# THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON CORPORATE VALUE

Ph.D. Student **Diana DOBRESCU**
Academy of Economic Studies, Faculty of Finance, Insurance, Banking and Stock Exchange, Bucharest, Romania
olimpicdi@yahoo.com

**Abstract**:

*This paper investigates the correlation between Corporate Social Responsability actions and companies' value. For this purpose a data base was created for 101 important companies in Romania, for years 2011 and 2012. The data was processed using Eviews 7 and SAS 9.2 softwares and the econometric variables specific determinations were interpreted in an econometric approach. A new index for the Corporate Social Responsabilitiy hierarchy levels was proposed and its applicability was demonstrated.*

**Key words:** social responsability, corporate governance, modelling, index.

**JEL classification**: C38, D22, M14

## 1. INTRODUCTION

The main purpose of this paper is the analysis of social responsibility actions of the main corporations doing business in Romania on their value, and mutual each impact these activities have on various social sectors. As a mean of study a database was created by investigating different sources of information. First of all the analyzes performed by well known companies in the field of corporate analysis, like Ernst & Young Romania [4] or BraunPartners Romania [1] were investigated. Then major romanian sites dedicated to Corporate Social Responsability (CSR) activities were investigated [14]-[16] and in order to validate and fill up the information materials developed by companies presenting their activities and results and scientific articles in the field were investigated.

The main difficulty encountered in data analysis consits in the absence of a standard for data reporting, data values and also CSR activities results quantification. It can be seen that the actual objectives for different campaigns, fields or methods for the CSR implementation for the companies in our country are only present in statistical surveys, having rather a subjective argument, while a regional and areas of involvement analysis was facilitated by the data presentation approach.

## 2. STATUS OF KNOWLEDGE

The CSR debate started long time ago, since the middle of last century. Howard Rothmann Bowen, surnamed „the father of CSR", written the fundamental book *Social Responsibilities of the Businessman* (Bowen, 1953). His work determined a vision change from business towards social responsibility, defining the new field so that entrepreneurs have the responsibility to orientate and take their decisions based on the expectations, aims and values of a society.

The 1976 Nobel Prize Laureate in Economics, Milton Friedman ([1970] 2007), starting from the title of an article published in The New York Times, says: "The social responsibility of business is to increase profits." According to the economist only people may have different responsibilities, while a corporation is an artificial entity and in this respect we believe that the responsibilities they have are all artificial. While the "business" as a whole can not be said to have responsibilities, even in the slightest sense.

The field has developed in the years before the financial and economic crisis started in 2007 and continues today with the advent of many approaches and theories. Interest in CSR has resulted in the emergence of new alternatives concepts, like corporate sustainability, compared with CSR by

van Marrewijk (2003), or corporate citizenship introduced by Matten et al (2003) and Wood and Lodgson (2002).

An interesting classification of CSR is conducted by Frederick (1987, 1998). It is based on the transfer of the concept of CSR ethics (which he calls CSR1), the managerial concept of social responsiveness (CSR2), through the inclusion of normative ethical elements to CSR3 and finally by considering the role of science and religion specific management issues, the final level is reached (CSR4). How far are these theories to the CSR practical reality has become evident since the last decades of the last century, because the American business scholar Dow Votaw wrote as long ago as 1972 that "corporate social responsibility means something, but not always the same thing to everybody. CSR, it sometimes seems, is everything and everywhere." Trying to explain his judgement he also noted that "To some it conveys the idea of legal responsibility or liability; to others, it means socially responsible behavior in the ethical sense; to still others, the meaning transmitted is that of 'responsible for' in a causal mode; many simply equate it with a charitable contribution; some take it to mean socially conscious; many of those who embrace it most fervently see it as a mere synonym for legitimacy in the context of belonging or being proper or valid; a few see a sort of fiduciary duty imposing higher standards of behavior on businessmen than on citizens at large" (Votaw, 1972, p. 25). [13]

