Ownership Structure and Economic and Socio-Environmental Disclosure in The Largest Brazilian Companies

Abstract
The disclosure of sustainable practices has become important in the search for competitive advantage, so as to meet the expectations of the various stakeholders. Thus, the study aims to investigate the relationship between the ownership structure and the economic and environmental voluntary disclosure in the largest Brazilian companies, analyzing ownership concentration and the identity of the controlling shareholder. For the analysis, we considered the economic, social and environmental perspectives, addressed both individually and jointly. The sample consists of 47 companies from the 100 largest public companies listed on BM&FBOVESPA, according to the magazine Exame Biggest and Best, edition 2013. The research is descriptive and quantitative, using Multiple Linear Regression for statistical analysis. The descriptive analysis of the prospects of (economic, social, environmental and sustainability) disclosure showed lower average disclosure for the environmental aspect. The state control organizations stood out with the highest average in three of the four levels of disclosure: economic, social and sustainability. As regards the application of statistical analysis, the regression models were not statistically significant, indicating that, for the companies in the sample, the ownership structure does not influence the economic and socio-environmental disclosure.

Key words: Property and control structure; Disclosure; Dissemination; Sustainability; Corporate Social Responsibility (CSR).
1. Introduction

The ownership structure is defined as the way in which the capital of a company is distributed, both for votes and for the degree of capital concentration (Sonza, 2012). In this sense, it is clear that the nature of the property and the identity of the controlling shareholders influence the company's performance due to the dependence on strategic positioning in relation to the alignment of interests between the parties (Braga Santos, Silva & Nunes, 2011). Thus, the following approaches to ownership structure exist: (i) the ownership concentration and (ii) the identity of the controlling shareholder, the latter of which can be categorized according to Carvalhal-da-Silva (2004), in individuals or families, foreign investors, government and institutional investors.

After checking the influence of the controlling shareholders in the company, Díez, Gago and García (2011) point out that the degree of involvement in practices related to sustainability can differ according to the ownership structure of the company, or more specifically the concentration of ownership. Ghazali (2007) corroborates by emphasizing that the ownership structure is one of the determinants of information disclosure about the sustainability of companies. Thus, it fits the concept of corporate sustainability, which is characterized by encompassing the economic, social and environmental aspects in determining business activity (Gallo & Christensen, 2011).

Considering that the disclosure of socioenvironmental information can generate value for companies (Borges, Rose & Ensslin, 2010) and legitimize their role in society (Cardoso, De Luca & Almeida, 2012; Sampaio, Gomes, Bruni & Dias, 2012; Costa, Torres, Vasconcelos & De Luca, 2013; Muttakin & Subramaniam, 2015), there is the theory of Legitimacy as the basis of this study. Thus, as Deegan (2005), this theory suggests that organizations should comply with the expectations of society and other stakeholders for the sake of their going concern.

Crisóstomo, Freire and Parente (2013) emphasize that owners and managers have been concerned with sustainability issues since, among other reasons, these issues contribute to the pursuit of business legitimacy. To exert influence on the operations of a company, aiming for business success, the owners have the ability to influence decisions related to economic, social and environmental performance and its respective disclosure, aspects paramount for achieving legitimacy.

Given the above and considering the influence of the ownership structure in decisions on voluntary disclosure of sustainability in organizations based on the precepts of the theory of legitimacy, this study suggests the following research question: What is the relationship between ownership structure and economic and socio-environmental disclosure in the largest Brazilian companies?

The general aim of this study is to investigate the relationship between the ownership structure and the economic and socio-environmental voluntary disclosure in the largest Brazilian companies. To do this, two specific objectives were put forward, namely: (i) identify the relationship between stock control and the economic and environmental voluntary disclosure in major Brazilian companies; (ii) investigate the relationship between the identity of the controlling shareholder and the economic and environmental voluntary disclosure in the main Brazilian companies.

Consistent with the problem and the research objectives, this study proposes the following hypotheses: H1: The stock control is related to the economic and environmental disclosure; H2: The identity of the controlling shareholder is related to the level of economic, social and environmental disclosure.

In Brazil, several studies have analyzed the capital structure (Dami, Rogers & Ribeiro, 2007), or the level of disclosure of voluntary information (Braga, Oliviera & Salotti, 2009), or even related the two in some specific context (Silva Chan, Furuta & Martins, 2007; Braga et al, 2011; & Lulseged Iyer, 2013). Nevertheless, few are investigating the association between them in a broader context. Thus, this research differs in seeking to verify the relationship between ownership structure, specifically stock control and the identity of the controlling shareholder, with the level of disclosure in the economic, social and environmental spheres.
This research is characterized as descriptive, with a quantitative and documentary approach. The final sample consists of 47 companies listed on the São Paulo Stock Exchange (BM&FBOVESPA), according to the ranking of the Journal Exame Best and Biggest Edition 2013. Data were collected from the 2012 Sustainability Reporting content analysis of companies in the sample and information available in the Program, published on the BM&FBOVESPA website. For the processing of data, descriptive analysis was used in order to characterize the sample and, for statistical analysis, we used multiple linear regression.

Besides this introduction, the research was divided into four sections. The second section presents the theoretical basis the work is based on, addressing aspects related to the ownership structure and the economic and environmental disclosure and relating both aspects in the legitimation of business activities in society. The third section deals with the methodological approach used to achieve the research objectives. The fourth section presents and discusses the results obtained from the use of methodological issues set out in section 3. Finally, the fifth section presents the final considerations of the study.

2. Theoretical Framework

2.1 Property and control structure

The growth of organizations and the complexity resulting from this process led to the separation between ownership and control, and this ownership transition has been predicted in the studies by Berle and Means (1932). This separation is then checked, primarily based on the existence of two types of shares in public companies: preferred and common shares.

