MFC18 - THE ROLE OF LEGAL PROTECTION FOR MINORITY INVESTORS IN THE RELATIONSHIP BETWEEN CONTROL STRUCTURE AND MARKET VALUE IN LATIN AMERICAN FIRMS

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Resumo
In light of Agency Theory, there is the possibility of a negative relationship between the concentration of control in companies and their market values. Conflict between majority and minority shareholders is typical in emerging economies such as those of continental Europe and Latin America, due to the fact that these countries, among other aspects, present low legal protection for minority shareholders, giving rise to opportunistic behavior by large controllers and the extraction of private benefits, thus negatively impacting the value of firms. In this context, this research aims to examine the relationship between concentration of control, market value, and legal protection mechanisms for minority investors in Latin American companies. The study sample includes 341 publicly traded companies listed on the stock exchanges of six Latin American countries (Argentina, Brazil, Chile, Colombia, Mexico, and Peru) from 2010 to 2016, forming a total of 1,303 firm-year observations, with market value ? represented by Enterprise Value ? being adopted as a dependent variable and concentration of control being an independent variable. The results of the dynamic models, estimated using the Generalized Method of Moments approach, suggest a negative influence of the concentration of voting capital on market value only in countries with low legal protection for minority shareholders. Thus, evidence of the destructive effects of large controlling shareholders on market value (entrenchment effect) in Latin America is confirmed, but these effects may be attenuated by characteristics of the legal environment in which the companies operate.

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ABSTRACT

In light of Agency Theory, there is the possibility of a negative relationship between the concentration of control in companies and their market values. Conflict between majority and minority shareholders is typical in emerging economies such as those of continental Europe and Latin America, due to the fact that these countries, among other aspects, present low legal protection for minority shareholders, giving rise to opportunistic behavior by large controllers and the extraction of private benefits, thus negatively impacting the value of firms. In this context, this research aims to examine the relationship between concentration of control, market value, and legal protection mechanisms for minority investors in Latin American companies. The study sample includes 341 publicly traded companies listed on the stock exchanges of six Latin American countries (Argentina, Brazil, Chile, Colombia, Mexico, and Peru) from 2010 to 2016, forming a total of 1,303 firm-year observations, with market value – represented by Enterprise Value – being adopted as a dependent variable and concentration of control being an independent variable. The results of the dynamic models, estimated using the Generalized Method of Moments approach, suggest a negative influence of the concentration of voting capital on market value only in countries with low legal protection for minority shareholders. Thus, evidence of the destructive effects of large controlling shareholders on market value (entrenchment effect) in Latin America is confirmed, but these effects may be attenuated by characteristics of the legal environment in which the companies operate.

Keywords: Concentration of control; market value; legal environment; legal protection of minority investors.

1 INTRODUCTION

This research aims to analyze the influence of control structure on the marke value in companies of emerging economies according to the legal protection for minority investors of the countries investigated. More specifically, we analyze whether the concentration of control impacts the market value of Latin America companies, and if these possible impacts on the firm's performance differ in function of aspects related to legal environment of these countries related to the protection of minor investors.

Companies have different levels of concentration of control, which causes different behaviors on the part of those already holding shares, future investors, and the various stakeholders interested in the firm's control and ownership, or in its attitudes towards the external environment (Bernard, Cade, & Hodge, 2018). Thus, control structure is directly related to issues addressed in Agency Theory (Jensen & Meckling, 1976) and corporate governance, and this can be reflected in the company's performance (Sant'Ana, Medeiros, Silva, Menezes, & Chain, 2016) – including its market value. In economies with high levels of shareholder concentration with little protection for minority investors and poor legal enforcement, the main agency conflict occurs in the principal-principal relationship (Chen & Young, 2010; Durnev & Kim, 2005, Shleifer & Vishny, 1997) and not in the principal-agent relationship (Jensen & Meckling, 1976), as in developed economies where, as a rule, capital is fragmented. Among the various forms of expropriation of minorities by the controlling shareholders in the principal-principal relationship, the following stand out: payment of excessive wages to themselves; self-appointment to privileged executive positions and positions on the board of directors of themselves or relatives (nepotism); and use of company

assets as collateral for personal transactions or borrowing company funds at advantageous rates (Dami, Rogers, & Ribeiro, 2007).

Within this context, Viana Junior, Morais and De Luca (2016) mention that the discussions about the influence of concentration of control on corporate performance are not conclusive. It is possible to identify studies with samples from emerging countries – characterized as having less protection for minority shareholders and poor legal enforcement compared to developed countries – that present a positive relationship between concentration of control and corporate performance (Ferreira & Martins, 2016; Lefort & Urzúa, 2008; Marques, Guimarães, & Peixoto, 2015; Sant'ana et al., 2016), and even no relationship (Campos, 2006; Mendez & Villanueva, 2010), making the discussions related to the issue inconclusive.

There are a chain of studies that infer that economic and institutional factors may interfere in this relationship (Dami et al., 2007; Demsetz & Villalonga, 2001; La Porta, Lopez-De-Silanes, & Shleifer, 1999; Soares & Kloeckner, 2008). Among the various characteristics related to the institutional environment in which organizations operate, the legal aspects of minority protection (La Porta et al., 1999) stand out for analysis purposes in this study. In this context and in light of La Porta et al. (1999), some empirical studies suggest that in countries where there is greater protection for minorities – even in those countries characterized as emerging – concentration of control might be expected to have a positive influence on corporate performance (Al-Shammari, O'brien, & Albusaidi, 2013; Gaur, Bathula, & Singh, 2015; Gugler, Mueller, & Yurtoglu, 2008; Kutsuna, Okamura, & Cowling, 2002). The rationale is that under a legal framework for protecting minority shareholders, large shareholders would be unable to act opportunistically in pursuit of their own interests, possibly reducing the main conflict at the same time (Durnev & Kim, 2005; Shleifer & Vishny, 1997), this conflict being typical of emerging regions such as Latin America.

