Corporate Social Responsibility: A marketing tool and/or a factor for the promotion of sustainable development for companies? An empirical examination of listed companies in the Athens Stock Exchange

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Abstract: The subject matter of this research is to examine the following questions: Already efficient companies adopt Corporate Social Responsibility (CSR) practices as a marketing tool and as a means to promote themselves? And at the same time, already efficient companies incorporate CSR in their strategy, thus reinforcing their sustainable development? Specifically, our research is comparative and involves listed companies in the Athens Stock Exchange which have adopted CSR and those who have not adopted it, for the period 2006-2012. In particular, it compares these two company types: listed companies which implement CSR practices and listed companies which do not implement CSR practices, with respect to efficiency ratios, which as explained also in the methodology, are ROE, ROA, EPS, ROS₁ & ROS₂. A key conclusion of the research is that companies which adopt CSR have higher average efficiency compared to those which do not adopt CSR, and also, already efficient companies use CSR as a means to promote themselves while incorporating CSR practices that drive their Sustainable Development. Something illustrated by the fact that the higher percentage of already efficient companies which implement sustainable development policies, is involved in all four CSR action fields: workplace, market, community, and environment.

Keywords: Social Corporate Responsibility, Sustainable Development, Companies, Marketing Tool, Stock Exchange
1. Introduction

Sustainable Development has been studied systematically by researchers the past 40 years, and has renewed the citizens’ and the government officials’ hopes for the achievement of a development that will not have adverse effects and will not destroy, but rather protect natural and social resources at an extent which will not eliminate the financial benefits. Companies sensing this change and in order to adapt to the intense pressures both of the globalized society and the society of citizens, adopted the term Corporate Social Responsibility. As time passed, the terms Sustainable Development and Corporate Social Responsibility were combined, converged and are perceived in the business field as synonymous. This is supported by many scholars among which is Keijzers [9], who showed that the concepts of Corporate Social Responsibility (CSR) and Corporate Sustainability (CS) have followed different courses that have recently converged, Marewijk [12] who confirms the convergence of the two concepts and Montiel [14] who shows that both the framework and the measures of CSR and CS seem to converge, although there are some differences between the two concepts. Following international initiatives, European and national CSR strategies, the impact of CSR international standards by Global Reporting Initiative and Global Compact, as well as the studies which started to strongly support the link between Corporate Social Responsibility and corporate efficiency, the number of companies that started to adopt it, has risen.

Specifically, a large amount of research that has been completed until now, advocates that CSR contributes to or impacts favorably on the financial efficiency of businesses. This argument in particular, seems to be affirmed by the size and value of the business, i.e. by companies which are already efficient. Moreover, Yi-ling [20] has demonstrated that when corporate social responsibility is connected with the human capital and the state (CSR for government), it correlates strongly and positively with their efficiency using the ROA index. Artiach, Lee, Nelson and Walker [2] have proven that economic development and the size of a company, relate to high performance in sustainable development and sustainability. Wang [19] also concluded that there is a correlation between a very good performance in CSR and an increase of a company’s financial value, and that there is a positive relationship between its size and the impact of its value on its corporate social performance. In addition, Karagiorgou [8] concludes that apart from the expenses that may arise, the adoption of a CSR strategy, may help companies achieve higher returns on shares and meet the needs of their stakeholders.

Many researchers also note that CSR is connected with marketing as a tool that helps to promote a company. CSR Europe [6] in particular, in a research it completed in 2000, showed that 70% of European consumers recognize directly the importance of the commitments made by the companies - manufacturers towards the society, while 1 out of 5 stated that they were willing to pay more for a product coming from a more “sensitive” company. From this perspective it is clear that today the reputation and value of the brand are more important now than they were a few
decades ago. The marketing departments of US universities already claim that Corporate Social Responsibility is one of the safest ways for a company to diversify, in a positive way, its brand name (Sahinidis and Kavoura) [16]. In addition, Greening & Turban [18] demonstrated that “a company’s CSR can provide a competitive advantage to attract new recruits”.

Alex MacBeath [6] concludes in International Business Report 2008 that the adoption of business ethics practices is essential for the success of Private Organizations. More particularly, the main factor which by 65% leads to the adoption of CSR practices, is the need of private organizations to “attract and retain a highly-qualified personnel” in order to meet present and future demands. In close proximity, in the second place with 63%, comes the “cost management” factor which reflects a company’s knowledge and acknowledgement that cost management is beneficial both for the business and for the environment. The need to establish trust and create a reputation among customers, represents 56% of the respondents, making this factor quite crucial for the adoption of CSR.

