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The Influence of Ownership Concentration on Firm Resource Allocations to Employee Relations, External Social Actions, and Environmental Action

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ABSTRACT

Objective – The purpose of this work is to examine the influence of ownership concentration on the funds allocated to CSR in Brazilian firm.

Design/methodology/approach – Econometric models have been estimated, with an index of CSR as the dependent variable, and ownership concentration as the explanatory variable, together with relevant control variables suggested in the literature (profitability, leverage, growth opportunities, and firm size). A Brazilian CSR database has been built using data extracted from two different sources, one relative to CSR data and another that provides ownership structure and financial data. CSR policy is proxied by an index obtained as the ratio between funds directed to social action (employee relations, external social actions, and environmental action) and net sales.

Findings – The findings indicate that CSR is positively influenced by firm ownership concentration in Brazil.

Practical implications – The positive influence of ownership concentration on CSR may be an indication that large controlling shareholders of Brazilian firm may be considering CSR as an effective way to improve the image and reputation of the firm and its owners. This belief may be stimulating CSR projects and their disclosure in Brazil.

Originality/value – This work is an additional contribution to the debate about the role played by ownership structure on CSR. Taking into account that the central point of Stakeholder Theory is a firm's concern with all its stakeholders, the research builds on Stakeholder and Agency Theories by assessing the influence of large controlling shareholders on a firm's social concerns.

Keywords – Corporate social responsibility; Ownership structure; Ownership concentration.

1 INTRODUCTION

In modern times, corporations are subject to enormous pressures exercised by other agents in addition to the traditional stakeholders directly involved with firm ownership, firm management and external funding considered under the agency theory framework (Jensen & Meckling, 1976). Social concerns may be seen as a new aspect in this context. They are not usually associated with the main firm strategic objectives and decisions and, *a priori*, not seen as value creating. Nonetheless, firms are starting to be assessed not only by traditional performance indicators but also by means of the way they interact with a broad set of social demands (Aguilera, Rupp, Williams, & Ganapathi,2007; McWilliams, Siegel, & Wright, 2006; Prahalad & Hamel, 1994). Under the stakeholder theory framework, the way a firm interacts with the ample set of its distinct stakeholders is relevant (Freeman, 1999; Freeman & Phillips, 2002; Freeman, Wicks, & Parmar, 2004; Jamali, 2008). This new scenario seems to be leading firms to integrate social concerns into their strategic planning, for visibility and reputational reasons, or also as a way to legitimize their social actions (Cochran, 2007; Reast, Maon, Lindgreen, & Vanhamme, 2013; Tilling & Tilt, 2010).

The central point of stakeholder theory is the firm's concern with all its stakeholders, meaning that the firm should not only be centered on value creation for shareholders but also on the welfare of all stakeholders and adequate interaction with the environment (Freeman, 1984; Freeman & Phillips, 2002). Under the stakeholder theory framework, a firm with such concerns integrated into its strategy tends to become a stakeholder-oriented firm that manages for stakeholder interests, and establishes trusting relationships with them, based on mutual loyalty and justice (Freeman, Rusconi, Signori, & Strudler, 2012; Harrison, Bosse, & Phillips, 2010; Minoja, 2012; Tullberg, 2013). Stakeholder theory proposes that business and ethics must be integrated and not in conflict, and that such integration is able to increase competitive advantages and create value (Freeman *et al.*, 2012; Tullberg, 2013). In this vein, a firm that effectively manages for stakeholders is sensitive to societal values, being expected to respect society and the environment. That firm is prone to set up Corporate Social Responsibility (CSR) activities (Brown & Forster, 2013; Waddock & Graves, 1997). Such activities may be directed to the interaction with the environment and to distinct stakeholders, like employees and several external stakeholders.

The literature has looked for possible determinants of CSR. Among possible factors able to moderate CSR are: firm profitability, firm risk, firm size and industry sector. More recently, some research works have also considered the possible influence of ownership structure on CSR (Barnea & Rubin, 2010; Godos Díez, Fernández Gago, & Cabeza García, 2012; Li & Zhang, 2010; Robertson, 2009). Evidence that specific country environment may have an influence on the intensity of CSR has been found and has motivated research in specific markets (Baughn, Bodie, & Mcintosh, 2007; Gjølberg, 2009; Robertson, 2009). The need for more academic attention about CSR in emerging markets has been highlighted (Li & Zhang, 2010). These are important motivations for research on specific markets, as is the case of Brazil. Specifically, the search for reputation and legitimacy may be a factor that interferes with CSR policy and its reporting (Adams, 2008; Bebbington, Larrinaga-González, & Moneva-Abadía, 2008a; Bebbington, Larrinaga-González, & Moneva-Abadía, 2008b; Deegan, 2002). Considering the relevance of reputation for firm owners, it seems appropriate to look for possible links between ownership structure and CSR. This work tries to answer whether CSR policy of Brazilian firm is influenced by ownership structure, and specifically by ownership concentration, or by the presence of a controlling shareholder.

The results show a positive effect of ownership concentration on CSR. These findings signal that, indeed, CSR of Brazilian firm seems to benefit from ownership concentration. This

means that more ownership concentrated firms are prone to undertaking CSR actions directed at employees, the external public, and to interactions with the environment.

The remainder of the paper is organized as follows. The next section presents a review of the literature and proposes the hypotheses for the present study. Then the sample and research strategy are described. Presentation of consolidated results is shown next. In the final part of the paper, the reader will find conclusions and final considerations.

2 LITERATURE REVIEW AND HYPOTHESES

2.1 Corporate social responsibility and reputational concerns

As predicted under the stakeholder theory framework, CSR may be considered as a response to social pressures, which characterize the dimensions of CSR (Cochran, 2007; Wood, 1991). A set of possible factors that may interfere in the intensity of firm's CSR has been considered, including profitability, leverage, firm size, sector, and more recently, ownership structure.

Reputational aspects have been treated in the literature as a concern that may also play a role in CSR policy. Company reputation is related to quality, esteem, image and prestige, in comparison to other entities (Deephouse & Carter, 2005). Some research has highlighted that the concept of organizational reputation may help the comprehension of CSR reporting practice (Bebbington *et al.*, 2008b; De Los Ríos Berjillos, Ruiz Lozano, Tirado Valencia, & Carbonero Ruz, 2012; Deephouse & Carter, 2005). Owners and managers who consider reputation a relevant concern, both for the firm and for themselves, may be more prone to undertake CSR actions as an additional way to improve.