Recent developments in theory and especially in practice CSR is reflected in the work of Romanian researchers. In this respect Iamandi (2012) analyzes the communication of CSR in Romania, in terms of transparency and participation according to reviewed EC Strategy 2011-2014 for Corporate Social Responsibility documents, developed by the European Commission in October 2011. These documents reflect emerging economic and social conditions in EU countries after the crisis. Among the major directions of action highlights two of them, reffering to the communication, namely: increasing the visibility of CSR and disseminating good practices, improving corporate disclosure information relating to society and environment. Obrad et al. (2011) examines the perception and reality in terms of CSR in Romanian multinational companies since 2000, entering the autochthonous business environment have taken the strategies and applied the CSR principles in their home countries, leading to CSR practices that can guide the rest of the companies in our country. Băleanu et al. (2011) look on the CSR practices of the most valuable companies in Romania, as well as their beneficiaries. The analysis includes the top 100 companies ranked by Ziarul Financiar (ZF English). One of the most important conclusion is that 49% of surveyed companies are engaged in CSR activities, this percentage being considered high by the authors. Another conclusion is that the vision they have on CSR is focused exclusively on the business and competitive advantages arising from CSR activity. It appears that CSR favorite tools used by companies are inexpensive and turn out poorly coordinated with other social and political actors [1]. Cocriş et al. (2009, 2011) focuses on the CSR activities in the banking sector, making an analysis of sustainability. Social responsibility is seen in the light of ensuring financial stability and therefore social welfare for the population. It's a view that a decade ago seemed implicit, but in the current crisis, together with the globalization process, determines the authorities to consider as a priority the stability of financial markets, the financial intermediation and financial infrastructure.

## 3.   THE CURRENT CSR CONTEXT IN ROMANIA

The way to report corporate social responsability activities has evolved over the years, currently being available objective data and surveys for 34 countries, including 16 activity sectors. [6]. For the evaluation and comparison of data was prepared by KPMG, a model that includes information systems and processes, ensuring the scope and the reached level, redeclaration, multiple channels of communication, using the highest standards proposed by the GRI (Global Reporting Initiative), as well as integrated reports. The analysis results are represented by a graph into four quadrants, having the communication quality as the ordinate and the process maturity level as the abscissa. Corporate reporting quadrants show illustrative positions for each country, based on  data

supplied only by the companies that publish a progress report to evaluate corporate social responsability.

As shown in the graph (figure no. 1), conducted by KPMG, the company's position in our country is in quadrant three, in the category of companies that have a late start in CSR. To date, CSR activities regarding the implementation and communication of CSR efforts and achievements are low. Companies tend to report on a single media channel and do not show significant results in terms of the growing maturity of their information systems and processes. These issues show that romanian companies have not yet implemented systems and information processes at leaders' similar level. International regulations in the field have evolved simultaneously with the evaluation techniques and standards. According to the European Parliament resolution of 6 February 2013 on corporate social responsibility: promoting the interests of society and a path to a sustainable economic recovery and comprehensive investor community, lately there has been a significant change in vision. This is justified by the fact that a number of 1123 investors managing assets of over U.S. $ 32 trillion approved the UN Principles for Responsible Investment (UNPRI) and at the European Forum on sustainable investments has been estimated that the global market for socially responsible investments reached approximately 7 trillion Euros in September 2010. A total of 82 investors, having Aviva Global Investors as leader, and managing assets totaling U.S. $ 50 trillion requested the UN Summit on sustainable development that reporting on businesses sustainability to become mandatory. [5]

In the chapter dedicated to establish a correlation between socially responsible investments and disclosure, in paragraph 69, the Commission notes that "one of the driving force determining the role of a responsible investment market in terms of social responsability and sustainability it is further institutional investor demand, but believes that the primary focus should not be limited to environmental issues, notes, in this regard, that disclosure to investors and consumers is an important driving force determining the role of CSR and must be based on social and environmental principles easily applied and measured."
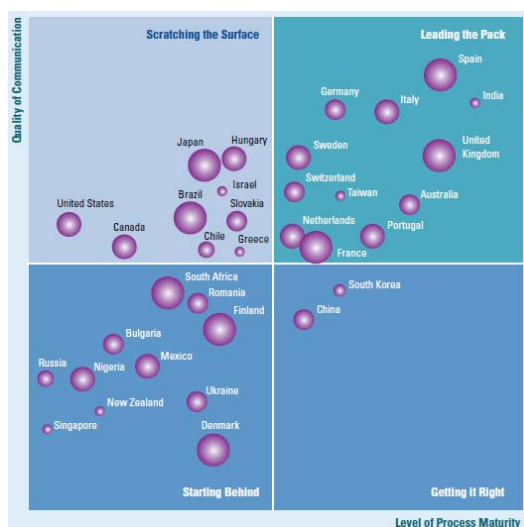


