repec

Revista de Educação e Pesquisa em Contabilidade
Journal of Education and Research in Accounting

Periódico Trimestral, digital e gratuito publicado pela Academia Brasileira de Ciências Contábeis

ABRACICON
ACADEMIA BRASILEIRA DE CIÊNCIAS CONTÁBEIS

ISSN 1981-8610

REPeC, Brasília, v. 10, n. 1, art. 5, p. 88-102, Jan./Mar. 2016
Available online at *www.repec.org.br*
DOI: http://dx.doi.org/10.17524/repec.v10i1.1320

Financial Performance and Information Disclosure on Human Resources: an Analysis of Companies in The IBrX – 100

Abstract

The research question that guided this study was: What is the relationship between the process of disseminating information on human resources and the financial performance of the companies? The research was conducted with the companies in the IBrX-100. All reports that supported this study relate only to the year 2013. The process of disseminating information on human resources was analyzed using the method by Mamun (2009). The statistical technique of multiple regression was used to assist in the interpretation of data, based on a cross-sectional view. The variables chosen for this study were Profitability (REN); Turnover (VV) and Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA). The companies analyzed presented a low disclosure rate of information on human resources. In view of the variables surveyed for this study, however, it can be concluded that there is a relationship between the process of disseminating information on human resources and the financial performance of companies when represented by Turnover and EBITDA - given that the profitability demonstrated no significant relationship in this analysis. Overall, the findings confirm other previous studies on the subject.

Key words: Human Resources. Information Disclosure, Financial Performance.

Gustavo Henrique Costa Souza
M.Sc. in Accounting from Universidade Federal de Pernambuco (UFPE) and Professor at Faculdade Luso-Brasileira (Falub). **Contact:** Av. Congresso Eucarístico Internacional, 01. Santa Cruz. Carpina-PE. CEP.: 55811-000.
E-mail: guga.hcs@gmail.com

Luiz Antonio Felix Junior
M.Sc. in Accounting from Universidade Federal de Pernambuco (UFPE) and Professor at Faculdade Internacional da Paraíba (FPB). **Contact:** Av. Monsenhor Walfredo Leal, 512. Tambiá. João Pessoa-PB. CEP.: 58400-160.
E-mail: juniorfelixx@hotmail.com

Umbelina Cravo Teixeira Lagioia
Ph.D. in Administration from Universidade Federal de Pernambuco (UFPE) and Professor at Universidade Federal de Pernambuco. **Contact:** Avenida Prof. Moraes Rego, 1235. Cidade Universitária. Recife-PE. CEP.: 50670-901.
E-mail: umbelinalagioia@gmail.com

João Gabriel Nascimento de Araújo
M.Sc. in Accounting from Universidade Federal de Pernambuco (UFPE) and Professor at Faculdade Santa Helena (FSH). **Contact:** Avenida Caxangá, 990. Madalena. Recife-PE. CEP.: 52-120-040.
E-mail: j_gabriel90@hotmail.com

Published in Portuguese and English. Original Version in Portuguese.

Received in 9/1/2015. Ask to Revise on 2/3/2016. Resubmitted on 2/17/2016. Accepted on 2/22/2016 by Dr. Felipe Ramos Ferreira (Assistant Editor) and by Dr. Valcemiro Nossa (Editor). Published on 3/31/2016. Organization responsible for the journal: Abracicon.

1. Introduction

The compensation of executives - a subject already addressed in several international academic papers (Cosh, 1975; Coughlan & Schmidt, 1985; Mehran, 1995; Murphy, 1999; Bryan, Hwang & Lilien, 2000; Bebchuk & Fried, 2003) - is just part of the amount spent on personnel. When discussing it, however, a number of underlying provocations emerge, such as: What do companies earn when they publish how much they spent paying language courses for employees or contributing to their pension plan, for example? Does that represent or may represent for them a comparative advantage over the competition? In doing so, do they suffer some kind of impact - direct or indirect, positive or negative - on their productive performance? Do investments in people (and communication on making this investment) influence their financial results? Although there is no intent here to answer all of these questions, this study sheds light on these points of discussion through the analysis of three elements, namely: investment in human resources; voluntary disclosure of this investment; and financial performance.

Thus, the research question that guides the work is: **What is the relationship between financial performance and the level of information disclosure on companies' human resources?**

For this study, the process of disseminating information on human resources was analyzed using the method adopted by Mamun (2009). With regard to financial performance, we opted for classic assessment measures, such as Return (REN), Turnover (VV) and Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA).

The research was conducted using data from companies listed on BM & FBovespa that are part of IBrX-100. The reason for choosing these companies as research subjects is threefold: first, the economic importance these organizations have for the country; then, the impact they have on the labor market - since they have a significant number of employees; and, finally, ease of access to their data.

In this work, we chose to use the word "investment" (and not simply "spending") to imply the prospect of return; and, regarding the "disclosure", only the information evidenced voluntarily (i.e. which is available without a legal provision requiring so) were key to the analysis in this research. Assuming that any benefits of mandatory disclosure are already considered in the company's results, what is being questioned here is if the voluntary disclosure - done through the annual reports - has the ability to leverage the performance and, therefore, the financial result.