Organizational legitimacy may be considered to be a kind of "social contract" between firm and society (Bebbington *et al.*, 2008b). In a certain way, the social system is able to "punish" firms that disrespect such a "social contract". In this sense, firm legitimacy is associated with proper, expected, or desirable actions of a firm within a social system (Deephouse & Carter, 2005). Legitimacy theory considers that firms try to legitimize their actions (Deegan, 2002; Tilling & Tilt, 2010). In spite of the voluntary aspect and absence of specific format for CSR disclosure, firms have implemented CSR policy and publicized their respective actions. Regardless of the exact reasons for such disclosures, the purpose is to gain, maintain or repair legitimacy with relevant corporate stakeholders (Deegan, 2002; Dowling & Pfeffer, 1975; Suchman, 1995). Annual reports may be a way that firms use to help legitimize corporate actions, serving as a tool to improve stakeholders' perception of the company and even influence concepts and opinions about values and norms of society (De Los Ríos Berjillos *et al.*, 2012; Deegan, Rankin, & Tobin, 2002; Deegan, Rankin, & Voght, 2000; Li, Richardson, & Thornton, 1997; Tilling & Tilt, 2010).

2.2 Corporate social responsibility in Brazil

In the 1990s the idea of CSR in Brazil matured with the incorporation of the CSR theme by a group of companies that began to promote social actions. Some factors that contributed to the advancement of CSR: pressure from international agencies; environmental protection campaigns, the 1988 Constitution of Brazil, which represented a major advance in both social and environmental issues, and the completion of important events and social programs, as is the case of Eco 1992 in Rio de Janeiro (Instituto Brasileiro de Análises Sociais e Econômicas [IBASE], 2008). It is worth mentioning the initiative of relevant institutions like IBASE (Brazilian Institute of Social and Economic Analysis). This institution has encouraged firms to undertake social action. In this context, they have proposed a report model for disclosing Corporate Social Responsibility. Also, they created a recognition of "Socially Responsible Firm" for firms with good social performance.

2.3 Ownership structure and CSR

The literature has documented that conflicts of interests among main firm's stakeholders, such as owners, management and creditors, considered by the theory of the firm (Jensen & Meckling, 1976), seem to be moderated by ownership structure. Ownership structure refers to how firm ownership is distributed among its shareholders, with several aspects involved, for instance, the concentration of shares in the hands of each shareholder or groups of them, whether there is a major shareholder with more than 50% of voting capital, insider ownership, etc. For instance, conflicts between firm owners and firm management is stronger in markets with low ownership concentration in contrast to markets characterized by high ownership concentration, where conflicts between controlling and minority shareholders seem to be more pronounced (Cuervo, 2002; Shleifer & Vishny, 1997). A number of works have found evidence on the influence of different aspects of ownership structure on investment and financial policies (Crisóstomo, 2011; Goergen & Renneboog, 2001; Schiantarelli & Sembenelli, 2000). Another stream of research has shown that ownership structure has also an influence on firm value and performance (Allen & Phillips, 2000; Villalonga & Amit, 2006). Considering that ownership structure matters for such a number of firm policies, it is feasible to consider that it may also influence a firm's CSR policy. Firm owners and managers have been concerned about CSR since it started to be considered as an additional way to establish legitimacy, improvement of firm image and reputation, and also visibility (Chiu & Sharfman, 2011).

Indeed, some recent research has documented evidence and highlighted the relevance of ownership structure for CSR. Robertson (2009) considers that ownership structure might influence strategic decisions about CSR and cites important cases of social actions by family firms in Turkey as an example. Robertson mentions that the family ownership structure in Turkey is very relevant to the present way of doing CSR as corporate philanthropy in that country. Robertson's view is that the influence of ownership structure on CSR could also be country specific.

The discussion about the legitimacy of CSR actions seems to be related to whether CSR is value creating or not, as the literature has pointed out (Griffin & Mahon, 1997; Margolis & Walsh, 2003). If this is the case, it is feasible to propose that ownership concentration may indeed matter for CSR. See (2009) considers that well protected shareholders' rights might enhance the likelihood that companies view CSR as something beneficial to the firm's profitability since shareholders may see CSR as value creating. This rationale has an opposite view. Minority shareholders may see CSR as fund consuming and profit reducing in the short-run, and this way they may not be interested in firm CSR. In this scenario, large powerful shareholders are more prone to undertake CSR activities that might reflect their preferences, as controlling shareholders, that may view firm reputation as relevant, even at the expense of some profit in the short-run. The search for legitimacy may drive such controlling shareholders that consider reputation a relevant concern, and the reduced number of such shareholders may ease the ongoing of CSR actions.

Results regarding the association between CSR and ownership structure are still initial and inconclusive. Some works have found a positive effect of ownership concentration on CSR. Eng and Mak (2003) find that voluntary disclosure is stronger with higher ownership in the hands of government in Singapore. In Malaysia, a positive effect of government ownership on CSR has been found (Said, Zainuddin, & Haron, 2009). In the Spanish market, ownership concentration in the hands of the main shareholder is positively associated with CSR (Godos Díez *et al.*, 2012). In the USA, a positive influence of institutional ownership on CSR has been documented (Harjoto & Jo, 2008; Johnson & Greening, 1999).

Some aspects of ownership structure have been found to be negatively associated with CSR. This is the case of insider ownership in the

USA (Barnea & Rubin, 2010), and ownership concentration in the hands of the main shareholder of non-state firms in China (Li & Zhang, 2010). In the European scenario, the power of the largest shareholder is negatively related to CSR (López-Iturriaga & López-De-Foronda, 2011). Another group of works has found no correlation between ownership concentration and CSR (Halme & Huse, 1997; Prado-Lorenzo, Gallego-Alvarez, & Garcia-Sanchez, 2009; Roberts, 1992).

2.4 Hypotheses rationale

Following the above arguments about higher ownership concentration, usually associated with a reduced number of large controlling shareholders, it is worth mentioning that such a situation minimizes agency conflicts between managers and owners, since it facilitates management monitoring and alleviates the free-rider problem. Besides, ownership concentration held by a few controlling shareholders tends to be associated with a long-term perspective in ownership, in contrast to the possible short-term interests of managers and minority shareholders. Evidence of a positive effect of ownership concentration in easing a firm's access to external financing has been found, and the literature has considered reputation an important concern in this context (Chirinko & Schaller, 1995; Goergen & Renneboog, 2001).

