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The Relationship Between Executives' Remuneration and Corporate Financial Performance

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The purpose of this paper is to investigate the existence of a relationship between executives' remuneration and financial performance in 28 manufacturing companies. The Mann-Whitney test results suggest that there is a relationship between the average variable salary and financial measures: return on equity and return on sales and the benefit index and financial measures: sales growth, return on equity, and return on sales. The Pearson correlation test pointed out the inexistence of a significant linear relationship among the variables.

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Field of research: Finance.

1. Introduction

Within the last few years, many researchers have tried to understand the nature of the relationship between human resources management and corporate performance. From all HR practices, remuneration is vitally important both for the company, since it is a relevant item in its cost composition, and for people, for it symbolizes the relative value of their job. The studies that approached the relationship between remuneration and performance were performed mainly in the United States and used data from American companies. Many of these studies used the total salary received in cash to operate the Remuneration variable and individual indicators to measure corporate performance. The results found show the existence of a relationship between remuneration and financial performance, even though statistically weak. The lack of studies relating remuneration and financial performance in the Brazilian market context justifies this study. In order to operate the Remuneration variable it is used: the average monthly salary, the average variable salary and an index created based on the answers provided by the companies who participated in the study that chooses "The Best Companies for You to Work in Brazil".

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The Financial Performance variable is measured by three financial measures extracted from magazine Melhores e Maiores. Both the data related to remuneration and the data related to financial performance are from fiscal year of 2006. The study focuses on the remuneration of corporate directors, vice-presidents and presidents.
This paper tries to answer the following question: *What is the relationship between executives' remuneration and the corporate financial performance?*
And the objective is to investigate the existence of a relationship between executive remuneration and corporate financial performance.
We hope this paper increases the existing knowledge on the existence of a relationship between executive remuneration and corporate financial performance and provides grounds for companies to improve their management systems.

2. Bibliographical Review

2.1. Remuneration

Remuneration is one of the most important and complex human resources management systems. While encouraging the search for better and better performances, the remuneration system should try to align people's behavior with the company's goals.
According to Dutra (2002, p. 181), "remuneration is the economic and/or financial counterpart of a job performed by the individual". It may be divided into direct and indirect remuneration". Direct remuneration is the total amount received in cash by an individual for a job he/she has performed. It includes fixed and variable remuneration (CHIAVENATO, 2000; DUTRA, 2002).
Fixed remuneration is the cash amount previous agreed between the person and the company that is regularly paid for the job performed. It is usually associated to the tasks and the position held by the individual in the company (DUTRA, 2002).
Variable remuneration is the amount in cash received by the individual for achieving certain goals previously agreed between the person and the company.
According to Dutra (2002), the biggest difficulty to develop a proper remuneration system is defining criteria that differentiate people based on their contribution to the company. The two major sets of criteria to determine the remuneration are: the ones who are based on the job market and the ones based on internal equality standards. The first one uses information external to the company, mainly wage studies, and aims at making the remuneration system more competitive. The second one uses inside company information and aims at ensuring a safe and fair environment.
Indirect remuneration is represented by the benefits the company grants people for the job performed, aiming at providing security and comfort (DUTRA, 2002). Examples of benefits include: medical assistance, group life insurance, retirement additional and car, among others.

2.2. Financial performance

Most management studies try to understand how the decisions executives make affect corporate performance. Without a performance measure, it would not be possible to assess the quality of the decisions made.
The financial performance concept prevails in empirical studies. However, there is no consensus regarding which measures to use to measure performance (CARTON; HOFER, 2006).
Carton and Hofer (2006) reviewed the empirical studies published from July 1996 to June 2001 in five American publications: *Academy of Management Journal, Strategic Management Journal, Journal of Management, Journal of Business Venturing* and *Entrepreneurship Theory & Practice*. From the 1,045 analyzed, 138 used performance as a dependent variable.
The authors identified 88 different measures to measure performance. 46% of these 138 articles used only one measure to measure performance, 25% used two measures and the 29% remaining ones more than two measures. The profitability measures appeared in 70% of the articles. Then came the growth measures and in third the market-based measures.
This review revealed that the performance concept has multiple dimensions, a view that is shared by other authors (CHAKRAVARTHY, 1986; VENKATRAMAN; RAMANUJAM, 1986, 1987; KEATS, 1990). Therefore performance has to be analyzed using a set of measures.
Venkatraman and Ramanujam (1987) showed that the performance concept has at least two different dimensions: growth and profitability. Each of these dimensions may be described by one or more measures. Profitability, for example, may be described by measures such as: return on equity, return on sales, return on assets, and sales growth.