The fact that there are studies emphasizing, at the same time, the benefits of disclosure and the reluctance of companies to assume it as common practice, with a view to establishing a culture of transparency (Dantas, Zendersky & Niyama, 2005), indicates that, at least in Brazil, there is no clear understanding nor consonant answers about the relationship between disclosing and obtaining advantage (financial or otherwise) of the disclosure. Thus, the analysis of this binomial deserves reflection and further elaboration.

To deepen the analysis of the relationship between the disclosure of investment in human resources and the financial performance of companies, this study aims to contribute for professionals in Human Resources, based on the findings obtained in this research, to be able to review how the information on investments in human resources are being evidenced in the companies where they work. In addition, this research will instigate members of the academy to carry out further research in order to confirm or refute whether the results obtained here are repeated in other business segments and/or countries.

2. Literature and Hypotheses

2.1 Information Disclosure in Human Resources: a Marketing Strategy

By the way, regarding the body of knowledge each person has, Tinoco (2013) argues that its use in a materialized form, through new technologies, brings intangible values to the company. Thus, the investment made for the purpose of developing people within organizations may be able to generate value for companies.

Abeysekera (2006) states that the traditional accounting system suggests that intellectual capital is a non-countable item. In this perspective, Hossain, Khan and Yasmin (2004) state that, even if such an investment is not explained in the financial statements of the entities, the people's work remains the gear responsible for the development of organizations and even the attraction of new investors. Tinoco (2013, p. 67) explains that "the new paradigm of competitiveness and continuity of entities seeking to lead the world depends on the recognition that this is anchored in people." Skilled and motivated work generates better results, which consequently creates value for the entity and returns for the shareholders. Therefore, the company that invests in human resources has a differential attractiveness to investors. Hossain, Khan and Yasmin (2004) corroborate this view, stating that, when perceiving a distinguished and competent workforce, investors can see a promising business. Therefore, disseminating the investment in human resources has become a marketing strategy in order to attract foreign capital and perhaps even able to motivate people in the organization.

In the 1970's, Drucker (1973, p. 49) stated that "ideally, marketing should result in a customer who is ready to buy." If this concept is applied to large companies with securities traded in the capital market, it is understandable that these companies want to use the marketing techniques to look more attractive to investors (which at that time are customers ready to buy companies they consider most profitable). Additionally, Kotler (2012) defended the distinction between marketing defined based on economic parameters (whose concept is related to the market interaction between individuals with needs and individuals with cash) and marketing defined from a management view, which, according to him, is the art of selling products, whether the internal (the people of the company) or external client (potential investors).

In the opinion of Guissoni and Neves (2013), marketing is no longer considered only as a tactical area, but rather a structure with strategic function. According to these authors, marketing is understood not only as the sector responsible for advertisements aimed at external customers, but as the body whose function includes a wide range of elements.

It is Gounaris (2008), however, who gives the interpretation key to understand why the disclosure of investments in human resources is seen now as a marketing strategy. By analyzing the impact of internal marketing actions on the job satisfaction of the employees in an organization, the author showed that there is a positive and significant correlation between these two elements. Employees seduced by a marketing campaign feel more proud of belonging to the company and - consequently, produce more and better.

The set of information offered by this marketing area includes the dissemination of information on investments in human resources and rests on some values. Iglesias, Sauquet and Montaña (2011) listed six of these values: trust; commitment; teamwork; innovation; flexibility; and results orientation. The latter plays a key role in understanding the evidence that this research intends to offer.

2.2 The Relation Between the Disclosure of Investments in Human Resources and Companies' Financial Performance

After demonstrating the importance of human resources and their function within organizations as value creators, there is the concern with the disclosure of the benefits generated, their consequences and how much that value added is worth. Branco and Rodrigues (2009) reported that financial performance is linked to a skilled workforce, which generates competitiveness in marketing relations. Hossain, Khan and Yasmin (2004), however, report that it is difficult to assess and record the experience, knowledge and skills of people in the companies in accounting terms.

Indeed, although some information related to investments in human resources are exposed in the companies' financial statements, there is other information that cannot be evidenced through these statements. Because of this, Domínguez (2012) clarifies that the financial reports are of limited use. To get a clearer way to expose information that is not expressed in the financial statements, Hossain, Khan and Yasmin (2004, p. 225) argue that "to remove this difficulty and draw the shareholders' attention, many companies are reporting on their human resources in a non-financial form, mainly in the annual reports on a voluntary basis". Bontis (2002) emphasizes that the disclosure of information through these annual reports is very important for external users. The author points out that, although there is a global appeal for information on the people in the organization, the number of entities that disclose this is still small.

With regard to human resources, the disclosure of specific information by way of non-financial reporting seeks to demonstrate facts that the financial statements do not include, and thus satisfy the various users hitherto deprived of this information. Some studies (Ullmann, 1985, Mamun, 2009; Micah, Ofurum & Ihendinihu, 2012) discussed the influence that the disclosure of such information has on the financial performance of entities more punctually. Mamun (2009), for example, researched the listed companies in Bangladesh to find out if their human resource disclosure indices presented in the annual reports were associated with their corporate attributes. The author concluded that the larger firms with higher value trades in the market and higher financial performance, disclose more information on human resources than smaller companies.

