OWNERSHIP STRUCTURE AND PERFORMANCE: EMPIRICAL EVIDENCE FROM CHILEAN FIRMS

Francisca Silva*, Nicolás Majluf** and Ricardo D. Paredes **

Abstract

This paper analyses the effect of ownership structure (represented by the concentration of the economic rights of the majority shareholder, and the affiliation to a business group) on performance. From a cross-section of publicly traded Chilean firms in the year 2000, we find evidence that the effects on performance depend on ownership concentration in a non-linear way, showing the changing balance of two opposing economic forces: value creation and value expropriation by the controlling shareholder. For the entire sample, the mere fact that a firm is owned by a business group does not affect performance.

Keywords: Ownership structure, business groups

** Corresponding author. Department of Agricultural Economics, Pontificia Universidad Catolica de Chile, V. Mackenna 4860, Santiago, Chile Tel.: 56-2-6864180. E-mail address: fsilvat@puc.cl*
***School of Engineering, Pontificia Universidad Catolica de Chile*

1. Introduction

The ownership structure of firms in emerging countries is quite different to that prevailing in developed countries, particularly the Anglo-Saxons, because it is considerably more concentrated and a high percentage of corporations are controlled by business groups. These are characterized by the common ownership of several companies by an individual, family or coalition of families. The high ownership concentration would be beneficial for the firm if it increases the incentives of the controller to improve the performance of the company. However, when minority control structures exist, high concentration of voting rights comes together with low economic rights. In this case, the controlling shareholder has incentives to extract value from the firm, hurting the position of other shareholders.

Also, the performance of a firm changes when it is rooted in a Business Group. The result may be positive when the diversification of the activities of the group leads to the creation of internal markets for factors of production, making possible a more efficient allocation of resources and the realization of economies of scale and scope[1]. Alternatively, the outcome might be negative if the Business Group takes advantage of its condition to expropriate minority shareholders, even at the expense of overall efficiency[2]. Both effects could coexist, so the net effect is not clear, at least theoretically. The purpose of this article is to assess the effect of the ownership structure in the performance of companies in an emergent country. The ownership structure is summarized in this paper in terms of two dimensions: i) the concentration of the economic rights of the majority shareholder and ii) the affiliation to a business group. The sample is taken from publicly traded Chilean firms in the year 2000.

The paper is structured in four sections besides this introduction. In the second, we review the relationship between ownership structure and performance and we show, in broad terms, the different ways in which a business group could affect performance. The third section presents the methodology and the data, the fourth the results and the fifth the conclusions.

2. Corporate governance and performance

Different types of organizations prevail in modern economies, such as family businesses, corporations,

[1] Two examples: (1) In presence of transaction and information costs, firms belonging to an economic group could have access to cheaper financing, and (2) The managerial talent could be jointly trained for all the companies of the group and transferred among them.

[2] Examples of this are the expropriation of business opportunities by the firm's majority shareholders (MS), the use of transfer prices that favor MS (exploiting business relationships with other companies controlled by them, or transferring assets to them at values below the prevailing market prices), getting a loan for the personal use of MS using the firm's assets as collateral, the payment of special dividends to themselves, and the approval of investments that benefit them at the expense of minority shareholders.

Government-owned firms, and cooperatives. The structure and organization of the economic activity, and the specific institutional form adopted by a firm depend on the objectives pursued and on the associated costs, particularly transaction and agency costs (Alchian and Demsetz, 1972).

Family businesses, for example, are better than non-family firms at aligning the objectives of owners and managers (because they are either the same individual or they have a kin relationship), but they are usually less competent at selecting their employees. Also, the prevalence of trust renders external controls (like accounting data or audits) less necessary, but this obstructs the access to external financing and becomes a constraint that hinders growth.

On the other hand, corporations are favoured because they are open to any individual willing to become a shareholder, their shares are amply traded in the market, and they must meet exacting regulatory requirements. However, they do have problems, mainly the agency relations among owners, managers and employees (their objectives are not aligned, and it is expensive for the owner to monitor managers and employees' actions[3])

These organizations may adopt varied forms of ownership structure. In this paper, ownership concentration[4] and affiliation to a business group are the two indicators used to analyze the impact of ownership structure on performance.

