

Ownership concentration and accounting performance.
The Latin-American case

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**Ownership concentration and accounting performance.
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Abstract: This paper studies the effects of ownership concentration on the accounting returns for a panel of 532 publicly listed Latin-American firms between the years 1999 and 2003. The firms are from five countries: Colombia, Brazil, Chile, Peru and Venezuela. The results, for a model that assumes variables independence, indicate a positive effect of ownership concentration on performance, and an effect, weaker, but still positive of performance on the ownership concentration. Under an approach of simultaneous equations, the effect of ownership concentration on performance is negative, and the effect of performance on ownership concentration, vanishes. The relationship between ownership concentration and performance suggests an entrenchment effect of controlling shareholders that hinders the competitiveness of the sampled firms.

Resumen: Este artículo estudia los efectos de la concentración de la propiedad sobre el desempeño contable en un panel de datos de 532 empresas entre los años 1999 y 2003 de cinco países latinoamericanos: Colombia, Brasil, Chile, Perú y Venezuela. Los resultados, en una aproximación que asume independencia entre las variables, soportan un efecto positivo de la concentración de la propiedad sobre el desempeño y un efecto, más débil, también positivo, del desempeño sobre la concentración de la propiedad. En un contexto de ecuaciones simultaneas, el efecto de la concentración de la propiedad en el desempeño se torna negativo, mientras que el efecto positivo del desempeño sobre la concentración de la propiedad se desvanece. La relación de la concentración de la propiedad con el desempeño sugiere un atrincheramiento de los accionistas controlantes que vulnera la competitividad de las empresas de los países de la muestra.

Key words: Ownership concentration, firm performance, corporate governance.

JEL Classification: G32, O54

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1.- Introduction

The agency conflict is the base of the studies that link ownership concentration with performance. Smith (1776) describes the interests' conflict between the owners (principals) and the managers (agents), when he points to the managers' lack of diligence whenever they are not owners at the same time. Jensen and Meckling (1976) illustrate the presence of private benefits of control and the agency costs whenever the manager is not an owner with 100% ownership. They conclude that it is beneficial for the firm to assign ownership rights to the manager, aligning his incentives with the wishes of the owners. The contribution of Jensen and Meckling (1976) was particularly relevant in the U.S.A. given the dispersed ownership structure that characterizes the listed firms of this country; a structure the book of Berle and Means (1932) had defined as the paradigm of the public listed firms. More recent studies on the ownership structure in non Anglo-Saxon economies (Shleifer and Vishny, 1997; La Porta et al., 1999, Claessens et al., 2000, among others) depicted a different picture: In most European, Latin-American and Asian countries, the firms have controlling shareholders; in those countries the main agency conflict seems to be the expropriation of minority shareholders.

Additional contributions about the effects of ownership on performance have studied additional and contrasting consequences to those that Jensen and Meckling (1976) describe. Stulz (1988) studies the effect of managerial ownership on the likelihood of a takeover. With low ownership concentration the premium paid by the raider is less than optimal. At higher levels of ownership in the hands of the manager, the premium increases; however at even higher levels of managerial ownership the likelihood of a takeover vanishes, with a resulting entrenchment of the manager and a negative effect on the firm value. Empirical studies of McConnell and Servaes (1990), Himmelberg et al. (1999) find support for Stulz's (1988) conclusions.

Shleifer and Vishny (1986) study the effect of large minority shareholders on the expropriation levels against small shareholders. They argue that substantial holdings overcome the free riding problem of small shareholders; for large shareholders the benefits of monitoring exceed its costs. Admati, Pfleiderer and Zechner (1994) point out a potential negative effect of large shareholdings: excessive risk aversion that negatively affects managerial actions. An additional potential cost of concentrated ownership is the reduction of managerial initiative given the largest levels of monitoring and control that these shareholders exert (Burkart, Gromb and Panunzi, 1997); according to this reasoning, a dispersed ownership would signal a commitment to not exert too much control. A dispersed ownership structure would not be stable if the level of investment protection is low, because this condition allows the controlling party to enjoy significant private benefits, if his control over the firm is solid; thus producing the incentives to concentrate the ownership (Bebchuck, 1999).

The pervasiveness of concentrated shareholdings around the world has been widely documented: Claessens et al. (2000) study the ownership structure for firms of 8 East-Asian countries, finding high ownership concentration, mainly with family involvement; La Porta et al. (1999) cover 27 high income countries, reporting high ownership concentration, except in countries with high level of shareholder protection and the commercial code or company law originating in the English Common Law.

An additional venue in the study of the relationships between performance and ownership concentration posits that these are not observable, because each firm would present a particular and optimal mix of different governance mechanisms, with simultaneous determination. Consequently, no significant relationship between ownership concentration and performance would be observable for cross-sectional samples (Demsetz, 1983; Demsetz and Lehn, 1985; and Demsetz and Villalonga 2002). Most of the recent research on these issues recognizes the simultaneous determination of

performance and ownership, and additional mechanisms of governance (Agrawal and Knoeber, 1996; among others).