When investigating the determinants of disclosure in Corporate Social Responsibility (CSR) in a group of companies listed on Bovespa, Conceição, Dourado, Baqueiro, Freire & Brito (2011) suggested that the disclosure policy in this area is linked to the marginal benefit the entities earn (or expect to derive) with this type of disclosure. Social marketing would therefore take place in economic terms, a positive externality, a compensatory effect of disclosure. The same study indicates the existence of a significant relationship between financial performance and the disclosure of CSR.

Gupta and Steenburgh (2008) argued that marketing is essential for the growth of a company and those who manage this area are required to allocate the funds they receive so as to generate returns for the company. This thought is focused on the economic perspective of the cost-benefit ratio.

To illustrate how this utilitarian view of marketing is present, in fact, in the business context, see the study by Papasolomou-Doukakis and Kitchen (2004), which demonstrated how the internal marketing in UK banks was, at best, a "window" (window dressing) or part of a set of trappings of marketing, which reflect beauty and impress by the way they are presented, but lack a substantial base founded on a genuine concern with the employees. The internal marketing, in this case, serves as a tool to manipulate the behavior of employees and lead them first, to achieve the objectives and goals of the company, to achieve the interests only afterwards. This utilitarian view, the way it is formulated, according to Papasolomou-Doukakis and Kitchen (2004), is a contradiction in terms, since the traditional rhetoric of internal marketing has always been primarily focused on the internal public, only then followed by the influence on and improvement of business results - as a result of the former's level of satisfaction.

Ewing and Caruana (1999), in turn, found that internal marketing is related to the effectiveness of human resources. This "effectiveness", according to the authors, is linked to business performance and therefore the achievement of the strategic objectives of organizations. Their study confirms that internal marketing is an important antecedent of effectiveness.

The importance of marketing and the connection it has with organizational performance were highlighted in Morgan (2012). In addition, when defining some elements that make up the portfolio of an organization, the author conceptualizes human resources in these terms:

> Refer to people and knowledge and skills available in the company's workforce that provide inputs for the company's marketing capabilities (Morgan, 2012, p. 105).

Further, the author defines these "marketing capabilities" as skills "developed when individuals and groups repeatedly apply their knowledge and skills to combine and transform resources in ways to contribute to the achievement of business goals". This comment clearly draws a connection between people and results, in the sense that human resources are a factor closely linked to the achievement of goals and, therefore, the performance of the organization.

2.3 Measuring Financial Performance

Assessing the financial performance of an organization is a complex task that involves a number of technical and market considerations. The choice of the "best measures" (i.e. the most appropriate indicators) to assess a certain company is subjective and therefore subject to questioning.

Considering this, in this study, it was assumed that the profitability, EBITDA and the Turnover companies reported would represent their financial performance. Thus, the study hypotheses were built and analyzed, relating the measures to the disclosure index of information on human resources.

Initially, we studied the relationship between profitability and dissemination of information on human resources. As in the study by Domínguez (2012), this paper used the Return on Assets (ROA) to define profitability.

According to Mamun (2009), a company that has better profitability in general, also aims to disseminate more information about its operation, as this helps maintain its reputation.

In this sense, the study by Domínguez (2012) assessed the relationship between the profitability of companies in Madrid and the level of disclosure on human resources. In a similar perspective, Micah, Ofurum and Ihendinihu (2012) evaluated the relationship between the financial performance of companies listed in Nigeria regarding the dissemination of information on human resources and used the ROA and ROE as financial performance indicators.

That said, the first hypothesis of this study was constructed as follows:

Hypothesis 1: There is no significant relationship between profitability and the disclosure level of HR (HRADI).

Churchill, Ford, Hartley and Walker (1985) asserted that the Turnover is a measure used to investigate the company's performance in relation to its sales force. By extension and consequence, this measure is related to the operating results of the company. McGuire, Chiu and Elbing (1962), by the way, had already highlighted the relationship between sales and results.

Regarding the management process, Zuccolotto and Colodeti Filho (2008, p. 45) emphasize that "knowing the volume of sales is of utmost importance to the financial management of the company." Colletti and Tubridy (1987) also recalled the importance of this quantitative measure.

In a recent study on management results applied to IBrX companies (Brazil Index), Reis, Cunha and Ribeiro (2014, p. 212) acknowledged that "a temporary increase in the Turnover" may end up "pushing the results of the period."

In view of some studies that used the Turnover in their research, it was observed that this measure had not yet been evaluated with regard to its influence on the voluntary disclosure process. Thus, aiming to analyze its relationship with this prospect, especially with information on human resources, the second hypothesis of this study emerged:

Hypothesis 2: There is no significant relationship between the Turnover and the level of disclosure on HR (HRADI).

International studies (Hamilton, 2003; Trejo-Pech, 2006), developed in different lines of business, highlight the importance of EBITDA as a financial performance measure. The Brazilian literature (Vasconcelos, 2001; Santana & Lima, 2004), in turn, also highlights the advantages of its use.

With regard to the relationship between profitability and dissemination of information on intellectual capital, Sonnier, Carson and Carson (2007), for example, used EBITDA as profitability parameter and found, in fact, a significant relationship between this indicator and the level of disclosure (although this relationship has been inverted due to the accounting treatment of the intellectual capital). The authors considered human capital as one of the components of intellectual capital model they proposed and advocated the use of EBITDA as a valid and appropriate measure for evaluating the financial performance of an organization. Gelb and Zarowin (2002) also took it as an indicator able to assist in the analysis of corporate disclosure policies.