2.1. Ownership concentration

A high ownership concentration affects the performance of a firm in two opposing ways. On the one hand, the presence of a majority shareholder may increase the market value of a firm, or it may lower it.

Many reasons have been given to explain why an increase in ownership concentration may be beneficial for the firm, such as: it lowers the incentives to extract private benefits by controlling shareholders (Jensen and Meckling, 1976), reduces the biases favouring short-term over long-term projects (Bebchuk, 1999), and increases the incentives to invest in human capital specific to the firm (Burkhart, Gromb, and Panunzi, 1997). There are clear incentives for majority shareholders to become actively engaged in the management of the firm, gathering information, monitoring management, and doing whatever is deemed necessary to improve performance, because the effect of this effort will revert mainly to them. This is not the case when the property rights are dispersed among many small shareholders. No one has clear incentives to act, because their costs are higher than the benefits they get. The "free-rider" problem affects their capacity to take decisions.

But, alternatively, there are reasons to expect that ownership concentration may reduce the value of the firm. This may be the case when a "minority control structure" prevails, that is, when the voting rights of controlling shareholders are higher than their economic rights. Voting rights refers to the percentage of votes in the hands of the controlling shareholder that can be applied to the nomination of board members; economic rights instead, are rights to the cash flows and dividends of the firm. In this situation, majority shareholders have positive incentives to extract or transfer value away from a firm, because the benefits they get are larger than the costs they incur. This is prevalent among business groups.

There are several ways in which business groups can get voting rights in excess of their economic rights. For instance, they can organize the ownership of firms in a pyramid structure, they can hold different kinds of stocks, or they can have cross ownership of firms (Bebchuk, Kraakman and Triantis, 1999). Any of them could ensure control without a majority ownership[5]. The effect of these practices on performance has been analyzed by Claessens et al. (2000), who found that firms in a Business Group create a lower value than the industry average. This outcome would be the result of the gap between voting rights and economic rights. A larger gap implies a higher risk of expropriation by controlling shareholders, and a consequently lower value of the firm against the industry.

However, expropriation incentives are somewhat offset by market mechanisms that penalize those who take advantage of shareholders that don't exercise direct control. Special mention must be made of the loss of reputation and credibility of the controlling Business Group, which could hinder its access to financial markets and to other resources, and jeopardize its survival. Also, actions that reduce the value of the firm induce hostile acquisitions and the eventual dismissal of managers exhibiting questionable behaviours (Jensen, 1988)[6]. As a demonstration of self-restraint, a number of

[3] For example, the asymmetries in the information managers have could affect the investments of the firm (Myers and Majluf, 1984).

[4] Ownership concentration has been extensively analyzed in the literature to find the factors that explain it. See for example Demsetz (1983), Demsetz and Lehn (1985), Bergstrom and Rydqvist (1990), Gerson and Barrs (1991), and Prowse (1992). For the case of Chile see Paredes and Flor (1993).

[5] For a specific study of different class of stocks and examples of forms of control in Chile, see Raineri (1999).

[6] However, there are problems to fully validate the operation of these market mechanisms. This is the case when controlling shareholders implement mechanisms that limit the transfer of control, like "poison pills" and others. Furthermore, the monitoring performed by Business Groups is not as effective under some regulatory regimes. Edwards and Edwards (1987), and Harberger (1983) find that for higher

business groups maintain minority control structures on the firms they manage, but at the same time they implement mechanisms to put a limit on expropriation (see for example Majluf et al., 1998, Khanna and Palepu, 1999, Khanna and Palepu, 2000b, Lefort and Walker, 2000).

The initial question is not settled. We can not ascertain if ownership concentration helps or hinder performance. Demsetz and Lehn (1985) define a linear model linking ownership concentration and return on equity (ROE), and find no significant relationship. Mork et al. (1988) obtain a different result when using a non-linear specification of the model. They find a significant relationship between ownership concentration (measured as the fraction of the firm owned by board members) and market value[7]. A similar result was obtained by McConnell and Servaes (1990), who also use a non-linear relationship. Likewise, Xu and Wang (1997) find a positive and significant relationship between ownership concentration and performance in China, and Lopez and Saona (2005) find that the ownership concentration reduces the managers' discretionary behaviour in a sample of Chilean firms.