Preferred shares characterize the property of the organization and provide the right to cash flows, but do not come with voting rights. The common shares characterize the organization’s control, as they provide the right to vote (Okimura, Silveira & Rocha, 2007; Sarlo, 2009). Thus, it is noteworthy that the concentration of capital has an important role, since it is through the ownership of common shares that the shareholder will participate in company decisions.

Several surveys show that in Brazil, the separation between control and rights on cash flow is marked by the fact that companies issue preferred shares (Carvalhal-da-Silva, 2004), also identifying a high property concentration in the shareholding companies, besides presenting the family model (Brandão, 2004; Sarlo, 2009; Braga et al, 2011). Nevertheless, Dami et al. (2007) highlight the ownership concentration as a way for owners to monitor the management.

In this sense, the identity of the controlling shareholder is considered of great importance in directing corporate actions since, according to Okimura et al. (2007), it is assumed that the ownership structure will influence the company’s performance. Thus, we see the influence not only of the amount of capital the shareholder, but also the identity of that shareholder; or whether it is a family, private person, worker, manager, financial institution or foreign company (Javid Iqbal & 2008).

In the literature, several classifications are given to the identities of the shareholders, among which we emphasize Okimura et al. (2007) and Carvalhal-da-Silva (2004). The first segregates the classification of the controllers’ identities: foreign private property; national private property; family or personal property owned by banks / financial institutions; and pension fund property. The second ranks: individuals or families; foreign investors; government; and institutional investors. The classification of Carvalhal-da-Silva (2004) is adopted in this study, since the author covers the various stockholder identities in a clear, objective and concise manner.

Furthermore, Braga et. al (2011) - claim that the stock control impacts the company’s communication with external users, especially in the voluntary disclosure, since there are no pre-established standards. Thus, it appears that the management model and policies employed by the organization, which include disclosure policies can be determined by the stock control as well as the identity of the controlling shareholder.
In this context, Gondrige, Espejo, Clemente and Silva (2011) point out that the voluntary disclosure varies widely among companies. This type of disclosure has gained a greater focus though, due to issues related to the internationalization of institutions and financial crises that have occurred in recent years. Thus, the need to consider the interests of major groups related to business activity (Díez et al., 2011) and increased relevance and interest of society in a social (Borba, 2006) and environmentally (Borges et al., 2010) responsible action, together with the notion that such actions can impact the business performance (Saleh, Zulkifli & Muhamad, 2010), contributed for organizations to take a different stance towards the disclosure, which is characterized in several countries as voluntary.

2.2 Economic and Socio-Environmental Disclosure and Legitimacy Theory

The companies are responsible for the transformation of natural resources into products and services provided to society, standing out as one of the key players in the economic development process (Braga et al., 2009). Nevertheless, the historical processes indicate that the corporate behavior changes based on the intense support to its stakeholders (Amran & Ooi, 2014), given that, gradually, the need emerged to reconcile economic development with environmental preservation (Roque & Cortez, 2006).

Issues involving the socio-environmental responsibility of organizations have undergone significant changes in the last decades of the twentieth century (Fonseca, Adams & France, 2012). This is verified by Borba (2006), highlighting that the growing social inequality caused, mainly as from the 70s, questions and claims about the role of business in society. In this same perspective, Ribeiro, Van Bellen and Carvalho (2011) argue that society becomes concerned with environmental degradation in that the problems arising from it gain serious proportions, so the social pressures act as a way to demand the adoption of environmentally sound practices.

From a broader perspective, the continuity of organizations is linked to meeting the “needs of all stakeholders: customers, governments, communities, employees and shareholders” (Borges et al., 2010, p 404), who consequently present different demands regarding corporate sustainability matters.

It appears, therefore, that the companies’ conduct should not be restricted to the obtaining of profit, as the social and environmental aspects should also be taken into account in business activities (Borba, 2006; Ghazali, 2007; Braga et al, 2009; Díez et al, 2011; Cardoso et al, 2012). Thus, the concept of corporate sustainability covers, in an individual and integrated manner, the economic, social and environmental dimensions in determining the performance of companies (Gallo & Christensen, 2011). It is noteworthy that the above concept is similar to Corporate Social Responsibility (CSR), considering that Iyer and Lulseged (2013) highlight that CSR refers to the voluntary contribution of business to sustainable development, beyond what is required by laws or regulations.

Given the influence of socio-environmental practices and their respective disclosure in the legitimacy of the company in society, the theoretical framework of legitimacy theory emerges, which this study is based on. In this sense, Deegan (2005) points out that the legitimacy of an organization depends on the business practices employed in a society, which should be appropriate to the context the company operates in. Moreover, as the author appointed, the theory of legitimacy establishes that organizations need to meet and comply with society’s expectations. Otherwise, the organization will face many obstacles, such as the difficulty in attracting capital and customers.

That theory is based on the construct that “there is a kind of ‘social contract’ between the organizations and the society they operate in, representing a set of implicit or explicit expectations of its members on how they should operate” (Days, 2007, p. 6). Beuren and Sothe (2009) complement by affirming that the company should continuously demonstrate its importance to society, seeking the legitimacy of its actions. Companies therefore intend to make efforts to be perceived as responsible (Costa et al., 2013).
Sampaio et al. (2012) states that pressures are also exerted with regard to the disclosure of information concerning the activities in the area of sustainability, functioning as a legitimizing instrument. The authors note an increase in the level of disclosure of these types of information, reflecting the concerns of organizations with the perception of society on these matters. Martini, and Silva Mattos (2014) corroborate the claim that, increasingly, companies monitor, quantify and disclose information related to corporate sustainability for the stakeholders.

According to Murcia (2009), some companies disclose information beyond those required by law, the so-called voluntary disclosure. For the author, this form of disclosure complements the mandatory disclosure in order to provide additional information about the company's operations, which creates major advantages for investors. These investors will have more detailed information about the organization, which may influence the decision-making process.

