideological bargaining power in this node, which has had several crucial impacts over the development chances of the country.

Finally, the bargains that should take place in the Antofagasta region between the mining MNEs and local representatives have been systematically interrupted by the central government. This, since due to the magnitude and relevance of the mining industry, the central government wants to monopolise their influence over it. However, several social movements have pressured the local and national representatives in order to bargain and regulate the mining industry.

All of this, has had several implications for the national and local development. The presence of an uninvolved national state has caused issues to all the agents involved in the copper mining GPN. Additionally, most of the value has been captured by the mining MNEs, and the little fraction left in the country has been captured by the Metropolitan Region, leaving the Antofagasta region in a very precarious situation. This, since the region has not been able to develop a diversified productive fabric, or to benefit from localized spillovers, while suffering all the costs of the mining production.

**Figure 38: GPN approach summary.**



Source: own elaboration.

Hence the bargaining power asymmetry found for this case, has caused a situation where both the Antofagasta Region and the country seem to be closer to what be considered a new form of mining enclave (see Figure 38), meaning unsustainable growth and hindering their development chances. All of this is in line with what the GPN framework predicts, since the power asymmetry lead to high value capture by the mining MNEs and central regions, a lack of territorial embeddedness, and a disconnection between the strategic objectives of the private firms and the States, meaning that this GPN has not been able to develop a strategic coupling.

## CHAPTER 9

### CONCLUSIONS

#### 9.1 INTRODUCTION

This research inserts itself within the long-standing discussion about the effects of FDI for mining regions and countries under the latest globalisation process. This debate comprises a vast literature about the nature of such effects, where some argue that countries and regions benefit from the FDI inflows and presence of mining MNEs, while others are more critical about the sustainable development possibilities the mining industry offers. Both approaches have historically focused on the national level, limiting the regional and international dimensions to a background context, where the positive or negative spillovers take place.

However, the outcomes experienced by the host regions and countries heavily depend on how the actors participating in a GPN take advantage of their strengths, despite the constraints they face, when bargaining with each other. In this line, resource-rich countries have historically faced a 'resource curse', being unable to overcome their dependency to the natural resource, diversify their economies and, therefore, develop in a sustainable way. Moreover, this discussion has not fully analysed the consequences of the uneven development happening within a nation State. As the *Dependencia* literature shows (Cardoso & Faletto, 2007), a country can enjoy high growth rates at a national level, creating an illusion of growth. However, this growth has traditionally depended on the formation of extractive enclaves in the host regions (Cademartori, 2008; Weisskoff & Wolff, 1977), where most of the value is captured and social costs are externalised by the extractive MNEs.

This research aims to contribute in this debate, especially regarding to the effects of the mining industry over uneven development along the mining GPN. To do this, it considers the Global Production Network (GPN) approach, which explicitly acknowledges how uneven development may be taking place in the spaces hosting FDI and MNEs. This approach highlights the relevance of reaching a strategic coupling between the strategic objectives of the main actors of the GPN, namely, the MNEs, the civil society and the local/national State. This coupling process takes place through several bargains between the main actors, in every relevant node of the production network. Likewise, the outcomes of these bargains in terms of who and where value is captured, are ultimately determined by the power asymmetries between the agents, which are also related to the

level of embeddedness of the MNEs with the host region and country (Coe et al., 2008a; Coe et al., 2008b; Coe et al., 2004; Coe & Hess, 2011; Henderson et al., 2002).

However, the GPN approach can usefully be developed further. Firstly, it has not theoretically and empirically opened what some call the 'black box of power' ; and secondly, apart from the work of Bridge (2008), it has not been fully adapted and applied to the study of the mining industry despite recognition of its relevance (Coe et al., 2004). Thus, this research tries to unpack the black box of power by: incorporating and updating the bargaining models developed in international business literature as a way to develop operational definitions of bargaining power; adapting the GPN approach for the study of a mining GPN, specifically, the Chilean copper mining industry; and focusing and re-evaluating the role of the State in bargaining processes with mining MNEs.

Hence, this research responds the four research questions raised at the beginning:

1. How can the GPN approach be incorporated in analysing the extractives industries, specifically the mining one, and in determining the chances of reaching (or not) sustainable development in the host region and country?
2. How can the concept of bargaining power, crucial in GPNs, be conceptually unpacked; in order to explain issues related to value capture, such as where and how is value being ultimately captured and by whom?
3. What kind of empirical evidence about the successive bargains taking place between the mining MNEs and Chilean State in different nodes can be provided, and what are the implications for sustainable development of the outcomes of these bargains?
4. What is the role of the State in the successive bargains taking place with the mining MNEs in the current Chilean copper mining GPN?

The research makes a theoretical contribution by incorporating some new (and old) elements into the GPN approach, to address how the host regions and countries can improve their sustainable development chances. It also provides empirical evidence related to how the historical bargaining processes have taken place in the mining industry in Chile, and the outcomes these bargains have produced. The focus is on the current globalization period, by identifying what are the main strategic resources hold by the two actors studied, the mining MNEs and the State, while also pinpointing the major constraints each actor faces while trying to exert (or not) the different kinds of bargaining power.

The research is organized by firstly introducing the GPN literature as a broad framework to study uneven development in the extractive industry, where power asymmetries determine the strategic coupling possibilities during the successive bargains taking place between the actors involved. It later tries to unpack the black box of power, by proposing three operational definitions based on the power debate and bargaining literature. It also stipulates the possible spatial outcomes that the exertion of bargaining power can cause. Then, the Chilean copper GPN is proposed as the case study, leading to an historical analysis of the previous mining GPNs existing in the country. This, in order to evaluate how the bargaining power asymmetries between the Chilean State and mining MNEs and development outcomes have evolved. Afterwards, the focus is on the current neoliberal era, where the research describes each actor's strategic resources and constraints in order to have a grasp of their potential bargaining power. Finally, the research analyses the bargains among these actors in each spatial node, in terms of the episodic, non-decisional and ideological bargaining power they exert, as well as the spatial implications of them. A summary of the main findings of these research is detailed next.

## 9.2 MAIN FINDINGS AND CONTRIBUTIONS

### **9.2.1 Adapting the GPN approach to the study of the copper industry by incorporating bargaining models.**

As previously established, this research aims to contribute both in a theoretical and empirical way. Regarding to the theoretical addition, it firstly adapts the GPN approach by following the work of Bridge (2008) for the oil industry to study the copper mining industry, considered the most important of metals. Hence, using this as a guideline, the research addresses the always latent issue of how to deal with power by incorporating and updating the literature about bargaining models. This literature was firstly proposed during the 1970's in the obsolescence bargaining models (Bergsten et al., 1978; Fagre & Wells, 1982; Kobrin, 1987; Moran, 1974), which proposed that resource rich countries would have to initially bargain under unfavourable conditions with the mining MNEs due to their lack of technology, financial capital, know-how and market access, to then hold the upper hand after the investments were made and the costs sunk – allowing them to change the initial conditions and capture a higher proportion of value.

This theoretical body only focused on the State–mining MNE tier of bargain, and it was progressively abandoned. However, it has been recently revived in the form of new research incorporating a secondary tier. In these two tier models, the nation State also bargains with the countries where the headquarters are located, while also being influenced by some international institutions that intervene influencing the bargains to favour the mining MNE's interests (Nebus & Rufin, 2010; Ramamurti, 2001). Moreover, the GPN literature explicitly mentions the bargaining models as a way to open the black box or power (Bridge, 2008), so the updated traditional obsolescence bargaining models become a decisive way in determining the value capture and potential development outcomes for the FDI hosting spaces.

Consequently, this research incorporates the recent two tier bargaining models into the GPN approach, while also recognizing that *bargains take place in multiple tiers*: between the nation state and the firms; between the nation state and the international institutions and headquarters; but also in a subnational level between regional states and the mining MNEs. Hence, this is an additional theoretical contribution, tested by the empirical work of this thesis. The empirics focused in the bargains taking place in the three tiers, while also addressing how the international institutions could influence the bargains.

The empirical work found that, effectively, several bargains take place in the most important nodes of the Chilean copper mining GPN: The Antofagasta Region as the place of production; Santiago, political and economic capital of Chile; and London, home of main headquarters and copper trading places and most important mining institutions. The results showed that the bargaining outcomes varied in scope and relevance according to the hierarchy of the node where they took place. The higher the hierarchy, such as London, the higher the relevance of the bargains for the whole industry, as well as the scope of the outcomes. However, the bargains taking place in lesser hierarchy nodes, such as Antofagasta, could also potentially affect the whole industry, meaning that the bargaining outcomes are not vertical but a flow of positive and negative effects (Bridge, 2008; Coe et al., 2008b; MacKinnon, 2012; Yeung & Coe, 2015). This result means that considering the 'bright and dark sides' from belonging to a GPN is crucial for future research and, therefore, more studies should focus on the latter, due to the potentially disastrous consequences for developing host economies and regions.

Moreover, most of bargains related to luring further FDI into Chile happened in London, as well as the ones related to the conditions offered to the mining MNEs to establish new or further projects. Santiago hosts several of the bargains related to the national legislation, especially regarding to the way in which the incomes from the industry are



distributed, while the Antofagasta Region has witnessed an increasing social pressure for bargaining with both the national State and mining MNEs in order to increase the capture of value in the region and promoting a diversified productive fabric and sustainable development. Consequently, these findings emphasise the need to focus on subnational bargains (regional and local) in future GPN research, especially the way in which the exertion of power in bargains determine strategic coupling and sustainable development.

