

Interlocked, Business Groups and the State in Chile (1970-2010)

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“Interlocked”
Business Groups and the State in Chile
(1970-2010)

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Abstract:

In this paper we examine the relationship among business groups (BGs) in Chile in the long run, focusing on the relations between the state viewed as a BG and privately-owned BGs from 1970 to 2010. Our analysis proceeds within the methodological perspective of interlocking directorates (IDs) analysis. Working with a unique database of the boards of affiliated firms to BGs, we consider IDs as a way to learn about the cohesion and relation between these BGs. We include a period of political change and institutional and economic modernization in Chile, which also involved a transformation in the character of the entrepreneurial class in the country. We find that the state BG has played an important role in the networks of Chilean capitalism. Our work complements the literature on BGs and state capitalism, showing the rich nature of social networks in a capitalist society.

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Introduction

In developing countries, business groups (BGs) are highly relevant economic actors, and have been studied extensively across various research traditions, such as management, finance, sociology, and economics.¹ According to one established definition, BGs consist of “legally independent firms, operating in multiple (often unrelated) industries, which are bound together by persistent formal (e.g., equity) and informal (e.g., family) ties.”² Studies of BGs in Latin America largely focus on the histories of specific BGs, relationships among privately owned BGs, and BG performance over the course of brief periods.³ This project pursues a longitudinal and relational analysis of Chilean BGs over the past 40 years to address two critical issues: How do BGs relate to one another over time? And what type of relationships do we observe between private BGs and the state? Organized around these questions, this article discusses an important aspect of Chilean capitalism since the end of the 1960s.

This paper belongs to a long tradition in network analysis that defines interlocking directorates (IDs) as ties between organizations, created by the presence of the same members on their boards.⁴ While we are aware that this type of methodology has its limits as it cannot expose important particulars regarding the relationships under examination, we are convinced it is a useful approach. To extend this tradition, we consider the Chilean experience over time and focus on the IDs among BGs, including the state as a BG, through its coordinated operation of state-owned enterprises (SOEs) by quasi holding structures (CORFO –Corporación de Fomento de la Producción- and SEP –Sistema de Empresas Públicas). Most network studies appear ahistorical, leading to calls for more international, historically informed studies.⁵ The field of business history demands studies that employ new methodologies to understand changing relationships among organizations.⁶ With a longitudinal study that integrates the state as a BG, we not only reveal connections between SOEs and the private sector but also describe their evolution in relation to the political and economic environment of Chile. In this sense, we follow an approach similar to Lluch and Salvaj’s examination of the evolution of corporate networks in Argentina.⁷

Our contribution to the literature on Chilean business history includes a detailed database of the boards of firms associated with different BGs. As we explain subsequently, the richness and detailed information included in our database represents a unique research material that can support in-depth studies of the evolution of the Chilean corporate sector and its relationship with the state. We collected information about companies affiliated with Chilean BGs for four benchmark years: 1970, 1988, 1999, and 2010. In addition, we have nominal information about the boards’ compositions in these years.

Moreover, we extend research into state capitalism by addressing the relationship between the state and BGs in Chile and describe its evolution from the 1960s to 2010. Our study covers both the import-substitution (ISI) and free market periods, as well as pre- and post-authoritarian eras, and details the types of relationships that existed in each and to what degree. Previous studies on state capitalism examine minority state ownership⁸ or state ownership networks.⁹ Our work explores one strategy followed by BGs: that is, to forge board networks with the state. We describe the structural conditions that may facilitate the contacts between the private and public sector.

The high dynamism we observe of the relational structure of the BGs in Chile represents an adaptive response to changes in the wider context. Three distinct stages are identified in the evolution of the network structure of Chilean BGs. In the ISI period, the cohesive network integrated all BGs, while during the authoritarian phase BGs grew increasingly isolated. A completely different structure emerged during the democratic period, characterized by a connected center and a dynamic periphery, shaped by new BGs with no connections with the center. Moreover, the ID strategies of the largest BG in the country, the state, were highly adaptive to institutional changes. The state had a prominent role in the network during the ISI period; in the fragmented network of the late 1980s it had virtually no relationships with private actors. By the 1990s, SOEs began to re-enter the network; by 2010, its level of integration was similar to that of 1970, though with entirely different types of relations. Thus, we demonstrate the significant and permanent role of the state in the network, as well as the influence of networks on the state's concrete strategies.

This article consists of five sections. We begin by describing the methodology, definitions, data and sources used, followed by a brief account of current literature on the history of BGs in Chile. Next, we link debates about BGs and their social nature, to detail the historical evolution of the BG corporate network. Using our literature review on state capitalism, we describe the relationship between the state BG and private BGs over time. Finally, we conclude with a summary of our findings and their implications.

Definitions, Methodology, Data, and Sources

Several challenges arise for empirical studies of BGs, including an accepted working definition of BG, methodological issues and data availability. The definitions of BGs may seem clear in an abstract sense, but making them operational can pose various difficulties, which are especially problematic for empirical studies that undertake a comparative analysis on BGs. Our work on BGs in Chile uses the official definition and classification offered by the Chilean laws on capital markets. Chile is one of the few countries in which BGs have a clear legal status¹⁰ which, as we shall examine below, was developed as a consequence of a banking crisis with over-indebted BGs, in the early 1980s. Since our analysis may be sensitive to the fact that we use this official classification, it is important to consider whether the legal definition employed by the Chilean regulator, the Superintendencia de Valores y Seguros (SVS), reflects the analytic definitions of BGs. Chilean law on capital markets (Art. 96, Law No. 18.045) states that:

A business group is a set of companies which present such a sort of relationships and linkages in their property, management, administration, or credit responsibilities, that there is ground to believe that the economic and financial decisions of those companies are guided by or subordinated to the shared interest of the group, or that there are common financial risks in the credits obtained or in the financial instruments they issue¹¹.

This same article also states that a BG exists whenever two or more listed companies are controlled by the same shareholder (or group of shareholders), even if one of the companies is just an investor that holds shares of a single productive firm. The definition establishes many BGs in Chile. Table 1 presents information about the recognized number of BGs.