**Figure 1.  CSR position graph for countries with significant activity in the area, according to KPMG, International Survey of  Corporate Responsibility – Reporting 2011 [7].**

CSR Rating 24/7, developed by B&P Brandivia, for activity fields, for a group of 25 major companies in Romania evaluates companies through the following seven areas:
  1. Transparency;
  2. Corporate Governance;
  3. Relationship with Related Parties;
  4. Responsibility towards the environment;
  5. Economic responsibility;
  6. Responsibility to society;
  7. Responsibility for human resources.

Romanian companies' CSR results show poor performance in communicating environmental responsibility (eg management and measurement of environmental impact) and communication of HR practices (eg the existence of atypical forms of employment such as part time or flexible working). Of the 25 companies studied, only 7 have published a CSR or environmental report in the last two years, while only 7 companies' websites include a detailed and easily accessible CSR / Sustainability section. The average CSR Index 24/7 also developed by B & P Brandivia for different activity fields shows that the Telecom and Financial sectors are more envolved in the CSR activities having a high index, while the commerce has a much lower index. [2]

## 4. METHODOLOGY AND DATABASE USED IN QUANTITATIVE ANALYSIS

Using information from several reports: Ernst & Young Romania: *"Major Companies in Romania, 2012 Edition"*, B&P Brandivia: *"CSR 24/7 Rating 2010 Romania"*, from webpages specialized in CSR: www.responsabilitatesociala.ro, www.csrmedia.ro or belonging to romanian companies, a database contaning variables for 101 main companies from national market was constructed. The analized period was the years 2011-2012.

Unifactorial and multifactorial regression analysis in Eviews 7 econometric software were used for data processing.

Companies' selection was firstly made considering the position in major firm's top in Romania and afterwards by turnover size, profit and number of employees criteria. From a larger range of companies were choosen those for which sufficient information regarding the quantification of CSR activity existed.

The used econometic variables, their symbol and computation description is shown as follows (table no. 1).

### Table 1. Variables used in the model

| Variabile | Symbol | Description |
|---|---|---|
| Major company index | MCRSCOR | An index developed by Ernst & Young based on the market parameters for companies in Romania, with the purpose of creating a hierarchy. Values range from 1 to 5. |
| Annual turnover | CA | Turnover for year 2011 2011 (RON) |
| Profit/Loss | PROFIT | Companies' profit or loss from the financial documents in 2011 (RON) |
| Number of employees | ANGAJAȚI | Average number of employees in 2011 |
| CSR 24/7 Index | BPINDICE | The value of the B&P Brandivia CSR 24/7 index, ranging from 0 to 100. |
| CSR actions in the education field | EDUCATIE | DUMMY variable, which equals 0, if the company made no CSR actions in the education field, or equals 1 if it made. |
| CSR actions in the culture field | CULTURA | DUMMY variable, which equals 0, if the company made no CSR actions in culture field, or equals 1 if it made.t. |
| CSR actions in the environment protection field | MEDIU | DUMMY variable, which equals 0, if the company made no CSR actions in the environment protection field, or equals 1 if it made. |
| CSR actions in the social field | SOCIAL | DUMMY variable, which equals 0, if the company made no CSR actions in the social field, or equals 1 if it made. |
| CSR actions in the health protection field | SANATATE | DUMMY variable, which equals 0, if the company made no CSR actions in the health protection field, or equals 1 if it made. |
| CSR actions in the sport field | SPORT | DUMMY variable, which equals 0, if the company made no CSR actions in the sport field, or equals 1 if it made. |
| CSR Index | CSR | Cumulates the 6 CSR action fields stated above, with values ranging from 0 to 6. |

## 5. THE ECONOMETRIC MODEL

## 5.1. RESULTS FOR THE ECONOMETRIC ANALYSIS

In order to study the relationships between companies' value and reported CSR actions, considering also the aspects regarding the endogenity between the major company index and CSR indexes, several regressions were performed.