Regarding CSR policy, decisions about it might be taken discretionarily by large controlling shareholders in the search for benefits from improving firm image and reputation in the medium and long-run, even being contrary to the short-term interests of minority shareholders and managers. CSR activities most highlighted in the literature are associated with actions directed to non-shareholder stakeholders, and there is controversy about the value creation capacity of such actions, as previously mentioned (Margolis & Walsh, 2003; Orlitzky, Schmidt, & Rynes, 2003; See, 2009). Returns from CSR activities may not be associated with short-term periods since CSR is something that might be incorporated into the brand and firm image in the long-run. This would be very important to large controlling shareholders, usually with a long-term perspective regarding firm ownership, compared to minority shareholders. Highly protected minority shareholders can be powerful enough to disagree with great amounts of CSR that could be profit consuming in the short-run. In the opposite way, in markets where a small number of controlling shareholders have the opportunity to decide about it discretionally, i.e., with no strong minority shareholders opposition, the reputational motives might be stronger than short-term profitability, even when facing the possibility of disrespecting minority shareholders' interests. Considering the uncertain value creation power of CSR, and that Brazil is characterized by low protected minority shareholders, as documented in the literature (Dyck & Zingales, 2004; La Porta, López-de-Silanes, Shleifer, & Vishny,1998), it is feasible that ownership concentration in Brazil may lead to more importance for reputational and legitimacy concerns driving CSR. This set of arguments leads us to the proposition of the following research hypothesis:

> **Hypothesis 1**: Ownership concentration has a positive effect on the CSR of Brazilian firms.

3 SAMPLE AND METHOD

3.1 Sample

Difficulties in CSR measurement, frequently mentioned in the literature, may be even more severe in markets in which the question is relatively incipient, as is the case of emerging markets. Brazilian firms disclose CSR information voluntarily in an inconsistent manner. Such absence of uniformity in format and content makes research more difficult. In order to make this study feasible, data has been collected from two different sources: the Brazilian Institute of Social and Economic Analysis (IBASE), and

Economática. IBASE has proposed a report model for disclosing firm's CSR and had also served as a repository for such data (IBASE, 2008). There has been an important voluntary adherence of firms from 1996 until 2009, when IBASE declared that it had reached its purpose of promoting CSR and would not file firms' CSR data anymore. IBASE has created a unique database on CSR of Brazilian firms. The IBASE archive contains data of firm funds directed to CSR related to employees (food, legal labor charges, pension plan, health plan, security and health at work, formal and professional education, cultural activities, employees' children care, and profit sharing), to external stakeholders (educational and cultural programs, health and sanitation, sport programs, hunger prevention, government taxes), and to interactions with the environment (investment associated with preventing accidents in firm production processes, external actions related to educational programs and environment protection and recovery) (IBASE, 2008). This way, CSR in this work is defined in terms of a firm's allocation of resources to employee relations, to actions directed to external stakeholders, and to interactions with the environment.

The financial and ownership data have been collected from Economática database. Having ownership data as a key point, our sample has been restricted to listed companies in the period 1997-2008, with a total of 354 firm-year observations. In order to use panel data, a subsample of firms with a minimum of 2 observations each, for 49 companies, in a total 237 firm-year observations, has been created. The distribution of firms in eight important economic sectors is also relevant to the study, as can be seen in Table 1. For sensitivity analysis, models have been estimated by distinct methods. Additionally, Ordinary Least Squares estimates for the whole sample with 354 observations have also been run.

TABLE 1 – Distribution of firm sample by sector

Sector	N. Observ.	%	N. Firms	%
Gas and fuel products	15	6.33	4	1.69
Mining, steel and chemical products	47	19.83	9	3.80
Machinery and equipment	25	10.55	6	2.53
Telecommunications	17	7.17	3	1.27
Electric energy, gas supply, and water supply and sanitary services	88	37.13	19	8.02
Financial services	26	10.97	3	1.27
Trade and retailing	13	5.49	3	1.27
Other	6	2.53	2	0.84
Total	237	100.00	49	100.00

3.2 Variables and models

The literature has highlighted that CSR measurement is a relevant problem for CSR research, being probably the reason for the lack of uniformity and the great variety of measures used in CSR research (Margolis & Walsh, 2003; Waddock & Graves, 1997). Such difficulty is also present in Brazil. The CSR index adopted in this study is based on IBASE's information, which contains CSR data regarding the three corporate social action segments: relationship with employees, external social action, and environmental action. CSR is defined in terms of a firm's fund allocation to employee relations, to society, and to concerns with the environment. As mentioned above, CSR funds disclosed through IBASE by the firm are directed to employees (food, legal labor charges, pension plan, health plan, security and health at work, formal and professional education, cultural activities, employees' children care, and profit sharing),

external stakeholders (educational and cultural programs, health and sanitation, sport programs, hunger prevention, government taxes), and to environmental interactions (investment associated to preventing accidents in the firm production process, external actions related to educational programs and environmental protection and recovery). The CSR index (Corporate Social Responsibility Index – CSR_I) is defined by the ratio between the amount of funds spent by the company on firm CSR and its net sales. Such a ratio signals the proportion of net sales directed to CSR, being an interesting proxy for the firm's concern with CSR, as previously used in Brazil (Crisóstomo, Freire, & Parente, 2014; Crisóstomo, Freire, & Soares, 2012; Crisóstomo, Freire, &Vasconcellos, 2011; Machado, Machado, & Santos, 2010).

This work uses econometric models to deal with the association between ownership concentration and CSR. The models have CSR_I as the dependent variable that is regressed on ownership concentration and other relevant control variables used previously. In model of equation (1), a dummy variable (DMajor) has been used to take into account the presence of a major shareholder (DMajor), i.e, a shareholder with more than 50% of voting shares. This dummy variable is set to 1 if firm i, in year t has a major voting shareholder, and is set to 0 otherwise.

$$CSR\_I_{i,t} = \beta_0 + \beta_1 DMajor_{i,t} + \beta_2 ROA_{i,t} + [\beta_3 LEV_{i,t}] + [\beta_4 GrOpp] + \beta_5 SIZE_{i,t} + \beta_6 SD_{i,t} + \beta_7 YD_{i,t} + \varepsilon_{i,t} \quad (1)$$

The model of equation (2) has the sum of ownership concentration in the hands of the 3 (three) main voting shareholders (OwnC) considered as a possible determinant for CSR according to hypothesis 1. For robustness of results, model (2) has been estimated for the sum with three distinct values: the sum of voting shares in hands of the main shareholder (OwnC1), the proportion of voting shares owned by the two main shareholders (OwnC2), and the sum of voting shares in the hands of the three main voting shareholders (OwnC3).