Insert Table 1 around here

The first list of BGs appeared in Circulars 766, 774, and 790, from 1988; since that time, and in accordance with the aforementioned law, the SVS regularly prepares lists of groups in the country. Lefort has argued that in 2000, only the 25 largest BGs, defined as such by the SVS (26 including the state), “qualified as a business group.”¹² Khanna and Rivkin also note that the SVS definition is “somewhat vague” and worry about whether it reflects a general understanding of group boundaries, rather than just “idiosyncratic perspective of the regulators”, though cross-checking the names in the listing led them to agree with the scope of the definition.¹³ We concur with these authors and use the official classification, although we recognize it has some limitations. For example, this criteria means that some important BGs are not recognized as such (while other less important are included), possibly because their most important activities take place abroad, or because they are not involved in economic activities where systemic risk, or the public interest, is at stake.¹⁴

For this study, we reconstructed the relationships of BGs on the basis of IDs, which exist when two or more BGs share common directors. Following the methodology applied by Lluch, Salvaj and Barbero,¹⁵ we use social network analysis (SNA) to calculate different measures of the IDs. For this purpose, and the elaboration of related network graphs, we use UCINET and Netdraw software (version 4.14, a network visualization package bundled with UCINET).¹⁶ With SNA we can calculate measures that describe the topology of a network and determine the identity of the most central actors, that is, those with the greatest dominance in a network. In Appendix I, we describe the different network measures we use. In general terms, an analysis of IDs can provide a good picture of the BG’s social structures and reveal the identities of the main decision makers in a particular economy. As we discuss subsequently, this methodological analysis also enables us to focus on the social character of BGs. We are convinced that historical SNA offers the most appropriate methodology for our research.¹⁷

The uniqueness of our data set is a primary contribution of this study. We collected information about companies affiliated with BGs during four benchmark years: 1970, 1988, 1999, and 2010. The choice of these years reflects different stages in Chile’s modern economic history, marked by different economic and political systems (or governments from different political coalitions, as in 1999 and 2010). Our choice also factored-in data availability; board membership information was not readily or systematically available for many years.

We defined the BGs using well-known open sources for 1970 and official classifications (prepared by the Chilean financial markets regulator) since 1988. For the state, we reconstructed this “group” for 1970 and 1988. Specifically, to identify the largest BGs and the companies affiliated with them in 1970, we used systematized information provided by: Hachette and Lüders, which provided detailed information about firms affiliated with the state BG, and Garretón and Cisternas and the Libro de las 91, which offer information about private BGs.¹⁸ The latter two were published during the government of

Salvador Allende, motivated by a desire to examine economic concentration in Chile and identify its largest “monopolistic” firms.

We collected nominal information about the boards’ composition from the following institutional repositories: Superintendencia de Valores y Seguros (SVS), Superintendencia de Bancos e Instituciones Financieras (SBIF), Superintendencia de Administradoras de Fondos y Pensiones (SAFPs), and Bolsa de Comercio de Santiago. We also gathered data from financial yearbooks, firms’ annual reports, and bibliographical dictionaries.

The final sample included 114 firms in 1970, 66 in 1988, 272 in 1999, and 474 for 2010 (see Table 2). The number of individual board directors ranged from 353 in 1970 to 259 in 1988, 1.018 in 1999, and 1.548 in 2010.

Insert Table 2 around here

Business Groups in Chile

In 2012, the 32 biggest BGs in Chile accounted for approximately 65% of the market capitalization in the national stock exchange.¹⁹ Yet, as we review next, BGs are not just a recent phenomenon in Chile; they have been central actors in the institutional and economic development of the country.

Going back in history, different types of BGs have marked Chile. The activities of foreign (and Chilean) trading houses operating since the nineteenth century offer a noteworthy example. These organizations engaged in a broad scope of economic activities;²⁰ some of those houses were explicitly called “groups” by some authors.²¹ The Great Depression in the 1930s had a profound impact on the Chilean economy, upsetting the structure of business networks in the export sector, which had represented the main engine of the economy. The explicit ISI policy, developed through CORFO, established in 1939, and the resulting creation of a network of state-owned enterprises represented an inflection point in the Chilean economy. The state owned companies became a group on its own that promoted business ventures with the private sector. Existing local and family BGs had to accommodate this new environment, in a transition relatively unexplored in Chilean business history.²²

Research on BGs during the 1960s and 1970s shared concerns about the problem of economic concentration, which was associated with lagged modernization of the economy. Several studies examine the organization of contemporary BGs at this time.²³ For example, Zeitlin and Ratcliff highlight the importance of family networks and propose the concept of “kinecon groups,” complex units in which economic interests and kinship bonds are inextricably intertwined.²⁴ Garretón and Cisternas also describe the new ways BGs operated at the end of the ISI period (as Chile transitioned to a planned economy). They identify economic and social mechanisms that led to the formation of new groups, with a fascinating discussion of the role of the state. Their study thus offers the first research to

refer explicitly to “business groups” (“grupos económicos”) and, interestingly, they also introduce an early IDs analysis of Chilean capitalism.²⁵

The 1970s initiated a period of great changes in the Chilean economy and society. Economic planning assumed a different magnitude, going beyond the development of the industrial sector. The state started to assume a larger role throughout society, through a revolutionary process of social, political, and economic transformation. As the structure of property and incentives in the economy changed, many private-sector BGs were expropriated. By 1973, the state accounted for 39% of the production in the Chilean economy. The socialist experiment of the Popular Unity government ended tragically though, and the military government that took over in 1973 imposed significant structural reforms on the economy.²⁶

A classic study by Dahse, focusing on the 1970s, offers an interesting approximation to BGs in Chile’s post-economic liberalization. The re-privatization of firms taken over by the Popular Unity government led to a re-emergence of the group organization in the Chilean economy.²⁷ But this new order differed in several ways: Many established groups disappeared, other traditional groups resumed their previous activities, and a new and bolder generation of businesspeople (a novel trend identified by Garretón and Cisternas) emerged to form their own BGs. This unexpected result was triggered by the lack of government attention to economic concentration and financial regulation. In particular, cross-lending within BGs was a common and important financial practice in the 1970s. Studies of adjustments associated with the liberalization of the Chilean economy after 1975 note the “importance of being a grupo” and stress the breadth of bank-centered groups.²⁸

An international economic crisis in the early 1980s exposed the fragility of the existing group structure and the dangers of cross-lending, leading to a financial crash in 1982–1983.²⁹ Much of the group structure described by Dahse broke down a couple of years after his study was published. This crisis led to the disappearance of entire BGs, such as Vial/BHC group, and the reduction of others, like Cruzat-Larraín. Widespread government intervention in response to this crisis (including the takeover of several banks and corporations) led to new re-privatizations in the mid-1980s. A new stage of privatization, based on the divestiture of SOEs in utility sectors, began almost simultaneously.³⁰ New groups thus arose, and others that had been conservative in the 1970s (e.g., Angelini, Luksic) gained strength. Some privatized firms eventually became new BGs, as was the case for CAP, SOQUIMICH or ENDESA.