Table 1: Reasons for adopting business ethics practices on a global level

<table>
<thead>
<tr>
<th>Cost Management</th>
<th>Public Relations/ Brand Development</th>
<th>Staff Recruitment/ Retention</th>
<th>Tax deductions</th>
<th>Investment relations</th>
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Source: [International Business Report, 2008]

It is interesting to note that for private organizations, public relations/ brand development comes right after personnel and cost management issues. The latter indicates that private individuals drive private organizations towards more ethical business practices. As organizations grow in size, their operations also become subject of stricter control, while large multinationals pay more attention to public relations/ brand development.
The use of CSR as a marketing tool by already efficient companies and its incorporation in their strategies with the promotion of their sustainable development is the object of this research, which has also been indicated by other scholars. Harjoto and Jo [5] believe that the study of the impact of corporate social responsibility on a company’s value/ performance must be based on the fact that the adoption of CSR within a company is determined by corporate governance and the management consolidation measures. In this sense, when directors use CSR activities to resolve conflicts between managers and various stakeholders, the adoption of CSR strengthens the value and performance of a company. Adams and Frost [1] state that the reporting of CSR data, has led to developments in data collection systems and to an integration of social and environmental data provision in the decision-making process, to risk management and performance measurement.

Consequently, this research aims to complement the existing Greek and international corpora as regards the study of CSR as a marketing tool, and specifically to connect the already efficient companies through efficiency indexes, by enhancing their performance as a result of CSR adoption. Moreover, we will try to answer the following questions:

- 1st Question: Do already efficient companies adopt CSR practices as a marketing tool and as a means to promote themselves?
- 2nd Question: Do companies incorporate CSR in their strategy, thus reinforcing their sustainable development?

2. Methodology

The research sample covers the companies listed in the Athens Stock Exchange during 2006-2012. Companies from the bank sector were excluded as the form of their accounting books differs from the one of companies in other sectors, and consequently the comparison of their financial indexes with those of dissimilar companies is difficult. The total number of companies for the years 2006-2012 is 1,514. The listed companies are divided in two groups, the companies which have adopted CSR and those which have not.

Then, the identification data and financial information of the listed companies of the two groups are recorded. These are:

- Sector,
- the Company’s status based on six variables 0-5 (0=In Suspension, 1=To Delist, 2=regular, 3=low dispersion, 4=surveillance, 5=main market),
- Merger-Delisting 0-1 (0=No, 1=Yes)
- Profits - Losses before taxes,
- Total Assets,
- Total Equity,
- Turnover,
- Fixed Assets,
• Current Assets,
• Short-Term Liabilities,
• Long-term Liabilities,
• Earnings Per Share = Profits/ losses per share,

The following index numbers are calculated:
• ROA = Return on Assets = Profits - Losses before taxes/ Total Assets
• ROE=Return on equity = Profits - Losses before taxes/ Total Equity
• Return on Sales 1 = Turnover/ Total Assets
• Return on Sales 2 = Turnover/ Total Equity

The companies are classified based on:
• The wider sector, with variable values between 1-3 (1= includes the extraction of raw materials, the primary production coming from farming, fishery and livestock farming, as well as industries, 2=commerce, 3=services)

Then, only for the group of businesses which have adopted CSR, the following Qualitative Variables were created:
• CSR mention in Financial Reports, to determine whether there is a tendency to integrate CSR/Sustainability statements with Statements of Accounts.
• Member of CSR Hellenic Network,
• CSR mention on the website,
• CSR action field/ Workplace, [3], [4], [10] & [23]
• CSR action field/ Market field, [3], [4], [10] & [23]
• CSR action field/ Community, [3], [4], [10] & [23]
• CSR action field/ Environment, [3], [4], [10] & [23]
• Other/ Charity, (first CSR form [10])
• Sustainable Development, (exploration of its convergence or its matching with CSR according to the bibliography)
• Quality Assurance, in connection with CSR
• Environmental Policy, if it exists separately from SD and/or CSR