For the first and second multifactorial analysis having MCRSCOR as a dependent variable, the results are presented in table no. 2 and tabel no.3, respectively.

**Table 2. First multifactorial analysis having MCRSCOR as a dependent variable**

Dependent Variable: **MCRSCOR**
Method: Least Squares
Sample (adjusted): 1 99
Included observations: 99 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 3.644254 | 0.092168 | 39.53915 | 0.0000 |
| EDUCATIE | -0.793677 | 0.156616 | -5.067654 | 0.0000 |
| CULTURA | -0.369680 | 0.217366 | -1.700729 | 0.0924 |
| MEDIU | 0.085801 | 0.154346 | 0.555900 | 0.5796 |
| SOCIAL | 0.108654 | 0.160955 | 0.675059 | 0.5013 |
| SANATATE | 0.054104 | 0.195235 | 0.277123 | 0.7823 |
| SPORT | 0.718597 | 0.227152 | 3.163505 | 0.0021 |
| R-squared | 0.290445 | Mean dependent var | | 3.412111 |
| Adjusted R-squared | 0.244170 | S.D. dependent var | | 0.707130 |
| S.E. of regression | 0.614768 | Akaike info criterion | | 1.932939 |
| Sum squared resid | 34.77043 | Schwarz criterion | | 2.116432 |
| Log likelihood | -88.68047 | Hannan-Quinn criter. | | 2.007180 |
| F-statistic | 6.276460 | Durbin-Watson stat | | 0.900593 |
| Prob(F-statistic) | 0.000015 | | | |

**Table 3. Second multifactorial analysis having MCRSCOR as a dependent variable**

Dependent Variable: MCRSCOR
Method: Least Squares
Sample (adjusted): 1 99
Included observations: 99 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 3.467896 | 0.091156 | 38.04335 | 0.0000 |
| CSR | -0.094244 | 0.036710 | -2.567299 | 0.0118 |
| BPINDICE | 0.024542 | 0.005663 | 4.334030 | 0.0000 |
| R-squared | 0.181929 | Mean dependent var | | 3.412111 |
| Adjusted R-squared | 0.164886 | S.D. dependent var | | 0.707130 |
| S.E. of regression | 0.646207 | Akaike info criterion | | 1.994442 |
| Sum squared resid | 40.08805 | Schwarz criterion | | 2.073082 |
| Log likelihood | -95.72486 | Hannan-Quinn criter. | | 2.026259 |
| F-statistic | 10.67464 | Durbin-Watson stat | | 1.320320 |
| Prob(F-statistic) | 0.000065 | | | |

The output file contains R-squared coefficients with small values: 29% and 18%. This shows that an important percentage of the MCRSCOR value is determined by factors that were not included in the model and that the correlation between variables is weak.

For establishing if the parameters are significant the p-value must be taken into consideretion. If the p-value is very small the error made by rejecting the null hypothesis ("the

parameter is statistically insignificant) is also small and if the p-value is great the null hypothesis will be accepted. The same result can be obtained by using the Fisher test analysis.

MCRSCOR is determined in a very small proportion by CSR indexes and moreover, in the CSR global index with takes into consideration the 6 CSR fields, a reverse (negative) correlation appears.

In the next multifactorial analysis the dependent variable is BPINDICE and the results are shown in table no. 4.

**Table 4. Multifactorial analysis having BPINDICE as the dependent variable**

Dependent Variable: **BPINDICE**
Method: Least Squares
Sample (adjusted): 1 99
Included observations: 99 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -2.962382 | 4.045454 | -0.732274 | 0.4658 |
| CA | 6.21E-10 | 8.44E-11 | 7.353880 | 0.0000 |
| PROFIT | 1.43E-08 | 1.93E-09 | 7.409274 | 0.0000 |
| MCRSCOR | 0.995825 | 1.199913 | 0.829915 | 0.4087 |

| | | | |
|---|---|---|---|
| R-squared | 0.592374 | Mean dependent var | 4.515152 |
| Adjusted R-squared | 0.579501 | S.D. dependent var | 11.85401 |
| S.E. of regression | 7.686837 | Akaike info criterion | 6.956461 |
| Sum squared resid | 5613.309 | Schwarz criterion | 7.061314 |
| Log likelihood | -340.3448 | Hannan-Quinn criter. | 6.998885 |
| F-statistic | 46.01889 | Durbin-Watson stat | 2.033399 |
| Prob(F-statistic) | 0.000000 | | |