$$CSR\_I_{i,t} = \beta_0 + \beta_1 OwnC_{i,t} + \beta_2 ROA_{i,t} + [\beta_3 LEV_{i,t}] + [\beta_4 GrOpp] + \beta_5 SIZE_{i,t} + \beta_6 SD_{i,t} + \beta_7 YD_{i,t} + \varepsilon_{i,t} \quad (2)$$

An additional group of variables is included in the models so that the models control for a larger number of factors, following relevant previous works. The literature frequently controls also for profitability (ROA), firm size (SIZE), firm risk (proxied by leverage in this work – LEV) and industry sector (Griffin, & Mahon, 1997; Husted, & Allen, 2007; Ullman, 1985; Waddock & Graves, 1997). Growth opportunities (GrOpp) have also been pointed out in recent literature as able to moderate firm CSR (Li & Zhang, 2010).

Results about the effect of profitability on CSR are still inconclusive, but the rationale is that profitability may benefit CSR since higher profitability might be favorable to the existence of slack resources (Baron, Harjoto, & Jo, 2009; Griffin & Mahon, 1997; Waddock & Graves, 1997). Despite the lack of a consensus, this work also includes financial performance as a factor able to affect CSR. Following the current trend in the CSR literature, this work adopts return on assets (ROA) as a financial accounting performance measure.

Firm risk, proxied by firm leverage, is also seen as able to influence firm CSR policy. In this sense, since CSR is not strictly connected to the main business of the company, risk tolerance of firm directors might moderate their attitude toward CSR since CSR requires the use of funds that would otherwise be used in the main activities of the company. Looking at leverage itself, the more leveraged the firm is, the less flexibility it has to direct funds to other destinations besides the firm's main business (Waddock & Graves, 1997). Firm leverage (LEV) is measured as the ratio of total liabilities over total assets. Considering that LEV is not an adequate variable for firms from the financial sector, we have estimated models (1) and

(2) with LEV for the subsample of nonfinancial firms only, and, without the LEV variable for the whole sample, i.e., including the financial sector.

Firm growth opportunities have also been taken into account in the literature as able to affect CSR policy, under the argument that firms with growth opportunities would be directing all effort to maximize such investment opportunities and, in this way, would be less able to direct funds to CSR (Li & Zhang, 2010). Growth opportunities are proxied by Tobin's q, measured as the sum of firm market value and debt, over total assets. For robustness of our results, we have estimated the models proposed with and without growth opportunities, since the results with such factors are still preliminary.

Firm size is an important control variable since it may determine firm capacity to undertake CSR actions. Smaller companies may face lower capacity of sustaining more active behaviors regarding social action, compared to larger firms that usually have better and more available infra-structure as well as higher cash flow levels. At the same time, as a firm grows, it becomes more visible and more responsible with respect to different stakeholders' demands. This study adopts the log of total assets as a proxy for company size (SIZE). The literature has pointed to the possible importance of firm size on CSR in spite of the existence of controversial arguments (Baumann-Pauly, Wickert, Spence, & Scherer, 2013; Orlitzky, 2001; Udayasankar, 2008).

Considering that the literature has found that some sectors of the economy usually have more intense CSR activity, it is important to take the industry factor into account with the inclusion of sector dummies (SD) in the models (Day & Woodward, 2009). Additionally, year dummies (YD) have also been used to control for possible time events with effects on CSR.

For robustness of results, models were estimated using Generalized Least Squares for panel data (GLS), Two Stage Least Squares (2SLS), and OLS (Ordinary Least Squares). Additionally, OLS estimates have been run for the whole sample, including firms with only one firm-year observation.

4 RESULTS

Table 2 shows descriptive statistics of model variables. Brazilian firms have, on average, 7.65% of annual net sales directed to social action (CSR_I). Our findings show that, in fact, Brazilian firms have high ownership concentration (OwnC), as previous works have documented (La Porta *et al.*, 1998; López-Iturriaga & Crisóstomo, 2010). The average ownership concentration of voting shares is around 60.36% in the hands of the main shareholder (OwnC1) and reaches 79.66% in the hands of the three main voting shareholders (OwnC3). Additionally, a major shareholder, i.e., a voting shareholder with more than 50% in voting capital, is a reality in 68.35% of firm-year observations. Such characteristics of high ownership concentration may lead to some specific effects on certain firm strategic policies, as previously found, and possibly also on CSR policy, as hypothesized in this work.

TABLE 2 – Descriptive statistics

Variables	Average	StdDev	CoefVar	Median	Min.	Max.
CSR_I	0.0765	0.0557	0.7279	0.0612	0.0042	0.2652
OwnC1	0.6036	0.2603	0.4312	0.5841	0.1127	0.9986
OwnC2	0.7410	0.2112	0.2850	0.8198	0.1738	0.9996
OwnC3	0.7966	0.1832	0.2300	0.8503	0.1738	0.9996
ROA	0.0627	0.0878	1.4015	0.0436	-0.2891	0.4403
LEV	0.2009	0.1705	0.8488	0.1885	0.0000	0.7038
GrOpp	0.8267	0.7414	0.8968	0.6495	0.0333	6.1528
Size	14.4386	1.7727	0.1228	14.1129	10.6208	18.7701

Note: CSR_I is firm's CSR index, measured as the ratio between CSR expanses and net sales. ROA is return on assets. Leverage (LEV) is measured by the ratio of total liabilities over total assets. GrOpp stands for firm growth opportunities, proxied by Tobin's q. SIZE is firm size, proxied by Ln of total assets.

4.1 Model estimates for nonfinancial firms

Information exhibited in Table 3 shows that a major voting shareholder (DMajor) indeed plays a positive role on the CSR of Brazilian firms, in accordance with the proposed hypothesis. Such a significant positive coefficient of DMajor has been found in all model estimations. The presence of a major shareholder has been shown to have a positive effect on CSR, thus being robust to distinct estimation methods (GLS, 2SLS, and OLS) and to model estimates without (columns i) and with (columns ii) the growth opportunities variable (GrOpp).