In this paper, we study the relationships between ownership concentration and accounting performance for a sample of firms from five Latin American countries, covering the years 1999 to 2003. In regressions where simultaneity among governance mechanisms is not considered, we find that ownership concentration affects performance positively. The result is coherent with different authors who find a similar positive relationship for different samples (La Porta et al. 2002; Lins, 2003). Consistent with the arguments of Demsetz and Lehn (1985), the effect of risk on ownership concentration is inverse U-shaped: initially, higher levels of risk produce more ownership concentration, to reduce agency costs, but when risk is too high the owners reduce their holdings to reduce their risk exposition. We also find a weaker positive effect of accounting performance on ownership concentration; good results seem to encourage owners to concentrate their holdings. When a simultaneous model is considered, the conclusions are reversed, and the effect of ownership concentration on performance is now negative and significant; the simultaneous model seems to point out an entrenchment effect by the owners that hinders the competitiveness of Latin American firms. In that way, legislators' efforts to promote more democratic ownership structures are actions in the right direction. As long as exchange listing implies more dispersed ownership structures, the efforts to ease and promote listing are also positive steps.

Section 2 presents the source and nature of the data. In section 3 variables are described. Section 4 defines the empirical models and the theoretical arguments that support them for three types of regressions: ownership concentration, accounting performance and the simultaneous model of

ownership concentration and performance. Section 5 presents the empirical results, the section 6 concludes.

2.- Data

We use Economatica, a financial database covering Latin American firms, to assemble a panel with non-financial firms listed in five Latin American countries, covering the years 1999 to 2003. Firms from the following countries were included in the study: Colombia, Brasil, Chile, Perú and Venezuela. Firms from other countries were excluded because ownership data was not reported. The range of assets goes from 2.12 millions to 41,500 millions.

The variables are described in table 1. Statistics are presented in table 2. We observe negative correlations between leverage (DFAT) and return on assets (-0.24); and between fixed assets (AFAT) and return on assets (-0.15). The positive correlations between risk (DESVES), risk squared (DESVES2), and return on assets (0.17 and 0.3, respectively), seem to confirm the positive association between risk and return. Risk and risk square are negatively correlated with size, measured as the log of sales (LNVT) the values are 0-16 and -0.14, respectively; size appears to be a good hedge against risk.

[Tables 1, and 2 go about here]

The number of firms is 352 with 1548 firm-year observations, and an unbalanced panel. Sections c and d of table 2 report information per country and test of means respect return on assets and the sum of the three largest shareholders. Not surprisingly, firms from Brazil are bigger, but they also present the largest ownership concentration. The test of means suggests structural differences in accounting performance and ownership concentration for the countries in the sample.

3.- Variables

Ownership concentration

A Herfindahl index of shareholdings concentration (Demsetz and Lehn, 1985), **HITOT**.

$hitot = \sum_{i=1}^5 a_i^2$, where a_i is the percent of shareholdings of shareholder i . Given the high level of

ownership concentration for the countries in our sample, we chose this measure because it presents higher variation than the simple sum we use in table 2, sections c, and d.²

Performance

Different studies have used Tobin's q as a measure of financial performance. However, that index loses quality when the firms are not actively traded. Mossman et al. (1998) express that accounting returns are better predictors of firm survival than market values. More important, Demsetz and Villalonga (2002) argue that accounting returns better reflect the effects of ownership concentration than market values, because it measures what management has accomplished and not what management will accomplish. In this study, we use the return on assets, **ROA**, and the return on equity, **ROE**, as the measure of performance.

Risk

We measure risk with **DESVES**, the standard deviation of ROA, during the sample years. We also use the square of DESVES, **DESVES2**. Again, the volatilities of market returns are not an option for most of our firms. Gebhardt et al. (2000) finds an association between the risk premium and earnings variability, which supports our approach.

² The average of the sum of shareholdings of the 5 largest shareholders is 82% (76.7% for the 3 largest), with a minimum of 64% (64% for the 3 largest).

Firm size

The measure of size will be the log of sales, **LNVT**, and the log of assets, **LNAT**. The first is more related with accounting performance, while the second is more related with ownership structure.

Leverage

The measure of leverage is the ratio of financial debt to assets, **DFAT**. The average of this measure is 18%, an indication of low leverage.

Tangible assets

An indicator (inverse) of the discretionary power of the manager, and the agency costs, is the ratio of net fixed assets to total assets, **AFAT**.

Sales return

A signal of the market power of a firm is its operational income, which we measure as the ratio of earnings before interest and taxes to sales, **PEBITVT**. Higher returns imply more cash flow controlled by the manager, being a potential source of agency costs.

Sales growth

A variable that influences the firm's performance is its growth. We measure growth as the average growth sales in the sample period, **G**.

4.- The model

4.1.- Determinants of ownership concentration

Demsetz and Lehn (1985) hypothesize that ownership concentration is a product of the business risk, its size and its industry. The effect of risk should be not monotonic. Initially, at low levels of risk, increasing levels of risk imply more potential for agency costs, because the discretionary powers of the manager are higher at higher levels of uncertainty. Then, at these levels the owners optimally increment their shareholdings. However, a level of risk too high, in the case of high concentration, implies a sub-optimal risk diversification; consequently, at these levels the owners reduce their shareholdings. The effect is inverse U-shaped; with concentration increasing with risk until disinvesting is optimal.

Size has a negative effect on ownership concentration for two reasons: 1) as in the case of high levels of risk, concentrated shareholdings in large firms imply sub-optimal risk diversification; 2) at a larger size, the owners are probably wealth constrained (Himmelberg et al. 1999; Demsetz and Lehn, 1985).