In this case the R-squared coefficient is 59% meaning that BPINDICE's value is mostly determined by the included factors, and the CSR activity is mostly influenced by financial strength and position and not the otherway. The conclusion is that CSR activities don't guarantee or facilitate the ascent to a higher value and position for the corporation.

An aditional unifactorial analysis regression was estimated having BPINDICE as dependent variable in order to study the influence of the employes number over the index. The results are presented in table no. 5.

R-squared value is around 49.6% which suggests that BPINDICE is highly influenced by the companie's average number of employees. The CSR activity is eased and facilitated within the companies having many employees.

**Table 5. Unifactorial analysis for the influence of the employees number over the index**

Dependent Variable: BPINDICE
Method: Least Squares
Sample (adjusted): 1 99
Included observations: 87 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -1.680082 | 1.054887 | -1.592666 | 0.1149 |
| ANGAJATI | 0.002478 | 0.000271 | 9.140554 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.495698 | Mean dependent var | 3.919540 |
| Adjusted R-squared | 0.489765 | S.D. dependent var | 11.21380 |
| S.E. of regression | 8.010100 | Akaike info criterion | 7.022004 |
| Sum squared resid | 5453.745 | Schwarz criterion | 7.078691 |
| Log likelihood | -303.4572 | Hannan-Quinn criter. | 7.044830 |
| F-statistic | 83.54972 | Durbin-Watson stat | 1.498618 |
| Prob(F-statistic) | 0.000000 | | |

### 5.2. PRINCIPAL COMPONENTS AND CLUSTER ANALYSIS

For this study after testing only 6 out of 12 variables were retained, the ones with higher significance**: MCRSCOR, CA, PROFIT, ANGAJATI**, **BPINDICE** and **CSR**.

This technique consists of new variables determination, also known as principal components, computed as linear combinations of the original variables, having maximum variance and thus retainig the maximum possible information. A small number of new variables are obtained (usually 2-4), not correlated one with another.

Before the analysis is made, the variables should be standardized. This process consist in the substitution of each observation's value with the ratio between its centered value and standard deviation. The result of PRINCOMP procedure is obtained using SAS 9.2 software and is shown in table no. 6. In order to find the optimal number of principal components in the analysis the Kaiser criterion it is used. Subsequently this number is determined by the cumulated proportion of information (variance) which should exceed 76%. In the case of the current analysis 3 principal components are retained.

The first one takes **54,58%** of the initial variance, the second one **20,1%**, and the third one **10,82%,** giving a total of **85,51%**. In the analysis, the „scores" (observations for the 3 principal components) will replace the observations for the initial 6 variables.

**Table 6**

| | Eigenvalue | Difference | Proportion | Cumulative |
|---|---|---|---|---|
| **Eigenvalues of the Correlation Matrix** | | | | |
| **1** | 3.27494015 | 2.06877429 | 0.5458 | 0.5458 |
| **2** | 1.20616586 | 0.55676646 | 0.2010 | 0.7469 |
| **3** | 0.64939940 | 0.25065497 | 0.1082 | 0.8551 |
| **4** | 0.39874443 | 0.09635176 | 0.0665 | 0.9215 |
| **5** | 0.30239267 | 0.13403519 | 0.0504 | 0.9719 |
| **6** | 0.16835748 | | 0.0281 | 1.0000 |