Government concerns about repeating the patterns of the 1970s and early 1980s led to changes in Chilean banking law (1986) and the development of new chapters in the corporate law regarding the identification and regulation of BGs. The creation of the new private pension system, in which pension funds gradually were allowed to buy equity in the Chilean (and international) stock market, had significant effects in the organization of BGs and their corporate governance.³¹ Thus, the organization of the financial system has been persistently relevant for the structure of BGs. Financial repression made group formation attractive in the 1950s, as did privatization (and weak regulation) in the 1970s and early 1980s. Lefort even notes that the 1982 crisis was “perhaps one of the most important events” to shape Chilean corporations in the 2000s.³²

As the Chilean economy has become more complex, in the context of economic modernization and growth, and as the structure of BGs has become more stable, research has gone beyond identifying and characterizing the BGs in the country. Instead, studies focus on the corporate structure of BGs, emphasizing the multilayered (or pyramidal) structure of Chilean BGs, their high diversification, internal IDs, and significant cross-holdings. Others note that a large proportion of Chilean companies (which later formed groups) were founded by the state³³, and examine the significant mobility of BGs in Chile.³⁴ Their performance, citing nonlinear relationships, with the speculation that the declining profitability of BGs in Chile may have had to do with the path of economic reform, has also been analyzed.³⁵

The Social Nature of Business Groups and the Evolution of Network Structures

Different authors have argued that BGs emerge due to the existence of incomplete or imperfect markets, on some dimension.³⁶ In this sense, groups might resolve institutional voids forging collaborative networks to build trust and pool collective resources (or even to collude). This leads us to consider the social bonds within and between BGs.

The study of interlocks is important for revealing interfirm and intergroup network ties.³⁷ The investigation of IDs represents a direct way to examine the organization and relations among BGs, because IDs constitute a frequently employed governance mechanism within groups, such that highly reliable or trusted executives, directors, and family members sit on the boards of several companies within the same group. But BGs also build external IDs with other groups and companies. For example, groups owned by different families (or different BGs with a common ethnic background) might share directors when launching a joint venture.³⁸ Thus ID structures are an organizational expression that allows for the identification of informal groups and the relationships among them. They are an indicator of trust and collaboration between firms of a given group, as well as across groups. To the extent that BGs may use IDs for different reasons and to perform different activities, the effects of different network structures must be considered with care. In particular, it may be important first to establish the existence and identify the characteristics of the ID phenomena, before considering the rationales for this behavior.³⁹

Accordingly, we identify three phases in the evolution of the network structure for IDs among Chile's BGs over 40 years. This is depicted in Figure 1.

Insert Figure 1 around here

In the last stages of the ISI period (late 1960s and early 1970s), all BGs were included in the main network component. Studies on BGs in this period⁴⁰ share concerns about the problem of economic concentration, such that they viewed IDs among BGs as power mechanisms, used to increase concentration. According to Zeitlin and Ratcliff, "interlocking, in particular, of the top corporations and major banks is an organizational expression of the coalescence of interest bearing financial and industrial capital."⁴¹ These authors describe a cohesive corporate elite, resulting of cohesive family ties and

membership in the same social group. Our results seem consistent with this description (though we might dispute some interpretations offered to explain this evidence). We find an inclusive and agglomerated nucleus that includes all the BGs. As Table 3 shows, there were no isolated BGs in the network in 1970, and only two BGs were marginal, which equates to about 10%. The state BG obtained the highest centrality in this period, an issue we explore in depth subsequently.

Insert Table 3 around here

After a turbulent period of nationalization, privatizations, and the financial crisis of 1982, the free market authoritarian phase (1980s) produced a new, more fragmented network; the main component included only 40% of the BGs, and this value drops to 30% if we consider marginal firms part of the periphery (Table 3, Figure 1). This result is consistent with the findings of Salvaj, who notes that the network of the 185 largest companies in Chile in 1988 had the highest fragmentation and fewer links than those in other years (1970, 1999, and 2005).⁴² Similarly, when studying the relational strategies of telecom companies in Chile between 1978 and 1988, Bucheli and Salvaj find that during the military regime, the average degree of centrality for all the firms decreased.⁴³ Whether a reduction in the power of the business sector was intended or was simply a consequence of the economic policy in place, the power of the traditional elite declined during this period.⁴⁴ Our analysis confirms that the Chilean elite was fragmented during the 1980s, according to the reduction in the links at the corporate level. In addition, the opening of the economy after the late 1970s limited the political power the BGs had previously enjoyed, thereby decreasing the usefulness of their local networks.

The third phase shows a main component with a periphery that remains stable around 30%. This structure is replicated in both 1999 and 2010, as we show in Table 3 and Figure 1. These results also are consistent with a previous study that showed that between 1990 and 2000, the ownership and ID structures of public companies in Chile featured a small-world structure, with a center that grew more agglomerated and an increasing external periphery.⁴⁵ The IDs of Chile's BGs indicate both network archetypes: coordination in the economy through a highly connected center but dynamism through healthy growth in the number of new entrants at the periphery with no connections to the center of the network. Many new entrants are international actors. As our database shows, international BGs (that is, BGs listed by the SVS but controlled by multinational enterprises⁴⁶) experienced significant growth: in 1988 they represented 23% of our sample of BGs, but by 1999 they accounted for 41%, and in 2010, they made up 37%.

In conclusion, we find significant mobility of BGs in Chile and persistence of family-controlled groups⁴⁷; only five BGs appeared in all four benchmark years, and four of these are related to families: Matte, Menéndez-Izquierdo-Lecaros, Angelini, and Luksic. The last BG that was present over the entire period consisted of the Chilean SOEs, or what we refer to as the state BG.⁴⁸ The role of the state as one of the main actors in the ID network has been one of the least noted points in the study of BGs in Chile.

The State in the Chilean Economy and Corporate Networks over Time: Network Calculations for the State BG

Even after many processes of liberalization, in many modern societies the state has an important role in the productive sector of the economy. The standard rationale for these activities involves some market (or policy) failure.⁴⁹ But state capitalism takes different forms across countries,⁵⁰ such that the boundaries of state ownership (or direct economic participation) are never preset, even in capitalist societies.⁵¹ In a way, the very term “state capitalism” may seem oxymoronic, but we use it to refer to “the widespread influence of the government in the economy, either by owning majority or minority equity positions in companies or through the provision of subsidized credit and/or other privileges to private companies.”⁵²

Instances of majority shareholding by the state are easy to identify. The interesting question that follows from this identification of SOEs is how (and why) these firms establish contacts with the rest of the economy. The relations can take many forms, some of which have clearer justifications than others, but whatever their shape, these links are informative about the boundaries of the state and the structure of an economy. A historical analysis can shed further light on this issue.

The state’s involvement in the Chilean economy preceded the establishment of CORFO. Thus the state participated in the capital market and the development of public works in different sectors of the economy since the earliest decades of the twentieth century.⁵³ However, with CORFO, the “entrepreneurial state” (“Estado empresario”) assumed a far more significant role; we even might argue that CORFO and its affiliated firms acted as a coordinated unit and represented one of the major BGs in Chile in the first half of the twentieth century. Considering the state as a BG requires some explanation. We have already referred to the coordination of SOEs under CORFO in the 1940s and 1950s. Yet some Chilean SOEs have depended directly of some ministries; this is the case of CODELCO, ENAP, and BancoEstado. In any case, and whatever the actual degree of coordination undertaken by CORFO or SEP, all these SOEs can be said to form part of a BG as there is a controlling shareholder, who through the mechanisms of a representative democracy, must centrally address all strategy and management related issues. Big private BGs share these same features.