TABLE 3 – Regression results for the explanatory power of the presence of a major shareholder on CSR for nonfinancial firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
DMajor	0.0234	***	0.0194	**	0.0234	**	0.0194	**	0.0234	**	0.0194	**
	(0.006)		(0.029)		(0.010)		(0.041)		(0.010)		(0.041)	
ROA	-0.0841	**	-0.0534		-0.0841	*	-0.0534		-0.0841	*	-0.0534	
	(0.046)		(0.255)		(0.060)		(0.284)		(0.060)		(0.284)	
LEV	-0.0571	***	-0.0510	***	-0.0571	***	-0.0510	**	-0.0571	***	-0.0510	**
	(0.003)		(0.009)		(0.005)		(0.015)		(0.005)		(0.015)	
GrOpp			-0.0079				-0.0079				-0.0079	
(0.145)							(0.171)				(0.171)	
SIZE	-0.0062	***	-0.0062	***	-0.0062	**	-0.0062	**	-0.0062	**	-0.0062	**
	(0.008)		(0.008)		(0.013)		(0.013)		(0.013)		(0.013)	
Intercept	0.1740	***	0.1829	***	0.1585	***	0.1648	***	0.1585	***	0.1648	***
	(0.000)		(0.000)		(0.006)		(0.005)		(0.006)		(0.005)	
N	211		211		211		211		211		211	
F					2.51		2.49		2.51		2.49	
p-value					0.0005		0.0005		0.0005		0.0005	
R2					0.2182		0.2260		0.2182		0.2260	
Wald Chi2	58.88		61.6									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 DMajor_{i,t} + \beta_2 ROA_{i,t} + \beta_3 LEV_{i,t} + [\ \beta_4 GrOpp\ ] + \beta_5 SIZE_{i,t} + \beta_6 SD_{i,t} + \beta_7 YD_{i,t} + \varepsilon_{i,t}$.
Note: CSR_I is firm's CSR index, measured as the ratio between CSR expanses and net sales. DMajor (dummy variable) is set to 1 in the presence of a major shareholder in the firm-year observation. ROA is return on assets. Leverage (LEV) is measured by the ratio of total liabilities over total assets. GrOpp stands for firm growth opportunities, proxied by Tobin's q (sum of firm market value and debt, over total assets). SIZE is firm size and is proxied by Ln of total assets. SD is a group of industry dummies, and YD is a group of year dummies. Models estimated by Generalized Least Squares for Panel Data (GLS), Two Stage Least Squares (2SLS), and OLS (Ordinary Least Squares). Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

Estimated results of model 2 are exhibited in Tables 4, 5 and 6. These estimates take into account the ownership concentration among the three main voting shareholders of Brazilian non-financial firms and are in line with those of model 1 (see Table 3). Voting ownership concentration of the main (OwnC1), the two main (OwnC2), and the three largest voting shareholders (OwnC3), is positively related to the CSR policy of Brazilian firms. This may be an indication that large voting shareholders of Brazilian firm are favoring CSR activities, in accordance with the proposed hypothesis.

TABLE 4 – Regression results for the explanatory power of ownership concentration on CSR for nonfinancial firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
OwnC1	0.0346	**	0.0278	*	0.0346	**	0.0278	*	0.0346	**	0.0278	*
	(0.011)		(0.053)		(0.017)		(0.069)		(0.017)		(0.069)	
ROA	-0.0779	*	-0.0477		-0.0779	*	-0.0477		-0.0779	*	-0.0477	
	(0.065)		(0.307)		(0.083)		(0.337)		(0.083)		(0.337)	
LEV	-0.0616	***	-0.0545		-0.0616	***	-0.0545	**	-0.0616	***	-0.0545	**
	(0.001)		(0.006)		(0.003)		(0.010)		(0.003)		(0.010)	
GrOpp			-0.0080				-0.0080				-0.0080	
			(0.141)				(0.166)				(0.166)	
SIZE	-0.0050	**	-0.0052	**	-0.0050	**	-0.0052	**	-0.0050	**	-0.0052	**
	(0.032)		(0.024)		(0.044)		(0.035)		(0.044)		(0.035)	
Intercept	0.1519	***	0.1654		0.1454	**	0.1544	**	0.1454	**	0.1544	**
	(0.001)		(0.000)		(0.021)		(0.015)		(0.021)		(0.015)	
N	211		211		211		211		211		211	
F					2.46		2.44		2.46		2.44	
p-value					0.0007		0.0006		0.0007		0.0006	
R2					0.2144		0.2224		0.2144		0.2224	
Wald Chi2	57.6		60.36									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 OwnC1_{i,t} + \beta_2 ROA_{i,t} + \beta_3 LEV_{i,t} + [\beta_4 GrOpp] + \beta_5 SIZE_{i,t} + \beta_6 SD_{i,t} + \beta_7 YD_{i,t} + \varepsilon_{i,t}$

Note: CSR_I is firm's CSR index, measured as the ratio between CSR expanses and net sales. OwnC1 is voting ownership concentration in hands of the main voting shareholder. ROA is return on assets. Leverage (LEV) is measured by the ratio of total liabilities over total assets. GrOpp stands for firm growth opportunities, proxied by Tobin's q (sum of firm market value and debt, over total assets). SIZE is firm size and is proxied by Ln of total assets. SD is a group of industry dummies, and YD is a group of year dummies. Models estimated by Generalized Least Squares for Panel Data (GLS), Two Stage Least Squares (2SLS), and OLS (Ordinary Least Squares). Industry and year dummies not presented in virtue of space priority. Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

It is worth mentioning that the significant negative correlation between leverage (LEV) and CSR of Brazilian firms agrees with such an adverse effect documented in previous works (Crisóstomo *et al.*, 2011; Waddock & Graves, 1997). These results are consistent when controlling for the presence of a major shareholder (Table 3) and for models that have ownership concentration as an explanatory variable (Tables 4, 5 and 6).

Another interesting result is the trend for an adverse effect of profitability (ROA) on CSR, observed for non-financial Brazilian firms, which indicates that, effectively, Brazilian firms do not seem to be prone to use profit for CSR. These results are similar for the model that has a major shareholder as the independent variable (Table 3) and also for models with ownership concentration as the explanatory variable (Tables 4, 5 and 6).