Additionally, and despite what the recent literature about bargaining posits, the empirical work presents interesting and unexpected findings about the role of international institutions: they have little to no effect in the successive bargains taking place in the Chilean copper mining GPN, since the country is not indebted. Thus, the mining MNEs have not been able to influence the Chilean State through institutions such as the IMF and World Bank, in the same way they used to do it during the previous Chilean mining GPNs, such as the early copper one, where the American copper mining MNEs successfully managed to get the American government involved in a similar way the British mining MNEs did during the nitrate era. This is an unexpected finding, since most of the updated bargaining models (Nebus & Rufin, 2010; Ramamurti, 2001) consider the international tier as a crucial space of influence to tilt the balance of bargaining power towards the mining MNE's interests. This could potentially mean that the Chilean State is in a stronger position due to its independence from international funding which, paradoxically, is not the case due to the exertion of the mining MNE's of bargaining power through other means, as developed next.

### **9.2.2 Shedding light on the black box of power: the proposed operational definition of bargaining power.**

To unpack the concept of power, this research makes an initial effort in operationalizing bargaining power. Thus, by mirroring the discussion developed in the power debate, the research defines three kinds of bargaining power: *episodic* (Dahl, 1961), *non-decisional* (Bachrach & Bachrach, 1962) and *ideological* (Lukes, 2005). All of these are based on the notion that power cannot be possessed as a material thing, it is intrinsically spatial and it can be measured by looking at how the actors use their strategic resources while facing their particular constraints in order to get their strategic objectives. Hence, the strategic resources are considered as power resources or potential bargaining power.

The episodic bargaining power relates to how an actor actively uses its strategic resources in order to make the other to do something that would not have done otherwise. The non-decisional bargaining power implies an actor being able to control the political agenda by leaving out the discussions issues that may go against its objectives. Lastly, the ideological bargaining power is exerted when an actor manages to completely change the other actor's perception, so the latter defends the interests of the actor exerting this kind of power over him as if these were their own. This is the most profound way to exert bargaining power, since it implies a change in the ideology of an actor, by creating a false consciousness, and can be only exerted when an actor successfully imposes its will over the other through several bargains over time. Chile is a good example of this, since the mining MNEs have greatly contributed to further develop the neoliberal ideology established during Pinochet's dictatorship, by creating the belief that if the State intervenes in the market in any form or shape, the mining MNEs will immediately leave the country (Harvey & Harvey, 2007; Moulian, 2002). This gave birth to a national state in the central level that refuses to actively intervene or exert its bargaining power within the country, while also impeding bargains between mining MNEs and other actors. This also means that Chile has developed a strong case of 'institutional amnesia' (Pollitt, 2000), where the hard-learned lessons from the Nitrate era and nationalization of copper were forgotten.

Hence, these three definitions of bargaining power primarily rest on the strategic resources held by each actor, and how these resources are used in order to reach their strategic objectives while, simultaneously, facing several peculiar constraints. These strategic resources and constraints are different for each actor, and their relevance also varies in relation to the node the bargaining is taking place. Consequently, due to the multi-scalar nature of a mining GPN, this research acknowledges that bargaining power can be exerted at one or every level of the network, in a top-down or bottom-up kind of way, where the successive outcomes of each bargain can potentially affect a part or the whole GPN.

This research uses these definitions of bargaining power to empirically determine what are the strategic resources and constraints of each actor, as well as how they exert (or not) their potential bargaining power in each node. This way to operationalize the bargaining power allows the analysis of the more easily observable outcomes, related to the episodic bargaining power, while also providing a way to understand deeper structural ways in which power is exerted in a GPN, like the control of the political agenda and ideological shaping (Allen, 2003; Haugaard, 2002; Lukes, 2005).

Furthermore, as the GPN approach strongly highlights, the continuous bargaining power asymmetries in favour of the mining MNEs mean they capture most of the value, while also hindering the possibilities for reaching a strategic coupling and, ultimately, leading to unsustainable development, all of which is considered the dark side of belonging to a GPN (Bridge, 2008; Coe et al., 2004). All this is deeply related with the role that the State plays in the consecutive bargains with the mining MNEs, which is the focus of the empirical work.

### **9.2.3 Re – evaluating the role of the State in bargaining with the mining MNEs**

#### **9.2.3.1 The historical role of the State in the Chilean mining GPNs**

A third aim of this work was to re – assess the role that the host states play in promoting a sustainable development in both the national and regional levels while bargaining with the mining MNEs. Hence, the research focuses on the relationship between the Chilean State and the copper mining MNEs in the three main nodes of the Chilean copper mining GPN: where the extraction and production happens (Antofagasta Region); where the national political elite and mining headquarters are located (Santiago); and where the copper is traded and most of the main decisions regarding to the copper industry as a whole take place.

Most of the empirical work aims to provide evidence related to the strategic resources and constraints of the Chilean State and mining MNEs, to somehow determine the potential bargaining power held by each actor. In this sense, the analysis starts with an historical analysis of the previous mining GPNs in which Chile has been embedded, the most notorious being the nitrate industry. During the nitrate era, the Chilean State allowed the British nitrate MNEs to take full control of the industry by becoming an ally of the foreign interests, leading to the creation of traditional enclaves in the form of mining towns.

These towns were located next to the ore and were characterised by the mining MNE completely replacing the State in several of its most fundamental functions. The full control of the mining MNEs over the mining industry also showed the darkest side of this GPN, due to the blatant violations of human and labour rights and the total collapse of

the Chilean economy after the apparition of synthetic nitrates (Cademartori, 2008; Meller, 2007; Phelps et al., 2015).

After this deep crisis, the Chilean State learned the lesson and increasingly strengthened its position. Consequently, between the 1920's and 1973, the Chilean State fully exerted its bargaining power in the way predicted by the obsolescence bargaining models (Moran, 1974). Thus, the Chilean State was cautious when luring FDI into the country, allowing the mining MNEs to enjoy their relative stronger bargaining position in the pre-investment bargains, to then take advantage of the high sunk costs made by the mining MNEs to bargain better conditions for the national interests.

The Chilean State increasingly augmented its participation in the mining industry and the overall economy, leading to a point where it fully nationalized the copper mining industry. This was clearly the prime of the Chilean State's bargaining power capacity over the mining MNEs, since most of the value produced stayed within the country's frontiers. However, this would not last long due to the latter political pressures over the mining MNE's home countries to reverse the nationalizations or get what they considered a proper retribution (Meller, 2007; Salazar, 2003; Salazar & Pinto, 2002).

The era of a strong Chilean State abruptly ended with the coup of 1973, which fully transformed the Chilean economy and society. This research tries to unravel this transformation by focusing in the latter period, called the neoliberal copper GPN. At this point, it is worth noticing that the Chilean history is a clear example of the shifts in both the shifting nature of the relative strength of the Chilean State and mining MNEs, as well as the actor's will to fully exert its bargaining power. Interestingly, there have been periods where the mining MNEs have been able to fully exert their bargaining power due to a high level of complicity with the Chilean State, which happened despite the extremely negative consequences for labour and the economic fabric. Conversely, the Chilean State has also historically been able to become a strong agent when bargaining with the mining MNEs, by fully exerting its bargaining power and making sure of capturing most of the value produced in the industry.

#### **9.2.3.2 Strengths and constraints in the bargains of the Chilean copper mining GPN**

If one believes that historical events are revealing of progress, it is tempting to think that most of the worst consequences of belonging to a mining GPN have been long overcome, and that countries like Chile can now focus in getting the best of the latest globalisation wave. Nonetheless, history tends to repeat itself if the hardly learned lessons are deliberately or unintentionally forgotten (Pollitt, 2000). Hence, this research provides empirical evidence to assess if the Chilean case is closer to the brighter or darker side of outcomes from participation in a copper mining GPN.

To do this, the strategic resources and constraints of both the Chilean State and mining MNEs are detailed as well as the way in which each actor uses (or not) these resources to exert their bargaining power. Regarding the Chilean State, it is found that its most strategic resources are the quantity and quality of copper deposits found in the country; its legal and taxation regimes extremely favourable to FDI; its political and economic stability; the high copper prices due to the commodity super cycle; and the international perception of Chile as a land of opportunities for FDI. Most of these resources are extremely localized and valued by the mining MNEs, and thus the chances finding another country with similar features is remarkably difficult, if not impossible at this moment. This would theoretically imply that the Chilean State holds a considerable amount of bargaining power when facing the mining MNEs.

The constraints the Chilean State faces, conversely, relate to three broad categories: competitiveness concerns; issues related with the structure and functioning of the State; and political affairs. Some of these heavily undermine the Chilean State bargaining's capacity, such as the relatively small size of the Chilean State compared with the mining MNEs, and the extremely high level of centralism. Moreover, there are several lost opportunities, like the underutilized role of the State owned CODELCO in promoting a more diversified regional and even national economic fabric; as well as the sheer discontinuity in its socio-economic policies.

Among the latter, the Chilean State has failed to create medium and long-term national and regional development strategies, and when it has made the effort to start such crucial discussions, these are promptly dismissed as soon as a new coalition takes charge of the national government (Pollitt, 2000). This has left both the national and regional governments completely aimless in terms of their long term objectives, which of course, impedes focusing the bargains towards promoting regional and national sustainable development.