Entrepreneurial activities undertaken by this organization exerted significant effects on the development of the country’s industrial capacity. State-owned enterprises were established in different sectors that appeared economically strategic, such as energy (formation of the Empresa Nacional de Electricidad in 1943, along with regional projects throughout the country), steel (Compañía de Acero de Pacífico, 1946), and many others.

The ISI model in place was effectively complemented with a greater scope of planning in the Chilean economy, associated with mistrust of the stability of the liberal economic system and a deep-rooted faith in the ability of experts to guide national development processes. This belief was apparent in, among other things, the establishment of extensive systems of regulations and controls throughout the economy, reportedly consistent with the modernization of the country. The controls in the financial markets led in turn to a repressed capital market, which made it difficult for new businesses to obtain funding to develop new ventures. Doing business in Chile became much harder.⁵⁴

Some crowding-out of public activities by the state probably resulted. At the same time, some SOEs pursued links with private firms; for example, in the bay of San Vicente, close to the steel mill at Huachipato, an important industrial pole emerged, related to the development of a mixed sector in the Chilean economy. These firms were owned jointly by the state and private businesses. Through these various mechanisms, CORFO participated in many different businesses and sectors of the economy.⁵⁵ Table 4 contains information about the size of the state BG in terms of gross domestic product (GDP, %), number of affiliated firms, and number of board positions and directors for each of the benchmark years considered in this study.

Insert Table 4 around here

In 1970, the state represented approximately 14% of the GDP and was the largest BG, with 67 affiliated firms. Traditional family-owned BGs, such as the Matte or Edwards family groups, accounted for 26 and 27 firms, respectively. The Banco Hipotecario—a “new,” non-family BG, identified mainly by its remarkable capability to innovate in financial and organizational practices⁵⁶—controlled 26 firms. The remaining groups each contained fewer than 15 firms; for example, the Luksic or Vial Espantoso groups featured 13 and 9 affiliated firms, respectively.

In this period, the state represented an attraction pole, especially in the industrial sector of the economy. Faced with financial constraints and a closed economy, BGs might want to build strong relationships with the government, to ensure they could do business. This drive would increase the centralization of the network, leading relations to converge to the state BG, the most central node in 1970. In Table 4 we detail the degree and betweenness centrality of the state BG over the years. Indeed, the 1970s network has the highest degree centrality, of 7,84.

Specifically, in 1970, the state BG was the most central in terms of betweenness centrality and third in degree centrality, even though it was underrepresented in our sample in 1970 and 1988 (see note on Table 2), because of its high percentage of multiple directors. State-owned enterprises accounted for 28% of the interlockers, which span two or more different groups (the full 1970 sample had 65 interlockers in total), and 30% of the big linkers, which appear in more than two groups. The average number of relations of SOEs’ boards was 3.

With our focus on IDs, we need to understand the structure of the relations we observe between the state BG and private sector BGs. Figure 2 shows the state BG ego network, consisting of the focal node (ego) and the nodes to which it directly connects (alters), plus the ties, if any, among alters. From this figure, we learn that the state BG was connected to 11 of the 18 BGs.

Insert Figure 2 around here

A state that is powerful in the economy generates the potential for cronyism. When the state generates relations with strong BGs, the risks become even more dangerous.⁵⁷ Some of these relationships may be accidental, but more often, and especially considering our previous discussion, the connections represent explicitly fostered and nurtured interactions. During the ISI period, which we observe in 1970, the state, through CORFO, engaged in important relationships with the private sector. The private sector participated directly in the direction of CORFO through different business associations, including the Sociedad de Fomento Fabril, the representative of the Chilean industrial sector.⁵⁸ Thus the industrial development plans designed by CORFO reflected active participation by private businesspeople.⁵⁹ The connections we consider also included the actual management of several SOEs, such that business associations had the right to nominate directors.⁶⁰ The relationship between the private sector and the state during this period thus went well beyond the representation of specific interests to include a direct role of the private sector in several economic policy areas.⁶¹ And yet, it is also interesting to note that the relationship between private BGs and the state-owned bank, Banco del Estado de Chile appears quite weak.

When we consider whether the size of private BGs determines the extent of their relationships with the state BG, we find that the two largest privately owned BGs, Edwards and Matte, cultivated intense relationships with the government, sharing 6 and 5 directors, respectively, with it. Most directors were prominent businesspeople, or CORFO engineers involved in the private business arena. But, at least in 1970, BG size was not the only explanation for strong relationships with the government. The Said group, with only six companies, shared 5 directors with SOEs: these links most likely stemmed from political ties and membership in business associations. Another BG with strong ties with the state was the Angelini group. Despite its small size at that time (four companies), it shared 2 directors with the government. Perhaps less surprisingly, the Banco Hipotecario group (one of the largest private BGs) had a weak relationship with the state in this period, such that they only shared one director. The remaining BGs were connected through weak ties and only shared one director with the state BG.

After the socialist experiment of the Popular Unity government, the change in the economic model since 1973 prompted a radical transformation in the environment faced by Chilean businesses. In this sense, the new economic model led to an entrepreneurial revolution. The rapid liberalization had significant effects on many sectors of the economy that were exposed to significant competition for the first time; it also represented a radical change in the organization of the Chilean economy.

In 1988, once the privatization programs were completed, the state accounted for around 15,9 % of GDP. Thus, it remained the largest BG in terms of number of companies; firms affiliated with the state BG numbered 48 (See Table 4)⁶². According to the official SVS data, traditional BGs such as Matte, Angelini, and Luksic contained 13, 11, and 9 firms, respectively. However, as a consequence of the economic transformation, and the effects of the 1982-1983 economic and financial crisis, the way private BGs interacted

among them and with the state changed significantly.⁶³ During General Augusto Pinochet's rule, the average degree of centrality for all the firms decreased.⁶⁴

The problem of centrality in the board network was especially acute for the state though, in that the boards of SOEs were stacked almost exclusively with senior government officials, who were unlikely to serve as directors of publicly listed companies. The specific year we consider, 1988, was also the year of the Plebiscite that General Pinochet lost, effectively marking the end of military rule. Thus, the military had limited capacity to engage in networking. In this year, the state BG was connected only to the Angelini group. In 1982, the Angelini group acquired CORFO's participation (14%) in COPEC and continued buying shares, to be able to control the company, in 1986. In 1988, Angelini was also the most central group in the network, and Anacleto Angelini, the founder of the group, was reportedly the wealthiest man in Chile.