In order to measure the efficiency of companies, older studies on the link between efficiency and CSR are taken into account, specifically Samy, Odemilin and Bampton [15] used the EPS index, Shen & Chang [17] used the ROA, ROE and EPS indices, while López, Garcia and Rodriguez [11] used ROA and ROE, and Courtis [22] used the Return on Sales indices: Turnover/ Total Assets and Turnover/ Total Equity. Thus, the following index numbers shall be calculated:
• Return on assets – ROA
• Return on Equity - ROE
• Earnings Per Share - EPS
• Return on Sales 1 = Turnover/ Total Assets
• Return on Sales 2 = Turnover/ Total Equity

The return on assets index is calculated by dividing the net profits before taxes with the total assets. This index measures the efficiency of all the capital a
company invests, and thus reflects the ability of its management to use the company's financial resources to generate net profits [21].

The return on equity index is calculated by dividing the net profits before taxes with the total equity. This metric shows how effectively a company uses its owners’ capital, as it demonstrates the size of the profits generated by capital invested by the company's shareholders [21].

Earnings per Share. This index shows the profits of the last 12 months, by share. Its calculation is based on the profits a company records in its balance sheet. The value of the amount the company distributes as profits to its shareholders, is divided by the number of current shareholders and indicates the profits distributed per share. This amount is called dividend. Usually, only part of the profits (often around half) is distributed as dividend to the shareholders [21].

Return on Sales 1. The sales or turnover over the total assets. This index number provides indications as to the degree a company makes extensive use of its assets in order to make sales [22]. It shows whether the company overinvests its capital in relation to its sales level. Of course, the elements of this index are greatly influenced by the way the company’s management depreciates its assets, i.e. whether it follows a policy of increasing or fixed depreciation. In general, the higher this index is, the more effective is the use of its assets. Also, it is useful to compare this index with the sector’s balances.

Return on Sales 2. The sales or turnover over the equity calculates how much of the shareholders’ capital has been kept within the business to generate a level of net sales. If this calculation is done over a longer time period, the ratio can help reveal how well the shareholders’ capital is used to generate sales. [22].

3. Recording and Processing of the Data

To test the basic hypothesis in this study, i.e.:

Do already efficient companies adopt CSR practices as a marketing tool/ means of promotion/ brand development/ adding value? We must first examine if they exhibit a substantial statistical difference as regards their efficiency from those which have followed another course. For this reason, a parameter-free control of the two medians shall be implemented (Mann-Whitney). This control checks if two independent samples come from populations with the same median. During this control, the following hypotheses were tested:

- H1: The average efficiency of companies which have adopted CSR is no different than the one of companies which have not adopted CSR.
- H2: The average efficiency of companies which have adopted CSR is superior to the one of companies which have not adopted CSR.

In parameter-free methods, the control of null-hypotheses compares the medians instead of the average values of the samples. The tests performed in this research
use confidence intervals of 1%, 5% and 10%. Having responded to the question of whether the average efficiency of companies which have adopted CSR is superior to the one of companies which have not adopted CSR, we will explore the hypothesis of our research:

**H**: The already efficient businesses adopt CSR practices as a means to promote themselves or even for public relations reasons/ enhance the company's value.

Also, having responded to the above question we will try to respond to our second hypothesis:

**H**: Do already efficient companies incorporate CSR in their strategy, thus reinforcing their sustainable development?

In order to respond to the above question, we will perform a correlation test of the qualitative variables, Pearson chi-square, to determine whether the variable of Sustainable Development has a statistically substantial relationship with the variables CSR action field/ Market field/ Community/ Environment/ Workplace and CSR mention in Financial Statements, to get the results which will lead us in obtaining useful conclusions.

We will also observe the indices of businesses which belong in the main market (i.e. are efficient based on the criteria of the Stock Exchange) and adopt CSR, in relation to the indices of businesses which are part of the main market but have not adopted CSR before the economic crisis of 2006-2009 and the period after the crisis 2010-2012, in order to determine, if possible, the contribution of CSR's adoption.