The strategic resources and constraints of the mining MNEs are also detailed. Regarding to the firms' strategic assets, they are divided in two groups: the strategic resources

internal to the firm; and the resources related to the connections and linkages of the firms with the other actors. The former comprise the elements related to the internal structure and organization of the firms, such as their geographically spread location and influence, flexibility and adaptability to the stark shifts of the markets. These internal resources also account the traditionally identified strategic assets held by the mining MNEs, such as their access to financial and physical capital, markets, technology and information (Moran, 1974).

Likewise, the linkages the mining MNEs have developed with other actors comprise their relations with the political elites in each node, their newly developed ties with the civil society through the CSR policies, their images as creators of employment and higher wages and their strong monopsonistic position when facing their suppliers.

Most of the strategic resources internal to the firms were already considered and developed in the traditional bargaining models, but some of them are new and have increased the mining MNE's relative bargaining position, like the aggragation of MNEs in industrial associations and the high degree of CSR. The former aims to become a lobby platform for getting the best conditions to operate, while the latter aims to getting the social licence to operate. The CSR policies have, in some cases, effectively changed the perception about the mining industry; while in others it has been seen as a mere marketing tool and fiercely criticized (Frynas, 2005). For the Chilean case, the mining MNEs have faced both opinions, but despite the criticism these policies have received, it has allowed the mining firms to smooth the edges with the civil society in a way it did not exist before.

Related to the constraints faced by the mining MNEs, this research found a considerable difference with what the traditional bargaining literature identifies as the main elements inhibiting the firms' bargaining power (Moran, 1974; Vernon, 1971). This, because the degree of competition and concentration in the industry, and the extent to which the host country government is a relevant customer or distributor do not seem relevant for the Chilean case. However, the third and most important element described in this literature, the sunk costs, are still a major bind for the firms.

This is interesting, since the mining MNE's have actively tried to establish a discourse in which they seek to be perceived as footloose, claiming that if the 'rules of the game' change too much, they can immediately leave the country. However, this research has proven this as a smoke screen, since the sunk costs are too significant, and the particular characteristics of Chile are too good to abandon the country. Furthermore, there is a new constraint related to the mining MNE's public image, which directly impacts on the difficulty in getting their social licence to operate. This has become a decisive issue,

since the newly empowered Chilean civil society has managed to stop multi-billion dollars ongoing or planned projects related to the mining industry, as long as they feel these threaten the environmental or socio-economic fabric. Hence, these constraints and resources will determine the potential bargaining power each actor can use in their successive negotiations and their identification is another main contribution of this work. Even though each particular GPN is likely to have a different set of strategic resources and constraints distributed among its main actors, the ones depicted in this research, as well as the proposed bargaining definitions, could be used as a starting point for future research, especially – but not exclusively – on extractive industries.

### **9.2.3.3 The Chilean State's way of bargaining (or not) for sustainable regional development**

Most of the GPN and bargaining literature assume that both actors are rational when defining their objectives, meaning that the mining MNEs try to achieve maximum profits in the minimum time, while the State is expected to promote sustainable development in the host region and country as a whole. However, this research finds that, for the Chilean case, only the assumption regarding to the mining MNEs holds. The Chilean central government plays a dichotomous role, both as an uninvolved and passive national state, behaving like a referee for issues between privates; while also actively promoting FDI in the international circuits, and interfering with the local bargains between the regional agents and mining MNEs. Such findings go against what was expected from the literature, since the central Chilean State does not seem to be promoting sustainable development in a serious planned way, and in any spatial scale, creating all sorts of issues. This may be better understood by looking at the bargains taking place in the different nodes.

In the bargains taking place in London, the Chilean State heavily promotes the country's unique features in the copper industry, in order to lure new or increase the existing FDI. These characteristics are widely recognized by the whole copper industry, giving the Chilean State a great bargaining potential. The mining MNEs, on the other hand, bargain to get the best operating conditions directly with the Chilean State, or indirectly through some industrial international institutions or important social activities. The firm's home countries also put some pressure over these bargains, in an overall distended way.

However, the international institutions which were the base of Ramamurti's (2001) updated two tier bargaining model, are not as relevant as he predicts. Since Chile has enjoyed a strong fiscal health, has passed from a debtor to a contributor of the international funding institutions, which have lost their influence over the Chilean Economy. Withal, the Chilean State's relative bargaining position at this level is significantly constrained by their dependency on mining FDI, as well as the several FTAs that holds.

Further bargains take place in Santiago, the capital city of Chile, where the State adopts an extremely passive role, becoming more of a witness instead of actively engaging in bargains with the mining MNEs. This research finds that this behaviour is shaped by the outcomes of the neoliberal ideology imposed by Pinochet's dictatorship, and later deepened by the mining MNEs since their arrival in the 90's, in what is an example of their exertion of ideological bargaining power (Harvey, 2005; Harvey & Harvey, 2007; Mayol & Ahumada, 2015). This particular behaviour goes against to every prediction of the bargaining models, while also meaning that the mining MNEs have been able to exert all sorts of bargaining power during the last decades, being unmatched by the national State.

This has created a power vacuum, recently filled by the newly empowered civil society, which have heavily pressured the State to address issues related to the environment, labour conditions and other negative externalities of the industries (Bebbington, 2009; Bebbington et al., 2008; Bebbington & Williams, 2008). The State's absence has also created problems for the mining MNEs, which have had to deal with the increasing demands from the population by even having to create development strategies due to their inexistence in the national and regional level. These strategies, despite being well intentioned, have not been able to satisfactorily cope with the issues being raised by civil society, leading to a situation where the mining MNEs are actually demanding a more active Central State, since they feel surpassed by the scope of this task which also detracts them from their ultimate purpose: producing and exporting copper. These novel results directly challenge most of the orthodox views related to the desirability of implementing free market policies to reach sustainable development, and should be further investigated by economic geographers, development and political economists, and any social scientist focused on uneven development issues alike.

The last node analysed is the Antofagasta Region, where the Central State changes its passivity for a passionate role in blocking the negotiations between the regional and local representatives and the mining MNEs. Here, there is an intense discussion about the



role of the mining industry for the region, as well as several local and regional initiatives to bargain with the copper mining MNEs optimal solutions for everyone involved. However, the extremely centralized nature of the Chilean State does not allow this to happen. The Central government explicitly and continuously blocks such negotiations since, as this research finds, it is interested in capturing most of the value in the capital city to then re-distribute it to the rest of the country. This has led to an increasing confrontation between the regional and local communities and central government, where the former complain the character of a sacrificed space the region seems to have for Santiago. The region has to deal with most of the worst negative externalities of the industry, while being unable to capture any significant portion of value that may help to reach sustainable development.

Hence, the findings of this research reveal how the Chilean State has gone full circle in terms of its bargaining behaviour, providing a prime example of severe 'institutional amnesia' (Pollitt, 2000). This has caused a situation in which Chile has experienced great growth during the last decades, but possibly due to the existence of an extremely high and long super cycle in the commodities, which increased the copper prices to their highest ever.

However, this growth has proven to be unsustainable. The Chilean copper mining GPN has not been associated with a diversification of the regional and national productive fabric, to promote the technologically advanced firms capable of exporting, or to create a development policy based on the mining industry. This is reminiscent of the enclave era, in which the country collapsed when nitrates were substituted (Phelps et al., 2015). As the GPN literature warns, when there are stark power imbalances favouring the MNEs, the host region and countries will be not able to capture the value they need in order to promote their sustainable development (Coe et al., 2004; Henderson et al., 2002). Similarly, the Chilean copper mining GPN shows several indications about a new form of mining enclave taking place in the regional level, which may have some positive effects on the national scale (Phelps et al., 2015). However, these effects are unsustainable if the country does not manage to deal with mono-dependency on the most basic kind of production of minerals (Bridge, 2004a, 2008). Hence, it is possible to argue that Chile is closer to what can be considered the dark side of belonging to a mining GPN instead of the widely heralded bright side.

In this line, this research is just another step in fully incorporating the GPN analysis in general, and the bargaining power concept, specifically, in studying the effects of the mining industry on (uneven) development. What started as a way to study the

mechanism in which the national and regional State were able to obtain gains from the successive bargains celebrated with the mining MNEs suggested by the theories, ended up in a re-evaluation of the role that the State can play in promoting sustainable development.

Thus, the main point and contribution of this research is twofold. First, it aims to highlight the relevance of studying the extractive industries for understanding uneven development in resource rich spaces. This industry has been largely forgotten in the social sciences, despite being the base of every single consumption good produced in every other GPN. Moreover, the industry is a prime example of the difficulties of reaping benefits for the host region in an industry usually dominated by large MNEs, power asymmetries and a strong spatial division of labour.

Second, it claims that bargaining power asymmetries among the actors of a GPN are crucial in determining the development possibilities for the host spaces, especially for developing countries and regions dependent of extractive resources. This is not something new, since the history of resource rich regions is the history of power exerted along the different nodes comprising a production chain (Mann, 1986). Bargains have historically taken place under conditions of asymmetric power among the different actors involved in an extractive production network, since the pre-Columbian times to the recent globalisation period, usually with dire consequences for the natural resource holders. Hence, the study of bargaining and power exertion is crucial for all research aimed at understanding how host spaces can lift their 'resource curse' and reach sustainable growth and development. In this line, the GPN approach provides an extremely unique conceptual framework to undertake this task, by allowing the multi-scalar analysis of the bargains among the actors of the production network, as well as how the exertion of their bargaining power determines value capture, and ultimately, the chances of reaching a strategic coupling. Consequently, the incorporation of bargaining models that help to identify each actor strategic resources and constraints, as well as further theoretical and empirical developments in the unpacking of the power concepts, would allow to have a comprehensive understanding of the uneven development issues mostly associated with capitalism, which are especially strong in developing and resource rich spaces.