As noted previously, CORFO had existed for a long time, but in 1997 the state organized a committee, "Sistema Administrador de Empresas," later to become the "Sistema de Empresas Públicas" (SEP), as a holding of companies owned by or in which the state owned a significant share of property. In 1999, the state BG was thus the largest in the country (in number of firms), with 25 affiliated firms. The second biggest BG was Grupo Santander, with 18 affiliated companies, followed by ENDESA and Matte with 16 firms each. Santander and ENDESA both were owned by Spanish multinational enterprises (MNEs), and as noted above we consider them as international BGs. Other BGs with more than 10 affiliated companies were the Luksic and Angelini groups. In this year (1999), we find that SOEs became re-integrated into the network. The state BG was connected to 7 of 74 BGs listed by the SVS. Figure 3 depicts the state BG ego network.

Insert Figure 3 around here

The connections between the state BG and several international BGs are not accidental. During the 1990s Chile received significant investments from abroad, and many MNEs entered the country. As noted above, these companies are registered in Chile, and their relations meet the definition of a BG, so they are labeled as such by the Chilean regulator. It is interesting to note that Spanish firms tended to approach the state to build ties at different levels. For example, they shared multiple directors with SOEs and also solicited the participation of politicians close to the Concertación government.⁶⁵ The remaining BGs were connected through weak ties and shared only one director with the state BG. The average number of relations of SOEs was 0,5.

In 2010, the state BG was again the largest group, with 34 affiliated firms according to the SVS. The second largest BGs were the Marín-Pérez Cruz-Correa and Matte groups, each with 18 affiliated companies, followed by Luksic with 16 affiliated firms, Angelini with 12, and BCI with 10. Thus, traditional family BGs become prominent again, as in 1970. Furthermore, the state BG was connected to 17 of 113 BGs listed by SVS. We provide the state BG ego network in Figure 4. The state BG exhibited strong relationships (more than one shared director) with four BGs: Luksic, CAP, La Polar, and a BG in the utilities sector (Aguas Andinas) controlled by a French MNE. The remaining BGs were connected through weak ties and shared only one director with the state BG.

Insert Figure 4 around here

This period also features a new government political coalition: After 20 years in power, the Concertación (center-left coalition) lost the presidential elections, and the opposition center-right coalition led by President Sebastián Piñera took office. Piñera had a distinguished career as both a politician and a businessman, and the vast extent of his relations was reflected in the overall BGs network, though the network also reflected the institutional changes that led to changes in corporate governance in SOEs in the country. The Piñera administration prompted a professionalization of the boards in SOEs, nominating directors with significant business experience. Although the network of 2010 appears similar to that of 1970, it actually reflected a different process. This fact, and the defeat suffered by the Concertación, led to a sort of “revolving door” phenomena, a possible corporate influence in the political arena that involve the movement of people. BGs executives or directors can and do fill positions in executive branches of government. Conversely, upon completing their service, many former government officials find employment in the BGs. After all, the boards of BGs constitute an especially exclusive position in business realms.⁶⁶

In 2010, SOEs accounted for 13% of multiple directors, many of whom were prominent independent directors (nominated by pension funds), executives, or lobbyists. The importance of independent directors reflects an increasing concern about the problems of corporate governance in Chile. Initially, it focused on private-sector businesses and especially BGs, in an effort to prevent tunneling and other types of exploitation of minority shareholders. But gradually this interest has expanded to include the state BG. The nature of state capitalism in Chile has been changing, but has never been stopped.

Conclusions

In this paper we have examined the evolution of BGs in Chile in the long run, focusing on the relationships between the state viewed as a BG (organizing different SOEs through a quasi holding structure) and privately-owned BGs. Previous studies on IDs in Chile are cross sectional or based on small samples and do not capture the long term evolution of the relationships between BGs. Our study includes a period of political change and institutional and economic modernization, which also involved a transformation in the character of the Chilean entrepreneurial class. By looking at the IDs in four different periods over the last 40 years, we described the formal connections within BGs and, especially, between the private corporate sector and the state. This allowed us to analyse the reproduction and rearticulation of economic elites in this period.

Our findings tend to question the claims of previous literature on the relationship between networks and institutions.⁶⁷ Theory predicts that the propensity of firms to resort to non-market collaborative relationships for inter-firm coordination, such as the sharing of directors, is less used in countries that improve their protection to minority shareholders and modernize their institutional context, as in the case of Chile. While there are significant changes in the nature and relational structure of BGs in Chile, throughout all the

periods analysed, we find a cohesive and dense web of corporate interlocks of the actors that survived.

The different forms BGs may take is a novel issue in the literature.⁶⁸ The Chilean case allows us to view the state as a BG. This is a point that has been overlooked in the literature on business history in Chile. We find that the state BG is a very central actor in the network, highly intertwined with the private groups; thus, in Chile SOEs have represented a significant part of the economy both directly and in terms of their network organization.

Considering the state as a BG suggests that the political economy of BGs is more complicated than what appears at first sight⁶⁹. In this sense our analysis also represents a significant complement to the literature on state capitalism. State capitalism is different across different countries, but also over time in the same country. When we consider the ego network of the state BG we find it takes distinctive forms over the years. Additionally, we find that ties between the private and public sector are present in most of the period analyzed here. Corporate governance improvements such as the emergence of independent directors or the professionalization of SOEs boards rather than reducing the interconnectivity between both sectors, has increased it. All of this points to the recognition of a changing, yet still important role of the state in the Chilean economy which here we are examining through a different point of view.

Our study also shows that the “revolving doors” phenomena is systematic in Chile, as well-connected BGs directors also served as directors in SOEs, and suggests how it varies over time. In this article, we explore a mechanism, IDs, by which BGs and government interests become more closely aligned, namely, through individual appointments in BGs and SOEs boards in Chile. The previously described mechanism not only integrates BGs and SOEs, but also MNEs into local environments⁷⁰. In this sense, our study represents an invitation to consider the nature of capitalist societies more carefully.

Concluding, we have to acknowledge the limitations of our study. Firstly, we only use the board’s networks. Other types of links such as ownership, family, ethnic or professional background might be also important to explain the boundaries and relational structure of BGs⁷¹. Future studies could analyze how IDs structure’s change is affected by other types of networks such as shared ownership, family relationships or membership in social clubs. Secondly, attributes such as the size or the sector of BGs affiliated companies could also affect the structure of the network. Incorporating these aspects more extensively will be part of future work. It might also be interesting to inquire whether these relationships reflect cooperation or collusion between BGs. This is a promising area for future research that is highly relevant from the perspective of public policy.