With the purpose of assessing the relationship between financial performance and disclosure of financial information, Ponte and Oliveira (2004) and Gerpott, Thomas and Hoffmann (2008) chose to use not directly EBITDA, but indicators obtained from it - which confirms its versatility and usefulness.

Considering that, as demonstrated, EBITDA receives significant academic approval and is related to a number of important information (whether accounting, financial or tax), it was decided, in this work, to adopt it as a numerical representation of the financial performance of the organizations studied. Thus, the existence of a relationship between the EBITDA and the level of disclosure of information on human resources was verified using the following hypothesis test:

Hypothesis 3: there is no significant relationship between the Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) and the level of disclosure of HR (HRADI).

3. Method

3.1 Definition of Sample, Collection Procedure and Data Analysis Technique

The research was conducted with the companies that compose the IBrX-100. This index focuses on the 100 shares with the highest trading volume on BM & FBOVESPA. Of the 100 companies listed in the index, however, for a better definition of the sample, the following were eliminated: a) companies that appear more than once in the list, to avoid duplicity; and b) companies classified in the "Financial Sector and Others", because of its specific features. After application these elimination criteria, we obtained a sample of 75 companies belonging to different activity branches.

The data were collected through the Economática database and through the Annual Management Reports obtained from the investor relations website of the companies listed. All reports that supported this study related only to 2013, so that the baseline date of issue is December 31st 2013.

The statistical technique of multiple regression was used to support the interpretation of the data was used, based on a cross-sectional perspective because the analysis will only focus on the year 2013.

3.2 Definition of Variables and Regression Model

The research presents variables that can lead to the achievement of the objective, which is to analyze the relationship between information disclosure on human resources and financial performance of companies. Thus, the dependent variable is the Information Disclosure Index of Human Resources (HRADI), which can be obtained as follows:

In the BM & FBOVESPA database, annual reports were collected of entities belonging to the IBrX-100. By reading this material, in a document analysis, keywords associated with investment in human resources were identified, as recommended by Mamun (2009). The analysis of the text, therefore, was done to verify the occurrence of the terms Mamun (2009) calls "disclosure items" (see Table 1). It is important to note that, with a view to preventing research bias, the occurrence of a "disclosure item" in the report's text was considered only once for calculation purposes. Thus, the most common and the least mentioned terms had equivalent weight.

Some of the terms listed by Mamun (2009) were adapted in order to avoid distortions of any kind and avoid bias due to inconsistencies in the terminology. This was necessary in view of: a) the impossibility of literal translation of some expressions; and b) the fact that the language commonly used in operations with companies reporting in Brazil sometimes diverges from language used abroad.

Thus, a table was built (Table 1) that correlated the terms based on Mamun (2009), as follows:

Table 1
Items to Measure HRADI

Mamun (2009) - Disclosure Items		Mamun (2009) - Disclosure Items (Adapted model)	
No.	**Disclosure Items**	**No.**	**Disclosure Items**
1	*Separate HRA statement*	1	Declaração HRA em Separado
2	*Total Value of Human resource*	2	Folha de Pagamento
3	*Number of employees*	3	Número de Funcionários
4	*Human resource policy*	4	Política de Recursos Humanos
5	*Training and development*	5	Treinamento e Desenvolvimento
6	*Management succession plan*	6	Plano de Cargos e Salários
7	*Employment report*	7	*Turn Over*
8	*Employees' value addition*	8	Valor Agregado dos Empregados
9	*Human resource development fund*	9	Fundo de Desenvolvimento de RH
10	*Employees/workers fund*	10	Fundo de Empregados / Trabalhadores
11	*Employee categories*	11	Categorias dos Empregados
12	*Managerial remuneration*	12	Remuneração Gerencial
13	*Retirement benefits*	13	Benefícios a Aposentados
14	*Performance Recognition*	14	Reconhecimento de Desempenho
15	*Superannuation fund*	15	Fundo de Pensão
16	*Other employees benefits*	16	Outros Itens Divulgados

Source: adapted based on Mamun (2009).

For the sake of a better understanding of the disclosure items, which were listed above in Table 1, a more detailed explanation on each of them is important, as shown in Table 2 below:

Table 2
Definition of the Items

Item	Definition
1	The expression "Separate HRA Statement" refers to companies that publish a specific report on how the organization deals with and invests in Human Resources. Therefore, the existence of these "independent" declarations (i.e. separate from the Standardized Financial Statements and the Annual Management Report) which refer exclusively to human resources was also verified.
2	Refers to spending on Human Resources (mostly salaries).
3	Refers to the number of people working in the company as effective employees.
4	Refers to the coordinated and strategic action focused on the development of people in the organization.
5	Is related to what the company spent to improve its employees' performance. In one word: training.
6	Refers to salary and career planning in the organizational chart and hierarchical model the company proposes.
7	Reports on employee movements (admission and resignation flow) in the organization.
8	Refers to how much of the value added the company produced was distributed among employees.
9	Refers to entities that have their own budget or a clearly defined fund, as the term itself says, for staff policies.
10	Are special conditions to respond to employees' financial demand, usually defined through down payments and/or loan policies.
11	Possible differences in employees' internal classification. This classification can refer to the department where these employees work, the type of professional relationship they maintain with the company or the socioeconomic profile of the staff.
12	Represents the compensation (not necessarily individualized per executive) paid to the top level of the investigated entities (normally in the form of bonus or stock options).
13	Refers to possible benefits (such as the creation of clubs, awards) granted to retired employees as recognition of merit and contribution they gave while active, as well as actions to enhance these persons' wellbeing.
14	This component is linked to additional compensation plans (vouchers, awards etc.), outlined to compensate best performances. Includes participation in profits and income.
15	Refers to the private health insurance for employees, fully or partially paid for by the company.
16	Includes all investments and actions focused on Human Resources, mentioned in the text of the reports, which somehow were not grouped in the other items. Thus, the goal is to prevent important information from being ignored solely for not being part of the theoretical model underlying this research.