### 4. Results of Hypothesis Control Test

In this section we shall present the results of the controls of all the individual hypotheses which relate to the subject of our research. Specifically, we will determine if there is a substantial difference in the average efficiency of the companies which adopt CSR and those which do not. In particular, to check whether there is substantiality, we will be based on the following efficiency indices:

<table>
<thead>
<tr>
<th>Efficiency Indices</th>
<th>Description</th>
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<tbody>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<tr>
<td>EPS</td>
<td>Earnings Per Share</td>
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<tr>
<td>Return on Sales 1</td>
<td>Turnover/ Total Assets</td>
</tr>
<tr>
<td>Return on Sales 2</td>
<td>Turnover/ Total Equity</td>
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Moreover, the Mann-Whitney's substantiality control for these two company types, those which adopt and those which do not adopt CSR, for the entire period of 2006-2012 in connection with indices: **ROA, ROE, EPS, Return on Sales 1 and Return on Sales 2**, the following are noted:

The median ROA=0.017 of the businesses which have adopted CSR, is statistically substantially greater than the median ROA=0.03 of the businesses which have not adopted CSR with p-value<0.001. Thus, there is a very strong correlation.
The median ROE=0.41 of the businesses which have adopted CSR, is statistically substantially greater than the median ROA=0.14 of the businesses which have not adopted CSR with p-value=0.005. This is a very strong correlation.

The median EPS=0.51 of the businesses which have adopted CSR, is statistically substantially greater than the median EPS=0.00 of the businesses which have not adopted CSR with p-value<0.001.

The median ROS1 of the businesses which have adopted CSR, is statistically substantially greater, ROS1=0.494 than the median of the businesses which have not adopted CSR, ROS1=0.456, with p-value<0.085.

The median ROS2 of the businesses which have adopted CSR, is statistically substantially greater, ROS2=1.157 than the median of the businesses which have not adopted CSR, ROS2=1.010, with p-value<0.055.

Consequently, it appears that there is a substantial statistical correlation between CSR and the financial performance of companies which have adopted it, as they outperform companies which have not adopted CSR in all indices, for all the years between 2006-2012.

Then, in order to respond to our main question, i.e. whether already efficient companies use CSR as a marketing tool, we compare the differences of the financial performance of companies which have adopted CSR and were part of the main market, to the one of companies which have not adopted CSR and were part of the main market during 2006-2012. So, we implemented the Mann-Whitney control and found that the following indices present statistically substantial positive correlations:

**EPS and Return on Sales 2.**

Based on the results of the statistical analysis, we note the following: The median of the EPS index of the businesses which adopt CSR and are in the main market, is statistically substantially greater than the median of the EPS index of businesses which do not adopt CSR and are in the main market, during the entire period of 2006-2012, with p-value=0.005 (see Table 1, Annex 1).

The median of the ROS2 index of the businesses which adopt CSR and are in the main market, is statistically substantially greater than the median of the ROS2 index of businesses which do not adopt CSR and are in the main market, during the entire period of 2006-2012, with p-value=0.052 (see Table 2, Annex 1).

Analysis indicates that at least the medians of the two indices of the businesses which have adopted CSR and are in the main market, are statistically higher than the corresponding indices of businesses which have not adopted CSR and are in the main market during the period 2006-2012.

We can therefore say that the average efficiency of businesses which adopt CSR and are in the main market, is greater than the one of businesses which do not adopt CSR and are in the main market, during the entire period of 2006-2012, in relation to the EPS and ROS2 indices.
Another important finding of our research which reinforces the fact that the average efficiency of socially responsible companies differs from the one of socially non responsible companies, underlining the fact that in the above case the companies which bring this result are part of the main market and are financially efficient, and this is possibly supported also by CSR.

Then we analyze the differences in the indices of companies which have adopted CSR and are in the “main market” business status, in relation to those which have not adopted CSR and are in the “main market” business status, during the period before the economic crisis 2006-2009 and after the crisis 2010-2012.

Regarding the period before the crisis 2006-2009, statistical analysis leads us to examine the ROS2 index. Specifically, the median of the ROS2 index of the businesses which have adopted CSR and are in the main market, is statistically substantially greater than the median of the ROS2 index of businesses which have not adopted CSR and are in the main market, during the entire period of 2006-2012, with p-value=0.060 (see Table 3, Annex 1).

Regarding the period after the crisis 2010-2012, statistical analysis leads us to examine the following indices. ROA, ROE, and EPS.

In particular, it is noted that the median of the ROA index of the businesses which have adopted CSR and are in the main market, is statistically substantially greater than the median of the ROA index of businesses which have not adopted CSR and are in the main market, with p-value=0.006 (see Table 4, Annex 1).

As regards ROE, the median of the ROE index of the businesses which have adopted CSR and are in the main market, is statistically substantially greater than the median of the ROE index of businesses which have not adopted CSR and are in the main market, with p-value=0.021 (see Table 5, Annex 1).