Demsetz and Lehn (1985) also suggest that ownership concentration might not be an exogenous variable, but the result of the firm's decision process. Cho (1998), based on this idea, finds that the market value of the firm has an effect on ownership structure, but not the other way around. A similar result was derived by Demsetz and Villalonga (2001). They measure ownership concentration in two different ways: as the fraction of the firm in the hands of the five largest shareholders, and as the fraction owned by the CEO. They find that both indicators are a consequence of the firm's performance. To explain this result, consider, for example, the preferential access to privileged information enjoyed by the largest shareholders that provides them with clear incentives to trade, thus affecting their stock ownership and, consequently, concentration. Also, the usual practice of compensating managers with stock options is another reason to expect inverse causality, because performance has an effect over ownership concentration. From their study, these authors conclude that causation would not operate in the opposite direction, that is, from ownership concentration to performance.

More recently, Anderson and Reeb (2003) cast a doubt on the direction of causality. They find that ownership concentration affects performance in family firms. The fact that families maintain their stock holdings for long periods (in their sample, 75.9 years) suggests that if performance drives ownership concentration, families would have an exceptional ability to foresee the future of the firm. Although the authors could not discard this possibility, they establish that performance is affected by ownership concentration in a non-linear way, and they add that the active involvement of the family in management responsibilities is positive for the firm

2.2. Affiliation to a business groups

Business groups are an organizational form particularly prevalent in developing countries. Leff (1978) provides a first general definition of them. He identifies three fundamental characteristics: a shared administration of diverse companies in several economic sectors (conglomeration), their integration to the financial sector, and the relationship among companies through a common family ownership. A Business Group is distinguished from a loose collection of companies united by financial ties, like the conglomerates in the United States, by the presence of a well established social structure among participating firms (Granovetter, 1994). In Chile, business groups are defined by the Law as a collection of legal entities which share ownership, administration or credit responsibility ties of such a nature, that there is ground to believe that their economic and financial behaviour is guided by common interests, or that their financial risks of debt and equity are interconnected[8]. The Chilean SEC elaborates a listing of the economic groups on a regular basis, and as we can observe in Figure 1, these have more that doubled since the beginning of the nineties.

Business groups can have a positive impact on performance if they can put together internal markets to make up for deficiencies in the operation of open markets which are common in developing economies. Paredes and Sánchez (1996), and Khana and Palepu (1999) have found that this result holds in many developing countries, among them Chile. The same result is obtained by Claessens et al. (1999) in their study for East Asian business groups. They find that the affiliation of a firm to a Business Group contributes

ownership concentration, a lower financial monitoring is evidenced in the Chilean case.

[7] Their results suggest that when ownership concentration is low, its growth increases the market value of the firm, because there is a better alignment of the interest of all shareholders. At higher levels of concentration, this is no longer true, because controlling shareholders will have enough voting power or influence to guarantee their position, making them less subject to market discipline, thus reducing market value. At very high levels of ownership concentration, the incentives to follow this behavior stay the same, while the interests of controlling and minority shareholders become better aligned, increasing market value again.

[8] Ley 18.045 Mercado de Valores (free translation). A singularity of this market is that banks are not allowed to hold shares of other firms. This regulation is the result of the great economic crisis of 1982, which was partly generated by the behavior of the most important Business Groups at that time.

positively to performance only in developing economies of East Asia and not in the most developed ones. Finally, although business groups and American conglomerates are different, and sweep generalizations may not be valid, it should be pointed out that these results are consistent with the negative value contributed by conglomerates in USA (Baker, 1992).

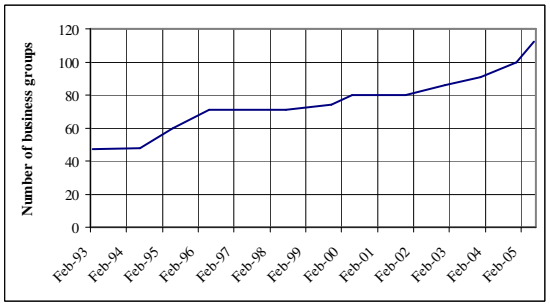


Figure 1. Number of business groups in Chile

Different reasons are given to explain why business groups can improve performance when addressing the problems of incomplete markets. In the first place, the ties of group members enable them to carry out coordinated actions, reducing transaction costs, and generating economic and social benefits that make membership attractive. Lightfoot (1991) finds that firms belonging to Japanese keiretsus get considerable efficiencies in their transactions, due to the linkages generated by cross properties, and the sharing of information and human capital.