3. Methodology

Using the criteria proposed by Vergara (2006), this study classifies as a descriptive, bibliographical and documental. It is descriptive because it aims at studying the relationship among variables. It is bibliographical because it uses data from the study “The Best Companies for You to Work At”, which is not available for the public in general.
This non-probabilistic sample is composed of 28 manufacturing companies selected among companies listed in magazine Você S/A – Exame As Melhores Empresas para Você Trabalhar 2007 and with financial data published in magazine Exame Melhores e Maiores 2007 because those are considered reference in the Brazilian corporate environment and because the companies listed in the said publications are considered *benchmark* in the market. Both the data related to remuneration and related to financial performance refer to fiscal year of 2006. The data related to the independent variable was provided by FIA’s (Fundação Instituto de Administração) Progep (Programa de Estudos em Gestão de Pessoas). FIA is in charge of the study that defines “The Best Companies for You to Work At” every year. Such data was extracted from the electronic questionnaires answered by the companies and refer to remuneration received by directors, vice-presidents and presidents, which are called executives herein. The information on remuneration includes:

a) The executive's average monthly salary in December 2006, in reais;
b) Average amount received by the executive during the year of 2006, in reais, as variable and/or bonus;
c) Access to the following benefits: medical assistance, medical clinic in the company's facilities, dental assistance, (average) subsidy of 50% or more to buy medicines, (average) subsidy of less than 50% to buy medicines, psychological assistance, group life insurance, education subsidy (junior high, high school or college), subsidy for professional specialization, subsidy to study languages, support to the employee's children education, subsidy for housing, financing and loans.

The benefit index was created to measure the executives' access to these 13 benefits. There were three answer choices for each benefit: a) the benefit is not offered to executive; b) the benefit is offered to part of the executives; c) the benefit is offered to all executives. To create the benefit index, each answer was assigned a score from 0 to 2 as follows:

alternative a) marked → 0 points
alternative b) marked → 1 point
alternative c) marked→ 2 points

The 13 answers scored from 0 to 2 were added up and divided by the maximum score a company could get: 26 points (=13 answers x 2 points, that is, the company offers all 13 benefits to all its executives). The percentage result (from 0 to 100%) corresponds to the benefit index.
Three financial measures were selected to measure the Financial Performance: sales growth, return on equity (ROE) and return on sales (ROS). The following factors were taken into consideration to choose such measures:

a) Most of the manufacturing companies listed in magazine Você S/A – are closed capital companies. Therefore it would not be possible to use market-based measures;
b) The measures chosen are very used by researchers and professionals to measure financial performance.

Such measures, extracted from magazine Exame Melhores e Maiores are calculated as follows:

a) Sales growth: shows the sales revenue increase in reais.

$$\text{Sales growth} = \frac{\text{Sales revenue}_{2006} - \text{Sales revenue}_{2005}}{\text{Sales revenue}_{2005}}$$

b) Return on equity (ROE): measures the return on the investment for shareholders. Results from dividing net income by equity.

$$ROE = \frac{\text{Net income}}{\text{Equity}}$$

c) Return on Sales (ROS): net income divided by sales.

$$ROS - \frac{\text{Net income}}{\text{Sales}}$$

To tabulate the data it was used the statistical software SPSS – Statistical Package for the Social Sciences, version 16.0 for *Windows*.

4. Result Analysis

The purpose of this paper is to investigate the existence of a relationship between the executives' remuneration and financial performance. Table 1 shows the average monthly remuneration and the executives' average variable remuneration in 2006. Four companies in the sample did not offer variable remuneration to their executives.