Leverage can be seen as an alternative monitoring mechanism by creditors, which implies a negative effect on ownership concentration (Demsetz and Villalonga, 2002).

Growth should be negatively associated to ownership concentration, because the owners would use it to balance their portfolios, perhaps after periods of growth the selling conditions would be better. Alternatively, from the agency theory point of view, high growth implies more discretionary expenses

by the managers; suggesting a positive relationship between growth and ownership concentration, to limit the discretionary expenses of managers.

Tangible (net fixed) assets are more easily monitored than non tangible assets, and then its level should be negatively associated with ownership concentration (Gertler and Hubbard, 1989). Another measure of discretionary expenses in the hands of the manager is the return of sales, PEBITVT; the relationship should be positive to also limit the discretionary expenses (Himmelberg et al., 1999).

The accounting performance of the firm is an incentive over the owners' actions to keep the ownership (Demsets and Villalonga, 2002). Positive or negative effects are plausible: Higher returns may turn the firm attractive for a takeover, then the owners would increase their holdings to obtain a better price or shield against it. On the other hand, good results could ease the rebalancing of the owners' portfolio. Which effect dominates seems to be an empirical issue.

The equation Implied in the previous discussion follows, with the expected coefficient signs in parenthesis:

Dependent variable:

Ownership concentration

Explanatory variables:

- a. Risk, DESVES (+), and its square, DESVES2 (-).
- b. Firm size as the log of assets, LNAT (-).
- c. Leverage, DFAT (-).
- d. Tangible assets, AFAT (-)
- e. Growth, G (?).

- f. Sales returns, PEBITVT (+)
- g. Accounting return, ROA (+?), ROE (+?).

4.b Performance determinants

The studies on the effects of shareholding concentration on performance are numerous; from the starting point of Berle and Means (1932) important book on American corporations, to recent studies on emerging markets (Joh, 2003; Lins, 2003).

The relationships between ownership concentration and performance are mainly determined by agency costs: more managerial ownership concentration, less agency conflicts and then better performance (Jensen and Meckling, 1976). From the point of view of controlling shareholders, the same principle also applies: more ownership concentration permits more monitoring. However, if control rights exceed cash flow rights, a negative effect on performance appears: the expropriation of small or minority shareholders (La Porta et al., 2002). Nevertheless, with no differential rights, more ownership concentration should reduce the incentives to expropriate, given that expropriation is costly for the firm (Shleifer and Wolfenson, 2002).

Also, theoretical arguments associate high ownership concentration with low performance, given that a high concentration may imply: 1) entrenchment of the controlling owners against market forces (Stulz, 1988); 2) a reduction in the manager's initiative due to an excessive monitoring (Burkart, Gromb and Panunzi, 1997); or 3) an excessive risk aversion (Admati, Pfleiderer and Zechner, 1994). Finally, Demsetz (1983) posits that the effect of ownership concentration on performance is unobservable.

The business risk should be positively associated with performance, as the classic theory of the CAPM claims (Sharpe, 1964); we include the square of risk to explore the possibility of a non monotonic association.

Size, the log of sales, should be positively related with performance given the association between business scale and efficiency; it may also signal market control from the firm. The effect of leverage has been widely studied; Myers (1984) suggests a negative association between leverage and performance, due to the adverse selection problem that firms looking for external finance face ("pecking order theory"). The owners' (and managers') incentives to assume excessive risk when leverage is too high may also explain a negative relationship.

Sales growth should be positively related with performance, given that firms that grow more may have superior investment opportunities than firms that grow less, other things equal (La Porta et al., 2002). However, not all the investments produce higher returns, as Jensen (1993) points out.

Variables such as the level of net fixed assets (AFAT) and the sales return (PEBITVT), are also associated with performance because they are related to the business the firm is involved in and the firm's market power. Finding a negative association between net fixed assets and performance is plausible due to the high competitiveness that characterizes the markets where the firms with these levels of net fixed assets operate; given that performance based in tangible assets is more easily replicated than performance based in non tangible assets, any excess of fixed assets would be a signal of inferior performance. On the other hand, Klapper and Love (2002) suggest that firms with high levels of tangible assets may not have the incentives for good monitoring, given the relative easiness with which these assets are monitored, which also signals a negative association between

the level of tangible assets (AFAT) and performance. The return on sales also has the same duality on the arguments that explain its association with performance: firms with high sales return should have high performance; on the other hand, the agency costs associated with a superior cash flow may signal a negative association.

The equation implied in the previous discussion follows, with the expected coefficient signs in parenthesis:

Dependent variable:

Performance

Explanatory variables:

- a. Ownership concentration, HITOT (+?)
- b. Risk, DESVES (+), and its square, DESVES2 (-?).
- c. Firm size as the log of sales, LNVT (+).
- d. Leverage, DFAT (-).
- e. Growth, G (+).
- f. Tangible assets, AFAT (-)
- g. Sales returns, PEBITVT (+?)