Considering the pressures for a sustainable business operation, the disclosure of information is necessary to supply this information demand. Non-financial reports show, among other things, transparency to stakeholders, in which the sustainability report is fundamental in the effective communication to stakeholders (Amran & Ooi, 2014). Costa et al. (2013) corroborate by affirming that, for the legitimation of the socio-environmental responsibility practices adopted, the publication of information through effective and high-quality means is essential.

Although the disclosure of such information is not mandatory in several countries, including Brazil, Garcia, Cintra, Ribeiro and Dibbern (2015) point out that, similarly to financial reports, sustainability reports should provide quality information to the stakeholders. The sustainability report stands out as the primary means by which organizations conduct such disclosure, with the model of the Global Reporting Initiative (GRI) serving as the main channel used for the purposes of disclosure. Accordingly, Sampaio et al. (2012) emphasize that the adoption of the GRI guidelines brings certain benefits to the organization, such as the disclosure of voluntary initiatives and commitment to sustainable development.

Several researchers point out a number of motivations for companies to disclose economic, social and environmental information voluntarily. The following can be cited: companies anticipation of potential government regulations and the reduction of costs associated with the regulations (Iyer & Lulseged, 2013); in order to ensure economic benefits of such disclosure (De Luca, Asuncion & Costa, 2013); the ability to generate value for companies (Borges et al., 2010); and the legitimacy of their work to society (Sampaio et al., 2012). Thus, many may be the factors that influence the dissemination of information relating to corporate sustainability and profitability (Ghazali, 2007; Murcia, 2009; De Luca et al, 2013; Iyer & Lulseged, 2013; Muttakin & Subramaniam, 2015); the size of the organization (Ghazali, 2007; Braga et al, 2009; Murcia, 2009; Iyer & Lulseged, 2013; Muttakin & Subramaniam, 2015), debt (Murcia, 2009; Braga et al, 2009) and stock control (Ghazali, 2007; Braga et al, 2009; Murcia, 2009).

To the extent that the stock control influences the disclosure process, it is emphasized that the ownership structure is one of the determinants of information disclosure about the sustainability of business (Ghazali, 2007). Crisóstomo et al. (2013) emphasize that the owners and managers have been concerned with the issues of sustainability, since this is now considered a way to improve the image and reputation of the organization, as well as to contribute to the pursuit of business legitimacy. The authors further argue that both the owners and controlling shareholders can influence policies related to the company's sustainability issues.
2.3 Ownership Structure and Economic and Socio-Environmental Disclosure

Wahab, How and Verhoeven (2008) point out that corporate social disclosure reflects the accountability and transparency of an organization. The authors highlight the fact that institutional investors show themselves sensitive to reporting practices, since they influence the potential for profitable business opportunities. It is assumed, therefore, that the disclosure of information is a means to legitimize its activities to the market and society (Ghazali, 2007; Sampaio et al, 2012.). Thus, it can be said that the ownership structure influences the choices of the company’s policies, particularly the aspects related to voluntary disclosure about corporate sustainability.

Crisóstomo et al. (2013) claim that it is feasible to consider that the ownership can also influence the sustainability policy. In addition, Dam and Scholtens (2013) found this relationship between stock control and disclosure policies, stressing that the higher the ownership concentration, the lower the level of disclosure. Crisóstomo et al. (2013), by suggesting a relationship between ownership structure and corporate social responsibility (CSR), analyzed 64 Brazilian public companies in the period 1997-2008 and found that CSR is positively influenced by the concentration of property in Brazil. According to these authors, this result may indicate that the major shareholders of Brazilian companies consider CSR an important way to improve the image and reputation, as well as to encourage the accomplishment of CSR projects and their dissemination.

In this context, we propose the following hypothesis:

$H_1$: Stock control is related to economic and socio-environmental disclosure.

García, Navarro and Anson (2014) point out that, under the corporate social responsibility of enterprises, it is necessary to consider not only the concentration of large shareholders, but also of their identity. In line with the authors, Oh, Chang and Martynov (2011) state that the owners impact differently in corporate sustainability initiatives. From this perspective, it follows that the identity of the shareholder can influence corporate social responsibility (Oh et al, 2011; Dam & Scholtens, 2012; Block & Wagner, 2014) and therefore the disclosure of sustainability information (Ghazali, 2007; Saleh et al, 2010; Iyer & Lulseged, 2013).

Dyer and Whetten (2006) point out that one of the motivations for carrying out socially responsible practices is the influence the company’s reputation has on the family itself, as the family name is directly linked to the company. Thus, from the perspective of family businesses, such disclosure helps to protect businesses and the reputation of the family (Iyer & Lulseged, 2013). However, Garcia et al. (2014) emphasize that, although the family nature of a company appears to influence the implementation of corporate social responsibility actions, there are no conclusive empirical results regarding the sign of such a relationship.

Such inconclusiveness is verified in studies like Block and Wagner (2014) and Iyer and Lulseged (2013). Thus, based on the perspective of family and organizational identity, Block and Wagner (2014) sought to examine whether the effect of family ownership may differ in the different dimensions of corporate social responsibility (CSR). Thus, the results found showed that family property is negatively associated with CSR performance related to community and positively associated with variety, employee, environment and aspects related to the product of the RSC. In the context of CSR disclosure, then, Iyer and Lulseged (2013) conducted research that aimed to investigate the association between family businesses and the dissemination of corporate social responsibility through the sustainability reports of large US companies belonging to the S & P 500. The authors found no statistically significant difference between family and non-family businesses regarding the disclosure of information in sustainability reports.