It appears that with reference to the EPS index, the median of the EPS index of the businesses which have adopted CSR and are in the main market, is statistically substantially greater than the median of the EPS index of businesses which have not adopted CSR and are in the main market, with p-value=0.015 (see Table 6, Annex 1).

The analysis of the index differences before and after the economic crisis on a statistically substantial level between the companies which have adopted CSR and are in the main market, and those which have not adopted CSR and are in the main market, enhances the hypothesis that the average efficiency of Socially Responsible Corporations is greater than the one of Socially Non Responsible Corporations on a statistically substantial level, both for the period before and for the period after the crisis. In addition, the significance of CSR for the Socially Responsible companies which are already efficient (part of the main market) is supported by the fact that after the crisis, their efficiency indices have increased in comparison with those of already efficient Socially Non Responsible companies, and they are greater in number - three indices (ROA, ROE, and EPS), instead of one (ROS2), before the
crisis. This observation may indicate that CSR strengthens businesses which are already efficient and adopt it, in relation to the rest which do not adopt CSR in the midst of the economic crisis. The increase of the reputation and value of the businesses possibly brings higher financial gains to these businesses. According to Melo and Garrido-Morgado [13], Corporate Social Responsibility - as a multi-dimensional structure - is more effective in building a good reputation for the company and developing a sustainable competitive advantage.

Thus, there are indications that, for already efficient businesses which are in the main market and have adopted CSR, based also on the efficiency indices, CSR reinforces their financial efficiency and contributes as a marketing tool, by promoting their activities, and enhancing their reputation and value, even in adverse economic conditions.

To respond to the second question of the research:

H : Do already efficient companies incorporate CSR in their strategy, thus reinforcing their sustainable development? We will perform a correlation test, Pearson chi-square, for businesses which have adopted CSR and were part of the main market during the entire period of 2006-2012, based on these qualitative variables:

- **Sustainable Development with CSR mention in Financial Reports,**
- **Sustainable Development with CSR action field/ Workplace,**
- **Sustainable Development with CSR action field/ Market field,**
- **Sustainable Development with CSR action field/ Community,**
- **Sustainable Development with CSR action field/ Environment**

It is noted that the Pearson chi-square correlation test of the qualitative variable Sustainable Development with the variable CSR mention in Financial Statements, shows that out of all the companies which have adopted CSR and are in the main market, 80.5% of the ones which implement Sustainable Development policies, also have a CSR statement in their annual statement of accounts. While, out of all the companies which have adopted CSR and are in the main market, 55.7% of the ones which do not implement Sustainable Development policies, also do not have a CSR statement in their annual statement of accounts. Therefore, there is a statistically substantial relationship between Sustainable Development and CSR mention in Financial Statements, with p-value<0.001.

The Pearson chi-square correlation test of the qualitative variable Sustainable Development with the variable CSR action field/ Workplace, shows that out of all the companies which have adopted CSR and are in the main market, 56.6% of the ones which implement Sustainable Development policies, are also involved in the workplace. While, out of all the companies which have adopted CSR and are in the main market, 100.0% of them, i.e. the ones which do not implement Sustainable Development policies, are also not involved in the workplace. Therefore, there is a statistically substantial relationship between Sustainable Development and CSR action field/ Workplace, with p-value<0.001.
The Pearson chi-square correlation test of the qualitative variable Sustainable Development with the variable CSR action field/ Market field, shows that out of all the companies which have adopted CSR and are in the main market, 60.9% of the ones which implement Sustainable Development policies, are also involved in the market field. While, out of all the companies which have adopted CSR and are in the main market, 83.3% of the ones which do not implement Sustainable Development policies, are also not involved in the market field. Therefore, there is a statistically substantial relationship between Sustainable Development and CSR action field/ Market field, with p-value < 0.001.

The Pearson chi-square correlation test of the qualitative variable Sustainable Development with the variable CSR action field/ Community, shows that out of all the companies which have adopted CSR and are in the main market, 54.3% of the ones which implement Sustainable Development policies, are also involved in the community. While, out of all the companies which have adopted CSR and are in the main market, 75.0% of the ones which do not implement Sustainable Development policies, are also not involved in the community. Therefore, there is a statistically substantial relationship between Sustainable Development and CSR action field/ Community, with p-value < 0.001.