TABLE 5 – Regression results for the explanatory power of ownership concentration (two main shareholders) on CSR for non-financial firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
OwnC2	0.0572	***	0.0514	***	0.0572	***	0.0514	***	0.0572	***	0.0514	***
	(0.000)		(0.002)		(0.001)		(0.003)		(0.001)		(0.003)	
ROA	-0.0756	*	-0.0496		-0.0756	*	-0.0496		-0.0756	*	-0.0496	
	(0.069)		(0.281)		(0.087)		(0.310)		(0.087)		(0.310)	
LEV	-0.0587	***	-0.0530	***	-0.0587	***	-0.0530	**	-0.0587	***	-0.0530	**
	(0.002)		(0.006)		(0.004)		(0.010)		(0.004)		(0.010)	
GrOpp			-0.0069				-0.0069				-0.0069	
			(0.192)				(0.220)				(0.220)	
SIZE	-0.0044	*	-0.0046	**	-0.0044		-0.0046	*	-0.0044	*	-0.0046	*
	(0.055)		(0.043)		(0.071)		(0.057)		(0.071)		(0.057)	
Intercept	0.1263	***	0.1388	***	0.1158	*	0.1247	*	0.1158	*	0.1247	*
	(0.005)		(0.003)		(0.067)		(0.050)		(0.067)		(0.050)	
N	211		211		211		211		211		211	
F					2.81		2.76		2.81		2.76	
p-value					0.0001		0.0001		0.0001		0.0001	
R2					0.2380		0.2441		0.2380		0.2441	
Wald Chi2	65.89		68.13									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 OwnC2_{i,t} + \beta_2 ROA_{i,t} + \beta_3 LEV_{i,t} + [\beta_4 GrOpp] + \beta_5 SIZE_{i,t} + \beta_6 SD_{i,t} + \beta_7 YD_{i,t} + \varepsilon_{i,t}$

Note: CSR_I is firm's CSR index, measured as the ratio between CSR expanses and net sales. OwnC2 is ownership concentration in hands of the two main voting shareholders. ROA is return on assets. Leverage (LEV) is measured by the ratio of total liabilities over total assets. GrOpp stands for firm growth opportunities, proxied by Tobin's q. SIZE is firm size and is proxied by Ln of total assets. SD is a group of industry dummies, and YD is a group of year dummies. Models estimated by Generalized Least Squares for Panel Data (GLS), Two Stage Least Squares (2SLS), and OLS (Ordinary Least Squares). Industry and year dummies not presented in virtue of space priority. Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

Table 6 – Regression results for the explanatory power of ownership concentration (three main shareholders) on CSR for non-financial firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
OwnC3	0.0521	***	0.0467	***	0.0521	***	0.0467	**	0.0521	***	0.0467	**
	(0.002)		(0.007)		(0.005)		(0.012)		(0.005)		(0.012)	
ROA	-0.0779	*	-0.0440		-0.0779	*	-0.0440		-0.0779	*	-0.0440	
	(0.064)		(0.341)		(0.081)		(0.370)		(0.081)		(0.370)	
LEV	-0.0604	***	-0.0529	***	-0.0604	***	-0.0529	**	-0.0604	***	-0.0529	**
	(0.002)		(0.007)		(0.003)		(0.011)		(0.003)		(0.011)	
GrOpp			-0.0089	*			-0.0089				-0.0089	
			(0.088)				(0.109)				(0.109)	
SIZE	-0.0041	*	-0.0045	*	-0.0041	*	-0.0045	*	-0.0041	*	-0.0045	*
	(0.075)		(0.055)		(0.094)		(0.071)		(0.094)		(0.071)	
Intercept	0.1218	**	0.1371	***	0.1141	*	0.1242	*	0.1141	*	0.1242	*
	(0.010)		(0.004)		(0.078)		(0.055)		(0.078)		(0.055)	
N	211		211		211		211		211		211	
F					2.60		2.62		2.60		2.62	
p-value					0.0003		0.0002		0.0003		0.0002	
R2					0.2242		0.2348		0.2242		0.2348	
Wald Chi2	60.98		64.73									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 OwnC3_{i,t} + \beta_2 ROA_{i,t} + \beta_3 LEV_{i,t} + [\beta_4 GrOpp] + \beta_5 SIZE_{i,t} + \beta_6 SD_{i,t} + \beta_7 YD_{i,t} + \varepsilon_{i,t}$

Note: Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

The negative effect of firm size on the CSR of Brazilian firms is not in accordance with most theoretical predictions, but agrees with previous empirical results in the USA and Brazil (Barnea & Rubin, 2010; Crisóstomo *et al.*, 2011), and contributes to the rationale of relevant researchers who believe that the reasons for a company undertaking CSR do not differ from smaller to larger firms (Baumann-Pauly *et al.*, 2013; Udayasankar, 2008). These results from Brazil are an indication that larger Brazilian firms are less prone to undertake CSR projects.

4.2 Model estimates for the whole sample (financial and non-financial firms)

In order to obtain even more robust results, we have estimated our models without the leverage variable, considering that it is not adequate for firms from the financial sector. The findings of such estimates have confirmed previous results relative to the group of non-financial firms.

Information provided in Table 7 shows that ownership concentration, in fact, plays a role on Corporate Social Responsibility policy (CSR_I) of the Brazilian firm. Looking at model (1) estimates (columns i), one can see the presence of a major voting shareholder (DMajor) has a significant and positive effect on CSR, giving support to considering the appropriateness of the proposed hypothesis. The positive effect of a major shareholder is the same for model estimates that include growth opportunities (GrOpp) (columns ii). Results are robust to various estimation methods (GLS, 2SLS, and OLS).

TABLE 7 – Regression results for the explanatory power of the presence of a major/dominant shareholder on CSR for all firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
DMajor	0.0261	***	0.0233	**	0.0261	***	0.0233	**	0.0261	***	0.0233	**
	(0.006)		(0.018)		(0.0040)		(0.020)		(0.004)		(0.020)	
ROA	-0.0021		0.0218		-0.0021		0.0218		-0.0021		0.0218	
	(0.959)		(0.646)		(0.969)		(0.737)		(0.969)		(0.737)	
GrOpp			-0.0056				-0.0056				-0.0056	
			(0.308)				(0.292)				(0.292)	
SIZE	-0.0077	***	-0.0079	***	-0.0077	***	-0.0079	***	-0.0077	***	-0.0079	***
	(0.002)		(0.001)		(0.001)		(0.001)		(0.001)		(0.001)	
Intercept	0.1676	***	0.1775	***	0.1232	***	0.1314	***	0.1840	***	0.1937	***
	(0.000)		(0.000)		(0.008)		(0.005)		(0.000)		(0.000)	
N	237		237		237		237		237		237	
F					6.71		6.23		6.71		6.23	
p-value					0.0000		0.0000		0.0000		0.0000	
R2					0.3343		0.3372		0.3343		0.3372	
Wald Chi2	119.00		120.56									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 DMajor_{i,t} + \beta_2 ROA_{i,t} + [\ \beta_3 GrOpp\ ] + \beta_4 SIZE_{i,t} + \beta_5 SD_{i,t} + \beta_6 YD_{i,t} + \varepsilon_{i,t}$.