Organizations that are government-owned are more sensitive politically, which is due to the general public’s greater perception of these companies’ activities, as the government’s ownership of these companies indicates that, indirectly, their ownership is also public (Ghazali, 2007). Muttakin and Subramaniam (2015) argue that the social accountability activities can reflect the governmental entities’ proneness to respond to the corporate interests and the wellbeing of society.
In this sense, Ghazali (2007) points out that in order to legitimize their actions, such companies tend to be more involved in socially responsible activities, as well as in greater disclosure of that information. This author examined the influence of capital structure on the disclosure of Corporate Social Responsibility (CSR) in the annual reports of Malaysian companies and found, as one of the results obtained in the survey, that companies that have large portions of the property held by the government disclose more information related to CSR in the annual reports.

The origin of the foreign stock control is another factor influencing the level of economic, social and environmental disclosure organizations. According to Muttakin and Subramaniam (2015), foreign owners are likely to be more aware and sensitive to rising expectations in companies' socially responsible activities, influencing the disclosure of such action. Braga et al. (2009) argue that, in addition to cultural aspects, the information disclosure cost of companies with foreign stock control is considered to be relatively lower than that of companies under Brazilian stock control. Thus, the authors point out that such organizations would be likely to disclose more environmental information than companies under Brazilian stock control.

This relationship was discussed in Braga et al. (2011), who analyzed the influence of the origin of stock control on the level of environmental disclosure of companies in the electricity sector in Brazil, based on the examination of a sample of 60 companies between 2006 and 2009. In short, the results the authors found showed that companies with foreign stock control presented an average level of environmental disclosure slightly higher than the Brazilian stock control companies.

The institutional identity is also cited as an influence on the disclosure of information on corporate sustainability. Saleh et al. (2010) explored the relation between CSR disclosure and institutional ownership of publicly listed companies in Malaysia, analyzing a sample covering 200 large companies from Malaysia, from 2000 till 2005. As a result, the statistical tests confirmed the existence of a significant positive relationship between the level of disclosure of CSR information and institutional investors. Thus, the authors concluded that, to engage in more sustainable actions, companies attract more investors and enhance the reputation and image of the organization.

In addition, institutional investors are characterized by having more resources and better organizational conditions, providing a greater potential for activism in Corporate Governance (Brandão, 2004). In line with the assertion, Gillan and Starks (2003) highlight the direct influence of these investors on administrative activities. Lima (2013) emphasizes that one of the objectives of the various initiatives that sought to establish corporate governance practices in Brazil, together with the activism of institutional investors, was to increase the quality of information provided by the organizations.

Given the above, we propose the following hypothesis:

\[ H_2: \] The identity of the controlling shareholder is related to the level of economic and socio-environmental disclosure.

Given the above, several types of analysis are observed, considering the relationship between ownership structure and Corporate Social Responsibility (CSR). However, the analyses are focused on specific features of the property or some dimension of CSR. The present study differs by contemplating, in the Brazilian corporate context, the two main characteristics of ownership structure - identity and control - as well as exploring all perspectives - economic, social and environmental - individually and on the whole.
3. Method

This research is characterized as descriptive regarding its goals, as it aims to identify and obtain information on the relationship between the ownership structure and disclosure of economic and socio-environmental information (Collis & Hussey, 2005). A quantitative study was undertaken, as it analyzes numerical data through statistical tests. The study is documentary because of the use of secondary data for the year 2012, obtained from the website of BM & FBOVESPA and Sustainability Reports released along the lines of GRI version G3.1, available on the companies’ websites.

The survey population comprises the 100 largest publicly-traded companies, according to the ranking of Exame magazine Biggest and Best, 2013 edition. To select the sample, the following criteria were used: (i) possess Sustainability Report according to the GRI model, presenting the Index; (ii) present controlling shareholder; and (iii) provide all the financial information needed for analysis.

Based on the application of these criteria, a number of companies were excluded: (i) 40 companies, 35 due to non-disclosure of Sustainability Report according to the GRI model and five due to the lack of the GRI Index in the report; (ii) seven companies; and (iii) five companies related to banks, since they did not have all the financial information necessary for calculating the variables due to a different ownership structure. In addition, there was the exclusion of a company that did not disclose the Reference Form, making it impossible to collect the data. Thus, based on the exclusions, the final study sample totaled 47 companies.

The analysis of the disclosure level was performed from three perspectives, individually - economic, social and environmental - as well as the three in an integrated manner. The latter is called the sustainability disclosure or economic and environmental disclosure, as it is considered full disclosure of the three categories. This analysis was conducted based on information evidenced in the GRI Sustainability Reports. The GRI model G3.1 features 84 indicators, divided into three dimensions: economic (9), environmental (30) and social (45).

The level of disclosure of this information was measured through content analysis, defined by Hair, Babin, Money and Samouel (2005) as a technique for obtaining data through systematic analysis and observation, which identifies the content and information features in the text. This analysis is based on the indicators stated in the Index of Sustainability Reports drawn up according to the GRI model. Thus, for each indicator, we used the following code: 0 (zero) if the item is not disclosed by the company; 0.5 (zero point five) for partial disclosure; and one (1) for full disclosure of the item. The level of disclosure in each of the perspectives was calculated based on the ratio between the added scores of the indicators disclosed by the company and the total number of indicators in that perspective.

As for the stock control, the percentage of common shares of the first controlling shareholder of the organization was used for measuring purposes. With regard to the identity of that shareholder, the controlling shareholder was screened to discover the identity of the owner of each company. Thus, based on the categorization by Carvalhal-da-Silva (2004), it used the following classification: state (government: city, state or union), foreign (foreign investors, with both individuals and institutions), family (individuals or families) and institutional (banks, insurance companies, pension or investment funds). The shareholding identity is therefore a dummy variable.

