Correlation between social responsibility and efficient performance in Croatian enterprises

Neda Vitezić\textsuperscript{1}

\textit{Abstract}

The objective of the research is to establish if there is a correlation between efficiency and socially responsible business performance in Croatian enterprises. The research is based on the hypothesis that higher corporate efficiency affects social responsibility development in enterprises and vice versa, that socially more responsible corporate performance have a positive effect on efficiency. In their research, many authors have proved the correlation between social responsibility and financial performance, reputation of the enterprise and added value. Cases from transition countries, which transferred to market economy and focused on socially responsible management and sustainability, have not been the subject of research. The social responsibility concept implies balance between economic, ecological and social goals, which means distribution of assets on several actors, so it may be predicted that more efficient enterprises will sooner accept the sustainability concept and act more responsibly. Except for theoretical social responsibility hypothesis, the initial point in the empirical section is dynamic analysis of business activities of Croatian entrepreneurs in the period between 1993 and 2010, on the basis of which a sample of enterprises was chosen, which submit transparent reports on social responsibility. The main result obtained by univariate analysis confirms that socially more responsible enterprises have better financial results, i.e. they are more efficient, and also have better reputation. The research also had limitations in relation to qualitative determination of the social responsibility impact on efficiency. The conclusion is derived that there is a causal relationship between efficiency and social responsibility, i.e. higher efficiency level enables higher allocation of resources with the purpose of socially more responsible corporate performance and vice versa; socially responsible corporate performance have an impact on reputation and on improved efficiency, measured by financial indicators.

\textbf{Key words:} efficiency, social responsibility, sustainable Croatian economy

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1. Introduction

In the past decade, social responsibility as a concept has been a subject of interest for a great number of scientists and professionals, and it will undoubtedly become the main topic and corporate orientation point in the 21\textsuperscript{st} century, because the current tendency is to substitute classic liberal market relations with social relations. Namely, because of highly dynamic and complex environment, an enterprise as an entity can realise its mission, vision and objectives only by adapting to demands of the environment. The enterprise becomes a part of this complex environment, in which social component becomes increasingly significant, and debates on the new model of the so-called ‘social enterprise’ become broader (Gray, Owen, Adams, 1996). Social enterprise is described as a series of social contacts between members of a society and the society itself, i.e. it signifies a ‘moral person’ (Monks, Minow, 2004), which is also called ‘collectivist entity’ because it has rights, but performs with the purpose to satisfy social interests (Capaldi, N., 2005). Thus, an enterprise should not be oriented on economic objectives alone; it should take into account ecological and social norms, be cooperative, and uphold values such as “altruism, co-operation, trust, commitment and integrity” (Knez-Riedl, J., 2003).

The concept of a socially responsible enterprise is based on the stakeholder model, or the model which represents the interests of all stakeholders, both direct and indirect. The enterprise undertakes its actions primarily to meet the interests of the owners, employees and customers (primary stakeholders), but there is a necessary moral commitment to meet the interests of other direct (suppliers, business partners) and indirect stakeholders (local community, unions, the media, government, etc.). From the customers’ point of view, socially responsible corporate performance have a positive effect on satisfaction and loyalty (Helm, S., 2007, Sarstedt, M., and others, 2008). The remaining indirect stakeholders will rate the enterprise from the aspect of overall perception of its orientation to the society and the environment. Enterprises accept this concept voluntarily (European Commission’s Green Paper, 2001), and become aware that it increases their reputation and efficiency. Favourable reputation increases revenues and reduces operating costs, and thus represents financial benefit for the enterprise. Stakeholders tend to equalise reputation with the financial position of the enterprise and refunding. Thus, in literature, reputation is often pointed out as a valuable asset when it is connected with financial success (Roberts and Dowling, 2002; Eberl and Schwaiger, 2005; Rose and Thomsen, 2006; and Inglis, Morley, Sammut, 2006). It is debatable whether socially responsible corporate performance are just another marketing tool designed to attract customers in order to increase profit, i.e. whether this is just a PR invention (Frankental, P., 2001).