Source: elaborated by the authors (2014).

Based on the disclosure items already shown, Mamun (2009) set a parameter for evaluating the investment profile in human resources. Therefore, he built the Human Resource Accounting Disclosure Index (HRADI). This indicator is composed of 16 items of disclosure on investments in human resources. Each disclosure item that is evidenced by the entities surveyed will add 1 (one) point, otherwise the item will be equal to 0 (zero). This is a dichotomous process in which the total score constitutes the individual score per company and, from then on, the disclosure level of human resources can be found, as follows:

$$\text{HRADI}=\frac{\text{Total score of Indidual Company } \times 100}{\text{Maximum possible score obtained}}$$

Source: Mamun (2009)

The following independent variables were used in the study to express the financial performance of the companies studied:

1. **Profitability (REN):** to define the Profitability in this research, the ROA was used, a profitability measure that considers the assets needed to produce income (Micah, Ofurum & Ihendinihu, 2012). In the study by Soares and Galdi (2011), this measure was considered relevant to measure the financial performance. The Profitability defined here through the ROA was obtained based on the following index (Marion & Iudícibus, 2008, p. 153; Matarazzo, 2003, p. 152)

$$REN = \frac{\text{Net Profit}}{\text{Total Assets}} \tag{2}$$

2. **Turnover (VV):** this measure was identified as relevant in the performance measurement and used in studies by Ferraes Neto (2002) and Macedo (2012). As Miranda, Wanderley and Meira (1999) noted, the Turnover is an *absolute* and not a *relative* indicator of financial performance: it reflects the financial performance based on a single finding, and not on comparisons/ratios of elements - as the so-called indices do. Thus, one can conclude that the VV is the value/amount a company invoices/sells in a given period. In this study, no other gains (non-operating) were considered as part of the volume earned in sales transactions, nor was the share of revenues allocated to cover taxes on sales included in the VV. After defining these criteria, one can thus define the Turnover (in terms of monetary value, and not quantity) as the volume of Net Operating Revenues.

3. **Earnings before interests, taxes, depreciation and amortization (EBITDA):** this financial performance measure was used in studies like Diaz (2002) and Frezatti and Aguiar (2007). As the name itself reveals, the EBITDA is calculated based on the elimination of the deductive effect some elements have on the profit. According to Frezatti and Aguiar (2007, p. 13), the formula to obtain this index can be expressed as follows:

$$\text{EBITDA} = \text{Net Earnings} + \text{Depreciation and Amortization} + \text{Financial Expenses} + \text{Income Tax and Social Contribution} \tag{3}$$

Thus, the explanatory function of the human resource disclosure index was described in the following terms:

$$\text{Hradi} = \beta_1 + \beta_2 * REN + \beta_3 * VV + \beta_4 * EBITDA + \upsilon_i \tag{4}$$

Where:
HRADI = Human Resource Information Disclosure Index;
REN = Profitability;
VV = Turnover;
EBITDA = Earnings before interests, taxes, depreciation and amortization.

3.3 Data Treatment

We used the software Gnu Regression, Econometrics and Time-series Libray (Gretl 1.9.92)® for the estimation of the regression model and the tests that validated it. The results were formatted using the spreadsheets of Microsoft Office Excel.

Initially, the descriptive analysis of data was performed, verifying the minimum and maximum points, average and standard deviation.

Next, before the regression analysis in cross-section, a series of validation procedures needed to be performed to test the model with regard to the following items: stochasticity of data; multicollinearity; model specification; heteroscedasticity; and normality of residues.

The stochasticity of data and multicollinearity were checked from the correlation matrix, in which the (positive or negative) relationship between the independent and the dependent variables was found. It was also observed if there was a strong link between the independent variables, which would signal the existence of multicollinearity. According to Wooldridge (2006), if the correlation coefficient exceeds 0.60, this can destabilize the regression.

Table 1
Correlation Matrix

HRADI	REN	EBITDA	VV	Variables
1	0.0738	0.0405	0.0220	**HRADI**
	1	0.0090	-0.1839	**REN**
		1	0.3964	**EBITDA**
			1	**VV**

Source: elaborated by the authors (2015).

The analysis of Table 1 indicates that the strongest correlation was found between Turnover and EBITDA (correlation = 0.3964), showing no multicollinearity between the variables in the model.

After verifying that the variables are stochastic, non random and that there is no multicollinearity between the variables, the regression was estimated to verify the specification error, the heteroscedasticity and the normality of the residues.