Initially, a descriptive data analysis was performed, aiming to detail the research variables: disclosure level and its relationship with the ownership structure (control and identity). For the analysis of the disclosure level based on the stock control to be put in practice, the companies were separated in three groups, which were defined by Pedersen and Thomsen (1997) based on the percentage of shares held by the controlling shareholder: (i) less than 20% of control, (ii) between 20% and 50%; and (iii) more than 50% of control. It is noteworthy that this classification was done only for the purpose of descriptive analysis, in order to better present and characterize the study sample.
To investigate the relationship between the ownership structure and the economic and environmental disclosure, we applied the statistical technique of multiple linear regression. According to Cunha and Coelho (2007), regression aims to establish a functional relationship between two or more variables involved, in order to describe a phenomenon.

Thus, Table 1 presents the dependent, independent and control variables used in the Multiple Linear Regression.

Table 1
Variables used in regression model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>Operation</th>
<th>Collection source</th>
<th>Theoretical base</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISC_ECO</td>
<td>Economic Disclosure</td>
<td>Number of indicators disseminated/total number of indicators</td>
<td>Sustainability report – GRI model</td>
<td>Murcia (2009); De Luca et al. (2013)</td>
</tr>
<tr>
<td>DISC_SOC</td>
<td>Social Disclosure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISC_AMB</td>
<td>Environmental Disclosure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISC_SUST</td>
<td>Sustainability Disclosure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent

<table>
<thead>
<tr>
<th>Independentes</th>
<th>Measure</th>
<th>Operation</th>
<th>Collection source</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>Stock Concentration</td>
<td>Percentage of common stock of main controlling shareholder</td>
<td>Reference Form – item 15.1/2</td>
</tr>
<tr>
<td>EST</td>
<td>State</td>
<td>Dummy variable of stockholder identity</td>
<td></td>
</tr>
<tr>
<td>ESTR</td>
<td>Foreign</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INST</td>
<td>Institutional</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Control

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>Operation</th>
<th>Collection source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALAV</td>
<td>Leverage</td>
<td>Current Liabilities/Assets</td>
<td>Sarlo (2009); Crisóstomo et al. (2013); Iyer e Lulseged (2013)</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
<td>Net Income/Assets</td>
<td>Murcia (2009); Crisóstomo et al. (2013); Muttagin e Subramani (2015)</td>
</tr>
</tbody>
</table>

Source: elaborated by the authors.

In that sense, a regression model was developed for each disclosure type: economic, social, environmental and sustainability; according to the following equations:

\[
\text{DISC}_\text{ECO}_i = \beta_0 + \beta_1 \text{CA}_i + \beta_2 \text{FAM}_i + \beta_3 \text{EST}_i + \beta_4 \text{ESTR}_i + \beta_5 \text{ALAV}_i + \beta_6 \text{ROA}_i \quad (i)
\]

\[
\text{DISC}_\text{SOC}_i = \beta_0 + \beta_1 \text{CA}_i + \beta_2 \text{FAM}_i + \beta_3 \text{EST}_i + \beta_4 \text{ESTR}_i + \beta_5 \text{ALAV}_i + \beta_6 \text{ROA}_i \quad (ii)
\]

\[
\text{DISC}_\text{AMB}_i = \beta_0 + \beta_1 \text{CA}_i + \beta_2 \text{FAM}_i + \beta_3 \text{EST}_i + \beta_4 \text{ESTR}_i + \beta_5 \text{ALAV}_i + \beta_6 \text{ROA}_i \quad (iii)
\]

\[
\text{DISC}_\text{SUST}_i = \beta_0 + \beta_1 \text{CA}_i + \beta_2 \text{FAM}_i + \beta_3 \text{EST}_i + \beta_4 \text{ESTR}_i + \beta_5 \text{ALAV}_i + \beta_6 \text{ROA}_i \quad (iv)
\]

To validate the models, the premises of the regressions were tested (independence, normality and homoscedasticity of residues and absence of multicollinearity of independent variables).

The statistical system used to treat the data was the software Statistical Package for Social Sciences (SPSS).
4. Analysis of Results

4.1 Characteristics of Companies

This study established the stock control and the identity of the controlling shareholder as variables to check the relationship between them and the economic and socio-environmental disclosure of organizations. Thus, to the extent that the disclosure is addressed in three dimensions, both individually and in an integrated manner, descriptive analysis sought to better detail these disclosure levels regarding the two features relating to the ownership structure focused on.

Thus, Table 2 presents descriptive statistic on the disclosure level per dimension.

Table 2
Descriptive statistics of disclosure levels of the companies in 2012

<table>
<thead>
<tr>
<th>Disclosure</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Variation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>47</td>
<td>22.22%</td>
<td>100%</td>
<td>75.77%</td>
<td>88.89%</td>
<td>23.53%</td>
<td>31.05%</td>
</tr>
<tr>
<td>Social</td>
<td>47</td>
<td>13.33%</td>
<td>100%</td>
<td>73.31%</td>
<td>75.66%</td>
<td>20.45%</td>
<td>27.89%</td>
</tr>
<tr>
<td>Environmental</td>
<td>47</td>
<td>11.67%</td>
<td>100%</td>
<td>68.62%</td>
<td>71.67%</td>
<td>22.17%</td>
<td>32.31%</td>
</tr>
<tr>
<td>Sustainability</td>
<td>47</td>
<td>19.05%</td>
<td>100%</td>
<td>71.90%</td>
<td>72.62%</td>
<td>19.74%</td>
<td>27.45%</td>
</tr>
</tbody>
</table>

Source: research data.

Based on the data analysis, we note that the maximum dissemination of GRI indicators was reached in each of the three perspectives in isolation, as well as of the three together. Through the minimum values, we can see also that none of the 47 companies in the sample failed to fully disclose all indicators. In addition, the average of the four levels of disclosure was around 70%, the median being superior to the means of all types of disclosure, indicating that half of the companies present above average disclosures for each perspective. It is worth noting that environmental disclosure shows the lowest average regarding the greater variability of the data, compared to the results obtained for the other levels of disclosure, a fact that indicates less disclosure of items in that perspective.