4.c Simultaneous relationships between performance and ownership concentration

The simultaneous determination of performance and different governance mechanisms has been widely established (Demsetz, 1983). Thus, we will test the following model of simultaneous equations:

$$\text{ROA}_{it} = \alpha + \mu_i + \gamma_1 \text{HITOT} + \beta_1 \text{LNVT}_{it} + \beta_2 \text{DFAT}_{it} + \beta_3 \text{G}_i + \beta_4 \text{AFAT}_{it} + \beta_5 \text{PEBITVT}_{it} + \text{DUMMIES} + \varepsilon_{it} \quad \text{Eq. 1}$$

$$\text{HITOT}_{it} = \alpha + \rho_i + \gamma_1 \text{ROA} + \beta_1 \text{DESVES}_i + \beta_2 \text{DESVES2}_i + \beta_3 \text{LNAT}_{it} + \beta_4 G_i + \beta_5 \text{PEBITVT}_{it} + \text{DUMMIES} + \varepsilon_{it} \quad \text{Eq. 2}$$

The model implies that risk and firm's assets affect the performance through the owners' incentives (Demsetz and Lehn, 1985; Himmelberg et al. 1999) instead of affecting it directly. The arguments that link leverage with performance (Myers, 1984) through the adverse selection argument of bad performers raising outside financing, given the difficulty the market faces to identify the good firms, have been well established through time. On the other hand, the monitoring power of creditors is questionable; first, the monitoring power of bondholders is very low (most of them have guaranties); second, given the many dimensions of the relationships between banks and firms, establishing a clear alternative monitoring by banks is difficult. Additionally, Helliwell (2000) argues that protection of banks' interests through collaterals backing loans diminishes the banks' incentives to monitor. Incidentally, as can be seen in table 4, the effect of leverage on ownership concentration is far from significant. The importance of tangible assets on performance also directly affects performance (instead of ownership concentration), any excess of tangible assets would signal inferior performance. Also, sales directly affect performance, independent of the effect of the level of assets on the ownership concentration; sales drive accounting performance, while the effect of assets on performance is indirect. However, the size of assets is clearly related to the wealth constraints of owners and the incentives they have to keep the ownership (sub optimal risk diversification).

Finally, both, sales growth (G) and the return of sales (PEBITVT), directly affect the dependent and simultaneous variables: 1) in the case of performance growth is an indicator of the firm investment opportunities, and the return of sales (PEBITVT) is an alternative performance measure; 2) in the case of performance both are included because both signal the discretionary power of managers.

5.- Empirical results

The regressions use unbalanced panels with firm level random effects. The choice of random effects is justified for different reasons: 1) fixed effects are appropriate when n is relatively small and t is relatively large, which is the opposite of our sample; 2) the random effects model assumes that the intercept of a firm is a random drawing from a much larger population with a constant mean value, which is more representative of our sample; 3) the measures of risk (DESVES), sales growth (G), and the industry and country dummies only work for random effects, because the fixed effects cannot include covariates that are constant within units; 4) An incomplete Hausman test (table 4, specification 1: ROA), dropping constant covariates across units, rejects the null Hypothesis of not systematic differences at 10% of significance. Furthermore, the explanatory power (Adj. R²) of the fixed effects model is just 0.08, while the same value for the random model is 0.3.

5.1.- Determinants of ownership concentration

Regressions of ownership concentration, assuming exogeneity of all variables is reported in table 3. The adjusted R² is 0.2 for all reported regressions. The effect of performance is positive for both cases, but just statistically different from zero (5%) for the return on assets, ROA. The effect of risk is inverse U-shaped, statistically significant (1%) for both specifications, with a maximum close to an average standard deviation of 55%.³ The result supports the hypothesis of Demsetz and Lehn (1985). The owners increment their shareholdings with risk, to control for the discretionary power of the manager, who could justify non optimal decisions by the uncertainty of the business environment. When risk is too high the owners reduce their shareholdings.

[Table 3 goes about here]

³ Máximum = $-\frac{\beta_{\text{DESVES}}}{2\beta_{\text{DESVES}^2}}$

The effect of size, the log of assets, is consistent with the theoretical arguments noted before and statistically significant (1%) for both specifications. Higher size is less efficient for keeping high ownership concentration, given the sub optimal risk diversification for the owners, and less likely because of their wealth constrains. A complementary argument is that the bigger a corporation, the smaller the stake required for effective control. For a firm close to the average in assets (US 772 millions) an increment in assets of US 100 millions would reduce our measure of ownership concentration in 0.0028%, other things being equal.

Comentario [SVR1]: Esto no está en la versión de español

No other variable is significant; however, the sign of growth (G) supports the idea of owners using growth to disinvest in the firm and balance their portfolio. The sign of net fixed (tangible) to total assets (AFAT) also has the expected sign, but is far from significant. The sign of return of sales (PEBITVT) does not have the expected sign (+), perhaps because the market power that implies this measure gives the owners some monitoring power that reduces their incentives to maintain their holdings. The dummy variable that identifies Brazilian firms is statistically significant (1%), and confirms that Brazil has more ownership concentration than the other countries included in the sample, even after considering all additional variables.

5.2.- Performance determinants

Regressions of performance are reported in table 4, with no treatment of endogeneity considered. The adjusted R^2 is 0.30 for the specification 1, where the dependent variable is the return on assets (ROA), and 0.11 for the specification 2, where the dependent variable is the return on equity (ROE). The model explains better the variations of ROA, not surprisingly, given the high variation of ROE and its dependence of accounting adjustments that firms make year by year.

[Table 4 goes about here]

The main result is the positive statistical association (5%) between ownership concentration (HITOT), and performance. Treating ownership as an exogenous variable seems to confirm the hypothesis of the reduction of expropriation by controlling shareholders when their ownership rights increase (La Porta et al., 2002). At this stage, higher concentration seems to help value creation.