Appendix I. Network Measures

We used the following measures in this study:

1. Number of connected BGs (and % of total BGs).
2. Number of isolated BGs (and % of total BGs), such that they have no ties to other BGs.
3. Number of marginal BGs (and % of total BGs), which are those with degrees of connection equal to 1 or 2.
4. Isolated and marginal BGs as a percentage of the total number of BGs.
5. The main component, or the maximally connected subnetwork.⁷²
6. Percentage of BGs in main component.
7. Degree centrality, or the number of links of a particular BG. Knowing the number of connections is not enough though, because some connections are better than others, so we complement degree centrality with betweenness centrality.⁷³
8. Betweenness centrality, which indicates the degree to which existing networks provide the BG with paths of communication to other BGs and facilitate the flow of information across boards. A high degree of betweenness centrality, means that the BG is a broker and plays an intermediary role in the corporate world.⁷⁴

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Table 1: Number of BGs according to the SVS

SVS's Report Date	Number of BGs
15-01-1988	12
25-01-1988	12
07-04-1988	12
23-01-1990	26
26-08-1991	30
11-02-1993	47
27-06-1994	58
11-05-1995	60
16-05-1996	71
14-01-1998	71
31-07-1998	71
26-10-1999	74
22-05-2000	74
22-02-2001	70
13-06-2001	82
29-11-2001	80
03-06-2002	85
10-01-2003	86
31-12-2003	91
30-12-2004	100
30-12-2005	110
30-12-2006	118
31-12-2007	117
31-12-2008	117
31-12-2009	112
31-12-2010	113

Table 2. BG's Data Description

Year	# BGs	% of BGs in Previous Year	# Firms	# Firms with Board Information	% Firms with Board Information*	# Directors	Board Size
1970	19		230	114	50%	353	5
1988	13	38%	118	66	56%	259	6
1999	74	18%	352	272	77%	1018	6
2010	113	42%	505	474	94%	1548	6

Source: Own elaboration, from data collected at the repositories mentioned in the sources section.

* The state BG has one of the highest percentages of missing data for 1970 and 1988. We collected information about 28% of SOEs in 1970 and 25% in 1988. Excluding the state BG, the percentage of firms with board information is 58% in 1970 and 77% in 1988. We collected information about 93 % of SOEs in 1999 and 97% in 2010.

Table 3. BG's Network Structure Measures

Year	Marginal BGs	Marginal BGs (%)	Isolated BGs	Isolated BGs (%)	Isolate and Marginal BGs (%)	BGs in Main Component (%)
1970	2	11	0	0,00	11	100
1988	1	8	8	62	69	38
1999	9	14	10	16	30	84
2010	12	11	31	27	38	70

Source: Own elaboration from the data collected at the repositories mentioned in the sources section.

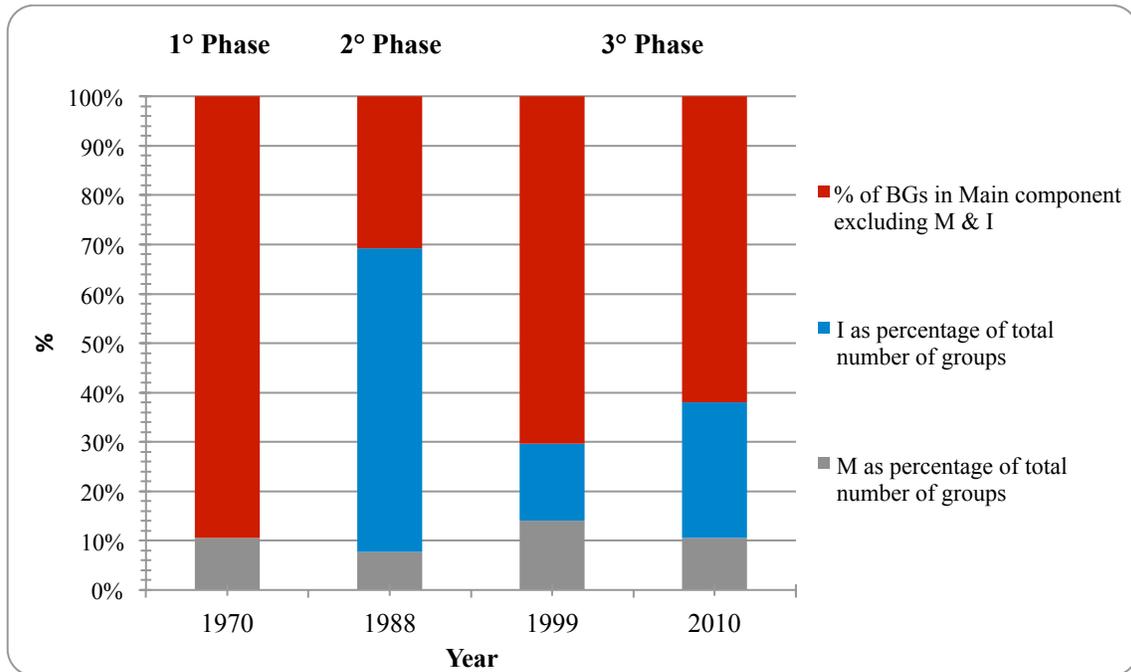
Table 4. Size and centrality of the State BG

Year	State BG GDP (%)	BGs' Affiliated Firms	Board Positions	Directors	Degree Centrality	Betweenness Centrality
1970	14.00*	67	97	88	54 (3 rd of 19 BGs)	27.60 (1 st of 19 BGs)
1988	15.90	48	81	77	1 (5 th of 13 BGs)	0.00 (13 th of 13 BGs)
1999	9.00	27	148	124	12 (28 th of 74)	0.38 (19 th of 74)
2010	NA.	34	177	145	42 (8 th of 113 BGs)	13.20 (4 th of 113 BGs)

Source: Own elaboration from the data collected at the repositories mentioned in the sources section and other sources.⁷⁵

*Value for 1965.⁷⁶

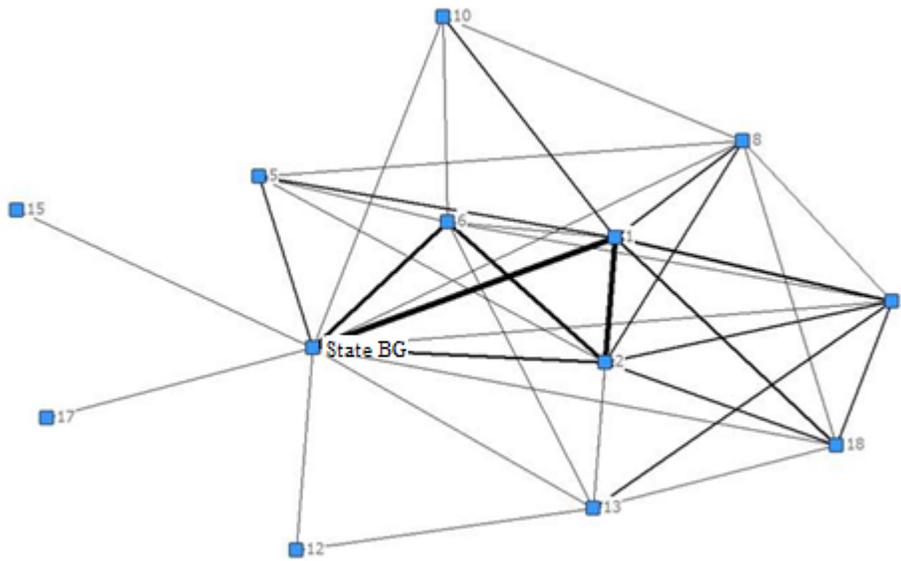
Figure 1. Evolution of the BG Network Structure



Source: Own elaboration from the data collected at the repositories mentioned in the sources section.