The subject of this research are socially responsible business performance and efficiency in the Croatian environment, i.e. whether more efficient enterprises are
also socially more responsible enterprises, and vice versa, does higher social responsibility have a positive effect on realised efficiency. In this process, efficiency is analysed through the financial aspect of performance, mostly through expressed profit and return on assets and equity, price-earnings and earnings per share. Global research confirm that socially more responsible corporate performance has a positive effect on financial results which measure corporate efficiency. They date back to the 1970’s, when over ten meta-analyses were compiled (Margolis, Elfenbein and Walsh, 2008). Results differ because of different theoretical foundations, different methodological approach, sample size, variables, time period, etc. Some scientists established a negative correlation between socially responsible and financial performance (Moore, 2001; Vance, 1975; Wright and Ferris, 1997), explaining that social responsibility represents cost for enterprises, which reflects negatively on profit. On the other hand, others established a positive correlation (Preston and O’Bannon, 1997; Ruf at al. 2001; Russo and Fouts, 1997; Simpson and Kohers, 2002; Waddock and Graves, 1997). They analyse social responsibility in the context of strategic advantage of an enterprise, because the decision to perform in a socially responsible manner induces sensibility in the public, which results in more significant impact on financial performance (revenue growth and cost reduction). Responsiveness towards the society mostly includes relationship to the environment, especially ecology. Customers prefer to buy products by socially responsible enterprises (Creyer and William, 1997; Mohr and Webb, 2005); the market also shows a positive correlation through the price-earnings and creates better image for bankars, investors, the government. (Spicer, 1978)

Such research have only just begun in Croatia, so the objective is to analyse business performance of Croatian economy in this transition period, and to analyse whether more efficient corporate performance stimulated some enterprises to achieve higher social responsibility level. Thus, the basic hypothesis was set - higher efficiency level stimulates enterprises to socially more responsible performance, and socially more responsible performance may improve efficiency and reputation of the enterprise, i.e.:

H1: higher efficiency level stimulates enterprises to socially more responsible performance

H2: socially more responsible performance may improve efficiency and reputation of the enterprise

The structure of the paper is such that research methodology is elaborated firstly. Conclusions are then derived based on empirical data on the current situation in Croatian economy with emphasis on efficiency, and enterprise sample is selected on the basis of this research. The statistical method is used to verify the correlation between efficiency and socially responsible corporate performance. Conclusions are derived and research limitations established based on the insights into the problem matter of the research and its results.
2. Methodological approach to the research

The issue of social responsibility in Croatian enterprises and its impact on efficiency, and vice versa, has not been the subject of research or publications. In the past few years, corporate social responsibility and stakeholder approach were mostly theoretical and conceptual research subject in Croatia (Sisek, B., 2001; Krkač, K., 2007; Omazić, M., A., 2007; Vitezić, N., 2008; Tafra-Vlahović, M., 2009; Gregory, A., Tafra-Vlahović, M., 2010; Krkač, K., Volarević, H., Josipović, M., 2011), and rarely from the economic causal aspect (Vitezić, N., 2011).

Social responsibility is a concept which invokes scientific debates. Basically, its definition is included in the theoretical debate on the purpose and objectives of the foundation if an enterprise and its performance have an active role in the formation of national economies. Furthermore, debates cover the issue of voluntary or legislative approach to social responsibility and limitations between the state, market or civil society. Practical and ideological implications on social responsibility research lead to even greater confusion, because the terms such as ‘sustainable development’, ‘corporate citizenship’, ‘stakeholder theory’ have not been sufficiently clarified. It is notable that the number of publications has been growing in the past ten years, but it is also true that research in this field have been present for over 30 years. However, it is also clear that there is no consensus, or a united stand, regarding socially responsible behaviour because new concepts emerge under various names, such as ‘corporate social performance’, ‘corporate social responsiveness’, ‘corporate social rectitude’. There are two approaches to the matter, Anglo-American and European. In the first, social responsibility is mostly defined as economic, legal, ethical and philanthropic corporate responsibility (Caroll, 1991, 1999), and in the second, as a concept based on ethical behaviour and contribution of the enterprise through the triple result – economic, ecological and social (triple-bottom line concept), which an enterprise wants to satisfy (Elkington, 1997). The terms ‘strategic philanthropy’ and ‘strategic social responsibility’ are also used, (Porter and Kramer, 2002, 2006), which indicates a shift in the perception of social responsibility.