To discuss the disclosure of characteristics in relation to stock control, the sample was divided in three groups, based on the percentage of shares held by the controlling shareholder, according to the classification of Pedersen and Thomsen (1997). Thus, Table 3 presents the descriptive statistics of disclosure levels in accordance with the ownership concentration of the companies in 2012.
Ownership Structure and Economic and Socio-Environmental Disclosure in The Largest Brazilian Companies

Table 3
Descriptive statistics of disclosure levels in 2012, divided according to the ownership concentration of the companies

<table>
<thead>
<tr>
<th>Disclosure</th>
<th>Concentration</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Median</th>
<th>Standard deviation</th>
<th>Variation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>less than 20%</td>
<td>2</td>
<td>33.33%</td>
<td>61.11%</td>
<td>47.22%</td>
<td>47.22%</td>
<td>19.64%</td>
<td>41.59%</td>
</tr>
<tr>
<td></td>
<td>between 20% and 50%</td>
<td>15</td>
<td>22.22%</td>
<td>100.00%</td>
<td>68.52%</td>
<td>77.78%</td>
<td>29.07%</td>
<td>42.43%</td>
</tr>
<tr>
<td></td>
<td>more than 50%</td>
<td>30</td>
<td>44.44%</td>
<td>100.00%</td>
<td>81.30%</td>
<td>88.89%</td>
<td>18.48%</td>
<td>22.73%</td>
</tr>
<tr>
<td>Social</td>
<td>less than 20%</td>
<td>2</td>
<td>55.56%</td>
<td>62.22%</td>
<td>58.89%</td>
<td>58.89%</td>
<td>4.71%</td>
<td>8.00%</td>
</tr>
<tr>
<td></td>
<td>between 20% and 50%</td>
<td>15</td>
<td>13.33%</td>
<td>100.00%</td>
<td>68.89%</td>
<td>62.22%</td>
<td>27.32%</td>
<td>39.65%</td>
</tr>
<tr>
<td></td>
<td>more than 50%</td>
<td>30</td>
<td>35.56%</td>
<td>100.00%</td>
<td>76.48%</td>
<td>81.11%</td>
<td>16.35%</td>
<td>21.37%</td>
</tr>
<tr>
<td>Environmental</td>
<td>less than 20%</td>
<td>2</td>
<td>56.67%</td>
<td>63.33%</td>
<td>60.00%</td>
<td>60.00%</td>
<td>4.71%</td>
<td>7.86%</td>
</tr>
<tr>
<td></td>
<td>between 20% and 50%</td>
<td>15</td>
<td>11.67%</td>
<td>100.00%</td>
<td>67.78%</td>
<td>73.33%</td>
<td>29.94%</td>
<td>44.18%</td>
</tr>
<tr>
<td></td>
<td>more than 50%</td>
<td>30</td>
<td>30.00%</td>
<td>100.00%</td>
<td>69.61%</td>
<td>72.50%</td>
<td>18.42%</td>
<td>26.47%</td>
</tr>
<tr>
<td>Sustainability</td>
<td>less than 20%</td>
<td>2</td>
<td>57.14%</td>
<td>58.93%</td>
<td>58.04%</td>
<td>58.04%</td>
<td>1.26%</td>
<td>2.18%</td>
</tr>
<tr>
<td></td>
<td>between 20% and 50%</td>
<td>15</td>
<td>19.05%</td>
<td>100.00%</td>
<td>68.45%</td>
<td>65.48%</td>
<td>27.41%</td>
<td>40.04%</td>
</tr>
<tr>
<td></td>
<td>more than 50%</td>
<td>30</td>
<td>40.48%</td>
<td>100.00%</td>
<td>74.54%</td>
<td>75.60%</td>
<td>15.11%</td>
<td>20.27%</td>
</tr>
</tbody>
</table>

Source: research data.

Based on Table 3, we note that there are few companies with controlling shareholders owning less than 20% of the company’s control (2), whereas more than half the sample (30) has a high ownership concentration, standing over 50% of total common shares. This result corroborates Brandão (2004), which also identified the high stock concentration as characteristic of the Brazilian capital market.

Companies that had shareholders holding less than 20% of control were the ones that had the lowest average levels of information disclosure. For the companies who had controlling shareholders with 20% to 50% of common shares, it is clear that the mean disclosure levels are homogeneous, since the disclosure covers around 68% of the indicators in each of the perspectives. However, such companies have the highest variability in all types of disclosure.

For businesses that had shareholders holding more than 50% of control, the results indicate a higher information disclosure level, considering that the average disclosure of economic (81.30%), social (76.48 %), environmental (69.61%) and sustainability prospects (74.54%) were higher in this group of companies. In addition, it should be emphasized that the data show a low variability, confirming the indication that, in the sample under analysis, companies with greater shareholder control disclose more information about corporate sustainability.

In addition, we analyzed the disclosure regarding the identity of the controlling shareholder, the results are shown in Table 4.
Table 4

Descriptive statistics of disclosure levels in 2012 according to the identity of the controlling shareholder.