To check the hypothesis on the appropriate specification of the model, the Regression Specification Error Test was used. As observed in Table 2, the test demonstrated that the model is correctly specified.

Table 2
Reset Specification Test

p-value	Null Hypothesis
0.386	Accepted

Source: elaborated by the authors (2015).

The White and Breusch-Pagan tests were also performed to confirm or reject the null hypothesis on the homoscedasticity of the regression error. As appointed in Table 3, the results of both tests indicated that the error is homoscedastic, accepting the null hypothesis that there is no heteroscedasticity.

Table 3
Heteroscedasticity Test

Test	p-value	Null Hypothesis
White Test	0.677	Accepted
Breusch-Pagan Test	0.403	Accepted

Source: elaborated by the authors (2015).

Finally, the normality of the regression residues was assessed. The normality tests, whose coefficients are displayed in Table 4, showed that the null hypothesis about the normal distribution of the residues was accepted in the two tests performed.

Table 4
Normality Test of Residues

Test	p-value	Null Hypothesis
Doornik-Hansen Test	0.052	Accepted
Jarque-Bera Test	0.053	Accepted

Source: elaborated by the authors (2015).

4. Data Analysis

4.1 Descriptive analysis of the data

The companies studied showed a low disclosure rate of information on human resources. Most of them evidenced between 0% and 40% of the items listed in the research method (Table 5). Among these percentages, 13 companies did not reveal any information. These findings are similar to the findings of Micah, Ofurum and Ihedinihu (2012) who, studying companies in Nigeria, found that they disseminated between 20% and 40% of this information.

Table 5
Distribution of Information Disclosure levels on Human Resources

	No. of Companies	Frequency	Accumulated frequency
	(N)	(%)	(%)
0% to 20%	43	57.33	57.33
21% to 40%	18	24.00	81.33
41% to 60%	9	12.00	93.33
61% to 80%	5	6.67	100
Total	75	100	

Source: elaborated by the authors (2015).

Table 6 demonstrates that the investigated companies evidence, on average, 23.44% of the items defined in the research method and reach 75% of disclosure at most, with a standard deviation of 19.61%. None of the companies presents all information defined by Mamun (2009) and some companied do not disclosure any information on their Human Resources. This result is similar to the findings by Mamun (2009), as the companies the author investigated disclosed 25% on average, 50% at most and at least 6.25% of the information on Human Resources.

Table 6
Descriptive Statistics of Human Resource Information Disclosure Rate

	N	Minimum	Maximum	Average	Standard Deviation
HRADI	75	0.00	75.00	23.44	19.49

Source: elaborated by the authors (2015).

4.2 Analysis of research hypotheses

In this part of the research, the analysis of the hypotheses raised in the study was presented (Table 7). In addition, comparisons were made with other studies that used the variables under analysis, in similar studies as well as in other kinds of research.

Table 7
Regression Result

Variable	Coefficient	t index	p-value
Constant	20.779	4.017	0.001
REN	3.037	1.185	0.241
EBITDA	9.343	3.361	0.001
Turnover	- 0.139	-1.822	0.074
R2		0.183	
Adjusted R2		0.137	
P - Value (F)		0.012	

Source: elaborated by the authors (2015).

4.2.1 Profitability (REN)

In the study by Micah, Ofurum and Ihedinihu (2012), it was observed that there is a significant relationship between the profitability of companies and Information Disclosure on human resources. Contrary to the results of that study, this research accepted the hypothesis (p-value = 0.241) that there is no significant relationship between the profitability of the companies studied and the HRADI.

On the other hand, the findings of this research confirm the study by Domínguez (2012), which shows that the interpretation of the regression results indicates that the fact that a company is more profitable does not make it enhance its propaganda on its investment in human resources.

4.2.2 Turnover (VV)

With regard to the Turnover, although many studies have been developed, such as Churchill, Ford, Hartley and Walker (1985), McGuire, Chiu & Elbing (1962), Zuccolotto and Colodeti Filho (2008) and Reis, Cunha and Ribeiro (2014), none of them used this variable to assess its influence on the level of disclosure.

Thus, in this study, the relationship between VV and HRADI was investigated and, in conclusion, the hypothesis (p = 0.074) was rejected at the significance level of 10%. Therefore, the Turnover is significantly related to the index of information disclosure on human resources.

4.2.3 Earnings Before Interests, Taxes, Depreciation and Amortization (EBITDA)

In their work, Sonnier, Carson and Carson (2007) assumed that the EBITDA variable was related to the disclosure of human capital. After analyzing the data, the authors found significance in this relation. Zaromim and Gelb (2002), in turn, used it as an indicator that can assist in the analysis of corporate disclosure policies.

In this study, following the reasoning by Hamilton (2013), Trejo-Pech (2006), Vasconcelos (2001) and Santana and Lima (2004), the EBITDA variable was considered as one of the representatives of financial performance. After analyzing the data, however, the hypothesis that there is no significant relationship between EBITDA and HRADI was rejected because, according to the regression model used in this study, there is a strong significant relationship between the EBITDA variable and the level of disclosure of human resources (p-value = 0.001). Therefore, this result confirms the findings of Sonnier, Carson and Carson (2007) and Gelb and Zaromim (2002).

5. Conclusion

This research aimed to verify the relationship between the process of disseminating information on human resources and the financial performance of companies.