The Pearson chi-square correlation test of the qualitative variable Sustainable Development with the variable CSR action field/ Environment, shows that out of all the companies which have adopted CSR and are in the main market, 61.4% of the ones which implement Sustainable Development policies, participate in environmental actions. While, out of all the companies which have adopted CSR and are in the main market, 100.0% of the ones which do not implement Sustainable Development policies, do not participate in environmental actions. Therefore, there is a statistically substantial relationship between Sustainable Development and CSR action field/ Environment, with p-value < 0.001.

This analysis also indicates that for businesses which have adopted CSR and were in the main market during the entire period of 2006-2012, there is a statistically substantial difference among the above variables. A fact that underlines the importance of the variable business status “main market” in the correlation of the qualitative variable Sustainable Development with the variables: CSR mention in Financial Statements, CSR action field/ Workplace, CSR action field/ Market field, CSR action field/ Community, CSR action field/ Environment, as it seems that their correlation percentages are greater and statistically more substantial, in comparison with the percentages of all the companies which have adopted CSR and for which the Pearson chi-square correlation test of the qualitative variable Sustainable Development has been performed using the same variables.

Specifically for companies which have adopted CSR and are in the main market, the correlation test shows that 80.5% of the businesses which implement Sustainable Development policies, state that they implement CSR in their annual statement of accounts in comparison with businesses which have adopted CSR, 23.5% of which implement Sustainable Development policies and state that they adopt CSR in their annual statement of accounts. Also, for companies which have
adopted CSR and are in the main market, 56.6% of the ones which implement Sustainable Development policies, are also involved in the workplace. While 49.4% of the companies which have adopted CSR and implement Sustainable Development policies, are also involved in the workplace. In addition, 60.9% of the companies that implement CSR and are in the main market, implement Sustainable Development policies, and are involved in the market field. While, 54% of the companies which adopt CSR, implement Sustainable Development policies, are involved in the market field. Furthermore, out of all the companies which are in the main market, 54.3% of the ones which implement Sustainable Development policies, are also involved in the community. While, out of all the companies which have adopted CSR, 46.2% of the ones which implement Sustainable Development policies, are also involved in the community.

Finally, out of all the companies which adopt CSR and are in the main market, 61.4% of the ones which implement Sustainable Development policies, also participate in environmental actions. While, out of all the companies which have adopted CSR, 54.3% of the ones which implement Sustainable Development policies, also participate in environmental actions. As regards the correlation test on the Sustainable Development variable for companies which have adopted CSR and are in the main market, it appears that the correlation percentages are higher with the variables examined, in comparison with the percentages of the correlation test on Sustainable Development based on the same variables for companies which have adopted CSR on a statistically substantial level.

The higher correlation percentages of Sustainable Development with the variables examined in the sub-group of companies which implement CSR and are in the main market, in comparison with the correlation percentages of Sustainable Development based on the same variables for companies which have adopted CSR, leads to the conclusion that the correlation/ convergence of Sustainable Development with CSR action fields: Market field, workplace, community, environment and its connection with CSR statement on the annual statement of accounts, is greater for companies in the main market than for companies which have merely adopted CSR. Consequently, Sustainable Development is linked with CSR by the theory of stakeholders (Action Field) and with the statement of CSR on the annual statement of accounts for businesses which have not adopted CSR and are in the main market with high, statistically substantial, percentages. This may indicate that more efficient companies, i.e. the companies which are in the main market, implement CSR activities and combine them with Sustainable Development more deliberately, understand better their significance in the company’s strategy since they mention CSR in their annual statement of accounts.

With reference to the question posed by our research, i.e. whether the already efficient companies adopt CSR as a marketing tool, or in order to promote their public image, or to increase their value, it can be argued that all the companies which have adopted CSR and are in the main market business status, it can be assumed that they can be more efficient in comparison with the rest, and the results
show that they present greater correlation percentages of Sustainable Development with CSR's implementation fields (according to the stakeholders theory), when compared with the correlation percentages of the same variables for the group of companies which have adopted CSR.

Moreover, the companies which belong in this sub-group, i.e., those which have adopted CSR and are in the main market, have superior ROA, ROE and EPS medians than the sub-group of companies which had not adopted CSR and were in the main market during the period 2010-2012 after the crisis. It also appears, that the ethical face of the company is strengthened and that a competitive advantage is created, and as a result its financial performance, even in adverse economic conditions, can be enhanced, since according to Harjoto and Jo [5], CSR activities may be used by the directors to resolve conflicts among managers and various stakeholders (conflicts that arise or arose during the time of the economic crisis). In this sense, the adoption of CSR strengthens the value and the performance of a company.