<table>
<thead>
<tr>
<th>Disclosure</th>
<th>Identity</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Median</th>
<th>Standard deviation</th>
<th>Variation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>Family</td>
<td>14</td>
<td>22.22%</td>
<td>88.89%</td>
<td>69.84%</td>
<td>77.78%</td>
<td>21.98%</td>
<td>31.47%</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>8</td>
<td>44.44%</td>
<td>100.00%</td>
<td>87.50%</td>
<td>94.44%</td>
<td>19.19%</td>
<td>21.93%</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>15</td>
<td>27.78%</td>
<td>100.00%</td>
<td>75.19%</td>
<td>88.89%</td>
<td>23.84%</td>
<td>31.70%</td>
</tr>
<tr>
<td></td>
<td>Institutional</td>
<td>10</td>
<td>22.22%</td>
<td>100.00%</td>
<td>75.56%</td>
<td>88.89%</td>
<td>27.99%</td>
<td>37.04%</td>
</tr>
<tr>
<td>Social</td>
<td>Family</td>
<td>14</td>
<td>34.44%</td>
<td>97.78%</td>
<td>66.11%</td>
<td>62.22%</td>
<td>20.55%</td>
<td>31.08%</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>8</td>
<td>67.78%</td>
<td>100.00%</td>
<td>84.03%</td>
<td>82.22%</td>
<td>11.88%</td>
<td>14.14%</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>15</td>
<td>42.22%</td>
<td>100.00%</td>
<td>74.22%</td>
<td>80.00%</td>
<td>18.71%</td>
<td>25.20%</td>
</tr>
<tr>
<td></td>
<td>Institutional</td>
<td>10</td>
<td>13.33%</td>
<td>100.00%</td>
<td>73.44%</td>
<td>78.89%</td>
<td>26.24%</td>
<td>35.73%</td>
</tr>
<tr>
<td>Environmental</td>
<td>Family</td>
<td>14</td>
<td>11.67%</td>
<td>90.00%</td>
<td>62.02%</td>
<td>65.00%</td>
<td>22.56%</td>
<td>36.38%</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>8</td>
<td>40.00%</td>
<td>100.00%</td>
<td>71.04%</td>
<td>73.33%</td>
<td>22.13%</td>
<td>31.15%</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>15</td>
<td>30.00%</td>
<td>100.00%</td>
<td>72.11%</td>
<td>73.33%</td>
<td>19.50%</td>
<td>27.04%</td>
</tr>
<tr>
<td></td>
<td>Institutional</td>
<td>10</td>
<td>26.67%</td>
<td>100.00%</td>
<td>70.67%</td>
<td>70.00%</td>
<td>26.58%</td>
<td>37.61%</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Family</td>
<td>14</td>
<td>25.00%</td>
<td>93.45%</td>
<td>65.05%</td>
<td>63.69%</td>
<td>19.65%</td>
<td>30.21%</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>8</td>
<td>63.10%</td>
<td>100.00%</td>
<td>79.76%</td>
<td>76.19%</td>
<td>13.16%</td>
<td>16.50%</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>15</td>
<td>40.48%</td>
<td>99.40%</td>
<td>73.57%</td>
<td>75.00%</td>
<td>17.93%</td>
<td>24.37%</td>
</tr>
<tr>
<td></td>
<td>Institutional</td>
<td>10</td>
<td>19.05%</td>
<td>100.00%</td>
<td>72.68%</td>
<td>76.79%</td>
<td>25.78%</td>
<td>35.47%</td>
</tr>
</tbody>
</table>

Source: research data.

Based on Table 4, it is seen that, in a sample of 47 businesses, government identity was less representative, with a total of 8 companies. In addition, it was noted that for the context of the sample under analysis, family-owned companies (14) were less frequent than those of foreign control (15). However, as indicated by Braga et. al. (2011) and Sarlo (2009), the publicly-traded companies in Brazil are predominantly controlled by families. Thus, an explanation for the greater share of foreign-controlled companies lies in the greater attention paid by such shareholders to the issues of sustainability, as indicated by Oh et al. (2011), which can therefore impact actual own disclosure about corporate sustainability.

Through the intersection of information about the stockholder identity and ownership of disclosure levels, it is clear that no family-owned company presented full disclosure on any of the types of disclosure under review. In comparison with other companies, these were the ones that had the lowest average levels of disclosure, which were below 70%, the lowest for the disclosure of environmental information (62.02%).

By confronting the average environmental disclosure of family businesses (62.02%) with an overall average that perspective (68.62%), shown in Table 2, there is a sign that family-controlled companies were mainly responsible for the decrease in the overall average of environmental disclosure. This can be verified by analyzing the environmental disclosure index of other stock identities since, while family businesses had a mean disclosure of 62.02%, companies with other identities - state, foreign and institutional - showed disclosure approximately 71% of the environmental indicators.

The state-owned organizations had a higher average both in the level of economic and social disclosure and in the level of disclosure of information on corporate sustainability (79.76%). In the latter case, there was less variability in the data, since its standard deviation and variation coefficient were 13.16% and 16.5%, respectively. This high level of information disclosure is also signaled by the maximum and minimum values of all types of disclosure (economic, social, environmental and sustainability), which were more favorable when compared to the other companies.
As for the foreign ownership of companies, there is uniformity in the levels of disclosure, as they are around 72% and 75%. In addition, it is clear that these types of businesses most reported environmental information (72.11%). Finally, the companies with institutional shareholder control companies show the highest variability of the data compared to the other companies of different identities.

### 4.2 Relation Between Ownership Structure and Economic and Socio-Environmental Disclosure

After the descriptive analysis, which provided knowledge on the study sample, the Multiple Linear Regression was analyzed, aiming to investigate the existing relation between the property structure and the economic and socio-environmental disclosure.