With the purpose of obtaining more clarity on the subject, this study aims to analyze the relationship between ownership structure – specifically concentration of control – market value, and legal protection mechanisms for minority investors in companies listed on the main exchanges in Latin America. Our sample includes 341 publicly traded companies listed on the stock exchanges of six Latin American countries (Argentina, Brazil, Chile, Colombia, Mexico, and Peru) from 2010 to 2016, forming a total of 1,303 firm-year observations. In general, the results of the dynamic models, estimated using the Generalized Method of Moments approach, suggest a negative influence of the concentration of voting capital on market value only in countries with low legal protection for minority shareholders.

A number of aspects support the relevance and feasibility of this study. It is possible to identify the subject in the national literature (Caixe & Krauter, 2013; Campos, 2006; Okimura, Silveira, & Rocha, 2007; Silveira, Lanzana, Barros, & Famá, 2004; Al-Shammari et al., 2013), where a number of studies have addressed the influence of ownership structure on corporate performance. Few, however, have focused on analyzing this relationship in underdeveloped countries (Kobeissi & Sun, 2010; Mehdi, 2007, Tam & Tan, 2007), with specific studies for Latin America being even rarer (Ferreira & Martins, 2016). In addition to contributing to the discussion in the Latin American context, this study makes advances by including aspects related to economic and legal environments in its analyses, not restricting itself to the classic division between Common Law and Code Law, but instead offering more precise discussions when dealing with specific forms of economic instability and the level of legal protection of minority shareholders in the countries analyzed, which according to Mangena, Tauringana, and Chamisa (2012) is not considered in much of the research already carried out on the subject.

The importance of this study for the market should also be highlighted, as it seeks to present an updated overview of the companies listed on the main exchanges in Latin America

regarding levels of ownership concentration, which may be used by national investors and foreigners as a source of information about the situation of companies from these countries in relation to others. In this sense, a contribution is also made to agents active in the capital market (investors and investment companies, for example), by presenting content related to the institutional environment of the countries investigated – mainly with respect to the legal aspects of protection (La Porta, Lopez-De-Silanes, and Shleifer, 1999; Santiago-Castro and Brown, 2007), which is one of the main problems in these countries.

2 BACKGROUND AND HYPOTHESIS
2.1 Control structure and market value

Regarding the relationship between the control structure and market value of firms, Reyna, Vázquez and Valdés (2012, p.12) state that "Agency Theory is the most important theoretical basis that examines and explains the relationship between ownership structure and financial performance", among other factors, because this theory allows for a better understanding of agency costs (Jensen & Meckling, 1976) or even the principal-principal relationship (Durnev, & Kim, 2005; Sheifer, & Vishny, 1997), which are the main elements that impact corporate performance.

Nguyen, Locke, and Reddy (2015) report that recent literature on corporate governance has re-examined the tradition of the main agency framework to understand contexts outside Anglo-Saxon jurisdictions, especially where highly concentrated ownership is the norm, as is the case of economies in less developed countries. Filatotchev, Jackson, and Nakajima (2013) emphasize that this theory was developed in a structure based on companies with fragmented ownership – that is, characterized by a large number of investors with a low level of participation in the business. Céspedes, González and Molina (2010) therefore note that the empirical results on the relationship between shareholder concentration and business performance from research in developed markets cannot be generalized to include emerging economies.

Given the evident divergence between the studies that address the influence of shareholder concentration on corporate performance according to the legal environment of the countries, Table 1 presents a division between the application of Agency Theory in Common Law countries – normally developed economies and recognized in this study as "Traditional Model" – and in economies linked to the Code Law system – generally less developed countries and recognized as "Alternative Model".

Table 1 – Agency Theory: division between traditional and alternative models

CHARACTERISTICS	TRADITIONAL MODEL	ALTERNATIVE MODEL
Main conflict investigated	Agent-Principal	Principal-Principal
Main economies investigated	Developed countries	Underdeveloped or emerging countries
Shareholder concentration levels	Fragmented capital	Concentrated capital
Characteristics of economies analyzed	Stock market with high trading levels, high legal protection for investors, and higher levels of legal enforcement	Stock market with low trading levels, low legal protection for investors, and low level of legal enforcement
Main results	The formation of blockholders generally has a positive effect on the corporate governance model	The formation of blockholders generally has a negative effect on the corporate governance model
Empirical studies	Ang, Cole, and Lin (2000); Fauzi and Locke (2012); Fleming, Heaney, and Mccosker (2005); Florackis (2008); Gugler et al. (2008); Helwege, Pirinsky, and Stulz (2007)	Caixe and Krauter (2013); Chen and Young (2010); Iturriaga and Crisóstomo (2010); Lefort and Urzúa (2008); Marques et al. (2015); Reyna et al. (2012)

Although it is possible to identify extensive empirical literature that shows the negative effects of shareholder concentration on corporate performance in emerging countries, it is necessary to highlight some studies that find positive correlations. The results of Iturriaga and Crisóstomo (2010), for example, indicate that shareholder concentration benefits performance to some extent, after which the effects begin to be destructive. Other studies have identified a negative and statistically significant relationship between concentration of control and market value, considering samples of both Brazilian companies (Caixe & Krauter, 2013; Iturriaga & Crisóstomo, 2010; Marques et al., 2015; Okimura et al., 2007) and of Chilean companies (Lefort & Urzúa, 2008). In addition to the arguments presented previously, based mainly on Agency Theory replicated in emerging economies, this study raises the first research hypothesis:

H_1: Concentration of control has a negative influence on performance in Latin American companies.