Risk has a statistically significant (1%) U-shaped effect on accounting performance, with a minimum at 36% (average standard deviation of ROA) for specification 1, and 56% for specification 2. Different to what we expected, the relationship is not monotonic.

The positive correlation we reported in table 2, section b, is not confirmed in our tests. For low levels of risk, higher risk means lower returns, the CAPM hypothesis (Sharpe, 1964) just works for high levels of risk. Although our measure of risk is rudimentary, it is likely that it affects the incentives of the owners more than market returns risk, especially in countries where markets do not present liquidity, and ownership is highly concentrated. Apart from that, our measure of performance is different from the expected market return for a given investment, because is the result of a dynamic interaction of market forces, firm characteristics and its governance mechanisms in each firm.

Sales are positively associated (1%) with return on assets (ROA) in the way we hypothesize above, and the result is not strong to changes in the performance variable (ROE), although the magnitude of both coefficients is similar. Size seems to support efficiency.

The effect of leverage on performance is negative and statistically significant, stronger, but not larger, for ROA (1%); for return on equity (ROE), the size of the coefficient is almost twice the size the

coefficient of return on assets. The adverse selection problem (Myers, 1984), and the taking of excessive risk when leverage is high, seem to drive good performers away from the debt markets.

The effect of growth (G) and the sales return (PEBITVT), are not significant, although the signs of coefficients are what we expected. The effect of the level of fixed assets (AFAT) on performance is negative and significant for ROA, suggesting that performance with reliance on tangible assets is more easily replicated than performance driven by non tangible assets; physical assets are not a competitive advantage in these times. Finally, the positive and significant (1% and 5% for ROA and ROE, respectively) coefficients of the dummy variables identifying Brazil and Chile show consistent higher returns for those countries during the sample years; alternatively, those coefficients may incorporate different accounting standards for the countries in the sample.

5.3.- Simultaneous relationships between performance and ownership concentration

- Effects on performance

On a simultaneous setting between ownership concentration and performance, the conclusions alter radically. The results are reported in table 5; the adjusted R² reduces to 0.08 for ROA and to 0.02 for ROE.

[Table 5 goes about here]

The effect of ownership concentration on performance is now negative and significant in both specifications (10%), which is in accordance with the entrenchment effect suggested by Stulz (1988); less than optimal risk taking (Admati, Pfleiderer and Zechner, 1994); or the reduction of managerial initiative (Burkart, Gromb and Panunzi, 1997). Given that for the countries in the sample the

controlling shareholders are usually actively involved in management, the first two arguments make more sense.

The strong effect of risk is now absorbed by the ownership concentration, which coefficient increases by a magnitude of 7 for the specification 1 (ROA) and a magnitude of 4 for the specification 2 (ROE). In the case of specification 1 (ROA) all the statistically significant coefficients reported in table 4, remain significant, with a reduction of significance for the measure of size (LNVT) to 10%, and with the same sign (except for HITOT). Their magnitudes are also similar. In the case of specification 2 (ROE) the results are analog, with the coefficient of leverage (DFAT) reducing its significance to 10%.

The importance of the country dummy variables persists with marginally higher coefficients, structural conditions or different accounting standards per country clearly affecting performance.

- Test of Simultaneity

Comentario [SVR2]: No esta en la version en español

A version of the Hausman test (Gujarati, 1995) is used to address if the endogenous approach suits the data. The procedure involves the following steps: 1) to regress HITOT on the exogenous variables and to obtain the residuals; 2) to regress performance following Equation 1, assuming no simultaneity, plus the residuals. If the residuals coefficient is statistically different from zero, the hypothesis of independence is rejected.

The magnitude and significance of such coefficient is reported as Hausman in table 5. For both ROA and ROE the significance of the residuals coefficient is 1%, which gives grounds to accept the presence of endogenous relationships between ownership concentration and accounting performance.

- Effects on ownership concentration

The results are reported in table 6. The simultaneous setting does not affect the adjusted R^2 that remains at 0.20 for both specifications. The main difference is that for the simultaneous setting the effect of performance on ownership concentration is no longer significant. However, our version of the Hausman test does not reject the hypothesis of independence, which leaves the former analysis unchanged.

6.- Conclusions

This study presents an analysis of the relationships between accounting performance and ownership concentration. The results, under assumptions of no simultaneous determination of the dependent variables, confirm the effect of a reduction of expropriation of minority shareholders at higher levels of ownership concentration. Once simultaneity is addressed, the effect is reversed, suggesting an entrenchment effect or sub optimal levels of risk assumed by the controlling shareholders. Regressions (not reported) looking for non monotonic effects of ownership concentration including the square of ownership, do not suggest the presence of that kind of influence. Other regressions (not reported) with dummies for the type of the owner (government, national private, foreign private) do not modify the results and do not convey any additional information.

La Porta et al. (2002), Claessens et al. (2002), using Tobin's q as a measurement of performance report a positive effect of higher controlling ownership on performance; they do not endogenize ownership concentration. The difference between those results and these results, apart from the endogeneity issue, may be a result of our choice of the instrument variables. Lins (2003) studied similar relationships to those reported here, including some countries of our sample, and found a positive effect of non-management large blockholders on performance, which he also measures as

the Tobin's q . He also reports a negative effect on valuation of an excess of control rights over cash flow rights of the managers, and for this calculation he recognizes the endogeneity of this variable, using an instrument variable approach. Himmleberg et al. (1999) mention that panel data addresses the issues of endogeneity, to explain why in their instrument variables firm level fixed effects regressions disappear the statistical effect of managerial ownership, present in regressions OLS panel data regressions. Interestingly, under their firm level fixed effects regressions with instrument variables, the effect of managerial ownership is negative, but not significant.