Table 2 – Executives' average remuneration (in reais)

	n	average	mean	standard deviation	minimum	maximum
Average monthly salary in 2006	28	28087,27	26405,00	8390,53	14021,28	52000,00
Average variable salary in 2006	24	205805,50	186355,00	139170,00	16259,00	471120,00

Source: Developed by the authors.

Table 2 shows the absolute frequencies (n) and the relative frequencies (%) of each of the thirteen benefits.

Table 2 – Benefits offering

Benefit	Is not offered to executives		Is offered to part of the executives		Is offered to all executives	
	n	%	n	%	n	%
1. Medical assistance	—	—	—	—	28	100.0
2. Medical Office in the company	5	17.9	5	17.9	18	64.3
3. Dental assistance	3	10.7	—	—	25	89.3
4. Subsidy of 50% or more to buy medicines	23	82.1	—	—	5	17.9
5. Subsidy of less than 50% to buy medicines	25	89.3	—	—	3	10.7
6. Psychological assistance	7	25.0	1	3,6	20	71.4
7. Group life insurance	3	10.7	—	—	25	89.3
8. Education subsidy	9	32.1	1	3.6	18	64.3
9. Subsidy for professional specialization	2	7.1	2	7.1	24	85.7
10. Subsidy for studying languages	5	17.9	1	3.6	22	78.6
11. Support for children's education.	15	53.6	3	10.7	10	35.7
12. Subsidy to buy housing	25	89.3	—	—	3	10.7
13. Financing and loans	6	21.4	—	—	22	78.6

Source: Developed by the authors.

The average, mean, standard deviation, minimum value and maximum value of each financial indicator are presented in Table 3, and of the benefit index are presented in Table 4.

Table 3 – Financial performance measures

	n	average	mean	standard deviation	minimum	maximum
Sales growth (%)	28	4.03	3.25	11.40	-14.10	27.40
Return on Equity (%)	28	17.00	18.35	23.56	-79.90	64.40
Return on Sales (%)	28	6.46	4.70	6.98	-2.70	26.30

Source: Developed by the authors.

Table 4 – Benefit Index

	n	average	mean	standard deviation	minimum	maximum
Benefit index (0 to 100%)	28	63.60	61.54	12.05	46.15	92.31

Source: Developed by the authors.

Due to the size of the sample, we chose to use non-parametric tests. Using the mean, the independent variables average monthly salary, average variable salary and benefit index were divided into two categories: “high” (higher than the mean) and “low” (lower than the mean). Then it was used the Mann-Whitney test to check whether the differences between the averages observed in the “high” and “low” categories are statistically significant. The assumptions formulated are:

H_0: the averages are the same
H_1: the averages are not the same

For the variable average monthly salary, one cannot reject H_0 (the averages are the same), at the significance level of 5% for the three financial measures: sales growth, return on equity and return on sales (Table 5).

Table 5 –Mann-Whitney test for variable average monthly salary

Ranks

	Average monthly salary	N	Mean Rank	Sum of Ranks
Sales growth (%)	Low	14	13.57	190.00
	High	14	15.43	216.00
	Total	28		
Return on Equity (%)	Low	14	14.93	209.00
	High	14	14.07	197.00
	Total	28		
Return on Sales (%)	Low	14	15.79	221.00
	High	14	13.21	185.00
	Total	28		

Test Statistics[b]

	Sales growth (%)	Return on Equity (%)	Return on Sales (%)
Mann-Whitney U	85.000	92.000	80.000
Wilcoxon W	190.000	197.000	185.000
Z	-0.597	-0.276	-0.827
Asymp. Sig. (2-tailed)	0.550	0.783	0.408
Exact Sig. [2*(1-tailed Sig.)]	0.571[a]	0.804[a]	0.4276[a]

a. Not corrected for ties.
b. Grouping Variable: Average monthly salary
Source: SPSS

For variable average variable salary, one may reject H_0 for sales growth. But one should not reject H_0 for financial measures: return on equity and return on sales (Table 6).