2.2 Control vs. market value: relevance of legal protection for minority investors

The political and economic sciences approach presupposes that the strategic actions devised by policy makers result from a strategic "calculation" to foster the gains of exchange. In this approach, rules associated with economic institutions create incentives for economic agents – such as managers or even controlling shareholders – given their preferences and cognitive abilities and how they shape the organization's results (North, 1990). Within this context, Gourevitch (2003) and Roe (2003) state that the legal system or even the culture of the country where the organization is based do not fully determine the incentives that shape the way managers and owners calculate their strategies, and that these are shaped by a set of factors derived from a wider environment.

Studies on organizational theory discuss the relevance of the organizational environment as well as its potential effects on how market agents devise their strategies and shape their values (Daft, 2008). According to Carvalho (2010), the literature has recognized the term "organizational environment" as the broadest and most comprehensive way of defining the space in which organizations operate, which in turn is usually divided into two main groups: general and specific environments (Schermerhorn Junior, 1999). The specific environment comprises the sectors with which organizations interact more directly, taking on unique and differentiated characteristics from one organization to another (Sobral & Peci, 2008), and which have a more immediate impact on the ability of organizations to achieve their goals (Daft, 2008). These include customers, regulators, and suppliers. Schermerhorn Junior (1999) conceptualizes the specific environment of organizations as their nearest and immediate space, comprising groups and people with whom they need to interact more directly in order to survive and thrive. The general environment, in turn, can be understood as the one composed of more general elements, but which still has the potential to influence strategic decisions, even more indirectly, compared to the elements of the specific environment (Daft, 2008). Thus, given the scope of the general environment and in light of what has been explained by Carvalho (2010), Daft (2008), and Schermerhorn Junior (1999), it is possible to divide the general environment into smaller environments, which could be called sub-environments of general environmental factors capable of substantially influencing the various operations of the organization, such as: legal sub-environment, socio-cultural sub-environment, economic sub-environment, political sub-environment, and ecological or environmental sub-environment, etc.

Figure 1 presents an overview of the organizational environment, its division into specific environment and general environment, and the possible subdivisions of the general environment and its factors.
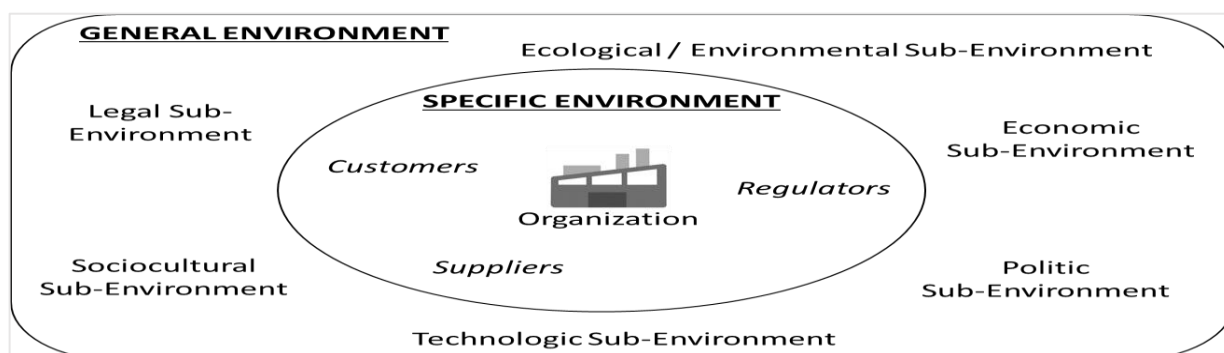
Figure 1 – Division of the organizational environment: specific and general

In terms of the legal sub-environment – hereafter referred to as the legal environment for brevity – and its characteristics in the "Control *vs* Market Value" discussion, we highlight the level of legal protection of minority investors, already addressed by a robust body of scientific research in finance (Djankov et al., 2008; Durnev & Kim, 2005; Johnson, Boone, Breach, & Friedman, 2000; Krishnamurti, Sevic, & Sevic, 2005). Analyzing a significant sample of 25 countries, Johnson et al. (2000), for example, provide convincing evidence that legal environments with precarious protection for minority investors played an important role in the monetary depreciation and falling stock markets of the 1997-1998 Asian financial crisis. The authors also argue that an adverse shock to investor confidence – in this case, the financial crisis – leads to increased expropriation by insiders.

In the same vein, Durnev and Kim (2005) seek to explain the influences of the institutional environment on the opportunistic behavior of controlling shareholders in their search for private benefits, as opposed to the decrease in other shareholders. For this, the authors propose mathematical models in which the deviation in the value of the company due to private gains of the controllers is inversely proportional to institutional environments with a greater presence of laws protecting minority shareholders. In other words, the authors establish, theoretically and empirically, that in countries with greater legal protection for minority shareholders there will be less opportunistic behavior by the controllers, which in turn could benefit corporate performance.

Several studies in finance argue and seek to prove empirically that differences in the legal protection of investors between countries shape the ability of insiders to expropriate minority shareholders, and thus even determine investor confidence in the business (Shankar & Wolfen, 2002). In this paper, we present the results of the literature on the development of the market.

It would be possible to conjecture that greater legal protection for minority shareholders could mitigate the detrimental effects of concentration of control on company market value by mitigating possible self-dealing practices by large controlling shareholders. Djankov et al. (2008) and Shleifer and Vishny (1997), for example, list some of these forms of expropriation by large shareholders with voting power, such as executive perks, overcompensation, transfer pricing, ownership of corporate opportunities, and selfish financial transactions, such as direct issuance of shares or personal loans to insiders and direct theft of corporate assets – which in theory could be more difficult to practice in environments where minority shareholder protection laws are in place.