An additional reason to explain these results is that we do not take into account the difference between controlling and non controlling blockholdings, the assumption is that all blockholdings have monitoring powers, and the same incentives. For the countries in our sample, it is not common to observe the presence of different blockholdings; if any exists, it is short lived or a transition in control. It is plausible that for the Latin American countries integrating this sample, the effect of ownership concentration will be negative, given the high ownership concentration and low ownership mobility that characterizes this region, conditions that ease entrenchment, the excessive intervention, and excessive risk aversion. These results suggest that higher democratization of listed firms results in better performance⁴. A reduction in ownership concentration would signal a commitment to reduce private benefits by controlling shareholders, improving the risk diversification for the Latin American countries.

⁴ The Colombia's Exchange is requiring that 20% of the ownership is in hands of minority shareholders. Firms have given a deadline to meet the requirement.

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ANEXXES

Table 1. Description of variables.

variable	description
ROA	net income on assets
ROE	net income on equity
HITOT	sum of the squares of 5 largest shareholdings
LNVT	log of sales
LNAT	log of total assets
DFAT	financial liabilities on assets
AFAT	net fixed assets on total assets
PEBITVT	ebit on sales
G	average of yearly annual growth in sales
DESVES	standard deviation of roa
DESVES2	variance of roa
AT	total assets, US thousands
VT	total sales, US thousands

Table 2. Data statistics.

a. Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	1,548	0.053	0.103	-0.663	2.458
ROE	1,548	0.070	0.528	-11.014	8.139
HITOT	1,548	0.431	0.293	0.000	1.000
LNVT	1,548	11.140	1.809	3.219	17.097
DFAT	1,548	0.180	0.165	0.000	0.940
G	1,548	0.063	0.190	-0.488	1.873
AFAT	1,548	0.396	0.286	0.000	4.120
PEBITVT	1,548	0.025	1.818	-62.520	8.672
DESVES	1,548	0.041	0.074	0.001	1.402
DESVES2	1,548	0.007	0.088	0.000	1.967
LNAT	1,548	11.999	1.627	7.660	17.541
AT	1,548	772,365	2,936,255	2,122	41,500,000
VT	1,548	329,259	1,309,430	25	26,600,000

b. Correlation Matrix

	ROA	ROE	HITOT	LNVT	LNAT	DFAT	AFAT	PEBITVT	G	DESVES
ROA	1									
ROE	0.458	1								
HITOT	0.0494	0.0631	1							
LNVT	0.0584	0.0213	-0.0016	1						
LNAT	0.0333	0.014	-0.0396	0.7584	1					
DFAT	-0.2443	-0.0907	0.0212	0.1152	0.1125	1				
AFAT	-0.1498	-0.0591	0.0892	0.1116	-0.0008	0.1801	1			
PEBITVT	0.0171	-0.0011	-0.0461	0.2217	0.0381	0.011	0.0758	1		
G	0.0727	0.0726	-0.0754	0.1029	0.0842	-0.0027	-0.0205	0.062	1	
DESVES	0.1732	-0.0265	0.005	-0.1636	-0.1418	-0.0443	-0.057	-0.0689	-0.0516	1
DESVES2	0.301	0.0729	-0.033	-0.1445	-0.081	-0.0432	-0.0534	-0.0551	-0.0253	0.8845

c. Country information

Code	Country	Obs.	Average of total assets	Avg. % ownership 3 largest hold.	Average roa
1	Brazil	595	1,417,959	81.3	7.6%
2	Chile	338	530,312	71.9	7.4%
3	Colombia	104	341,687	59.6	3.2%
4	Perú	434	170,194	79.1	2.2%
5	Venezuela	77	821,951	72.3	-2.8%
	Total/Average	1548	772,365	76.7	5.3%

d. Test of means for ROA and the sum of 3 largest holdings

The table presents a two tail test of means for return of assets, the assumptions are unequal variances and equal averages. The values are the t statistics. Asterisks represent levels of significance: * is 1 percent; ** is 5 percent; *** is 10 percent.

ROA

	Brazil	Chile	Colombia	Perú	Venezuela
Average	7.61%	7.44%	3.19%	2.24%	-2.83%
Chile	0.31				
Colombia	4.51 *	4.72 *			
Perú	8.09 *	9.63 *	0.97		
Venezuela	6.76 *	6.87 *	3.53 *	3.29 *	

Sum of 3 largest holdings

	Brazil	Chile	Colombia	Perú	Venezuela
Average	81.30 %	71.86 %	59.63 %	79.08 %	72.26 %
Chile	7.04 *				
Colombia	9.53 *	5.08 *			
Perú	1.57	(4.46) *	(7.95) *		
Venezuela	3.74 *	(0.16)	(4.03) *	2.64 *	

Table 3

Determinants of ownership concentration

The table reports the results of firm level random effects panel data regressions, dummies for 19 industrial sectors, 5 countries, and the sample years (1999-2003) are included, but only the country dummies are reported. The numbers in italics next to the coefficients are the P values of a two tail test. Asterisks represent levels of significance: * is 1 percent; ** is 5 percent; *** is 10 percent. The numbers below the coefficients are the standard errors. Variables definition is in table 1. The dependent variable in both specifications is a Herfindahl index of ownership concentration, HITOT. In specification 1 the performance variable is net income on assets, ROA. In specification 2 the performance variable is net income on equity, ROE.