Furthermore, while this research was taken place, it became clear that more questions need to be answered to have a comprehensive understanding of how can a mining GPN promote a strategic coupling between all the actors participating in it, all of which are described next.

## 9.3 FUTURE RESEARCH

### 9.3.1 Deepening a multi-scalar research agenda on bargaining processes

One of the main contributions of this work is the discussion and development of three bargaining power definitions, aimed to encompass the different level in which bargaining power can be exerted within a particular GPN (Haugaard, 2002; Moran, 1974). However, this opens several lines of future research, both empirical and theoretical, as detailed next.

In theoretical terms, these bargaining power definitions could be incorporated in the newly developed GPN 2.0 analysis, as a way to explicitly develop and specify the causal mechanisms linking the conceptual categories of power, value and embeddedness to the dynamic configurations of global production networks (Yeung & Coe, 2015) - this since the GPN 2.0 literature has explicitly highlighted the vital role of 'extrafirm bargaining' in strategic coupling and industrial upgrading in host regions (Yeung, 2016; Yeung & Coe, 2015).

In this sense, GPN 2.0 proposes that these bargains between firms and nonfirm actors will be actively pursued by the former, to reach: market power in industries where the state controls the access to attractive resources (such as the extractive industries); proprietary rights; and political legitimacy with the civil society and host states. Interestingly, this framework posits that these bargains are 'over and above cost-specific gains derived from bargaining with state and non-state institutions' (Yeung & Coe, 2015) such as tax concessions, environmental issues, etc., all of which are the focus of the bargains studied in this research and bargaining literature. Hence, there is common ground to merge both kinds of bargains in one theoretical synthesis.

Moreover, an increasing number of empirical studies show that non-firm actors, such as the state and civil society, are not as supportive of MNEs as theory has assumed. This is a decisive issue since, as this and other empirical research find (Bebbington, 2009; Bebbington et al., 2008; Bebbington & Williams, 2008), the newly empowered civil society has become a progressively influential actor in the bargains taking place in mining GPNs and it should also be considered a vital agent in further GPN analyses.

Even though the role of civil society has been previously highlighted by the GPN 1.0 literature (Coe et al., 2008b; Coe et al., 2004; Henderson et al., 2002), this has not been studied enough, and to some extent is also a shortcoming of this thesis. However, this

and other empirical works, leave several burning questions unanswered which deserve attention, such as: the speed at which most of these movements appear and disappear; how to track the evolution of the movements; and what could be their potential political influence over later bargains within a particular GPN. The latter is especially relevant in contested industries, like mining and garments, since civil society has the capacity to completely bypass the regional and national government by resorting to international courts, organisms, institutions and NGOs.

Furthermore, the peculiar characteristics of the extractive industries regarding those host states controlling the access to the resources, and the need of political legitimacy in order to secure the social licence to operate, highlight the importance of incorporating an analysis of these industries in GPN 2.0 analysis. This is all the more pressing since one perceived shortcoming of the GPN 2.0 framework is its focus on firms in comparison to the initial GPN 1.0 with its greater orientation towards the worst effects of uneven development historically suffered by resource rich regions and countries. Hence, by also considering the extractive industries, the GPN 2.0 framework could potentially expand its relevance to more of the developing world.

Another theoretical challenge is developing a better understanding of the bargains taking place in the sub-national nodes which may be relevant for the whole GPN. As noted by Yeung (2016), new research should 'be focused on the strategic coupling of actors at multiple spatial scales – from local and regional to national and global'. This research explicitly takes up this challenge by focusing on three nodes, adding the regional one to the traditional bargaining models. However, a better conceptualization of the way in which each bargain differs in terms of the scope of its outcomes, is still due. Even sub-national bargains taking place at the *local* level in the negotiations between indigenous communities and mining MNEs could potentially set a precedent and shape *international* legislation. However, any multi-tier bargaining model implied in this might be complex and intractable if each bargain even at the smallest scale is considered. It may be important therefore for ideal types of finite and empirically testable situations to be developed in order to keep the discussion manageable and aid comparative empirical analysis

Moreover, there is also a need for further empirical research related to the exertion of bargaining power within the extractive industries and between different industries. In this sense, there at least two comparative studies that should be carried out. The first one might usefully compare case studies within the copper mining GPN, ideally between nations/regions considered to have successfully reached sustainable development

based on the extractive resource extraction in the form of mining clusters; and among nations/regions that have failed in achieving this by developing new forms of mining enclaves. For the copper mining industry in particular, it would be interesting to compare how bargains take place in successful copper mining countries, like Canada and Australia, with extremely dependant and unsustainable nations, like Chile, Peru and Zambia. Likewise, it would be extremely interesting to compare the strategic power resources and constraints and how bargains take place among countries embedded in different GPNs. Thus, a comparative study between developing extractive countries in Latin America and service-oriented or technologically advanced countries in East Asia, could shed light over the similarities and differences in the sources and dynamics of bargaining power exertion, and provide valuable policy lessons for the cases considered and others sharing similar characteristics.

### **9.3.2 Developing understanding of the role of elites in promoting institutional amnesia and non - bargaining states**

A further challenge that remains open is how to address what can be considered as Institutional Amnesia (Pollitt, 2000) and the role that elites have in this process (Acemoglu & Robinson, 2008). As Pollitt (2000) explains, most of the focus today is on how institutions learn and remember, whereas the 'declining ability – and willingness – of public sector institutions in many countries to access and make use of possibly relevant past experiences', have been widely overlooked. This is a deciding issue, since as the Chilean case shows, history tends to repeat itself unless the institutions remember the – usually painfully – learned lessons, especially when bargaining with MNEs within a GPN. The more an institution like the state remembers these lessons, the more likely it will be to exert its bargaining power in the best way to promote what it should be its ultimate goal: sustainable development.

Moreover, as Acemoglu and Robinson (2008) find, a change in political institutions for economic institutions, as in the neoliberalization of Chile, can create a pattern of 'captured democracy' where a democratic regime may survive by imposing economic institutions favouring the elite. Consequently, in a captured democracy, the central State will not be willing to exert its bargaining power in the traditional way, leaving the market to deal with the effects of the mining industry, thus effectively creating a 'non-bargaining state'. This research did not address this issue due to time and resource constraints, but the findings raised the hypothesis that mining MNEs have continuously and deliberately

exerted ideological bargaining power over the Chilean population and political elite since the early mining GPNs. Hence, a deeper analysis building the theoretical bridges between the institutional amnesia and the power elite literature can help shed light on the appearance of non – bargaining states. Moreover, it is not as if an appreciation of the role of elites in institutional amnesia and captured democracy takes one far away from earlier literature in the *dependencia* tradition (Cardoso & Faletto, 2007) but rather recasts it in a new light; the more that things change, the more that they stay the same.

Likewise, it can be interesting to compare the extreme Chilean case of institutional amnesia and non – bargaining national state with the situation found in East Asia, since the latter managed to quickly overcome their status of developing countries due to the existence of developmental states. Recent work has applied the GPN 2.0 framework to study the latter countries (Yeung, 2016), so there seems to be space for undertaking this comparison. Welfare European States would be also an interesting point of comparison for multiple case study research. Both, developmental and welfare states could provide a stark contrast with the behaviour of the Chilean State. Furthermore, comparisons between several states participating in the copper mining GPN can also be of interest. All these potential comparative studies can help to better understand the role of elites in the relevance and strength of the states for reaching strategic couplings and, equally importantly, in situating the host countries inside the bright or dark side of belonging to a GPN (Bridge, 2009; MacKinnon, 2012). Likewise, such studies would permit an examination of the diversity of stances in strategic coupling that exists and an evaluation of how Chile's detached state compares unfavourably to the more interventionist East Asian States and European welfare states – echoing earlier work on state-MNE relations (Bailey et al., 1994; Safarian, 1993).

The analysis of the role of elites in promoting institutional amnesia and the comparison among several case studies leads on to relevant policy implications for the host states, especially regarding the potential for counterbalancing strategies when elites have created non – bargaining national states, something particularly interesting in the fields of Economic and Political Geography.

### **9.3.3 Focusing on mining MNE-SMEs supplier asymmetries and their implications for strategic coupling and sustainable development**

A last line of inquiry that could be further developed is how mining MNE and SMEs' supplier relationship affect strategic coupling possibilities and, thus, the chances of diversifying the host region productive fabric and reaching sustainable development. In this sense, the GPN (Henderson et al., 2002; Yeung, 2016), bargaining (Moran, 1974; Ramamurti, 2001; Vernon, 1971) and agglomeration literature (Gordon & McCann, 2000; Markusen, 1996; Phelps, 2004) fit together extremely well in order to understand how and when mining MNEs develop strong linkages with the local productive fabric and the chances of witnessing technological spillovers and other positive externalities could lead to a cluster formation (Phelps, 2004) – in other words those situations in which the host region is capable of developing new mining based industries that produce, enhance and facilitate the value capture within the region.