Graphs shown in figures below suggest the grouping of the variables as a function of the principal components, namely the new variables coordinates given by the principal components axes. The first 2 components are represented in figure no. 2. As it can be noticed, BPINDICE, PROFIT, ANGAJATI and CA are close to the second component axis, the rest of the variables being scattered.
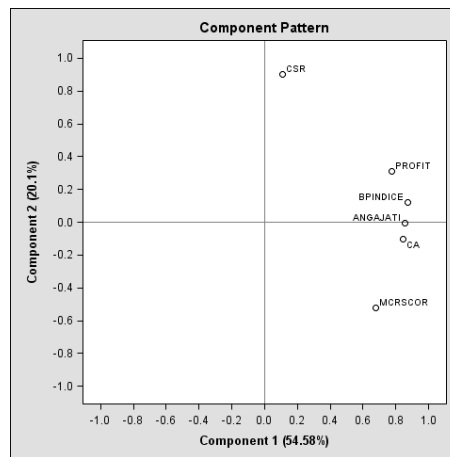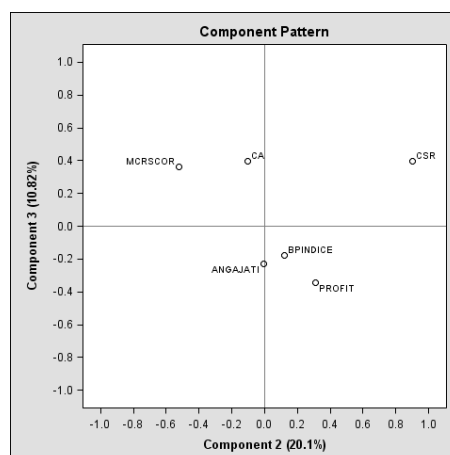
**Figure 2. Image of the first and the second principal components after aplying Kaiser criterion**

When representing the variables as functions of components 1 and 3, it can be noticed that CSR, MCRSCOR are closer to the component 1 but the most relevant vairables for companies' classification remain BPINDICE, ANGAJAŢI and PROFIT (figure no. 3).
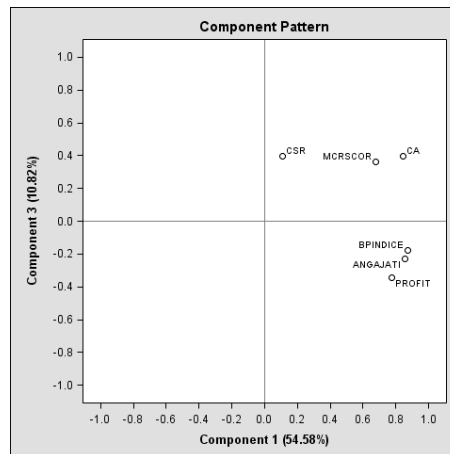


**Figure 3. Image of the first and the third principal components after aplying Kaiser criterion**

Finally, in the case of representing the variables as functions of the component 2 and 3 (figure no. 4), it can be noticed that all the variables are more scattered around the two axes.



**Figure 4. Image of the second and the third principal components after aplying Kaiser criterion**

98

All the three principal components reflect the fact that MCRSCOR and CA (showing the financial position and market strenght) won't be influenced significantly by the other variables.

In order to group the companies in classes, cluster analysis will be used. The general classification criterion should assure a minimum variability in the clases and a maximum variability between the classes. The Ward method evaluates the distance between 2 clusters as a sum of the squares of objects standard deviations in a configuration made by bringing together the 2 clusters. The **Dendogram** is the graph that highlights clusters' structure, componence and agregation levels. Using this tool it can be decided upon the optimal number of classes retained into the analysis, through the apparition of gaps. By performing several cuts in the dendogram (figure no. 8), different levels oh hierarchy will be obtained. As $R^2$ reaches 1 the number of clusters rises. When advancing in the cut several classes shall be obtained and the grouping of companies can be better observed. A gap is presented in figure no. 5 with a coloured line intersecting the dendogram in 4 points, which reflects the formation of 4 clusters.
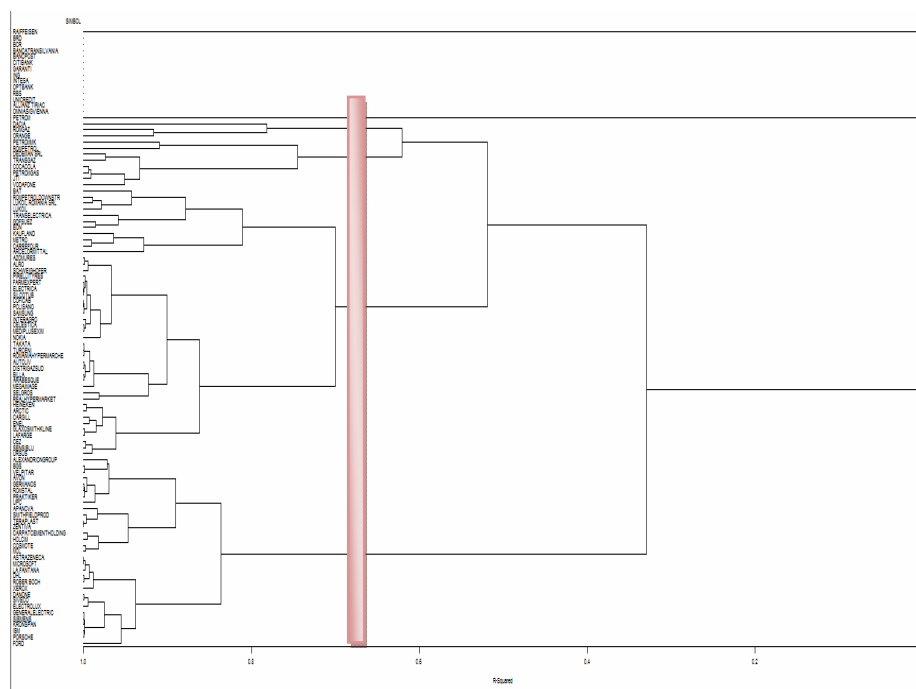