DEPENDENT VARIABLE	HITOT			
	1. ROA		2. ROE	
PERFORMANCE	Coef. Std. Err.	<i>P>z</i>		
PERFORMANCE	0.07071 0.03572	<i>0.048</i> **	0.00362 0.00622	<i>0.561</i>
DESVES	1.23021 0.41479	<i>0.003</i> *	1.19410 0.41278	<i>0.004</i> *
DESVES2	-1.13431 0.32945	<i>0.001</i> *	-1.08474 0.32717	<i>0.001</i> *
LNAT	-0.02258 0.00861	<i>0.009</i> *	-0.02208 0.00858	<i>0.010</i> *
DFAT	0.01283 0.03578	<i>0.720</i>	0.00327 0.03552	<i>0.927</i>
G	-0.09195 0.06921	<i>0.184</i>	-0.09167 0.06888	<i>0.183</i>
AFAT	-0.02230 0.03114	<i>0.474</i>	-0.02661 0.03107	<i>0.392</i>
PEBITVT	-0.00269 0.00176	<i>0.126</i>	-0.00259 0.00176	<i>0.143</i>
DBRAZIL	0.19080 0.06550	<i>0.004</i> *	0.19540 0.06512	<i>0.003</i> *
DCHILE	0.02804 0.07120	<i>0.694</i>	0.03323 0.07078	<i>0.639</i>
DCOLOMBIA	-0.11030 0.08269	<i>0.182</i>	-0.10944 0.08226	<i>0.183</i>
DPERU	0.11071 0.06916	<i>0.109</i>	0.11485 0.06877	<i>0.095</i> ***
CONSTANT	0.56765 0.15058	<i>0.000</i> *	0.56722 0.14995	<i>0.000</i> *
adj. R ²	0.2049		0.2039	
Obs.	1548		1548	

Table 4

Determinants of accounting performance

The table reports the results of firm level random effects panel data regressions; dummies for 19 industrial sectors, 5 countries, and the sample years (1999-2003) are included, but only the country dummies are reported. The numbers in italics next to the coefficients are the P values of a two tail test. Asterisks represent levels of significance: * is 1 percent; ** is 5 percent; *** is 10 percent. The numbers below the coefficients are the standard errors. Variables definition is in table 1. The dependent variable in the specification 1 is net income on assets, ROA. In specification 2 the dependent variable is net income on equity, ROE. A Hausman test for not systematic differences between fixed and random effects is also reported, a significant value rejects the null of not systematic differences.

DEPENDENT VARIABLE	1. ROA		2. ROE	
	Coef. Std. Err.	<i>P</i> > <i>z</i>		
HITOT	0.02111 0.00992	<i>0.033</i> **	0.13277 0.06256	<i>0.034</i> **
DESVES	-0.56218 0.08659	<i>0.000</i> *	-3.12396 0.55910	<i>0.000</i> *
DESVES2	0.77203 0.07001	<i>0.000</i> *	2.75614 0.44951	<i>0.000</i> *
LNVT	0.00539 0.00189	<i>0.004</i> *	0.00559 0.01204	<i>0.642</i>
DFAT	-0.14995 0.01675	<i>0.000</i> *	-0.25031 0.10376	<i>0.016</i> **
G	0.00834 0.01478	<i>0.573</i>	0.15498 0.09484	<i>0.102</i>
AFAT	-0.03303 0.01097	<i>0.003</i> *	-0.05181 0.06959	<i>0.457</i>
PEBITVT	0.00108 0.00128	<i>0.396</i>	0.00011 0.00745	<i>0.988</i>
DBRAZIL	0.08260 0.01366	<i>0.000</i> *	0.21510 0.08789	<i>0.014</i> **
DCHILE	0.09482 0.01454	<i>0.000</i> *	0.23087 0.09375	<i>0.014</i> **
DCOLOMBIA	0.02083 0.01698	<i>0.220</i>	-0.04503 0.10943	<i>0.681</i>
DPERU	0.06160 0.01415	<i>0.000</i> *	0.10381 0.09103	<i>0.254</i>
CONSTANT	-0.00221 0.03089	<i>0.943</i>	-0.01378 0.19753	<i>0.944</i>
R ² ajus.	0.3012		0.1173	
Obs.	1548		1548	
Hausman	12.39	<i>0.088</i> ***		

Table 5
Determinants of accounting performance
 2-SLS, simultaneous equations

The table reports the results of firm level random effects (Baltagi estimator) panel data regressions with instrument variables; dummies for 19 industrial sectors, 5 countries, and the sample years (1999-2003) are included, but only the country dummies are reported. The numbers in italics next to the coefficients are the P values of a two tail test. Asterisks represent levels of significance: * is 1 percent; ** is 5 percent; *** is 10 percent. The numbers below the coefficients are the standard errors. Variables definition is in table 1. The instrumented variable is ownership concentration, HITOT. The instruments are risk (DESVES), risk squared (DESVES2) and size as the log of assets (LNAT), plus all additional exogenous variables. The dependent variable in the specification 1 is net income on assets (ROA). In specification 2 the dependent variable is net income on equity (ROE). The result of a Hausman test for endogeneity is also reported, a significant value reject the null of independence (Gujarati, 1995).