Secondly, corporate diversification would facilitate the transfer of resources to divisions with better opportunities (Zingales, 2000). This is precisely the argument used by Khanna and Palepu (1997) to explain the success of the big and diversified business groups in developing economies. Finally, many of the institutions present in developed countries don't exist or work poorly in the emerging ones. This makes the access to advanced technology, cheap financing, sophisticated management knowledge and other factors of production more difficult. The group compensates for these deficiencies, thus giving rise to operational synergies related with the scale and scope in products and factors markets. The alternative view is that business groups affect adversely the performance of firms, because they aim at extracting or transferring value away from minority shareholders. For instance, the controlling shareholders could embark on projects that reduce the value of a particular firm to get a higher benefit at the corporate level, or they could invest to increase the size of the organization, just because they receive a compensation associated with sales volume[9].

Also, when using transfer prices that are not in line with market prices or the opportunity cost of firms, economic rent can flow away to organizations where the benefits of the controlling shareholders are larger

3. Methodology and Variables

3.1. The Model

For the empirical analysis of the effects that the ownership concentration and the affiliation to a Business Group have over the performance of the firms, the model that has been used in this paper can be expressed in the reduced form as

$$Y = f(\alpha, G, C) \quad (1)$$

where:

Y= Measure of the firms' performance

α= Economic rights concentration of controlling shareholders (may be a Business Group)

G = Dummy variable that equals one when the firm is owned by a business group

C= Statistical control variables: firm size, leverage and industry

The first term (economic rights concentration of controlling shareholders) acts in two opposite ways over performance

On the one hand, the value appropriated by controlling shareholders increases with concentration, this having a positive impact on performance, because the interests of all shareholders are in agreement; on the other, the likelihood of expropriation also increases, this having a negative impact on performance, because the interests of minority shareholders are not taken proper care of.

The second term captures the net effect of the ownership by a business group.

3.2 Data and Variables

The sample includes all the 177 non-financial Chilean corporations that were traded during the year 2000. For them, ample public information is available. Accounting data for that year (balance sheet and income statement) were obtained from the Chilean SEC, and stock prices from the Santiago Stock Exchange. The identities of controlling shareholders as well as the private societies they use to control their companies were obtained from the annual reports of all firms in the sample, and from

[9] See Shleifer and Vishny, 1997, Carlin and Mayer, 1999, and Johnson et al., 2000.

the 20-F forms filed with the Securities and Exchange Commission (SEC) when firms were also traded at the New York Stock Exchange.

Finally, the identity of relatives in the board was obtained from the press, and from annual reports, which provide detailed information of all transactions with related parties, as required by the Chilean Law.

a) Ownership Concentration

The basic information of ownership provided by the Chilean SEC contains the identities of the 12 largest shareholders for all publicly traded firms.

In general, the shareholders on those records are publicly-traded or privately-controlled firms, so their owners also need to be identified, as well as the owners of these and so on, until we get to the final controller (that can be a person, a family, a group of families, a foreign firm or a Chilean firm whose property is widely-held). With this information, we identify the ownership structure of all firms in the sample, determine ownership concentration, and set up the matrices with interlocking information.