Thus, it is conjectured as the second study hypothesis that:

H_2: *A higher level of legal protection for minority investors mitigates the effects of concentration of control on corporate performance.*

3 RESEARCH DESIGN
3.1 Sample and analysis period

The study sample includes companies listed on the stock exchanges of six Latin American countries – Argentina, Brazil, Chile, Colombia, Mexico, and Peru –, according to the availability of company information in the Capital IQ® and Economatica® databases, used as data sources for this study. With the aim of guaranteeing comparability between the companies regarding the economic-financial variables investigated, only those that published their financial statements in line with the International Financial Reporting Standards (IFRS) were included in the analysis, which covers 2010 to 2016. Table 2 shows the study sample, segregating the numbers of observations analyzed by economic sector (according to the S&P Global classification), excluding the financial industry, which was not considered in the analyses of this study.

Table 2 – Study sample: number of observations by economic industry (S&P Global)

Industry	2010	2011	2012	2013	2014	2015	2016	Total	%
Consumer Discretionary	25	27	34	43	42	48	50	269	20.61
Consumer Staples	21	28	33	39	41	38	42	242	18.54
Energy	1	1	2	2	2	4	4	16	1.23
Healthcare	4	4	6	8	9	8	12	51	3.91
Industrial	25	29	31	47	46	49	52	279	21.38
Healthcare	3	3	3	5	4	5	3	26	1.99
Materials	17	18	27	32	28	33	32	187	14.33
Real State	10	8	13	15	11	15	18	90	6.90
Telecommunication Service	2	3	2	3	3	4	6	23	1.76
Utilities	15	9	21	20	14	18	19	116	8.89
Others	0	1	1	1	1	1	1	6	0.46
Total	**123**	**131**	**173**	**215**	**201**	**223**	**239**	**1.305**	**100.00**

3.2 Dependent and independent variables

The market value of the companies is the dependent variable. In accordance with recent literature, the market value of the firms was represented by the Enterprise Value (Caixe & Krauter, 2013, 2014; Penman, Richardson, & Tuna, 2007; Viana Junior, Ponte, & Caixe, 2017), which reflects the total value of the company calculated based on the market value of the shares traded, debt securities, preferred shares, and minority interests, minus the value of cash equivalents (Capital IQ, 2017). The measure was scaled by the total assets of the company.

Control structure was treated as an independent variable. Based mainly on the studies from Caixe and Krauter (2013), Crisóstomo and Freire (2015), Crisostomo and Pinheiro (2016), Farooq and Zaroauli (2016), Ferreira and Martins (2016), and Lefort (2005), this variable was operationalized through three proxies: the proportion of shares with voting rights belonging to the main shareholder ($CONC_1$), to the two main shareholders ($CONC_2$), and to the three major shareholders ($CONC_3$).

Focusing on the general objective of this study, the level of legal protection of minority investors was also considered as an independent variable. Following the proposal from Fujiwara and Kimura (2012) and Pindado, Requejo, and Torre (2014), the legal protection of minority investors variable was measured based on information available in the World Bank's Doing Business Database, which includes a series of measures related to laws and regulations that facilitate or even hinder business activities in more than 190 countries (Doing Business, 2017a). The legal protection for minority investors index is measured by three main factors: (i) the disclosure of information on transactions between related parties; (ii) the ability of shareholders to sue and hold directors accountable for self-dealing; (iii) and access to evidence and allocation of expenses in lawsuits filed by shareholders. The data comes from a questionnaire applied to legal experts and are also based on securities and

guarantees regulations, Corporate Law, Civil Procedure codes, and admissibility of evidence rules.

Based on the legal protection of minority investors metrics, two groups of countries denominated High and Low were formed. The companies from countries with greater protection for minority investors were classified in the High group, while those from the other countries formed the Low group. In the High group, the countries with indices greater than or equal to the median were included, while the Low group included the other countries, that is, those with lower indicators than the median, similar to the methodologies used by Chen, Ng, and Tsang (2014) and Florou and Kosi (2015). It should be noted that segregation occurred for each year analyzed, depending on the availability of data.

In order to avoid estimations with biased and / or inconsistent coefficients, in addition to the previously mentioned variables we also selected control variables to give more robustness to the estimates, namely: company size (SIZE); return on equity (ROE); leverage (LEV); issuance of American Depositary Receipts (ADR); and type of shareholder control (TYPE_CON). The inclusion of these variables is based on relevant works related to the theme (Claessens, Djankov, Fan, & Lang, 2002; Klapper, Love, 2004; Silveira et al., 2004, Caixe & Krauter, 2013; Marques et al., 2015). Table 3 summarizes the variables used, their respective proxies, and the literature on the subject:

Table 3 − Dependent, independent, and control variables: proxies, references, and data source