Consequently, already efficient businesses use CSR as a means to promote themselves, while at the same time they implement CSR practices that in theory make them more socially responsible businesses.

5. Conclusions

The subject matter of this research was to review and respond to the following questions:

1st Question: Do companies adopt CSR practices as a marketing tool, i.e., as a means to promote themselves?

2nd Question: Do companies incorporate CSR in their strategy, thus reinforcing their sustainable development?

In order to respond to the above questions, we also explore the following question: Do the companies which have adopted CSR have higher average efficiency than the companies which have not adopted CSR?

To respond to these questions, secondary financial data of the companies which were listed in the Athens Stock Exchange for the entire period of 2006-2012, were recorded. Two files were created, one with the companies which have adopted CSR and a second with the companies which have not adopted CSR.

The index numbers ROA, ROE, EPS, ROS1, and ROS2 which are qualitative variables, have been calculated. Qualitative variables which were obtained by the analysis of their websites were taken into account for the businesses of the second group. These variables concerned various issues, such as membership to the Hellenic Network for CSR, the CSR mention in Financial Statements, the CSR mention on the website, etc., which are described in the methodology of the research.

A Mann-Whitney parameter-free control was performed to establish whether there is an important difference in the medians of the ROA, ROE, EPS, ROS1, and ROS2 indices between the listed companies which have adopted CSR and the listed companies which have not. The indices of the two groups of companies revealed a
statistically substantial difference, as the indices of the companies which adopted CSR were statistically and substantially greater than the indices of companies which did not adopt it during 2006-2012.

In order to respond to the main question of our research, i.e. whether the already efficient businesses adopt CSR practices as a marketing tool, or a means to promote themselves or even for public relations reasons/ to enhance the company’s value.

We have performed a Mann-Whitney parameter-free control of the medians of the variables for businesses in the main market which have adopted CSR and for businesses in the main market which have not adopted CSR. Analysis indicates that at least the medians of the two indices of the businesses which have adopted CSR and are in the main market, are statistically higher than the corresponding indices of businesses which have not adopted CSR and are in the main market during the period 2006-2012.

We can therefore say that the average efficiency of businesses which adopt CSR and are in the main market, is greater than the one of businesses which do not adopt CSR and are in the main market, during the entire period of 2006-2012, in relation to the EPS and ROS2 indices. Another important finding of our research which reinforces the hypothesis: Ha The average efficiency of socially responsible companies differs from the one of socially non responsible companies, underlining however in the above case the fact that companies which bring this result are in the main market and are financially efficient, and this is possibly supported also by CSR.

Moreover the analysis of the index differences before and after the economic crisis on a statistically substantial level between the companies which have adopted CSR and are in the main market, and those which have not adopted CSR and are in the main market, supports the hypothesis that the average efficiency of Socially Responsible Corporations is greater than the one of Socially Non Responsible Corporations on a statistically substantial level, both for the period before and for the period after the crisis, is reinforced. In addition, the significance of CSR for the Socially Responsible companies which are already efficient (part of the main market) is supported by the fact that after the crisis, their efficiency indices which have increased in comparison with those of Socially Non Responsible companies, are greater in number - three indices (ROA, ROE, and EPS), instead of one (ROS2), before the crisis. This observation may indicate that CSR strengthens businesses which are already efficient and adopt it, in relation to the rest which do not implement CSR in the midst of the economic crisis. According to Melo and Garrido-Morgado [13], Corporate Social Responsibility - as a multi-dimensional structure - is more effective in building a good reputation for the company and thus, in developing a sustainable competitive advantage.

It also appears, that the ethical face of the company is strengthened and that a competitive advantage is created, and as a result its financial performance, even in adverse economic conditions, can be enhanced, since according to Harjoto and Jo,
CSR activities may be used by the directors to resolve conflicts among managers and various stakeholders (conflicts that arise or arose during the time of the economic crisis) which was also supported by Kavoura and Sahinidis [7]. In this sense, the adoption of CSR strengthens the value and the performance of a company.

Consequently it is probable, based on the indications of this research, that already efficient businesses use CSR as a means to promote themselves, while at the same time they implement CSR practices that simultaneously promote their sustainable development.