**Figure 5.  Cluster analysis Dendogram**

The clusters grouping representation for the companies is shown in figure no. 6.
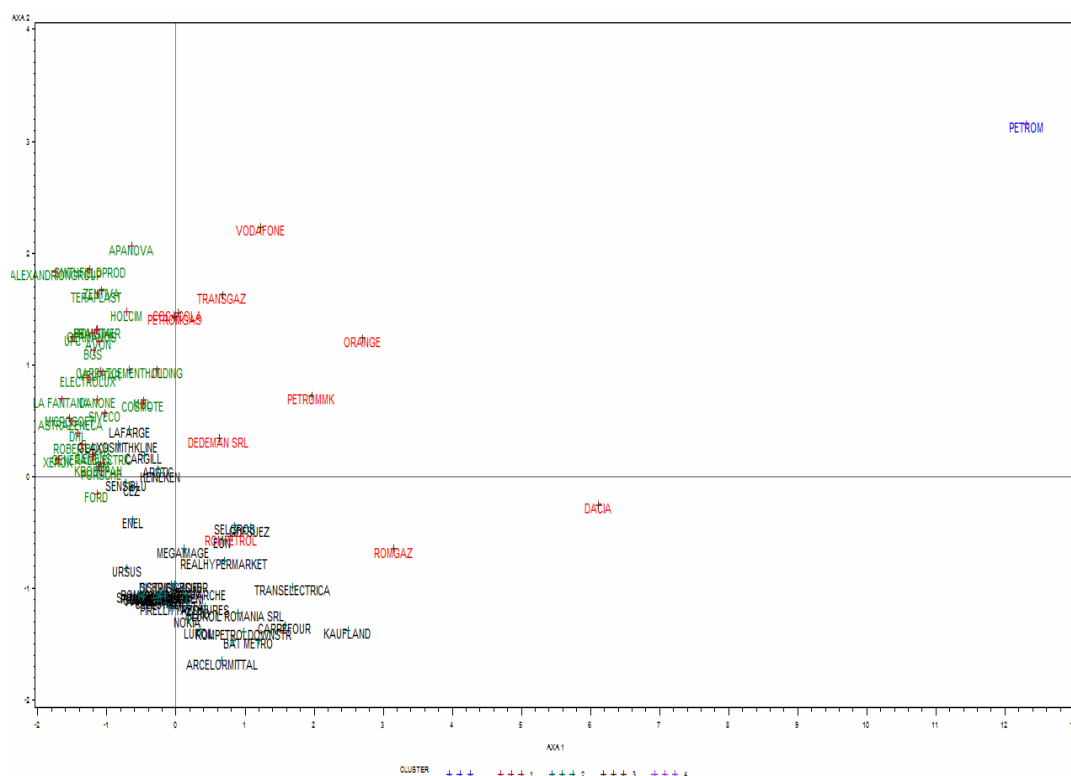
**Figure 6. Representation of the companies grouping into clusters**