Dimension	Variable	Operationalization	Reference	Source
Dependent Variable	Enterprise value (EV)	Enterprise Value / Total assets, where Enterprise Value = quotation x total shares + short-term liabilities - investments and deposits	Caixe and Krauter (2013 and 2014); Penman et al. (2007); Viana Junior et al. (2017)	Capital IQ®
Independent Variables	Concentration of control ($CONC_{1,2,3}$)	Proportion of voting shares belonging to the main shareholder ($CONC_1$), the two main shareholders ($CONC_2$), and the three major shareholders ($CONC_3$).	Caixe and Krauter (2013); Crisóstomo and Freire (2015); Crisóstomo and Pinheiro (2016); Farooq and Zaroauli (2016)	Economática®
	Legal protection for minority investors (PROT)	Annual index of legal protection for minority investors from countries	Chen et al. (2014); Fujiwara and Kimura (2012); Lin and Chow (2016); Pindado et al. (2014)	Capital IQ®
Control Variables	Size (SIZE)	Natural logarithm of total assets	Brandão and Crisóstomo (2015); Caixe and Krauter (2013); Lin and Chow (2016)	Capital IQ®
	Profitability (ROE)	Net income / Shareholders' Equity	Brandão and Crisóstomo (2015); Caixe and Krauter (2013)	Capital IQ®
	Leverage (LEV)	Total liabilities / Total assets	Brandão and Crisóstomo (2015); Caixe and Krauter (2013); Viana Junior et al. (2017)	Capital IQ®
	American Depositary Receipt (ADR)	Dummy variable that takes the value 1 if the company has ADRs and 0 otherwise	Mendez and Villanueva (2010); Viana Junior et al. (2017)	Capital IQ®
	Control type (TYPE_CON)	Set of dummy variables that assign value 1 to a specific type of major shareholder (Individual, Institutional, State, and Others) and 0 to others	Brandão and Crisóstomo (2015); Caixe and Krauter (2013); Okimura et al. (2007); Viana Junior et al. (2017)	Capital IQ®

3.3 Econometric aspects

Based on the variables investigated, the econometric model proposed in this study is presented in Equation (1):

$$\frac{EV_{it}}{TA_{it}} = \beta_0 + \beta_1 \frac{EV_{it-1}}{TA_{it-1}} + \beta_2 CONC_{it} \times PROT_{High} + \beta_3 CONC_{it} \times PROT_{Low}$$

$$+ \beta_4 SIZE_{it} + \beta_5 ROE_{it} + \beta_6 LEV_{it}$$

$$+ \beta_7 ADR_{it} + \sum_{n=1}^{4} \delta_n TYPE\_CON_{i,t} + \eta_i + \nu_{i,t} \qquad (1)$$

Where:

EV = Enterprise Value, calculated as the sum of the market value of shares and the book value of debts, minus the book value of cash equivalents;

TA = total assets;

CONC = concentration of control, measured by the proportion of voting shares belonging to the largest shareholder;

$PROT_{High}$ and $PROT_{Low}$ = dummies that represent countries with high and low legal protection for minority investors, respectively;

SIZE = size of the company (natural logarithm of total assets);

ROE = return on shareholders' equity (net income divided by shareholders' equity);

LEV = total end of year liabilities divided by total assets;

ADR = dummy variable that equals one if a firm has ADRs listed on a US stock exchange and zero otherwise;

TYPE_CON = dummies for shareholder control type, according to the Capital IQ[®] database (Individual, Institutional, State, and Disperse);

i = firm;

t = year;

η = firm-specific effect (heterogeneity not observed);

ν = error term.

In order to give the analysis more robustness, the parameters were estimated using the Systematic Generalized Method of Moments (GMM-Sys) approach, with the main aim of mitigating possible endogeneity effects, mainly arising from omitted variables and/or regressor measurement errors (Barros et al., 2010; Roodman, 2009; Roberts, & Whited, 2013). In this discussion, the assumption of the erogeneity of the regressors, regarding the estimation of parameters in financial research, is a concern raised by several studies on the subject (MacKinlay, & Richardson, 1991; Veprauskaite, & Adams, 2013; Sonza, & Kloeckner, 2014). Thus, estimates in GMM would be able to significantly reduce the effects of the endogeneity of the regressors, considering, in general, the "direct influence of past values of the response variable on their contemporary values" (Barros et al., 2010, p.18).

4 RESULTS

Table 3 shows the descriptive statistics for the microeconomic variables analyzed. In general, it is possible to identify an average of approximately 38% of shares held by the largest shareholder. Lefort (2005) and Ferreira and Martins (2016), who also analyze the control structure in Latin American companies, indicate averages of 53% and 51%, respectively, for this variable. Thus, there is possible fragmentation of control in listed companies in Latin America as a whole.

Table 3 – Descriptive statistics of microeconomic variables

Variable	N	Mean	Median	p.25	p.75	SD	Min	Max	CV
EV	1,305	0.9803	0.7849	0.5452	10.2316	0.6617	-0.3901	3.8708	0.6750
$CONC_1$	1,305	0.3860	0.3433	0.2094	0.5100	0.2209	0.0014	1.0000	0.5722
$CONC_2$	1,305	0.5056	0.4997	0.3261	0.6589	0.2248	0.0014	1.0000	0.4446
$CONC_3$	1,305	0.5704	0.5679	0.4099	0.7200	0.2171	0.0014	1.0000	0.3806
SIZE	1,305	6.7349	6.7899	50.6072	7.9161	1.8220	1.5412	12.6965	0.2705
ROE	1,305	0.0554	0.0726	0.0128	0.1302	0.3862	-4.0052	8.9812	6.9657
LEV	1,305	0.4998	0.5042	0.3845	0.6298	0.1927	0.0014	0.9688	0.3855

Note: EV = Enterprise Value over Total Assets. CONC = proportion of voting shares of the largest shareholder ($CONC_1$), of the two largest shareholders ($CONC_2$), and of the three largest shareholders ($CONC_3$). SIZE = natural logarithm of total assets. ROE = return on shareholders' equity. LEV = total liabilities divided by total assets.