REFERENCES


# TABLE APPENDIX

Table 1: The EPS index of businesses which have adopted CSR and are in the main market & of businesses which have not adopted CSR and are in the main market, for the entire period 2006-2012

<table>
<thead>
<tr>
<th>Company_Type</th>
<th>Count</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed company_CSR</td>
<td>314</td>
<td>5</td>
<td>-2.724</td>
<td>2.977</td>
<td>.135</td>
<td>.544</td>
<td>.067</td>
<td>314</td>
</tr>
<tr>
<td>Listed company</td>
<td>560</td>
<td>0</td>
<td>-1.348</td>
<td>1.927</td>
<td>.073</td>
<td>.314</td>
<td>.028</td>
<td>560</td>
</tr>
</tbody>
</table>

Mann-Whitney: p-value=0.005

Table 2: The ROE2 index of businesses which have adopted CSR and are in the main market & of businesses which have not adopted CSR and are in the main market, for the entire period 2006-2012

<table>
<thead>
<tr>
<th>Company_Type</th>
<th>Count</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed company_CSR</td>
<td>314</td>
<td>2</td>
<td>.000</td>
<td>9.403</td>
<td>1.603</td>
<td>1.528</td>
<td>1.163</td>
<td>314</td>
</tr>
<tr>
<td>Listed company</td>
<td>560</td>
<td>5</td>
<td>.005</td>
<td>45.712</td>
<td>2.181</td>
<td>4.464</td>
<td>1.039</td>
<td>560</td>
</tr>
</tbody>
</table>

Mann-Whitney: p-value=0.052

Table 3: The ROE2 index of businesses which have adopted CSR and are in the main market & of businesses which have not adopted CSR and are in the main market (before the economic crisis 2008-2009)

<table>
<thead>
<tr>
<th>Company_Type</th>
<th>Count</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed company_CSR</td>
<td>179</td>
<td>1</td>
<td>.000</td>
<td>9.403</td>
<td>1.667</td>
<td>1.594</td>
<td>1.267</td>
<td>179</td>
</tr>
<tr>
<td>Listed company</td>
<td>315</td>
<td>2</td>
<td>.007</td>
<td>20.884</td>
<td>2.110</td>
<td>3.784</td>
<td>1.976</td>
<td>315</td>
</tr>
</tbody>
</table>

Mann-Whitney: p-value=0.060

Table 4: The ROA index of businesses which have adopted CSR and are in the main market & of businesses which have not adopted CSR and are in the main market (after the economic crisis 2012-2013)

<table>
<thead>
<tr>
<th>Company_Type</th>
<th>Count</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed company_CSR</td>
<td>135</td>
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<td>-.394</td>
<td>.779</td>
<td>.096</td>
<td>.111</td>
<td>0.001</td>
<td>135</td>
</tr>
<tr>
<td>Listed company</td>
<td>241</td>
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<td>-.306</td>
<td>.293</td>
<td>-.016</td>
<td>.065</td>
<td>.040</td>
<td>241</td>
</tr>
</tbody>
</table>

Mann-Whitney: p-value=0.006

Table 5: The ROE index of businesses which have adopted CSR and are in the main market & of businesses which have not adopted CSR and are in the main market (after the economic crisis 2012-2013)

<table>
<thead>
<tr>
<th>Company_Type</th>
<th>Count</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed company_CSR</td>
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</tr>
<tr>
<td>Listed company</td>
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<td>0</td>
<td>-1.097</td>
<td>.447</td>
<td>-.035</td>
<td>.167</td>
<td>.042</td>
<td>241</td>
</tr>
</tbody>
</table>

Mann-Whitney: p-value=0.021

Table 6: The EPS index of businesses which have adopted CSR and are in the main market & of businesses which have not adopted CSR and are in the main market (after the economic crisis 2012-2013)

<table>
<thead>
<tr>
<th>Company_Type</th>
<th>Count</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed company_CSR</td>
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<td>4</td>
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<td>2.306</td>
<td>.033</td>
<td>.538</td>
<td>.005</td>
<td>135</td>
</tr>
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<td>Listed company</td>
<td>241</td>
<td>0</td>
<td>-1.180</td>
<td>1.927</td>
<td>-.022</td>
<td>.319</td>
<td>.041</td>
<td>241</td>
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</table>

Mann-Whitney: p-value=0.015