In this study we measure ownership concentration as the total economic rights (α) held directly or indirectly by controlling shareholders[10]. This departs from previous studies, which use voting rights held by controlling shareholders as the measure of ownership concentration. Economic rights are estimated from the available information as the share of total dividends paid by a firm that controlling shareholders get, and we think they are more closely associated than voting rights with the incentives the controller has. We include voting rights among the descriptive statistics of the sample. Voting rights for a given firm (γ) are obtained by adding the rights of all companies (public or private) that hold shares of that firm and, simultaneously, are managed by the same controlling shareholders. When there is more than one class of shares with different privileges, the computation of voting rights gives adequate weighting to each one of them to properly represent their relative influence when choosing board members. Ownership concentration may be somewhat underestimated, since some share holdings of the Business Group might not be included among the 12 largest, but this should not be a relevant number, because the twelfth shareholder has on average only 0.6% of outstanding shares and the entire group of 12 largest shareholders holds 86% of the company stock.

b) Performance

To measure performance we use a proxy of Tobin's q, defined as:

$$Q = \frac{market\ value\ of\ equity + book\ value\ of\ debt}{book\ value\ of\ assets},$$

The market value of equity is estimated using closing prices for shares on the last trading day of the year. The firm's return on assets (ROA) was also considered as an alternative performance measure. It is defined as:

$$ROA = \frac{profits + [rate\ of\ interest * (1-t)]}{assets}$$, where t is the tax rate.

c) Business group affiliation

Business Group's affiliation was derived primarily from the Chilean SEC, which maintains updated records with this information. Also, complementary data from annual reports and the press were obtained. For this paper, two or more corporations were included in the same Business Group if they had common controlling shareholders. Also, when a corporation controls another corporation, both are included in the same Business Group. So, out of the 177 companies in the sample, 114 belong to business groups.

d) Statistical control variables

The empirical analysis is done controlling statistically for the impact that other characteristics of the firm may have over performance. The variables used for this purpose are firm size (measured as the logarithm of the book value of assets), leverage (measured as the logarithm of the ratio between the book value of total debt and the book value of equity), and industry affiliation, defined at the level of two digits of the Chilean SIC.

3.3. Summary Statistics

We report in Table 1 some summary statistics for a variety of attributes of the total sample, and of group-affiliated and non-affiliated firms. It is apparent from the table the high concentration of ownership and control in Chilean firms. On average, controlling shareholders hold 53% of economic rights (α) and 65% of voting rights (γ). Also, firms affiliated to business groups are bigger, have smaller Tobin's q and show a higher return on assets (ROA) than non-affiliated firms.

The sample was divided in three categories (low, medium and high), depending on the concentration of economic rights, as shown in Table 1. The same was done for voting rights. The two breaking points are derived from requirements set in the Chilean law. It considers that a corporation doesn't have a controlling shareholder when economic rights concentration is below 25.

[10] Indirect ownership refers to shares of the firm that belong to other companies managed by the controlling shareholder.

Table 1. Descriptive Statistics

	Number	Assets* (US$)	Debt/ Equity	Tobin q	ROA	α	γ	α/γ
Total sample	177	394,653	0.57	1.01	0.04	0.53	0.65	0.83
Group-affiliated firms	114	518,635	0.58	0.97	0.06	0.49	0.67	0.74
Non-affiliated firms	63	170,304	0.57	1.10	-0.01	0.59	0.60	0.99
Low concentrated (α < 0,25)	28	397,985	0.49	1.04	0.05	0.14	0.43	049
Medium concentrated (0,25 < α < 0,66)	89	497,513	0.58	1.02	0.06	0.47	0.60	0.82
Highly concentrated (α > 0,66)	60	240,522	0.60	0.99	0.00	0.79	0.81	0.98
Low concentrated (γ < 0,25)	10	258,826	0.25	1.17	0.01	0.14	0.16	0.94
Medium concentrated (0,25 < γ < 0.66)	82	561,984	0.55	1.01	0.06	0.42	0.52	0.82
Highly concentrated (γ > 0,66)	85	249,207	0.64	1.00	0.02	0.67	0.82	0.39

* The rate of exchange used is 572.7 CH$ for 1 US$ (observed on 12/29/2000)
α = Economic rights concentration
γ = Voting rights concentration
ROA = Return on Assets

Above that level, any person or company intending to take control of a firm has to make a public tender offer. Also, if for any reason concentration exceeds 2/3, the controlling shareholder should make a public tender offer for the remaining shares. We can observe that the Tobin's q falls when increasing the concentration of both economic and voting rights, while the ROA initially goes up and then goes down. As expected, the highly concentrated companies are smaller in size and have a higher debt-equity ratio.