DEPENDENT VARIABLE	1. ROA		2. ROE	
	Coef. Std. Err.	<i>P>z</i>	Coef. Std. Err.	<i>P>z</i>
HITOT	-0.15406 0.07954	<i>0.053 ***</i>	-0.55910 0.31298	<i>0.074 ***</i>
LNVT	0.00727 0.00411	<i>0.077 ***</i>	0.00326 0.01600	<i>0.838</i>
DFAT	-0.14150 0.02529	<i>0.000 *</i>	-0.20889 0.12451	<i>0.093 ***</i>
G	-0.00998 0.03907	<i>0.798</i>	0.08991 0.13403	<i>0.502</i>
AFAT	-0.06455 0.02089	<i>0.002 *</i>	-0.04308 0.08946	<i>0.630</i>
PEBITVT	0.00088 0.00135	<i>0.514</i>	-0.00047 0.00770	<i>0.951</i>
DBRAZIL	0.12435 0.03759	<i>0.001 *</i>	0.41388 0.13011	<i>0.001 *</i>
DCHILE	0.10705 0.03794	<i>0.005 *</i>	0.32871 0.12757	<i>0.010 *</i>
DCOLOMBIA	0.00243 0.04573	<i>0.958</i>	-0.04511 0.15536	<i>0.772</i>
DPERU	0.09355 0.03828	<i>0.015 **</i>	0.24176 0.13112	<i>0.065 ***</i>
CONSTANT	0.01174 0.08125	<i>0.885</i>	0.05242 0.29647	<i>0.860</i>
R ² ajus.	0.08980		0.0282	
Obs.	1548		1548	
Hausman	0.519308	<i>0.000 *</i>	1.826063	<i>0.000 *</i>

Table 6
Determinants of ownership concentration
 2-SLS, simultaneous equations

The table reports the results of firm level random effects (Baltagi estimator) panel data regressions with instrument variables; dummies for 19 industrial sectors, 5 countries, and the sample years (1999-2003) are included, but only the country dummies are reported. The numbers in italics next to the coefficients are the P values of a two tail test. Asterisks represent levels of significance: * is 1 percent; ** is 5 percent; *** is 10 percent. The numbers below the coefficients are the standard errors. Variables definition is in table 1. The instrumented variable is performance, measured alternatively as return on assets (ROA), in specification 1, and return on equity (ROE), in specification 2. The instruments are size, measured as the log of sales (LNVT), leverage (DFAT), and net fixed assts on total assets (AFAT), plus all additional exogenous variables. The dependent variable in both specifications is ownership concentration (HITOT). The result of a Hausman test for endogeneity is also reported, a significant value reject the null of independence (Gujarati, 1995).

DEPENDENT VARIABLE	HITOT			
	1. ROA		2. ROE	
PERFORMANCE	Coef.	<i>P>z</i>		
	Std. Err.			
PERFORMANCE	0.07312	<i>0.701</i>	0.08016	<i>0.376</i>
	0.19016		0.09054	
DESVES	1.24597	<i>0.003 *</i>	1.40696	<i>0.004 *</i>
	0.42399		0.49270	
DESVES2	-1.14632	<i>0.001 *</i>	-1.27581	<i>0.002 *</i>
	0.35583		0.40515	
LNAT	-0.02172	<i>0.011 **</i>	-0.02217	<i>0.013 **</i>
	0.00858		0.00889	
G	-0.09666	<i>0.163</i>	-0.10670	<i>0.143</i>
	0.06929		0.07282	
PEBITVT	-0.00265	<i>0.138</i>	-0.00264	<i>0.155</i>
	0.00179		0.00186	
DBRAZIL	0.19329	<i>0.004 *</i>	0.17927	<i>0.012 **</i>
	0.06745		0.07132	
DCHILE	0.02983	<i>0.684</i>	0.01627	<i>0.832</i>
	0.07333		0.07688	
DCOLOMBIA	-0.10500	<i>0.204</i>	-0.10163	<i>0.233</i>
	0.08264		0.08521	
DPERU	0.11927	<i>0.087 ***</i>	0.11364	<i>0.115</i>
	0.06965		0.07211	
CONSTANT	0.54039	<i>0.000 *</i>	0.54769	<i>0.000 *</i>
	0.14906		0.15475	
adj. R ²	0.2063		0.2047	
Obs.	1548		1548	
Hausman	0.020071	<i>0.929</i>	-0.0329	<i>0.806</i>

RESUMEN "BORRADORES DE ECONOMÍA Y FINANZAS"

Número	Autor	Título	Fecha
1	Jhon J. Mora	El efecto de las características socio-económicas sobre la consistencia en la toma de decisiones: Un análisis experimental.	May-01
2	Julio C. Alonso	¿Crecer para exportar o exportar para crecer? El caso del Valle del Cauca.	Mar-05
3	Jhon J. Mora	La relación entre las herencias, regalos o loterías y la probabilidad de participar en el mercado laboral: EL caso de España, 1994-2000.	Jun-05
4	Julián Benavides	Concentración de la propiedad y desempeño contable: El caso latinoamericano.	Sep-05