As the GPN and bargaining literature propose, power asymmetries between the actors are crucial in determining who captures value and where. This research has focused on the state and mining MNEs as two of the main actors of any mining GPN but, as agglomeration theory explains, the relationship between the mining MNEs and their SMEs suppliers are decisive for the form of economic development – sustainable or otherwise - that will appear in any host region and country (Markusen, 1996). Moreover, as Phelps (1996) argues, despite the upsurge in global networks, buyer–supplier relations are usually hierarchical, and involve dependency of SMEs on MNEs. This is particularly acute in the extractive and mining industries, where MNEs enjoy a monopsonistic position that allows them to fully exert their bargaining power when negotiating with their suppliers, leading to the formation of new forms of extractive enclaves (Cademartori, 2008; Phelps et al., 2015).

Consequently, the often asymmetric bargaining relationship between mining MNEs and their SME suppliers, have several direct policy implications that should be investigated. As this research and others have found (Phelps et al., 2015), mining cluster policies have been widely applied in mining regions and countries, under the assumption that the positive agglomerative effects will take place automatically, leading to a diversified productive fabric. However, these policies have completely overlooked the power asymmetries that the monopsonistic position, size and other strategic resources confer on mining MNEs. This, together with the Chilean detached state, has led to a situation where not only the cluster has not developed but, as Phelps et al. (2015) found, there are new enclave formations being created that could be easily confused with clusters. Such new enclaves have created several issues, not only for the host region and country, but also to the mining MNEs, pressuring the latter to take full command of the development and application of cluster policies to produce 'world class suppliers'

(Valdes, 2016). This situation where MNEs replace the State in some of its most fundamental functions brings us full circle, reminding us of the traditional enclaves and highlights the need of appropriate policies regarding buyer-supplier relationships within the mining GPN.



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## APPENDIX A. INFORMATION SHEET USED FOR FIELDWORK INTERVIEWS

Information Sheet for Fieldwork Interviews

**You will be given a copy of this information sheet.**

Title of Project: Mining Multinational Enterprises and host States: Bargaining power and its outcomes for the development possibilities of the Chilean Mining Global Production Network.

This study has been approved by the UCL Research Ethics Committee (Project ID Number): 7449/001

Name Martin Arias

Work Address Bartlett School of Planning, UCL. Central House 14 Upper Woburn Place, WC1H 0NN, London

Contact Details Martin.loyola.11@ucl.ac.uk

We would like to invite \_\_\_\_\_ to participate in this research project.

### **Details of Study:**

The project is part of a PhD thesis, which tries to determine how the bargaining power held by the multinational enterprises, the state and civil society can shape and determine the development possibilities for a region and a nation. The project focuses on the Chilean mining industry, by studying three important nodes in which the bargains take place: London, Santiago (Chile) and Antofagasta (Chile). This work will use secondary and primary data, the latter represented by interviews with some Chilean representatives of the mining multinational enterprises, politicians and member of different civic organizations. This will allow to frame the discussion, and to shed light over the results obtained by analysing the secondary data. The research aims to fill in the gap in the economic geography about power and its consequences for development, as well as to propose policies regarding of how avoid extreme power asymmetries in mining countries.

We hope to interview 10 representatives in total from the government, mining multinationals and civic organizations. If you agree to take part, we will decide a date and place for an interview with you. This will be whenever suits you best. The interview will be between 30 and 45 minutes long, and we will ask your expert opinion about how power is being exerted by the organization to which you belong too, as well as how the power imbalances can affect regional and national

development. The interview will be recorded and transcribed only if you agree to it, and we will take all the precautions to anonymize your opinion, manage the data confidentially and destroy the interview after a period of 5 years. You will be sent a digital copy of the thesis once is published if you want to. Also,

- You can withdraw at any time, or decide to not take part, which will not affect the standard of care you receive.
- You may withdraw your data from the project at any time up until it is transcribed for use in the final report (December 2016).
- Recorded interviews will be transcribed (written up) and the tape will then be wiped clear.
- If you decide to take part, you will be given this information sheet to keep and be asked to sign a consent form.
- What if I have further questions, or if something goes wrong? If this study has harmed you in any way or if you wish to make a complaint about the conduct of the study you can contact UCL using the details below for further advice and information: Nicholas Phelps, [n.phelps@ucl.ac.uk](mailto:n.phelps@ucl.ac.uk), Bartlett School of Planning.

Please discuss the information above with others if you wish or ask us if there is anything that is not clear or if you would like more information.

It is up to you to decide whether to take part or not; choosing not to take part will not disadvantage you in any way. If you do decide to take part you are still free to withdraw at any time and without giving a reason.

**All data will be collected and stored in accordance with the Data Protection Act 1998.**

**Thank you for reading this information sheet and for considering take part in this research.**

Informed Consent Form for \_\_\_\_\_ in Research Studies

**Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.**

Title of Project: Mining Multinational Enterprises and host States: Bargaining power and its outcomes for the development possibilities of the Chilean Mining Global Production Network.

This study has been approved by the UCL Research Ethics Committee (Project ID Number): 7449/001

Thank you for your interest in taking part in this research. Before you agree to take part, the person organising the research must explain the project to you.

If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you to decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

### **Participant's Statement**

I \_\_\_\_\_

- I have read the notes written above and the Information Sheet, and understand what the study involves.
- I understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researchers involved and withdraw immediately.
- I consent to the processing of my personal information for the purposes of this research study.
- I understand that my participation will be recorded and I consent to use of this material as part of the project.
- I understand that the information I have submitted will be published as a report and I will be sent a copy. Confidentiality and anonymity will be maintained and it will not be possible to identify me from any publications.
- I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.
- I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.

Signed:

Date:

## APPENDIX B. LIST OF INTERVIEWS

Interview Code	Type of actor	Node	Date of interview	Recorded and transcribed
INT1	International mining NGO volunteer	London	12/05/2013	Yes
INT2	International mining NGO representative	London	14/06/2013	Yes
INT3	Director of a state owned mining MNE	London	18/06/2013	Yes
INT4	CEO of an international mining association	London	27/06/2013	Yes
INT5	Expert of the Chilean Mining Ministry	Santiago	18/07/2013	Yes
INT6	CEO of a mining supplier MNE	Santiago	19/07/2013	Yes
INT7	Entrepreneur, former politician	Antofagasta	25/07/2013	Yes
INT8	Entrepreneur, founder and former CEO of a regional industrial association	Antofagasta	26/07/2013	Yes
INT9	CEO of a state owned mining MNE	Santiago	01/08/2013	Yes
INT10	CEO of a mining MNE	Santiago	02/08/2013	Yes
INT11	Vice-president of a mining MNE	Santiago	06/08/2013	Yes
INT12	CEO of the Chilean Central Bank	Santiago	07/08/2013	Yes
INT13	Mining expert	Santiago	12/08/2013	Yes
INT14	CEO of a regional industrial association	Antofagasta	12/08/2013	Yes
INT15	Mining and technological development expert, academic and former vice provost of a local university	Antofagasta	15/08/2013	Yes
INT16	Former director of a regional development agency, mining expert	Antofagasta	15/08/2013	Yes
INT17	CEO of a mining MNE in charge of CSR policies	Antofagasta	20/08/2013	Yes
INT18	Politician, mining expert and authority	Antofagasta	21/08/2013	Yes
INT19	CEO of a local SME supplier of mining MNEs	Antofagasta	21/08/2013	Yes
INT20	Former CEO of regional cluster programme	Antofagasta	22/08/2013	Yes
INT21	CEO of a mining MNE's subsidiary	Antofagasta	25/08/2013	Yes
INT22	CEO state owned mining MNE in national headquarters	Santiago	27/08/2013	Yes
INT23	Director of a state institution in charge of attracting FDI	Santiago	27/08/2013	Yes
INT24	CEO of a big mining supplier	Santiago	27/08/2013	Yes
INT25	Mining expert of a state institution	Santiago	27/08/2013	Yes
INT26	Academic, mining expert, anthropologist, director of a cultural center	Santiago	28/08/2013	Yes



INT27	CEO of a mining MNE in national headquarters	Santiago	28/08/2013	Yes
INT28	Director of a state institution related to the mining industry	Santiago	03/09/2013	Yes
INT29	Mining expert, researcher	Santiago	03/09/2013	Yes
INT30	President of regional workers' union	Antofagasta	06/09/2013	Yes
INT31	Mining and technology expert, academic	Antofagasta	06/09/2013	Yes
INT32	Superintendent of a mining MNE subsidiary	Antofagasta	06/09/2013	Yes
INT33	Politician	Antofagasta	09/09/2013	Yes
INT34	City mayor	Antofagasta	10/09/2013	Yes
INT35	CEO of a big local mining supplier	Antofagasta	10/09/2013	Yes
INT36	Secretary of a mining MNE's union	Antofagasta	11/09/2013	Yes
INT37	Journalist, mining expert	Antofagasta	16/09/2013	Yes
INT38	Academic, mining expert, economist	Antofagasta	23/09/2013	Yes
INT39	CEO of mining MNE in national headquarters	Santiago	25/09/2013	Yes
INT40	CEO of the Mining Council	Santiago	26/09/2013	Yes
INT41	Academic, mining expert, economist	Santiago	26/09/2013	Yes
INT42	Director and representative of a multinational mining NGO	London	13/12/2013	Yes
INT43	Politician, academic, mining expert, economist	London	16/01/2014	Yes
INT44	Mining expert, former member of the Mining Ministry	Santiago	16/11/2015	Yes
INT45	Academic, mining expert, economist	Santiago	21/06/2016	Yes
INT46	CEO of a mining MNE in national headquarters	Santiago	22/06/2016	Yes
INT47	Director of a state institution related to the mining industry	Santiago	23/06/2016	Yes
INT48	Academic, mining expert, economist	Santiago	24/06/2016	Yes
INT49	Representative of the London Metal Exchange	London	11/06/2013	No
INT50	CEO of a mining supplier MNE	Santiago	06/08/2013	No