Note: Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

The picture depicted in model 2 estimates (Tables 8, 9 and 10), which take into account the ownership concentration held by the three main voting shareholders, is equivalent to that observed for the presence of a major voting shareholder. Ownership concentration held by the main voting shareholder (OwnC1), or in the hands of the two, and the three main voting shareholders (OwnC2 and OwnC3), is shown to be positively related to the CSR of Brazilian firms at the 1% significance level. Results are robust to various estimation techniques (GLS, 2SLS and OLS) and also for models without (columns i) and with growth opportunities (GrOpp) (columns ii).

TABLE 8 – Regression results for the explanatory power of ownership concentration (first main shareholder) on CSR for all firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
OwnC1	0.0395	***	0.0352	**	0.0395	***	0.0352	**	0.0395	***	0.0352	**
	(0.008)		(0.021)		(0.002)		(0.013)		(0.002)		(0.013)	
ROA	0.0085		0.0322		0.0085		0.0322		0.0085		0.0322	
	(0.838)		(0.492)		(0.872)		(0.609)		(0.872)		(0.609)	
GrOpp			-0.0059				-0.0059				-0.0059	
			(0.285)				(0.246)				(0.246)	
SIZE	-0.0060	**	-0.0065	***	-0.0060	***	-0.0065	***	-0.0060	***	-0.0065	***
	(0.014)		(0.009)		(0.005)		(0.003)		(0.005)		(0.003)	
Intercept	0.1378	***	0.1515	***	0.0943	**	0.1060	**	0.1521	***	0.1656	***
	(0.004)		(0.002)		(0.026)		(0.014)		(0.000)		(0.000)	
N	237		237		237		237		237		237	
F					7.99		7.42		7.99		7.42	
p-value					0.0000		0.0000		0.0000		0.0000	
R2					0.3332		0.3364		0.3332		0.3364	
Wald Chi2	118.45		120.16									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 OwnC1_{i,t} + \beta_2 ROA_{i,t} + [\ \beta_3 GrOpp\ ] + \beta_4 SIZE_{i,t} + \beta_5 SD_{i,t} + \beta_6 YD_{i,t} + \varepsilon_{i,t}$.

Note: Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

TABLE 9 – Regression results for the explanatory power of ownership concentration (two main shareholders) on CSR for all firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
OwnC2	0.0614	***	0.0574	***	0.0614	***	0.0574	***	0.0614	***	0.0574	***
	(0.000)		(0.001)		(0.000)		(0.000)		(0.000)		(0.000)	
ROA	0.0102		0.0300		0.0102		0.0300		0.0102		0.0300	
	(0.804)		(0.519)		(0.845)		(0.630)		(0.845)		(0.630)	
GrOpp			-0.0049				-0.0049				-0.0049	
			(0.369)				(0.325)				(0.325)	
SIZE	-0.0056	**	-0.0060	**	-0.0056	***	-0.0060	***	-0.0056	***	-0.0060	***
	(0.021)		(0.015)		(0.009)		(0.005)		(0.009)		(0.005)	
Intercept	0.1148	**	0.1269	**	0.0684		0.0792	*	0.1281	***	0.1400	***
	(0.019)		(0.012)		(0.107)		(0.065)		(0.001)		(0.000)	
N	237		237		237		237		237		237	
F					9.10		8.86		9.10		8.86	
p-value					0.0000		0.0000		0.0000		0.0000	
R2					0.3472		0.3495		0.3472		0.3495	
Wald Chi2	126.08		127.31									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 OwnC2_{i,t} + \beta_2 ROA_{i,t} + [\ \beta_3 GrOpp\ ] + \beta_4 SIZE_{i,t} + \beta_5 SD_{i,t} + \beta_6 YD_{i,t} + \varepsilon_{i,t}$.

Note: Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

TABLE 10 – Regression results for the explanatory power of ownership concentration (three main shareholders) on CSR for all firms

	GLS				2SLS				OLS			
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
OwnC3	0.0499	***	0.0456	**	0.0499	***	0.0456	***	0.0499	***	0.0456	***
	(0.009)		(0.019)		(0.000)		(0.001)		(0.000)		(0.001)	
ROA	0.0092		0.0377		0.0092		0.0377		0.0092		0.0377	
	(0.824)		(0.421)		(0.861)		(0.548)		(0.861)		(0.548)	
GrOpp			-0.0070				-0.0070				-0.0070	
			(0.195)				(0.143)				(0.143)	
SIZE	-0.0055	**	-0.0061	**	-0.0055	**	-0.0061	***	-0.0055	**	-0.0061	***
	(0.026)		(0.015)		(0.013)		(0.006)		(0.013)		(0.006)	
Intercept	0.1164	**	0.1332	**	0.0696		0.0846	*	0.1335	***	0.1497	***
	(0.023)		(0.011)		(0.112)		(0.056)		(0.001)		(0.000)	
N	237		237		237		237		237		237	
F					7.55		7.30		7.55		7.30	
p-value					0.0000		0.0000		0.0000		0.0000	
R2					0.3323		0.337		0.3323		0.337	
Wald Chi2	117.95		120.46									
p-value	0.0000		0.0000									

Model: $CSR\_I_{i,t} = \beta_0 + \beta_1 OwnC3_{i,t} + \beta_2 ROA_{i,t} + [\ \beta_3 GrOpp\ ] + \beta_4 SIZE_{i,t} + \beta_5 SD_{i,t} + \beta_6 YD_{i,t} + \varepsilon_{i,t}$.

Note: Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

As previously mentioned, OLS estimates have also been run for the whole sample with one or more firm-year observations. Results exhibited in Table 11 confirm the results that ownership concentration is associated with the CSR of Brazilian firms. OLS estimates for all firms (Table 11, Panel A), and the estimated results for the subsample of non-financial firms (Table 11, Panel B) which include the leverage variable, have provided significant positive coefficients for the proxies of ownership concentration (DMajor, OwnC1 and OwnC3). All models have also been estimated for ownership concentration in the hands of the two main voting shareholders, as well as for the four and five main shareholders, with the same results (not reported because of limited space). The trend for an adverse effect of profitability (ROA) and leverage (LEV) has also been verified in these estimate results.