Note: Detailed information of this figure is depicted on table 3.

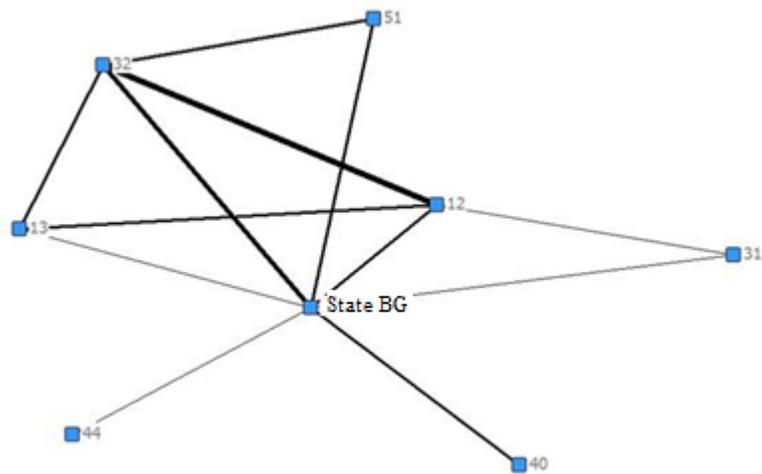
Figure 2. State BG Ego Network, 1970



Source: Own elaboration from the data collected at the repositories mentioned in the sources section.

Note: Edwards (1), Matte (2), Banco Hipotecario (3), Angelini (5), Said (6), Yarur Banna (8), Hirmas (10), Furman Lamas (12), Lepe-Piquer-Lehman (15), Vial Espantoso (17), and Luksic (18).

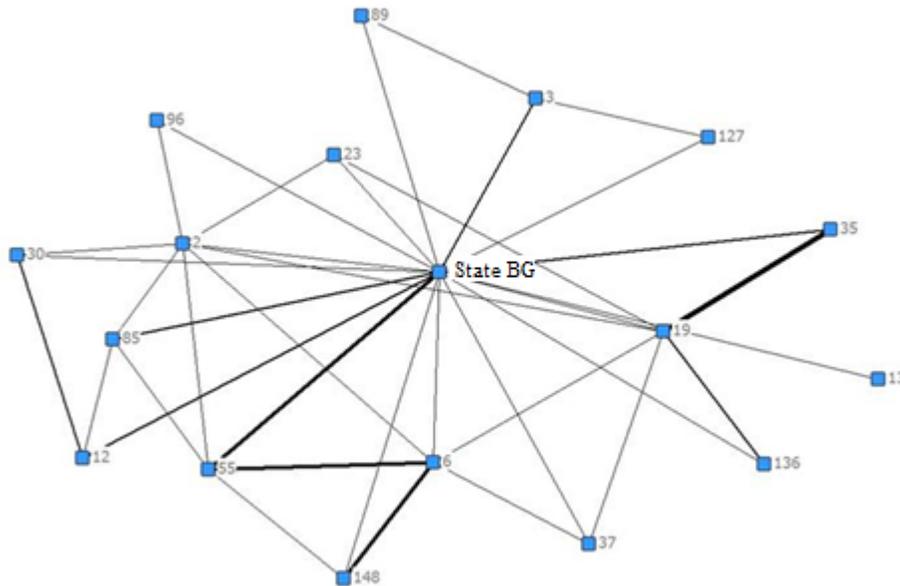
Figure 3. State BG Ego Network, 1999



Source: Own elaboration from the data collected at the repositories mentioned in the sources section.

Note: CAP (12), Forestal Terranova (13); GENER, owned by a U.S. MNE (31); IANSA, controlled by the Spanish MNE Puleva (32); Cruzat (40); Penta (44); and the Banco de Desarrollo (51).

Figure 4. State BG Ego Network, 2010



Source: Own elaboration from the data collected at the repositories mentioned in the sources section.

Note: Matte (2), Luksic (3), Claro (6), CAP (12), BCI (13), Sigdo Koppers (19), Hurtado Vicuña and Fernández León (23), AES Gener (30), Security (35), BBVA (37), La Polar (55), Aguas Andinas (85), Cueto (89), ConCreces (96), Metlife (127), AFP Habitat (136), and Forus (148).

Notes

¹ Colpan et al., *The Oxford Handbook of Business Groups*; Granovetter, 'Business Groups and Social Organization'.

² Khanna and Yafeh, 'Business Groups in Emerging Markets: Paragons or Parasites?', 331.

³ See, for example, Colpan et al., *The Oxford Handbook of Business Groups*; Barbero, 'Business History'; Dávila, 'The Current State of Business History'; Grosse, 'The Role of Economic Groups.'

⁴ Mizruchi, 'What Do Interlocks Do?', 271.

⁵ Mizruchi and Marquis, 'Interlocking Directorates', 375-377.

⁶ Friedman and Jones, 'Business History: Time for Debate'.

⁷ Lluch and Salvaj, 'A Longitudinal Study of Interlocking Directorates in Argentina'.

⁸ Musacchio and Lazzarini, 'Leviathan in Business'.

⁹ Lazzarini, *Capitalismo de Lacos*.

¹⁰ Khanna and Palepu, 'Policy Shocks, Market Intermediaries, and Corporate Strategy', 272.

¹¹ This is the translation from Majluf, et al., 'Governance and Ownership Structure', 112.

¹² Lefort, 'Business Groups in Chile', 395.

¹³ Khanna and Rivkin, 'Interorganizational Ties and Business Group Boundaries', 340.

¹⁴ del Solar, '20 grandes empresas familiares chilenas'. We are grateful to Fernando Lefort for this point.

¹⁵ Lluch, Salvaj and Barbero. 'Corporate Networks and Business Groups in Argentina'.