4. Results

Equation (1) relates concentration of economic rights (α) with performance measured by a proxy of Tobin's q. This relationship is generic, so a specific functional form has to be stated for α. We tried different functional forms to properly represent the balance between the two opposing forces that affect performance: creation and expropriation of value. We finally opted for a piecewise definition, similar to the one used by Mork et al. (1988), which breaks up concentration of economic rights in terms of three categories: Low, Medium, and High. The two break points separating these categories need to be estimated from the data. They are designated as α_{lm}, and α_{mh}, for the separation between the low and medium, and the medium and high categories respectively. The piecewise specification of α is:

Low	$= \alpha$	if $\alpha < \alpha_{lm}$
	$= \alpha_{lm}$	if $\alpha > \alpha_{lm}$
	$= 0$	if $\alpha < \alpha_{lm}$
Medium	$= \alpha - \alpha_{lm}$	if $\alpha_{lm} < \alpha < \alpha_{mh}$
	$= \alpha_{mh} - \alpha_{lm}$	if $\alpha > \alpha_{mh}$.
High	$= 0$	if $\alpha < \alpha_{mh}$
	$= \alpha - \alpha_{mh}$	if $\alpha > \alpha_{mh}$

Concentration of economic rights is now equal to the sum of the Low, Medium, and High variables. If its relationship with performance is not the same at different levels of concentration, the coefficients that relate these variables with Tobin's q will be different.

To estimate the two break points (α_{lm} and α_{mh}) we use a grid search technique. This requires looking first for the level of economic rights concentration that produces the most significant slope coefficient on the first variable in the regression (Low), setting α_{lm} at this level. Then we search for the second level of economic rights that yields the most significant slope coefficients on the second and third variables in the regression (Medium, and High respectively), setting α_{mh} at this level. These two values are used as initial points in an iteration process aimed at determining the two levels of economic rights that provide the most significant slope coefficients on the three concentration variables simultaneously.[11]

The results obtained for the break points are 21% and 74%, which are consistent with the ones defined as critical by the Chilean Law. Now it is possible to test the impact on performance of different levels of concentration of economic rights.

[11] We also perform the Hausman test for checking the endogeneity of ownership concentration. This was done running an auxiliary regression. Three additional variables correlated with the concentration of economic rights but not with the error terms of the performance equation were included to run the regression: the stocks' share in Pension Funds portfolios, the logarithm of the standard deviation of ROA and a dummy that controls for regulation. Then, the regression was run in a two-step OLS process. In the first, the concentration of economic rights was expressed as a function of all exogenous variables and the three additional variables above, and the residuals retrieved. In the second, the residuals of the first regression were included as a new independent variable. The regression coefficient on these residuals was not significantly different from zero, indicating that the hypothesis of consistency of the OLS estimators could not be rejected.

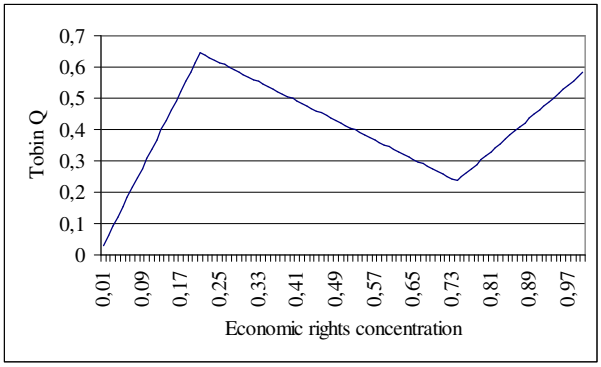
Table 2. Regressions on Performance
(Dependent Variable Tobin's q, OLS Piecewise)

Constant	Low	Medium	High	Size	Leverage	Group	Industries Dummies	R^2 Adjusted	F	N
1.293* (2.04)	3.072* (2.05)	- 0.772* (-2.43)	1.330 (1.46)	-0.036 (-1.14)	0.038 (1.21)	-0.049 (-0.47)	Yes	0.099	1.638	176

Test t in parenthesis; † p< .10;* p< .05;** p< .01

The results shown in Table 2 reveal that the coefficients of the variables Low, Medium and High are quite different. At low levels of concentration of economic rights (under 21%), this variable has a significant and positive impact on performance; at medium levels (between 21% and 74%), added concentration reduces performance in a significant way; and at high levels (over 74%), the impact is again positive but not significantly different from zero (Figure 2).