In a more detailed analysis of the control structure of the companies in the countries analyzed, Figure 2 presents the annual average of the proportions of voting shares, by country, owned by the main shareholder ($CONC_1$), the two largest shareholders ($CONC_2$), and the three largest shareholders ($CONC_3$), calculated over the period analyzed (2010 to 2016). In general, it is possible to observe that the Argentine companies have the highest concentration of control averages, with a main shareholder ($CONC_1$) ratio of around 65% for the companies from this country over the time window analyzed (2012 to 2016).
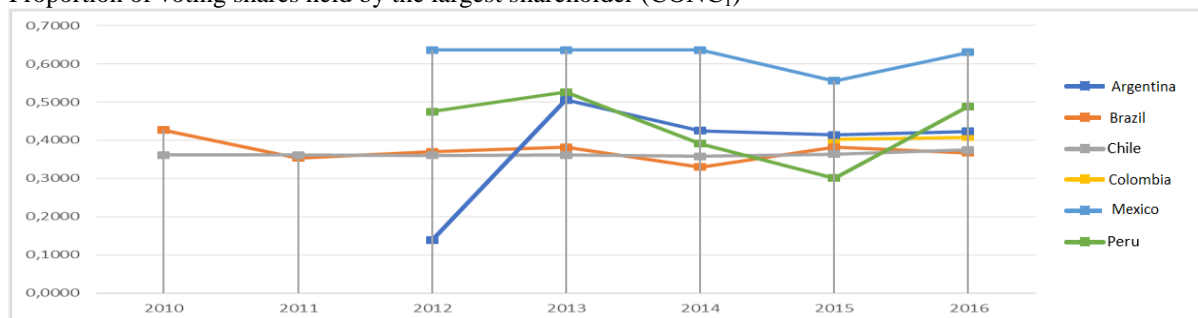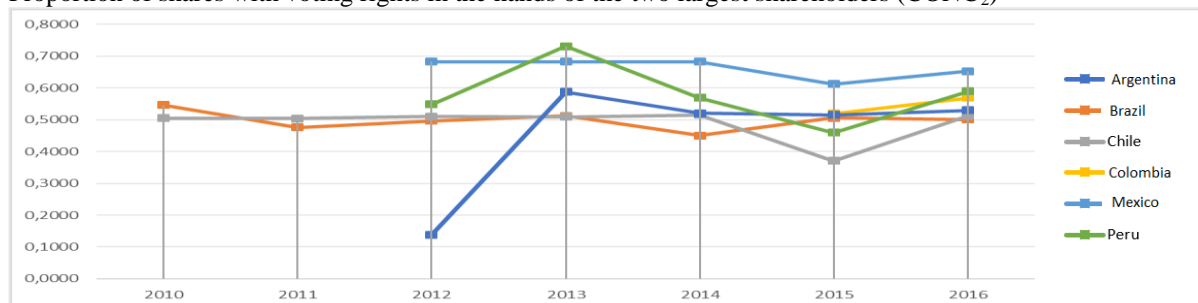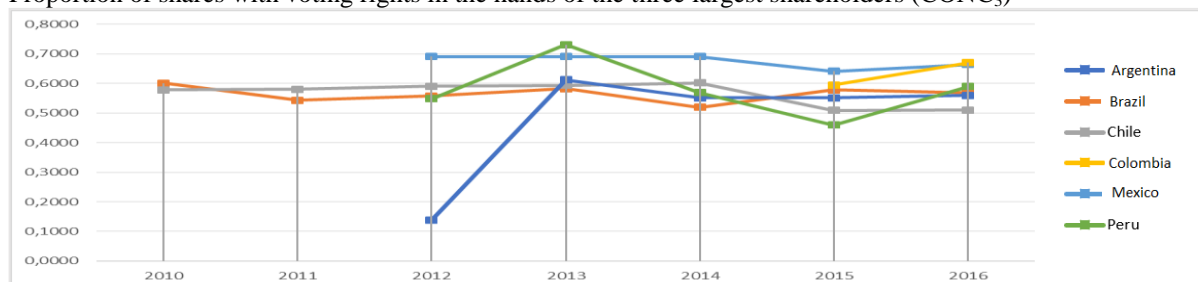
Proportion of voting shares held by the largest shareholder ($CONC_1$)

Proportion of shares with voting rights in the hands of the two largest shareholders ($CONC_2$)

Proportion of shares with voting rights in the hands of the three largest shareholders ($CONC_3$)

Figure 2 – Annual averages for concentration of control (2010 to 2016)

It is also possible to observe, according Figure 2, little variation in the means for concentration of control in the Brazilian companies in the sample, with this being around 40% for the largest shareholder, 55% for the two largest shareholders, and 60% for the three largest shareholders, which is generally consistent with the empirical results presented by Caixe and Krauter (2013), Marques et al. (2015), and Sant'Ana et al. (2016). Similar results are presented by the Chilean companies, which in a few of the years presented higher averages for concentration of control compared to the Brazilian companies, signaling little change in the control structure of the companies from these countries over the period analyzed.

Figure 3 contemplates the World Bank's Minority Investor Protection Index (2017) for the countries analyzed in the period from 2010 to 2016. In general, Argentina and Brazil could be highlighted as having the lowest indices in comparison to the other Latin American countries analyzed. Mexico's steady growth in this factor is also highlighted, jumping from approximately 65 points in 2010 to 73 in 2016. A similar growth of legal protection for smaller investors can be observed in Colombia, though less than for Mexico slight falls in Peru and Mexico between 2013 and 2014 are also noted from Figure 3.
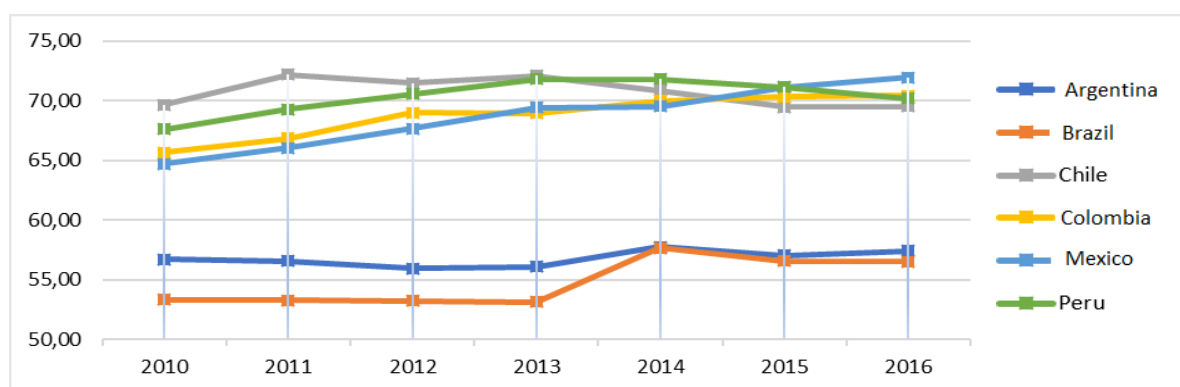