## APPENDIX C. INTERVIEW TRANSCRIPTION EXAMPLE

**INT42. (13.12.13) – London**

**Interviewer: (I)**

**Interviewee: (Y)**

Y: How a company gathers and deploys power and the... initial, the most obvious form of power that a company has is its financial power, it's got loads of money that obviously the amounts differ with the size of companies, but even with a smaller company relative to the local community it's got lots of money and that money can be deployed to buy people off, to divide communities, to bribe, I don't mean to bribe in the legal sense, is money as a soborno to make them do what we want, but for instance it may go to the Shanty in Tolino in Colombia while is trying to get permission to open a huge cast coal mine, sponsored the local football team, sponsored the local radio station, so... in that road... it would say these are social responsibility activities that are helping the local community, but of course is... it's... persuading people to drop their opposition to a project that could be very damaging to the agriculture way of life of people, so... that way of using financial power is... in a way the more pleasant option, but less pleasant option is the use of financial power to pay armed security to protect the companies' operations and... the... country which I am most familiar is Colombia, and certainly the companies feel the need for armed security for their operations and they pay private security, and they pay for security by the national military as well, that's not secret, they are perfectly open about that, their excuse being they need to defend their operations against guerrilla attacks, but it also leads to intimidation of people who've got nothing to do with guerrillas or armed groups of any kind... so... in that way, the financial power gets translated quite early to military power, so we not only have huge amounts of money but we also therefore have the capacity to kill. There's political power too, national governments, often regional governments sometimes local governments want mineral projects to go ahead against the will of local populations and so they, they make thing as easiest possible for a company and bigger companies can deploy their own financial power in direct influence of... governments so that governments policy's changes to make life easier for multinational investment and here there is a use of diplomatic power , rather running of all over the place I suppose, I am speaking from the perspective of fair multinational mine investment, I am not thinking primarily of local or national companies, still less nationalized companies, I am thinking of the companies that we deal with here, so a British based companies can rely on UK government diplomatic power and that counts for something, so the UK government will exert its authority other national governments in order to get those national governments to adopt policies that are friendly towards British multinationals, and an example of that happening with a small British company is the UK Trade and Investment Department which is part of Department Business Innovation Skills trying to use its influence in Bangladesh to persuade the government of Bangladesh to grant a mission to GCM Associates, a British company, to begin open cast coal mining at Fulbani, in Northwest Bangladesh, he is a project that has led to huge local opposition, tens of thousands of people repeatedly protesting against possibility of an open cast coal mine, and the project has been stall sin August of 2006 when there was a huge demonstration in which 3 protesters were shot dead by the Bangladesh Rifles, which is a part of the armed forces, and GCM Associates is losing money because of the fact that they are unable to proceed this project, which is its only project, so it's been to rely on the British government to try to persuade the government of

Bangladesh to allow the mine to go ahead, this is still not succeeded but I think British diplomatic power is important, another example of British diplomatic power being used to back the power of the British company was in Peru with Monte Rico Metals, can't remember the year, but Sir Richard Ralph was UK ambassador in Lima, and he travelled to the area around the company's Rio Blanco project, copper project to try to persuade local people that having an open cast copper mine would be good and they should not fear the destruction of their agricultural livelihoods and he resigned as ambassador and then was made chairman of Monte Rico Metals, the company evolved. Bigger companies, Angloamerican for instance, can rely on support from the foreign office and... I am not sure of the particular examples of supporting foreign office, but a few years ago I met with the person of the foreign office with responsibility for relations with the countries in the Andes, Peru, Colombia, Ecuador, and he told me straight back that "fine by me if groups like ours criticized Angloamerican, because it kept him in the job", because part of his job is to support Angloamerican in their line of project with Colombia and Peru, so we have financial power leading to kind of bribery power in the broadest possible sense, military power, political power, diplomatic power, there is a complete power imbalance between the companies that enjoy that kind of support and the communities, are you giving other example, of course... companies, multinational companies want freedom to trade and reduction of taxes, so the governments in their home countries advocate free trade which assists, which is for multinational companies, and within that there is also pressure for a lowering of taxation, and some, I don't know if the British government has done this, but the Canadian government, as part of its international aim, provided advice to the Colombian government about reform of its mining code, I think this was in 2001, and part of the reform involved the lowering of taxes and royalties, and I think that among the Canadian government personnel were people seconded from multinational mining companies, so there again there's political power being wielded by multinational companies in order to achieve their own aims, so that's the power that they have, that's how they deploy it.

I: That sounds really interesting, you gave me a very broad perspective on this issue, so how do you think or what do you think are the power sources that governments or local institutions have in order to counteract these other power from multinational corporations?

Y: Well, certainly there are judicial processes and... again using Colombia as an example, I apologise but so many of those are more familiar with them, in the... struggle of communities forcibly removed by the Sevenhail coal mine in northern Colombia, because of judicial action taken by lawyers working on their behalf, the rights were gradually better recognized, so for instance, first of all, the need for people to be moved at the company's expense out of the way of the line, then to make sure that there was some kind of compensation, then to make sure there were some kind of re-housing, one of the communities, Tabaco, achieved a Colombian supreme court decision, I think this was in May of 2002 which said that the... I think is that the company has to pay for... part of this, also the local municipality has to provide a site where the village could be reconstructed and that utilities should be provided, so that was judicial victory, although here we are more than 11 years later and it still not been implemented, also in Colombia a small Canadian owned, I think ultimately Canadian owned company called Muriel Mining was exploring in north western Colombia and wanting to open a mine at a place called "Mande Norte" I think it was copper gold and molybdenum, and there had been militarization of the area to protect the exploration activities and abuses alleged by local people as a result of militarization and lurking behind this company was the British multinational Rio Tinto, which was not getting its own hands dirty, but had an agreement

with Mirial Mining to fund exploration activities or depart from exploration activities with the option that later on if things were promising Rio Tinto could come in and do the mining or... whip profits at the mining, and the Mirial mining believed that it had consulted local communities, but the local communities contested this and said that the consultation done had been inadequate and not according to the Colombian constitution of 1991, and this went all the way to the constitutional court, the highest court in Colombia, and the constitutional court judged that the whole consultation process with indigenes and African decedents communities had to be done again because it had not been done properly and the constitution gives those 2 sets of communities the right to, prior consultation before developing projects on their land, but because by this time the UN declaration of the rights of indigenous people had been finalized in 2007 and including indigenous people's right to prior an informed consent, the constitutional court said "not only must this consultation process be done again, be done properly, but we must receive the consent of communities before you go ahead" so this was the contested by the Colombian government, I don't know at what stage is now at, but it had stopped the company's activity because of that, so there are judicial victories. In the case of GCM resources in Bangladesh what has kept the company from pursuing its project has been massive local and national mobilizations, huge numbers of people out in the streets taking strike action, occupying the area, so although they're not being, as far as I know, judicial activities, there not being political decisions, just the strength of this popular mobilization that has held up the project. Back to Colombia, in the case of Cerro Haul, there is also been a lot of mobilization around the company's expansion plans because they have a plan to expand within the current mining plan which they're doing, but they also have a plan to expand the mine further in a way that will necessitate the diversion of the river Rancheria, which is the only major water course in the province of Localhira, which is quite a dry province, and this plan has united unionized mine workers, communities of African descent and indigenous people against the company's plan and there have been big popular mobilizations about that, party is a result of which the company has put those plans on hold and said "for the time being we will not pursue them" so those are... both important ways of exercising power against multinational companies, the judicial and popular mobilization, another thing... other examples of that, there are combination of popular mobilization and the judicial has been the fight at Dongria Con people around the Neangharian hills in southern eastern India where British Medanta PLC which is really an Indian company but is registered here and listed in the London Stocking exchange, it... wants to mine both sides in the Neongharian hills which is sacred to the Dongriacon indigenous people and the Dongriacon have said "you won't mine both sides, we will all die before you die both sides, we will defend our land to the last drop of our blood" so that's being the key thing, but along with that... an Indian organization, I think it was Indiaronics took the case, took a legal case about the way that legal decision had been made allowing the company's activities to go ahead and as a result... I think it was the supreme court made the decision that the state government had to hold consultations with 12 Dongriacons communities and be bound by their decisions, and every single one said unanimously "we don't want this mine" and so because of the legal framework the government disbanded to not allow the mine to go ahead because of the decision by those indigenous, so there was a strong combination of the popular mobilization and the judicial, both of which had been backed up by international solidarity, and that's another important factor, communities in northern Colombia have told us that they don't think they would have made even the level of progress they have made against Serahound coal, which is owned by 3 London listed companies, if it were not for support from groups in this country, United States, Germany, Switzerland, Australia, because... support from here have created much greater