TABLE 11 – Pooled OLS regression results for the whole sample

Panel A Whole sample of non-financial firms												
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
DMajor	0,0237	***	0,0214	***								
	(0,000)		(0,001)									
OwnC1					0,0242	**	0,0192	**				
					(0,010)		(0,045)					
OwnC3									0,0499	***	0,0452	***
									(0,000)		(0,000)	
ROA	-0,0914	**	-0,0704		-0,0934	**	-0,0689		-0,0904	**	-0,0681	
	(0,029)		(0,127)		(0,022)		(0,132)		(0,025)		(0,133)	
LEV	-0,0746	***	-0,0710	***	-0,0812	***	-0,0759	***	-0,0782	***	-0,0740	***
	(0,000)		(0,000)		(0,000)		(0,000)		(0,000)		(0,000)	
GrOpp			-0,0063				-0,0076	*			-0,0067	*
			(0,106)				(0,061)				(0,087)	
SIZE	-0,0035		-0,0034		-0,0027		-0,0028		-0,0016		-0,0018	
	(0,138)		(0,144)		(0,234)		(0,233)		(0,459)		(0,425)	
Intercept	0,1302	***	0,1318	***	0,1232	***	0,1270	***	0,0807	**	0,0872	**
	(0,002)		(0,001)		(0,002)		(0,002)		(0,036)		(0,024)	
N	320		320		320		320		320		320	
F	11,03		9,53		4,75		4,53		5,58		5,30	
p-value	0,0000		0,0000		0,0000		0,0000		0,0000		0,0000	
R2	0,2032		0,2083		0,1837		0,1911		0,2009		0,2068	
Panel B – Subsample of non-financial firms												
Variables	**(i)**		**(ii)**		**(i)**		**(ii)**		**(i)**		**(ii)**	
DMajor	0,0269	***	0,0255	***								
	(0,000)		(0,000)									
OwnC1					0,0248	**	0,0216	**				
					(0,012)		(0,036)					
OwnC3									0,0507	***	0,0474	***
									(0,000)		(0,000)	
ROA	0,0043		0,0178		0,0068		0,0256		0,0090		0,0248	
	(0,913)		(0,683)		(0,861)		(0,555)		(0,817)		(0,566)	
GrOpp			-0,0037				-0,0054				-0,0045	
			(0,362)				(0,200)				(0,264)	
SIZE	-0,0023		-0,0024		-0,0012		-0,0014		-0,0004		-0,0006	
	(0,288)		(0,277)		(0,573)		(0,513)		(0,852)		(0,776)	
Intercept	0,0687	**	0,0732	**	0,0570	*	0,0658	**	0,0238		0,0323	
	(0,043)		(0,033)		(0,077)		(0,048)		(0,494)		(0,356)	
N	354		354		354		354		354		354	
F	6,70		6,27		6,13		5,55		6,39		6,12	
p-value	0,0000		0,0000		0,0000		0,0000		0,0000		0,0000	
R2	0,2554		0,2569		0,2358		0,2389		0,2478		0,2499	

Models estimated by OLS (Ordinary Least Squares). Estimated coefficients and standard errors robust to heteroskedasticity (in parentheses), concerning model of Equation 1, are presented. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

5 DISCUSSION

As a whole, this set of results shows that ownership concentration of the Brazilian firm affects positively its CSR policy. In economies characterized by a reduced number of controlling shareholders, such shareholders are often involved in firm direction, or are very close to it. This leads to a situation in which shareholders have their names strongly associated with firm name and that may be a factor that makes reputation an even more relevant concern. Hence, the findings of a positive effect of ownership on CSR might be interpreted as powerful controlling shareholders looking for reputational concerns of firms and their main shareholders. Large shareholders of the Brazilian firm seem to consider CSR policy a way to try to improve firm image and reputation, and disclose it in the search for legitimacy. Such agreement about the positive effects of CSR may lead to easier alignment of interests, thus favoring CSR policy.

Our findings are in the same direction as a recent related work in Spain, which has found a positive effect for ownership concentration on CSR (Godos Díez *et al.*, 2012). In a similar fashion, other works have found the positive influence of Government ownership (Eng & Mak, 2003; Said *et al.*, 2009) and of institutional ownership (Harjoto & Jo, 2008; Johnson & Greening, 1999) on CSR. The common argument is that the long-term interests of large shareholders are related to reputational concerns. Large shareholders seem to consider CSR as a way to signal positive information about the firm, and to create value in the medium and long-run.

An important avenue for future research is related to the role played by the personal values and characteristics of large shareholders on CSR policy. This may be associated with the nature of the main shareholders. Indeed, some initial evidence that has been cited above, like the positive effect of government or family ownership, contrasts with the negative effect of insider ownership. However, in emerging economies, as far as we know, no results on that phenomenon have been documented.

6 CONCLUSION

This research has looked for determinants of Corporate Social Responsibility. More recently, academics have put attention on the possible role ownership structure may play on CSR, possibly due to reputational concerns and firm image. This work has analyzed the possible relationship between ownership concentration and CSR in Brazil using a sample of 354 firm-year observations over the period 1997-2008. An annual CSR index was created to proxy for firm CSR policy. On the other side, traditional measures of ownership concentration have been used: a dummy indicating the presence of a major shareholder, and the sum of ownership in the hands of up to the three main voting shareholders.

A set of econometric models has provided results that exhibit a trend toward a positive effect of ownership concentration on firm CSR in Brazil. This positive influence has been found for the presence of a major shareholder, and an equivalent scenario has been depicted when taking into account ownership concentration in the hands of up to three main voting shareholders. Ownership concentration has shown to be an important determinant of Brazilian firms' CSR projects.

The finding that ownership concentration favors CSR may be interpreted as an indication that large shareholders of Brazilian firms consider CSR policy as a way of improving firm image and reputation with the expectation of value creation in the long-run. This view favors CSR actions when there is a major controlling shareholder. In the case of large shareholders that may compose a coalition to control the firm, the positive view of CSR may also favor the alignment of interests among them, since CSR is not very risky and fund consuming compared to other projects that may lead to conflict of interests among controlling shareholders. This positive view of CSR by controlling shareholders leads to the positive CSR-ownership concentration sensitivity that may indicate the search of powerful controlling shareholders for reputational concerns of firms and their owners.

We see this work as an additional contribution to CSR research by presenting evidence on the CSR-ownership concentration link in Brazil, an emerging market with increasing international visibility, where this type of research, as far as we know, is still absent.

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