Figure 3 – World Bank's Minority Investor Protection Index

Table 4 considers the estimations of the econometric models, investigating the relationship between concentration of control and approximate market value using Enterprise Value. In terms of the validity of the estimates, it is possible to observe that both the autocorrelation tests for the residuals (Arellano & Bond, 1991) and the validity of the instruments (Hansen, 1982) legitimized the estimated parameters. Thus, with regard to the results for the parameters, there is a negative and significant correlation between market value (EV) and the proportion of voting shares of the largest shareholder ($CONC_1$), which is in line with the results of previous studies (Lefort & Urzúa, 2008; Marques et al., 2015; Sant'ana et al., 2016), thus suggesting a detrimental impact of the concentration of control in the hands of large shareholders on the market value of firms. The results are confirmed by considering the sum of the two ($CONC_2$) and the three largest ($CONC_3$) shareholders.

Finally, it is also worth noting from Table 4 that in all the specifications tested, the first lag of the EV_{t-1} response variable positively influences the company market value, at 1% significance, in all the estimated models. This result reinforces the importance of using dynamic models in corporate finance studies, showing that static specifications may be subject to the omission of relevant variables (Wintoki, Linck, & Netter, 2012).

Table 4 – Relationship between concentration of control and market value

Variable	Equation 1	Equation 2	Equation 3
EV_{t-1}	0.3882***	0.3960***	0.3909***
	(0.11)	(0.11)	(0.11)
CONC$_1$	**-0.1398****		
	(0.07)		
CONC$_2$		**-0.1321****	
		(0.06)	
CONC$_3$			**-0.1179****
			(0.05)
SIZE	0.0716**	0.0667**	0.0629*
	(0.04)	(0.03)	(0.03)
ROE	0.2795	0.2646	0.2726
	(0.20)	(0.19)	(0.19)
ADR	-0.2130	-0.1726	-0.1517
	(0.17)	(0.18)	(0.20)
LEV	-0.3451	-0.4019	-0.3891
	(0.53)	(0.53)	(0.54)
INDIV	0.2028	0.2042	0.2154
	(0.23)	(0.22)	(0.23)
STATE	-1.0811***	-1.1351*	-1.2420*
	(0.61)	(0.69)	(0.73)
INSTIT	-0.0781	-0.0557	-0.0483
	(0.07)	(0.06)	(0.06)
_constant	0.3503*	0.4014*	0.4190*
	(0.22)	(0.22)	(0.22)
Number of Observations	1,082	1,082	1,082
Number of Instruments	128	128	128
χ^2	127.45***	134.47***	130.96***
AR (1) – *p-value*	*0.002*	*0.002*	*0.002*
AR (2) – *p-value*	*0.226*	*0.226*	*0.231*
J Hansen Test – *p-value*	*0.569*	*0.554*	*0.521*

Note: The dependent variable is Enterprise Value (EV), scaled by Total Assets. CONC = proportion of voting shares of the largest shareholder (CONC$_1$), of the two largest shareholders (CONC$_2$), and of the three largest shareholders (CONC$_3$). SIZE = natural logarithm of total assets. ROE = return on shareholders' equity. ADR = dummy variable that equals one if a firm has ADRs listed on a US stock exchange, and zero otherwise. LEV = total liabilities divided by total assets. INDIV, STATE, and INSTIT = dummies for shareholder control type, according to the Capital IQ® database, namely: Individual, Institutional, State, and Dispersed, respectively. Parameters estimated using systematic GMM in two steps with Windmeijer (2005) correction. Arellano and Bond first and second order residual autocorrelation tests [AR(1) and AR(2), respectively] are presented; and Hansen's J-Test (1982) is carried out for instrument validity. Standard errors in brackets. *, **, and *** denote 1, 5, and 10 % significance, respectively.

In order to investigate the possible effects of legal protection for minority investors on the "Control *vs* Market Value" relationship, Table 5 presents the estimations of the parameters related to the proposed model, with the insertion of interactive dummy variables representative of companies from countries with high (PROT$_{High}$) and low (PROT$_{Low}$) protection for minority investors. The level of minority shareholder protection is measured by the World Bank's Doing Business report, as suggested in other studies (Fujiwara & Kimura, 2012; Lin & Chow, 2016; Pindado et al., 2014).

Regarding the validity of the estimates, the autocorrelation and validity tests for the instruments, as well as for all previous estimates, were satisfactory, in accordance with Arellano and Bond (1991) and Hansen (1982). From Table 5 it is possible to observe a negative relationship between the concentration of control in the hands of the largest shareholder of companies from countries with less protection for minority investors (CONC$_1$ x PROT$_{Low}$) and market value, represented by Enterprise Value. On the other hand, when considering the proportion of voting shares of companies from countries with greater minority investor protection (CONC$_1$ x PROT$_{High}$), the variable is not significant. The results remain unchanged when considering the proportion of shares of the two largest (CONC$_2$) and the three largest (CONC$_3$) shareholders.