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- ¹⁶ Borgatti, Everett and Freeman, Ucinet for Windows.
- ¹⁷ Ventresca and Mohr, 'Archival Research Methods,' 818-819.
- ¹⁸ Hachette and Lüders, La privatización en Chile; Garretón and Cisternas, Algunas características del proceso de toma de decisiones en la gran empresa; Movimiento de Acción Popular, Libro de las 91.
- ¹⁹ CEEN-UDD, 'Ranking de Grupos Económicos'.
- ²⁰ Silva Vargas, 'Notas sobre la evolución empresarial chilena'; Couyoumdjian, 'El alto comercio de Valparaíso'; Llorca-Jaña, 'The organization'. As Jones has commented, around the world trading houses evolved "from merchants to multinational; Jones, Merchants to Multinationals.
- ²¹ Rojas, 'Los grupos economicos en Chile' and Islas 'Gobierno Corporativo'.
- ²² For some evidence on the utilities sector, see Nazer, Couyoumdjian, and Camus, Cien Años de Energía en Chile.
- ²³ Lagos, La concentración del poder económico; Zeitlin et al., 'New Princes for Old?'; Garretón and Cisternas, Algunas características del proceso de toma de decisiones en la gran empresa; Dahse, Mapa de la extrema riqueza.
- ²⁴ Zeitlin et al., 'New Princes for Old?', 109.
- ²⁵ Garretón and Cisternas, Algunas características, 31.
- ²⁶ Chumacero et al., 'Understanding Chilean Reforms'.
- ²⁷ Dahse, Mapa.
- ²⁸ Gálvez and Tybout, 'Microeconomic Adjustments'; Khanna and Yafeh, 'Business Groups in Emerging Markets'.
- ²⁹ de la Cuadra and Valdés, 'Myths and Facts'; Lefort and Walker, 'The Effects of Economic and Political Shocks'.
- ³⁰ Hachette and Lüders, La privatización en Chile; Lefort, 'Business Groups in Chile'.
- ³¹ Iglesias, 'Pension Reform and Corporate Governance'.
- ³² Lefort, 'Business Groups in Chile', 390; also Lefort and Walker, 'The Effects of Economic and Political Shocks'.
- ³³ Lefort, 'Business Groups in Chile'.
- ³⁴ Paredes and Sanchez, 'Grupos Económicos y desarrollo'.
- ³⁵ Majluf et al., 'Governance and Ownership Structure', Khanna and Palepu, 'The Future of Business Groups'; Lefort and Walker, 'Ownership and Capital Structure of Chilean Conglomerates'.
- ³⁶ Leff, 'Industrial Organization and Entrepreneurship'; Khanna and Palepu, 'The Future of Business Groups'.
- ³⁷ Mizruchi, 'What Do Interlocks Do?'
- ³⁸ Lluch, Salvaj, and Barbero, 'Corporate Networks and Business Groups in Argentina'.
- ³⁹ Scott, 'Theoretical Framework and Research Design'.
- ⁴⁰ Lagos, La concentración del poder económico; Zeitlin and Ratcliff, Landlords and Capitalists; Garretón and Cisternas, 'Algunas características del proceso de toma de decisiones en la gran empresa'.
- ⁴¹ Zeitlin and Ratcliff, Landlords and Capitalists, 8.
- ⁴² Salvaj, 'Cohesión y homogeneidad', 61.
- ⁴³ Bucheli and Salvaj, 'Adaptation Strategies'.
- ⁴⁴ Silva, 'Business Elites, the State, and Economic Change in Chile'.
- ⁴⁵ Brookfield et al., 'Liberalization, Network Dynamics, and Business Groups'.
- ⁴⁶ Given the relationships between different local companies owned by these MNEs, they are labeled as BGs by the Chilean regulator.
- ⁴⁷ Khanna and Yafeh, 'Business Groups in Emerging Markets'; Majluf et al., 'Governance and Ownership Structure'.
- ⁴⁸ Six BGs appeared in three of the four benchmark years (Guilisasti, Errázuriz, Yarur, Briones, Marín-Correa, and Claro). It is interesting to note that some of these groups existed in 1970, and probably throughout the whole period, but were not classified as such by the Chilean SVS. Forty three appeared in two benchmark years, and ninety seven BGs were present in only one period each.
- ⁴⁹ Bortolotti and Perotti, 'From Government to Regulatory Governance'.
- ⁵⁰ The Economist, 'State Capitalism Is Not All the Same'.
- ⁵¹ For an interesting historical analysis of some of these issues, see also Frieden, 'The Modern Capitalist World Economy'.
- ⁵² Musacchio and Lazzarini, 'Leviathan in Business', 3-4.
- ⁵³ Ibañez, Herido en el ala.

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- ⁵⁴ Hernán Briones refers to these problems when he recalls the founding of Cementos Bío Bío in the late 1950s. See Briones, 90 años de historia.
- ⁵⁵ Muñoz and Arriagada present a list of the investments undertaken by this organization in 1943; see 'Orígenes políticos y económicos', 5-58.
- ⁵⁶ Garretón and Cisternas, Algunas características, 74-77.
- ⁵⁷ Khanna and Yafeh, 'Business Groups in Emerging Markets'.
- ⁵⁸ Ortega, Corporación de Fomento de la Producción.
- ⁵⁹ Ibáñez, 'El liderazgo de los gremios empresariales'
- ⁶⁰ On these points, see for example the histories of the Banco del Estado de Chile and the Compañía de Aceros del Pacífico: Echenique and Rodríguez, Historia de compañía del acero; Cordero, Historias del Banco del Estado de Chile.
- ⁶¹ Menges, 'Public Policy and Organized Business in Chile'.
- ⁶² When in 1991 the Chilean state was first classified as a BG, it had much fewer associated firms; the state BG was presented closer to its actual size in 1996, when the SVS assigned it 23 affiliated companies.
- ⁶³ Montero, La revolución empresarial chilena; Larraín and Vergara, La transformación económica de Chile.
- ⁶⁴ Salvaj, 'Cohesión y homogeneidad'.
- ⁶⁵ Bucheli and Salvaj, 'Embrace Your Enemy'.
- ⁶⁶ Etzion and Davis, 'Revolving Doors', 1. This type of analysis is also possible in the context of the military government. After all, one should recall that many members of the economic team in the Chilean military participated in the private sector since the 1980s, and many have been board members of important BGs.
- ⁶⁷ Hoskisson, et al., 'Strategy in Emerging Economies'.
- ⁶⁸ Colli, Rinaldi and Vasta, 'The Only Way to Grow?'
- ⁶⁹ Khanna and Yafeh, 'Business Groups'.
- ⁷⁰ For comparative studies, see Bucheli and Salvaj, 'Multinacional corporations'; Lluch and Salvaj, 'A Longitudinal Study of Interlocking Directories in Argentina'; and Lazzarini, Capitalismo de Lacos.
- ⁷¹ Khanna and Rivkin, 'Interorganizational Ties and Business Group Boundaries'; Pak, Gentlemen Bankers; Lluch, Salvaj, and Barbero, 'Corporate Networks and Business Groups in Argentina'.
- ⁷² De Nooy et al., Exploratory Social Network, 318.
- ⁷³ Wasserman and Faust, Social Network Analysis.
- ⁷⁴ Ibid.
- ⁷⁵ Hachette and Lüders, La Privatización en Chile; Serra et al., 'The Effects of Privatization'.
- ⁷⁶ Hachette and Lüders, La Privatización en Chile.