As appointed in the research method, the premises of the regressions were tested (absence of independence of the residues, multicollinearity, normality of residues and homoscedasticity), checking the compliance with these premises. Thus, Table 5 presents the results of the four regression models applied in the research.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Disclosure</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Economic</td>
<td>Social</td>
<td>Environmental</td>
<td>Sustainability</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.958</td>
<td>0.674</td>
<td>0.806</td>
<td>0.751</td>
</tr>
<tr>
<td>Concentration</td>
<td>0.207</td>
<td>0.149</td>
<td>0.047</td>
<td>0.119</td>
</tr>
<tr>
<td>Family</td>
<td>-0.053</td>
<td>-0.064</td>
<td>-0.082</td>
<td>-0.069</td>
</tr>
<tr>
<td>State</td>
<td>0.042</td>
<td>0.087</td>
<td>-0.020</td>
<td>0.044</td>
</tr>
<tr>
<td>Foreign</td>
<td>-0.047</td>
<td>0.002</td>
<td>0.010</td>
<td>0.000</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.448(*)</td>
<td>-0.315</td>
<td>-0.267</td>
<td>-0.312</td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.436(*)</td>
<td>-0.005</td>
<td>-0.174</td>
<td>-0.111</td>
</tr>
<tr>
<td>N</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td>R²</td>
<td>0.186</td>
<td>0.132</td>
<td>0.058</td>
<td>0.107</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.064</td>
<td>0.002</td>
<td>-0.083</td>
<td>-0.027</td>
</tr>
<tr>
<td>F test</td>
<td>1.526</td>
<td>1.012</td>
<td>0.413</td>
<td>0.799</td>
</tr>
<tr>
<td>p-value</td>
<td>0.195</td>
<td>0.431</td>
<td>0.866</td>
<td>0.576</td>
</tr>
</tbody>
</table>

(*) Significant at 10%

Source: research data.

Diante disso, apesar de se ter a divulgação de informações socioambientais como importante para a legitimação da atuação empresarial perante a sociedade (Cardoso et al., 2012; Sampaio et al., 2012; Costa et al., 2013; Muttakin & Subramaniam, 2015), os resultados do presente estudo sinalizaram que a estrutura de propriedade não é fator influenciador do disclosure socioambiental, podendo indicar que os acionistas, identificados a partir da estrutura de propriedade e controle da empresa, não concebem a divulgação de tais informações como aspecto legitimador.
Based on Table 5, it is verified that the models do not show statistical significance, indicating that none of the independent variables alone exerts influence on the disclosure relating to the economic, social or environmental perspectives, or all three together (sustainability). Thus, from these results, it can be inferred that neither concentration nor the identity of the shareholder influences the disclosure of the companies in the sample.

Therefore, although the disclosure of environmental information is important for the legitimacy of business activity in society (Cardoso et al., 2012; Sampaio et al., 2012; Costa et al., 2013; Muttakin & Subramaniam, 2015), the results of this study signaled that the ownership structure does not influence the socio-environmental disclosure, which may indicate that investors, identified from the ownership and control structure of the company, do not conceive the disclosure of such information as a legitimizing aspect.

Thus, due to the lack of significance of the regression models tested, it turns out that the hypotheses proposed in this study, about the relationship both between the controlling interest and the economic and environmental disclosure (H1) and between the identity of the controlling shareholder and the level of economic, social and environmental disclosure (H2), cannot be accepted.

These results differ from the findings by Ghazali (2007) and Saleh et al. (2010), who verified a relationship between the disclosure of information on corporate sustainability and ownership structure. On the other hand, they support the results of the work by Iyer and Lulseged (2013), who found no statistically significant difference between family and non-family businesses regarding the disclosure of information in sustainability reports.

Also, note that the literature differs not only with regard to the relationship between the disclosure and the ownership structure of organizations. This divergence is also found in the relationship between the actions taken with regard to business sustainability and ownership structure and with respect to the stock control (Dam & Scholtens, 2013; Crisóstomo et al., 2013) and shareholder identity (Oh et al., 2011; Block & Wagner, 2014).

5. Final Considerations

The research aimed to investigate the relationship between the ownership structure and the economic and environmental voluntary disclosure in the largest Brazilian companies. To this end, in addition to financial data, data were collected about the identity and ownership concentration as well as the dissemination of economic, social and environmental information from 47 of the 100 largest publicly-traded companies on BM&FBOVESPA for the fiscal year 2012.

Descriptive analysis of the disclosure levels indicated that, although there is great variability among the perspectives analyzed (economic, social, environmental and sustainability), environmental disclosure showed the lowest average disclosure, and also presented the greatest variability of data. Concerning the identity of the controlling shareholder and the representativeness of the sample, the state-owned and foreign-controlled enterprises showed smaller and greater representativeness, respectively. Regarding the identity of the controlling shareholder with the disclosure levels, family businesses had lower average disclosure, particularly regarding environmental information. The state-control organizations stood out with the highest average in three of the four levels of disclosure, namely: economic, social and sustainability. In addition, foreign-controlled companies were the ones that most reported environmental information.

The results of the statistical test showed no significant relationship between ownership structure and the economic and socio-environmental disclosure. Therefore, it is inferred that neither the concentration nor the identity of the shareholder influence the disclosure of the companies belonging to the sample, i.e. this legitimizing aspect - the disclosure of information on corporate sustainability - is not influenced by the ownership structure of the company. Therefore, hypotheses H1 and H2 are not accepted.
As a contribution, this study contributes to the development and growth, in Brazil, of the theme ownership structure and economic and socio-environmental disclosure. It also seeks to contribute in terms of theoretical and empirical aspects, given that this issue is under development, with considerable differences as to the results found in international research.

Concerning the limitations of the research, it is emphasized that only one year was analyzed, preventing a more detailed comparison, in addition to the small number of companies in the sample, restricted to the largest publicly-traded companies in Brazil. Data collection can also be seen as a limitation, since the quality of the information disclosed in the sustainability reports was not considered, and the level of disclosure of the information was measured through indicators reported by the companies. For the sake of future research, suggestions include a longitudinal analysis and the inclusion of variables in the statistical model or even the use of other techniques for data analysis. In addition, it is necessary to verify the existence of this relationship in organizations both in Brazil and in other countries, since the literature on this subject shows mixed results.

References


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