Figure 2. Changes of Performance with Ownership Concentration



These results are in line with expectations. To explain them, we need to consider the two forces that pull the impact of economic rights concentration on performance in two different directions: value creation (which favours all shareholders equally), and value expropriation (which hurts minority shareholders). At low levels of economic rights concentration (under 21%), results show that the increase in value is larger than the effect of expropriation, probably because monitoring by other shareholders is closer and more effective. At medium levels of economic rights concentration (between 21% and 76%), expectations are that controlling shareholders are progressively less monitored by the market, making expropriation more likely. Finally, at high levels of economic rights concentration (over 76%), the incentives controlling shareholders have to extract private benefits get smaller, because mainly themselves assume the costs of their actions.[12] These results are in line of those found by Mork et al. (1988) for the United States, though the break points are much smaller in that case (5% and 25%)[13] . The coefficient of affiliation to a business group is not significant, which means that there are not significant differences between the performances of firms that are affiliated to business groups from the ones that are not. Although similar results have been reported in the literature[14], this is a surprising observation, because in later years we have observed a steady increase of business groups in Chile, suggesting that there are benefits to be derived from them (Figure 1). In another study (Silva, Majluf and Paredes, 2005) we find that the impact of groups on performance is significant, but its influence is derived from specific elements of their corporate governance (interaction between the ownership control structure and social ties) and not just from firm affiliation. The coefficients for the two control

[12] Similar conclusions are obtained when using voting rights as a measure of ownership concentration, but results are less robust.

[13] This may be the result of structural differences, like the much larger ownership concentration in Chile as compared to the United States due to the smaller protection got by investors (La Porta et al., 1999).

[14] Khanna and Palepu (2000b) did not find an effect on performance of affiliation to a Business Group in 6 of the 9 years included in their study.

variables used in this study, size and leverage, are not significant.

5. Conclusions

This paper refers to the Chilean market. We think it is an interesting addition to the literature on corporate ownership, because Chile has an institutional system that in many ways is patterned after the Anglo-Saxon, but it has peculiar characteristics (shared with other emerging markets) that make it work in a quite different way. The main evidence of this is the high ownership concentration and the prevalence of business groups.

This leads to a novel interpretation of the principal-agent problem. While in developed markets the focus in on the relationship between shareholders and managers, in developing markets the focus shift to the relationship between majority (controlling) and minority shareholders. In particular, the ability those majority shareholders have to expropriate value from non-controlling shareholders.

Our results are consistent with previous work in this area. We find evidence that the effects on performance depend on ownership concentration in a non-linear way. First performance increases and then decreases with ownership concentration. This shows the changing balance of two opposing economic forces: value creation and value expropriation by the controlling shareholder.

When ownership concentration is below 21%, performance increases. One interpretation of this finding is that at that when concentration increases within this range, controlling shareholders are more disposed to carry out activities that improve the performance of the firm (like using synergies, gathering and sharing information, pooling supplies, and many others), without making use of expropriation practices, because there is a higher monitoring of the majority shareholder by other relevant shareholders. Non-controlling shareholders have an important say in the monitoring of activities by controlling shareholders that may lead to expropriation.

On the other hand, when the concentration of economic rights is in the range from 21% to 74%, performance goes down, probably because the expropriation effect overcomes the value creation as the monitoring by other shareholders gets weaker. The observed results are not necessarily indications of inefficiency or less-than-optimal behaviour in the management of the firm by controlling shareholders, since they may be trading profits in the firm for other private benefits.

For ownership concentration levels higher than 74% the expropriation incentives are less important, because the costs of expropriation are borne in an increasing proportion by controlling shareholders themselves.

Finally, the other important result from this paper is that the mere fact that a firm is owned by a business group does not affect performance. This is a surprising result that does not help to understand the steady increase of business groups in Chile. In fact, affiliation to business groups has by and large been considered a key variable for explaining the performance of a firm. But this is not apparent in an average measure of their impact. To better understand this finding it is necessary to look in more detail at the specific elements of corporate governance used by different business groups.

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