Table 6–Mann-Whitney Test for variable average variable salary

Ranks

	Average variable salary	N	Mean Rank	Sum of Ranks
Sales growth (%)	Low	12	9.42	113.00
	High	12	15.58	187.00
	Total	24		
Return on Equity (%)	Low	12	11.67	140.00
	High	12	13.33	160.00
	Total	24		
Return on Sales (%)	Low	12	11.33	136.00
	High	12	13.67	164.00
	Total	24		

Test Statistics[b]

	Sales growth (%)	Return on Equity (%)	Return on Sales (%)
Mann-Whitney U	35.000	62.000	58.000
Wilcoxon W	113.000	140.000	136.000
Z	-2.136	-0.577	-0.808
Asymp. Sig. (2-tailed)	0.033	0.564	0.419
Exact Sig. [2*(1-tailed Sig.)]	0.033[a]	0.590[a]	0.443[a]

a. Not corrected for ties.
b. Grouping Variable: Average variable salary
Source: SPSS

For the variable benefit index one may reject H_0 for the three financial measures (Table 7). Therefore the companies that offer a wider range of benefits to most of their executives show higher levels in the measures: sales growth, return on the equity and return on sales.

Table 7 –Mann-Whitney test for variable benefit index

Ranks

	Benefit index	N	Mean Rank	Sum of Ranks
Sales growth (%)	Low	16	11.31	181.00
	High	12	18.75	225.00
	Total	28		
Return on Equity (%)	Low	16	10.50	168.00
	High	12	19.83	238.00
	Total	28		
Return on Sales (%)	Low	16	10.69	171.00
	High	12	19.58	235.00
	Total	28		

Test Statistics[b]

	Sales growth (%)	Return on Equity (%)	Return on Sales (%)
Mann-Whitney U	45.000	32.000	35.000
Wilcoxon W	181.000	168.000	171.000
Z	-2.368	-2.971	-2.832
Asymp. Sig. (2-tailed)	0.0184	0.003	0.005
Exact Sig. [2*(1-tailed Sig.)]	0.017[a]	0.002[a]	0.004[a]

a. Not corrected for ties.
b. Grouping Variable: Benefit index
Source: SPSS

In order to determine whether or not there is a linear relationship between remuneration and financial performance it was applied the Pearson correlation test. The results show there is not a significant linear relationship among the variables (Table 8).

Table 8 –Pearson Correlation

	(1)	(2)	(3)	(4)	(5)	(6)
(1) Average monthly remuneration						
Pearson Correlation	1					
Sig. (2-tailed)						
N	28					
(2) Average variable remuneration						
Pearson Correlation	0.568**	1				
Sig. (2-tailed)	0.004					
N	24	24				
(3) Benefit index						
Pearson Correlation	-0.066	-0.074	1			
Sig. (2-tailed)	0.739	0.730				
N	28	24	28			
(4) Sales growth						
Pearson Correlation	0.159	0.276	0.344	1		
Sig. (2-tailed)	0.419	0.191	0.073			
N	28	24	28	28		
(5) Return on Equity						
Pearson Correlation	0.127	-0.074	0.253	0.543**	1	
Sig. (2-tailed)	0,520	0,730	0,195	0,003		
N	28	24	28	28	28	
(6) Return on Sales						
Pearson Correlation	0.111	-0.003	0.360	0.332	0.562**	1
Sig. (2-tailed)	0.574	0.991	0.060	0.084	0.002	
N	28	28	28	28	28	28

**.Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)
Source: SPSS

5. Final considerations

The purpose of this paper is to investigate the existence of a relationship between the executives' remuneration and corporate financial performance. The data used in the study is secondary. The data related to independent variable Remuneration was provided by Progep and the data related to dependent variable Financial Performance was extracted from magazine Exame Maiores e Maiores. They relate to fiscal year of 2006.
To chart variable Remuneration the following information it was used: the executives' average monthly salary and average variable salary in 2006, besides the benefit index, which was created by this study to measure the executives' access to 13 benefits. To chart variable Financial Performance three financial measures were used: sales growth, return on equity and return on sales.
The Mann-Whitney test to check the equality of the average between two independent groups showed that, at the significance level of 5%, there is a relationship between average variable salary and financial measures: return on equity and return on sales. And there is a relationship between the benefit index and financial measures: sales growth, return on equity and return on sales.
The Pearson correlation test was then used and the results point to the inexistence of a significant linear relationship among the variables.
Other studies may be developed using bigger samples or charting the variables in a different way from the one used in this paper.

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