As main results, it was found that the companies analyzed had a low rate of information disclosure on human resources, as most of the companies showed between 0% and 40% of the items listed in the method and none of the companies presented all the items proposed by Mamun (2009).

Thus, answering the question initially raised, it was found that the Turnover and EBITDA of the companies are related to the index of information disclosure on human resources and that the Profitability of these entities is not related to the HRADI.

The findings about the Profitability corroborate the findings by Domínguez (2012), while the results on the EBITDA are consistent with the findings by Sonnier, Sonnier, Carson and Carson (2007) and Gelb and Zaromim (2002). As for the Turnover, no studies were found that observe the variable from the perspective analyzed in this study.

Thus, given the variables raised for this study, it can be concluded that there is a relationship between the process of disseminating information on human resources and the financial performance of companies, when represented by Turnover and EBITDA, given that the Profitability demonstrated no significant relationship in this analysis.

This study was limited by the fact of analyzing only three financial performance variables (Turnover, EBITDA and Profitability). It is therefore suggested that future studies investigate if there is a relationship between the disclosure of human resources and the financial performance using other variables.

6. References

Abeysekera, I. (2006). The project of intellectual capital disclosure: researching the research. *Journal of Intellectual Capital*, *7*(1), pp. 61-77. doi: http://dx.doi.org/10.1108/14691930610639778.

Bebchuk, L. A., & Fried, J. M. (2003). Executive compensation as an agency problem. National Bureau of Economic Research, *17*(3), pp. 71-93.

Bontis, N. (2002). Intellectual Capital Disclosure in Canadian Corporations. *Journal of Human Resource Costing & Accounting 7*(1), pp. 9-20.

Branco, M. C., & Rodrigues, L. L. (2009). Exploring the importance of social responsibility disclosure for human resources. *Journal of Human Resource Costing & Accounting*, *13*(3), pp. 186-205.

Bryan, S., Hwang, L., & Lilien, S (2000). CEO Stock-Based compensation: an empirical analysis of incentive intensity, relative mix, and economic determinants. *The Journal of Business,* [S. l.], *73*(4), pp. 661-693.

Churchill, G. A., Ford, N. M., Hartley, S. W., & Walker, O. C. (1985). The determinants of salesperson performance: A metaanalysis. *Journal of Marketing Research*, *22*(2), pp. 103-118. doi: http://dx.doi.org/10.2307/3151357.

Colletti, J. A., & Tubridy, G. S. (1987). Effective major account sales management. *Journal of Personal Selling & Sales Management, 7* (2), pp. 1-10.

Conceição, S. H. D., Dourado, G., Baqueiro, A., Freire, S., & Brito, P. (2011). Fatores determinantes no disclosure em Responsabilidade Social Corporativa (RSC): um estudo qualitativo e quantitativo com empresas listadas na Bovespa. *Gest. Prod*, *18*(3), pp. 461-472.

Cosh, A. (1975). The remuneration of chief executives in the United Kingdom**.** *Economic Journal*, [S. l.], *85*(337), pp. 75-94.

Coughlan, A., & Schmidt, R (1985). Executive compensation, management turnover, and firm performance: an empirical investigation. *Journal of Accounting and Economics*, [S.l.], 7(1-3), pp. 43-66.

Dantas, J. A., Zendersky, H. C., dos Santos, S. C., & Niyama, J. K. (2008). A dualidade entre os benefícios do disclosure e a relutância das organizações em aumentar o grau de evidenciação. *Revista Economia & Gestão*, *5*(11), pp. 56-76.

Diaz, F. P. (2002). EBITDA: "uma visão critica". Dissertação de mestrado apresentada ao curso de Mestrado Profissional em Administração da EAESP/FGV, São Paulo, SP, Brasil.

Domínguez, M (2012). América Álvarez. Company Characteristics and Human Resource Disclosure in Spain. *Social Responsibility Journal*. *8*(1). 1, pp. 4-20. doi: http://dx.doi.org/10.1108/17471111211196539

Drucker, P. (1973). Management: Tasks, responsibilities, practices. *New York: Harper & Row.*

Ewing, M. T., & Caruana, A. (1999) An internal marketing approach to public sector management: the marketing and human resources interface. *International Journal of Public Sector Management,* 12(1), pp. 17-29.

Ferraes Neto, F. (2002). A relação da logística com a administração financeira e seus impactos nos índices financeiros de uma organização. *Revista FAE*, Curitiba, *5*(3), pp. 41-49.

Frezatti, F., & Aguiar, A. B. (2007). EBITDA: possíveis impactos sobre o gerenciamento das empresas. *Revista Universo Contábil*, *3*(3), pp. 07-24.

Gelb, D. S., & Zarowin, P. (2002). Corporate disclosure policy and the informativeness of stock prices. *Review of Accounting Studies*, *7*(1), pp. 33-52.

Gerpott, T. J., Thomas, S. E. & Hoffmann, A. P (2008). Intangible asset disclosure in the telecommunications industry. *Journal of Intellectual Capital*, 9(1), pp. 37-61.

Gounaris, S. (2008). The notion of internal market orientation and employee job satisfaction: some preliminary evidence. *Journal of Services Marketing*, *22*(1), pp. 68-90.