pressure on the multinational owners of the mine, the pressure not over mass movement here, but of embarrassment, they don't want their community members abroad to annual general meetings of their company here to say in front of shareholders in bold what we are doing is bad, we don't want it, you've got to do things differently, they don't like when members of parliament raise questions in parliament about companies' record, they don't like when the Guardian prints critical articles about the, and the Daily Mail as well, so those things that we are able to add to what's being done in the host countries, that's important, so mobilization, judicial route, international solidarity, a fourth possibility which is linked most closely with the international solidarity but is related to the judicial root is... several groups in recent years have use existing non judicial international mechanisms notably the complains procedure of the organization for economic calibration and development to bring complains against companies in their home countries, so there was a complaint broad against BHP Billiton in Australia and against Xstrata in Switzerland for what they were doing in Seracon, there was a complaint brought against Bedanta in Britain for what they were doing in the Hungarian hills, there is currently a complaint against GCM resources in Britain against what they are doing in Bangladesh, and in the case of Seracon those complains led to, Seracon setting up an independent panel of inquiry with international expert to look into the impact of its operations and this independent panel found that a lot of what we've been saying was true, and the company agreed to abide by most of the panel's recommendations, so it's still being a struggle to make them to do it, but I think they sensed a public relations disaster and this was the way to handle it off, in the case of Bedanta, it would have nothing to do with the complaint's process, it said here is a company which delivery listed on the London Stock Exchange to get all the benefits of money and prestige that you get for listing in London, even though is controlled by a single Indian family, but as soon as they face in the UK an investigation by the UK National Contact Board for the OECD complain process, they said "oh we don't have to listen to them, we are Indian" so they would have nothing to do with the process, so the UK National Front made their judgement against the company and that was a public relations disaster for the company and it held some ethical investors to decide to pull out of the company which also was bad for the company's public relations, so the company still goes doing what it does, but that was a blow to its \_\_\_ in the case of GCM resources... since the world development movement here in London and the international accountability project in San Francisco brought the OECD complaint against GCM resources, GCM resources has lost even more money, I mean in the past year has lost I think 3 and a half million pound, its share prices gone down, all its directors have resigned and being replaced, it's chairman has resigned and being replaced, is being replaced by the chairman of the British investment \_\_\_ resources, so the company was suffering anyway, and the fact that the UK National Content want look where there was a case to answer and decided "yes, there is a case to answer, we will investigate this" that itself was a blow to the company, so there we are, use of complains mechanisms, non-judicial processes.

I: Actually for what you tell me there are 2 actors involved, the people, indigenous people, organized people and on the other hand the multinational corporations, but, it calls my attention the fact that the state apparently is not involved at all, is not involved in Colombia, well in Chile it doesn't exists, according to a lot of professors there was a process between the beginning of the XIXth century where the MNC appeared, the first globalization, where the states where mainly trying to attract them, but then something happened, especially in Latin American countries, the states learned from the past experience of letting the MCN to do whatever they want, so after that we see a process where the states were very powerful and they were waiting for the...investment to be

done and after that they would usually the rules of the game, but nowadays after the 70s or after the cold war we see the complete opposite, so what do you think about this process, because apparently the governments have forgotten these valuable lessons from the past.

Y: I don't think they've forgotten those lessons, the states have been run by the political class which also runs the MNCs and they, there has been a total victory of neoliberal politics, which is being fall back against some places, none of which is perfect like Ecuador, Bolivia, Venezuela, which also offered trick local communities \_\_\_ but at least they took the view that the national government ought to have more power over national resources than multinational companies and... so, I think because of the triumph of neoliberalism a lot of the kind of legislative structure which would have constrained multinational mining companies has been dismantled in order to maximize multinational profits, and then the governments who have deliberately been made indebted are desperate for foreign exchange, so is the payback this entirely illegitimate debts, so they don't want to do, well on the face of it they don't want to do thing to discourage international investment, but behind the scenes they are all friends anyway and all represent the same class of people. However, like... within a company there will be people of good will, of good conscious who wants to do things in a good way, within states there will be people who wants to do things in a good way, so I think the Colombian state for instance is controlled by people that represent a certain set of families within Colombia who own 50% of the land surface of the country and had done for hundreds of years, who want things done in a particular way, but within the state's structure we may well find excellent people like defensores del pueblo, do you have those in Chile as well? Defensores del pueblo?

I: I don't think so.

Y: Is entirely alien to anglo saxon political and legal structures, but... \_\_\_ a government department which job is to make to make sure that people's rights are not violated by the state and... and so the local defensor del pueblo in the case of Tabaco, he was doing his best to stop the destruction of the village when the people were being evicted in 2001, so he was a representative of the Colombian state, but in my view he was a good representative of the Colombian state, and the judicial is part of the state apparatus and clearly the Colombian judicially has made some decision that in my view were good just decisions, so the state is a mix entity which at time can and does act in favour of local communities in dispute with mining companies, but generally speaking at the moment, states, particularly national act as if they were primarily there to support the multinational mining companies. There are interesting examples in the Philippines and Argentina, where local municipalities or even regions have said "we will not have open cast mining, we are against it, we voted against it, the local population have voted us in and we voted against it" and national government said "you can't, national policy is we want open cast mining, you don't have the power at municipal level to override national mining policy" so there are big fights there, but there are again, you see, elements of the state in dispute with other elements of the state.

I: What do you think local communities or host regions can benefit from this mineral resources, because so far a lot of people believe that this is a curse instead of a bless, how do you think that especially in the southern regions, these countries have benefits from these resources?

Y: Well, I am jaded in my view because of the fact that I work with communities that don't want mining. If I had personal dealings with communities that do want mining I would

have developed my thinking about this more, but I know that are communities that want mining, primarily communities who have done that for years to have a tradition of mining, and I think actually this is the key thing, nobody is going to benefit from mining at local level if they don't want mining and London Mining Network came together, I mean, among the groups in our networks there were widely different views of all sorts of things, but the point of unity is being communities what happens on their land, and if a community does not want mining then, in our view, they should not have mining, it should not be imposed on... and it won't benefit them, because of the very fact of imposing on against their will it means that is a dis-benefit and one of the things about the documentary about Caimanes that was showed last night was... people were saying that "we don't want the mine, we want our valley back, we want our river back". One of the things that was clear from Jasmina Romero, from Fuerza de Mujeres from la Guajira en Colombia who was with us in October for the BHP Billiton AGM... she was explicitly saying in the companies AGM, "we don't want your money or your social responsibility project, we don't want any of that, no amount of money has any meaning for us, mining is against indigenous tradition, is a violation of mother earth, you are tearing out the organs of mother earth, if you divert a river you are cutting the veins of mother earth, we want you to get out" so there is nothing that the company can do that would benefit those people, because those people will not see there is a benefit, and in order for a company to insist that there is a benefit, is a pure act of cultural imperialism, is the most stark exercise of power, is to say, which is being said for the past 521 years, your world view is rubbish, one world view is 100% right, so if we tell you that money is good and valuable, more valuable than undisturbed land you've just got to accept that view, we are telling you this is the benefit, and if you don't think it is you are wrong, you are stupid, you are primitive and we are right, so that's the first thing: consent, if there is no consent there is no benefit, and consent must be free consent, no coerced consent, not the kind of consent that happens if the other possibilities have been denied, here is an example of that: I first became involved with indigenous people in 1983 when I lived in the north in Shain indian reservation in Montana, he... was a jovial mind, very beautiful group of people, many of them became dear friends of mine who exactly 100 years previously had been forcedly deprived of their livelihood because their livelihood was to follow herds of bison on the plains and live by hunting, but the bison had been deliberately killed, almost to the point of extinction and the people had been, by military force, prevented from wandering about, hunting remaining buffalo, and they were confined to a reservation and told "you've to farm" which it never worked. It happened had to their tradition hundreds of years before in a different part of the continent but it was not part of their living tradition and the land is not good for agriculture and the people did not have experience in agriculture and they didn't make a go off it and there was great poverty, and is a... intensely rural location, so... any form of industrial activity is not much of a viable economic proposition, so the Sharan people were under continuous pressure to allow open cast mining on their lands, because underneath their land lie huge amounts of coal and to the north of the reservation there is an open cast mine, the south there are several open cast coal mines, to the east there is coal and is being a big struggle about whether or not there will be open cast coal mine to the east of the reservation and then there on the reservation there is coal, and people including very dear, very very dear friends, elders in the people who bear in themselves the indigenous tradition, these people, they voted for coal mining, not because is part of their tradition, but because the young people ending up on drugs, addicted to alcohol, committing suicide because there were no opportunities for them, and they thought "we must have jobs for our people" that is not free consent, that is the consent that you get after the lengthy process of brutal militarized imperialism, so that's point one, if a group of people wants mining, perhaps