Table 5 – Effects of legal protection of minority investors in the relationship between concentration of control and market value

Variable	Equation 1	Equation 2	Equation 3
EV_{t-1}	0.3964***	0.4211***	0.4020***
	(0.11)	(0.11)	(0.11)
$CONC_1$ x $PROT_{High}$	**0.0478**		
	(0.18)		
$CONC_1$ x $PROT_{Low}$	**-0.1874***		
	(0.07)		
$CONC_2$ x $PROT_{High}$		**-0.0297**	
		(0.12)	
$CONC_2$ x $PROT_{Low}$		**-0.1334****	
		(0.07)	
$CONC_3$ x $PROT_{High}$			**0.0017**
			(0.11)
$CONC_3$ x $PROT_{Low}$			**-0.1448****
			(0.06)
SIZE	0.0772**	0.0544***	0.0592**
	(0.03)	(0.03)	(0.03)
ROE	0.2896*	0.2466	0.2696
	(0.17)	(0.16)	(0.17)
ADR	-0.1956	-0.1318	-0.0807
	(0.14)	(0.16)	(0.20)
LEV	-0.1225	-0.2223	-0.1555
	(0.50)	(0.51)	(0.49)
INDIV	0.1299	0.1901	0.1805
	(0.25)	(0.25)	(0.27)
STATE	-0.9736*	-0.9528	-1.0599
	(0.59)	(0.61)	(0.68)
INSTIT	-0.1201*	-0.0948	-0.0923
	(0.07)	(0.07)	(0.07)
_constant	0.1818	0.3521	0.2944
	(0.25)	(0.25)	(0.26)
Number of Observations	1,082	1,082	1,082
Number of Instruments	144	144	144
χ^2	134.37***	172.93***	159.50***
AR (1) – *p-value*	*0.002*	*0.001*	*0.002*
AR (2) – *p-value*	*0.218*	*0.223*	*0.223*
J Hansen Test – *p-value*	*0.391*	*0.305*	*0.224*

Note: The dependent variable is Enterprise Value (EV), scaled by Total Assets. CONC = proportion of voting shares of the largest shareholder (CONC1), of the two largest shareholders (CONC2) and of the three largest shareholders (CONC3). **$PROT_{High}$** (**$PROT_{Low}$**) is a dummy variable that takes the value 1 if the legal protection index for minority investors in country j in a given year is ≥ median (median). SIZE = natural logarithm of total assets. ROE = return on shareholders' equity. ADR = dummy variable that equals one if a firm has ADRs listed on a US stock exchange, and zero otherwise. LEV = total liabilities divided by total assets. INDIV, STATE, and INSTIT = dummies for shareholder control type, according to the Capital IQ® database, namely: Individual, Institutional, State, and Dispersed, respectively. Parameters estimated using systematic GMM in two steps with Windmeijer (2005) correction. Arellano and Bond first and second order residual autocorrelation tests [AR(1) and AR(2), respectively] are presented; and Hansen's J-Test (1982) is carried out for instrument validity. Standard errors in brackets. *, **, and *** denote 1, 5, and 10 % significance, respectively.

Thus, it is suggested that the legal environment of countries – specifically with regard to the protection of minority shareholders – may moderate the effect of controlling rights on the market value of firms, even in less developed economies, as in the case of Latin America. Thus, the existence of the entrenchment effect (Claessens et al., 2002) is only conjectured in countries with less protection for minority shareholders, and this phenomenon is not confirmed for countries where, in theory, major shareholders would be less likely to act opportunistically for their own benefit.

5 CONCLUSIONS

This study investigated, in light of Agency Theory applied to less developed economies, the relationship between the concentration of control and market value in Latin American companies, and whether this relationship could be tempered by characteristics related to the legal environment of the countries analyzed, more specifically the legal protection of minority investors. Using a sample of 341 companies listed on the main exchanges in Latin America, and applying several econometric models estimated using GMM-Sys, the results suggest a negative effect of concentration of control on market value. After inserting the variables related to legal protection for minority investors, a negative influence of the concentration of voting capital on market value was observed only in the economies with low legal protection for minority shareholders.

These results reinforce the destructive effects of the concentration of voting rights – through the formation of large blockholders in the analyzed economies – on corporate performance in Latin American stock markets. In spite of the slight dispersion of shareholder control in recent years, on average, companies in some countries still see a high presence of controlling shareholders, which in environments with incipient minority protection and low legal enforcement could act abusively against the interests of small shareholders. This could include outlining salary policies for themselves, managing privileged information, assigning privileged executive positions to their relatives, or even raising transactions with ineffective parties to serve personal goals, which could aggravate agency costs and eventually undermine the firm's governance structure and market value.

It is also possible to infer an attenuation of agency conflicts between controlling shareholders and minority shareholders in a legal environment of greater protection for minority shareholders, even in less developed economies. Given the impossibility of acting for their own benefit – in light of legal barriers capable of disciplining such behavior – large controlling shareholders could convey to the market the idea of better corporate governance, assuming that the owners of large shareholdings, and therefore with concentrated decision-making powers, are more demanding in terms of efficient governance mechanisms to control administrative decisions, eventually exercising more efficient monitoring of management and thus increasing market value.

For future research we suggest an analysis of the effects of the economic and legal environment on other facets related to ownership structure that not only involve control, such as cash flow rights or even ownership percentage as a whole – considering shares with and without voting rights – as well as the replication of the models used in other countries with less developed economies, such as those of continental Europe, with a view to confirming the findings, and including other variables not explored in this study.

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