Guissoni, L. A., & Neves, M. F. (2013). Ensaio sobre a Análise de Desempenho em Marketing e Aplicação de Métricas. *Revista Brasileira de Marketing*, *12*(4).

Gupta, S., & Steenburgh, T. (2008). Allocating Marketing Resources**.** *Marketing Mix Decisions: New Perspectives and Practices, Roger A. Kerin and Rob O'Regan, eds., American Marketing Association, Chicago, IL.*

Hamilton, B. (2003). EBITDA: still crucial to credit analysis. *Commercial Lending Review*, *18*(5), pp. 47-48.

Hossain, D. M., Khan, A. R., & Yasmim, I. (2004). The Nature of Voluntary Disclosures on Human Resource in the Annual Reports of Bangladeshi Companies. *Dhaka University Journal of Business Studies*, *25*(1), pp. 221-231.

Iglesias, O., Sauquet, A., & Montaña, J. (2011). The role of corporate culture in relationship marketing. *European Journal of Marketing*, *45*(4), pp. 631-650.

Kotler, P. (2012). Marketing Management, *Millennium edition:* Custom Edition for University of Phoenix.

Macedo, M. M. (2012). Gestão da produtividade nas empresas. *Revista Organização Sistêmica*, *1*(1), pp. 110-119.

Mamun, S. A. A. (2009). Human resource accounting (HRA) disclosure of Bangladeshi Companies and its association with corporate characteristics. *BRAC University Journal*, *1*(1), pp. 35-43.

Marion, J. C., & Iudícibus, S. (2008). Curso de Contabilidade para não contadores. 5ª. ed. São Paulo: Atas.

Matarazzo, D. C. (2003). Análise financeira de balanços. 6ª. ed. São Paulo: Atlas.

McGuire, J. W., Chiu, J. S., & Elbing, A. O. (1962). Executive incomes, sales and profits. The American Economic Review, *52*(4), pp. 753-761.

Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of financial economics*, *38*(2), pp. 163-184.

Micah, L. C., Ofurum, C. O., & Ihendinihu, J. U. (2012). Firms Financial Performance and Human Resource Accounting Disclosure in Nigeria. *International Journal of Business and Management*, *7*(14).

Miranda, L. C., Wanderley, C. A., & Meira, J. M. (1999). *Garimpando na imprensa especializada: uma metodologia alternativa para a coleta de indicadores de desempenho gerencial.* Anais do Congresso Internacional de Custos, Portugal, 6.

Morgan, N. A. (2012). Marketing and business performance. *Journal of the Academy of Marketing Science, 40*(1), pp. 102-119.

Murphy, K. J. (1999). Executive compensation. *Handbook of labor economics*, 3.

Papasolomou-Doukakis, I., & Kitchen, P. J. (2004). Internal marketing in UK banks: conceptual legitimacy or window dressing? *International Journal of Bank Marketing*, *22*(6), pp. 421-452.

Ponte, V. M. R., & Oliveira, M. C. (2004). A prática da evidenciação de informações avançadas e não obrigatórias nas demonstrações contábeis das empresas brasileiras. *Revista Contabilidade & Finanças, 15*(36), pp. 7-20.

Reis, E. M., Cunha, J. V. A., & Ribeiro, D. M. (2014). Análise Do Gerenciamento De Resultados Por Meio De Decisões Operacionais Nas Empresas Componentes Do IBrX-Índice Brasil. *Advances in Scientific & Applied Accounting*, *7*(2).

Santana, L., & Lima, F. G. (2004). *EBITDA: uma análise de correlação com os retornos totais aos acionistas no mercado de capitais brasileiro.* Congresso USP de Controladoria e Contabilidade e Iniciação Científica, São Paulo, SP. Brasil, 4

Soares, E. R., & Galdi, F. C. (2011). Relação dos modelos DuPont com o retorno das ações no mercado brasileiro. *Revista Contabilidade e Finanças*, *22*(57), pp. 279-298.

Sonnier, B. M., Carson, K. D., & Carson, P. P. (2007). Accounting for intellectual capital: the relationship between profitability and disclosure. *Journal of Applied Management and Entrepreneurship, 12*(2), pp. 3-14.

Tinoco, J. E. P. (2013). Contribuição ao estudo da mensuração, avaliação e evidenciação de recursos humanos. *Revista Contabilidade & Finanças,* USP, São Paulo, 14, edição comemorativa, pp. 66-78.

Trejo-Pech, C. O. (2006). Accruals, Free Cash Flow and EBITDA for Agribusiness Firms. *Proceedings of the American Agricultural Economics Association Annual Meeting.*

Ullmann, A. A. (1985). Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance of US firms. *Academy of management review*, *10*(3), pp. 540-557.

Vasconcelos, Y. L. (2001). EBITDA - Retrato do desempenho operacional. *Informações Objetivas-IOB-COMENTA, 49*(1), pp. 1-6.

Wooldridge, J. M. (2006). *Introdução à econometria – uma abordagem moderna*. São Paulo: Pioneira Thompson Learning.

Zuccolotto, R., & Colodeti Filho, É. (2008). Gerenciamento de preços em empresas de pequeno porte por meio do custeio variável e do método de Monte Carlo.doi: 10.4025/enfoque. V. 26 n.3. 4872. *Enfoque: Reflexão Contábil*, *26*(3), pp. 39-52.