because they have a tradition of mining like the coal mining communities in Britain who wanted to maintain their tradition in mining and it was deliberately destroyed, partly was deliberately destroyed because the British government at the time knew that the opening of the Sierra coal mine in Colombia which took its coal to the export port on a railway provided by British Steel, the word British Steel imbued on the track of the railway we saw when we went there, so they knew that could get coal from there from a place where people did not want mining at the cost of destroying the mining tradition of people in this country did want mine. How can it be a benefit to people under those circumstances? Well, first of all, they need to be well paid, safe unionized jobs for local people who want them, there also need to be really good health and safety legislation, properly enforced, there need to be a tax regime properly enforced, which doesn't allow transfer pricing and which allows for benefits to be filtered at local level and not simply at national government level, preferably mining should be done by entities where the majority of the dividends come back into that country, I read a study the other day an analysis by a man called Patrick Bond whose... he is in South Africa, analyses the mining industry and his view was "even if we could get rid of transfer prices, tax evasion, bribery, corruption, all of that, still mining by multinational companies is a net dis benefit to African countries, because the amount of benefit that flows back into the country is less than the value of the mineral that they are taken out of the country and whose value flows into the pockets of shareholders who are based not in the country, but in Britain or United States or whatever it may be, so it needs to be attention paid to who is the major beneficiary, financial beneficiary in the operations and how... where is the balance between the value of what is being taken out of the country and what comes come into the coffins of that country at national and local level. Then there needs to be rigorous properly enforced environmental legislation, including the proper... restitution of demand side, but here is the major problem, it's not possible truly to restore a mine site, you... you won't really get back what was there, you won't be able to restore the... water sources that have been destroyed, if it is a self-find deposit you will get acid mine drainage for the rest of time, and again from the South African example, there are lots and lots of abandoned gold mines across parts of South Africa, deep mines rather than cast... where the... the owning companies pump water out of the mine to prevent the build-up of acid mine drainage for a number of year after closure and then stop, so the mine are filled up with acidified water which has now polluted the entire water table in the region around Johannesburg and is now so close to the surface that it threatens actually to destroy agriculture and drinking water in the entire region, and when you talk about something that needs to be done forever... I studied late antique medieval history university... to assume that people in the future will have the same technological knowhow that people have now is an unsafe assumption to make, people who believe in the myth of progress and who haven't studied medieval history, appear to believe that will go on and go on becoming more advanced technologically. Actually, as far as I can see, giving the lack of political will to do anything about climate change, by the end of this century our current civilization would have completely collapsed, even if it hasn't I just don't think is safe to assume that tasks can be done into the forever future, and with that in mining drainage you have to go on pumping forever, and ever, and ever, until the whole solidified rock has dissolved! When you're talking about uranium mining, you're talking about wastes that are extremely dangerous to the health of all living things for hundreds of thousands of years, so for far longer than homo sapiens have existed in our current form, and nobody has come up with good ways of... dealing with radioactive wastes, so... I think that is the horrible sting in the tale of mining, we can say "ok, our community consents to mining, positively wants it, is good, well payed, safe, unionized employment, there is good health and safety, there is good taxation, the country is benefiting economically, if



we wait for this enterprise and there is good mine restitution and there is good dust suppression and there is good detoxification of water and that... but forever?" There isn't the possibility of making it safe forever, which is why I think any mining needs to be undertaken only after the most serious consideration of whether is really, really necessary, if there is absolutely no alternative, if we really cannot retrieve minerals that have already been mined, in order to reuse them, it cause environmental damage caused by \_\_\_ that is so severe and goes on for so long.

I: Well, I just have two more questions, I think you may have to do something else or maybe are tired already but, do you think that there are any differences between a national owned mining corporation or Multinational Corporation like CODELCO and just a multinational corporation? And the other is... what do you think is the role of multilateral organizations in this topic, for example, the World Trade Organization, maybe the United Nations, do they have anything to say about this, or the IMF, the World Bank? Because until the 70s or 80s they were really powerful trying to promote neoliberal policies but so far they seem to be more quiet in the last 10 or 20 years for some reason, at least in Latin America which is the case that I know, in Chile, so do you think that they have anything to say in this topic?

Y: On the first question first... is there a difference between national and multinational mining entities?... in terms of their behaviour not necessarily, a nationalized company is just as capable of behaving in an oppressive militarized manner and tramping over the rights of local communities as a multinational company and in some cases even may be worse, because of the fact that a multinational company also have to take account of public opinion in their home country, but on the other side the multinational companies are going to be surfing out value from the country where the mineral is, to the countries where the shareholders are, and that's not going to be the case with the national companies so... for that reason I think that it is better that mining should be done by national entities rather than multinational capitalist companies. The other thing on the side of multinational companies is that, especially with the larger ones, because of the break of expertise that they can turn, they may well be better developing more \_\_\_ technologies than a nationalized company might do, so ways need to be found for, if all the mining industry through the world were nationalized, it would be important for different countries to share skills and technology with one another to develop the best possible practices.

On the multilateral institutions, the world trade organization is unfortunately not dead, is just raised his head again I think last week I think, and in any case there are... regional free trade agreements being pursued like the... what do they call now? There is the... trade partnership of the Pacific, something like that and a similar one for the Atlantic, and as I understand these agreements mirror the kind of agreements that have been signed in the Americas like North American free trade agreement and the free trade agreement between North America and Central America, where companies are able to sue national governments for changing things, I've forgotten the country and the company, there is currently an example of a company suing a national government for raising the minimum wage, so... in those ways I think those international trade agreements are entirely maleficent, destructive, the IMF and World Bank have certainly done huge damage through their funding of extractives industries, just at the moment... they have attempted to come up with standards that they plan use on companies that they lent to, which I supposed to do things like insuring that if agricultural communities have to move because of a mining project, they owed a land of an equivalent value... that kind of thing can exert a pressure to raise minimum standards, and at the moment multilateral funding

institutions can exercise helpful pressure in decision about what they want fund, so the World Bank has just said that is not going to be funding anything to do with the nuclear industry, and the European Bank for Reconstruction and Development has joined a number of other multilateral funders in saying that is not going to fund coal projects except under most peculiar circumstances, so they've been doing a lot of bad by the things they've been funding but they are changing their policies, they exert pressure for good. United Nations, during the time when it had body working on transnational corporations, the name of which I forget... that was a way of putting pressure on multinational corporations to behave better, but that was a victim at the end of the cold war and now we have these UN guidance principles drawing up by John Ruggi, the protect respect a \_\_\_ framework, are you familiar with that?

I: No

Y: Basically western government torpedoed efforts of the United Nations to have international regulation of multinational companies, they wanted to stop that and they succeeded in stopping it, but because there was then a kind of a vacuum and a continuing argument about who should maintain vigilance over multinational corporations, an academic from Nova Scotia I think, John Ruggi, either put himself forward or was put forward to look into this matter and see whether he could come up with a system that would be acceptable to all parties, so after several years of looking into the matter he came up with this framework of protect, respect, remedy, where individual states have the duty to protect human rights, multinational corporations have the duty to respect human rights and the legislation protecting human rights and if they don't local communities and workers need to have some kind of remedy, but the problem is that companies have such power that they put pressure on national governments to have low standards anyway so the basic standard is going to be set low and if the companies fail to respect human rights and the state fail to protect human rights, and fail to sanction companies that don't respect human rights, what remedy do people have? And at the moment this supposedly an aspiration that people have remedies, but the kind of remedies that are available to people at the moment are too weak, there are judicial processes that might be very lengthy and hugely expensive. In this country the government has just cut some of the legislation that enable people overseas to bring cases against British registered companies for things that they've done on other countries, so in fact the British government has moved in the opposite direction, with the non-traditional remedies, like the OECD complains procedure, there is no sanction against a company other than embarrassment, loss of reputation, so that whole process is far too weak in the view of many people, quite a lot of NGOs who believe is too weak, and nonetheless trying hard to use it as best they can for the benefit of communities and one of the things that people are pushing for, including within coalitions organizations in this country, including London Mining Network, pushing to ensure that British government ties up legislation here to make British based or British listed companies keep to human rights and environmental agreements to which the UK has signatory, but that's a difficult battle. More recently, a number of countries in the UN led by the government of Ecuador have started calling again for some kind of international body to have power over multinational corporations and that seems to a lot of us to be a very much better idea than having national governments doing it, we have an international criminal court, we ought have some kind of international court to deal with the crimes of multinational corporations.

I: Thank you very much, I just wanted to ask you what is your perception about Chile, like whereas... in your work have you ever heard about the situation in Chile or just you know about Caimanes?

Y: Well... Chile was the first country that I got involved with when I went to university in 1978, I joined the Oxford's students Chilean Society, because, simply because there was a man at the fresher's fair with a banner saying "sensitive people care about Chile" and I thought "oh, I am sensitive, so I should care about Chile" I knew nothing about it, but I joined and I got to know exiles from the Pinochet dictatorship, so at that time I was very active on Chile, but I knew nothing about mining, some of my friends in this country are people who fled from Pinochet and are still here and... so part of my perception about Chile is what they have told me, and... I am sad that well not only I am sad about the vicious brutality of the military regime, or the blood that was shed, or the evil that was done, but also sad that an experiment in socialist democracy was destroyed and replaced by neoliberalism without liberty, and among my Chilean friends here some accepted the policies of the Concertacion thinking "this is the best we can do under the circumstances" and I am very critical of that, thinking that it was a sellout, so my perception is that large rich private interests have triumph completely in Chile, and also vaguely aware of the Mapuche struggle from their land rights in the south and the repression that they have faced and continued to face and often a lack of understanding of the indigenous rights even on the part of the \_\_\_ of the non-indigenous part of the Chilean population, but one thing that I learned last night, which I didn't know before, is that apparently this now there is going to be a process of constitutional reform in Chile, so finally to move away from the Pinochet constitution and that is a sign of hope, I think is a sign of hope.

I: Yeah me too but it will be difficult because, I don't know, I was part of the student movement for many years and we had a massive fight against the concertacion because they were trying to privatize everything, they won and 3 years ago the same lady Bachelet, which will be probably the new president, she promised to make a change in the constitutional law about education, so she made a change which was basically a change in the title of the law, so I am very sceptical about this process. Thank you very much for your time.