The majority of the observations are grouped into the first 2 clusters. Cluster 4 (containing only PETROM company) includes those observations with the highest values for all the variables (financial and CSR) and cluster 3, holding DACIA, ORANGE, VODAFONE, ROMPETROL, ROMGAZ, DEDEMAN, represents the group of companies with very good financial indicators, value and  position on the market which also have many CSR actions. Companies from cluster 2 have high financial and market strenght indicators but don't undertake CSR activities, the CSR index does not influence their value. Cluster 1, including TERAPLAST, ALEXANDRION, HOLCIM, LA FANTANA, COSMOTE, SIVECO, GSK, DHL, AVON, APA NOVA is the most interesting because these companies have a very good image regarding CSR without having the benefit of as many resources as the other firms in the study.


## 6.  CONCLUSIONS


This paper presents an econometric analysis of CSR actions' influence over the value of major companies in Romania but also, reciprocally, the impact of CSR activities on different social sectors firms' values. The research was realized using a database containing 101 strong companies on the national market during 2011-2012. Unifactorial and multifactorial regressions in Eviews 7 were used for processing data. Main conclusions are that CSR activity is partially influenced by financial strenght, market position and value for a company, and not the otherway and secondly the fact that CSR activity is facilitated at companies having a larger number of employees. Another analysis was made using SAS 9.2 software having as main results the determination of 3 principal components which can synthesize a big part of the information corresponding to the 6 initial variables and also the posibility of grouping the companies in 4 clusters holding observations, in terms of value and CSR activity.

**REFERENCES**

1. Băleanu T.E., Chelcea L., Stancu A. (2011), "The Social Responsibility of the Top 100 Romanian Companies. An Analysis of Corporate Websites", Amfiteatru Economic, Vol. XIII , No. 29**,** February 2011;
2. B&P Brandivia (2010),  "CSR 24/7 Rating 2010 Romania", /www.braunpartners.ro/;
3. Dragotă M. (2012)*,* "Guvernanţă Corporativă", course support (in romanian)*,* Finance, Insurance, Banking  and Stock Exchange Faculty;
4. Ernst & Young Romania (2012), "Major Companies in Romania, 2012 Edition", doingbusiness.ro;
5. European Parliament resolution of 6 February 2013 on corporate social responsibility: promoting the interests of society and a path towards a sustainable and inclusive economic recovery (2012/2097(INI));
6. Iamandi I.E. (2012), "Empirical Analysis on CSR Communication in Romania: Transparency and Participation"*,* The Romanian Economic Journal, XV, no. 46, December 2012;
7. KPMG (2012), "International Survey of Corporate Responsibility – Reporting 2011";
8. Moscalu M., Vintila G. (2011), "Study Regarding the Determinants of Corporate Social Performance for a Sample of Romanian Listed Companies", Metalurgia International, 17, 3, pp. 243-251;
9. Moscalu M., Vintila G. (2012), "The assessment of corporate social risk in a Romanian context", Procedia - Social and Behavioral Sciences 62, p. 571 – 575;
10. Obrad C., Petcu D., Gherheş V., Suciu S. (2011), "Corporate Social  Resposability in Romanian Companies  – between perceptions and reality", Amfiteatru Economic*,* Vol. XIII **,** No. 29, February 2011;
11. Vintilă G. (2009), "Fiscal management of the enterprise", course support (in romanian)*,* Finance, Insurance, Banking  and Stock Exchange Faculty;
12. Voineagu V., Ţiţan E., Şerban R., Ghiţă S., Todose D., Boboc C., Pele D. (2009), "Econometrics Theory and Practice" (in romanian),  second edition*,* Meteor Press, Bucharest;
13. Votaw D. (1972), "Genius Became Rare: A Comment on the Doctrine of Social Responsibility, Pt. 1", California Management Review 15(2), 25–31;
14. www.csrmedia.ro/;
15. www.globalreporting.org/resourcelibrary/G3.1-Guidelines-Incl-TechnicalProtocol.pdf
16. www.responsabilitatesociala.ro/.