The effect of social responsibility on corporate efficiency is most frequently analysed as a correlation between the results or certain effects in relation to investments and these are usually measured by financial indicators. Social responsibility is connected with corporate business performance from the previous period because it is estimated that the enterprises which realise greater return on assets or equity will be more motivated and able to make additional investments, which are to be expected if the enterprise is oriented towards higher social responsibility. Enterprises with lower profitability rate will, for justifiable reasons, have less possibilities and will be less willing to invest in socially responsible actions. Various research results regarding correlation of efficiency and corporate social responsibility are mostly
caused by different methodology and efficiency measures. However, most studies support positive correlation between corporate social responsibility and efficiency when it is measured by the usual financial indicators (ROA, ROE, ROS, P/E)\(^2\). For the purpose of this research, and for testing univariate correlation between social responsibility of certain selected enterprises and their efficiency, the used indicators were obtained through the Zagreb Stock Exchange. The sample consisted of two groups of enterprises; the first group includes enterprises which submit public reports on social responsibility (total of 22 enterprises), and the second group includes enterprises which do not report on social responsibility and it is assumed that they do not allocate funds for this purpose (total of 20 enterprises).

This research provides conceptual and empirical analysis of social responsibility of Croatian enterprises in the economic, legal, cultural and social environment and current practice. Taking into consideration historical heritage, it would be interesting to analyse the current social behaviour concept, which is a sociological and economic issue and is not the subject of this research. The subject of the research is efficiency of Croatian economy in the transition period, i.e. from the beginning of the privatisation process until present day, when some enterprises support sustainable development strategy, which also implies their social responsibility. This is why the starting point of the research is dynamic analysis for the period between 1993 and 2010, on the basis of which a conclusion is derived on the extent of improvements in Croatian economy in the transition period, and whether this could be a good basis for social responsibility concept development. Naturally, the research is limited on those enterprises which publicly express social responsibility performance through economic, ecological and social transparent reporting system. For this purpose, Croatian Business Council for Sustainable Development (HRPSOR) data are used, as well as data disclosed on web pages. Data from the Zagreb Stock Exchange are used for financial performance.

3. Efficiency of Croatian economy from 1993 to 2010

In the past eighteen years, Croatian economy has experienced significant changes: Croatian independence in 1991, privatisation and transfer to market economy. Such a significant transformation brought economic changes but also organisational, legislative, sociological and other changes. Economic changes reflected on business results of all legal entities, primarily through financial reporting.\(^3\) Significant

\(^{2}\) Return on Assets-ROA, Return on Equity-ROE, Return on Sales-ROS, Price/Earnings-P/E.

\(^{3}\) Analysis for the preceding period is based on information from financial statements which entrepreneurs (excluding banks, insurance companies and craftsmen) submitted to the Financial Agency (former SDK, ZAP, today FINA) over the years, in accordance with applicable accounting standards for each year.
changes were made in the above-mentioned period in accounting and other regulations (change of certain standards which influenced reporting, changes in classification criteria on the size of enterprises), as well as changes in the monetary unit (denomination)\(^4\), as well as slight decrease in value (inflation). This is why, for the purpose of this analysis, all the data were deflated by valid retail prices index\(^5\) and expressed in relative numbers. 1993 was analysed as the base year, considering the fact that application of accounting standards started this year, and this is the year in which relevant legislation was adopted (Accounting Act, Audit Act, Companies Act). The base year is also the year of very high inflation (over 16 times), but since 1995, the inflation rate has not exceeded 6.5%, i.e. 3.4% on average in the analysed period.

The changes are also evident in the number and structure of enterprises, industry structure, expressed financial performance and efficiency level. Thus, the number and structure of Croatian entrepreneurs significantly changed in relation to the period before independence and transfer to market economy. Namely, in the 1990’s, the share of small enterprises amounted 81.2%, medium-sized enterprises 13.3%, and large enterprises 5.5%, while the privatisation process and small entrepreneurship stimulation changed this structure in favour of small enterprises. Thus, in 2010, the share of large enterprises was reduced to only 0.4%, medium-sized enterprises to 1.4%, and small enterprises to 98.2%, which is partly caused by changes in the classification\(^6\). There are almost nine times more enterprises (96,758) than there were in the 1990’s (10,859). Most new enterprises were registered in the period between 1993 (35,595) and 1998 (62,050), which is visible in the following Chart:

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\(^4\) From 23-12-1991 to 29-05-2004, the valid curency was the Croatian dinar (HRD), and kuna was introduced from 30-05-1994 (KN) as instrument of payment on the territory of the Republic of Croatia, so denomination was conducted by division of the Croatian dinar by 1000 while disregarding the third decimal, i.e. 1000 HRD = 1,00 HRK.

\(^5\) Data used by the Central Bureau of Statistics reported in 2004 and 2011.

\(^6\) In 2005 and 2007, assets and revenues value was changed (NB).
From 2001, the tendency was constant growth of the total number of enterprises, especially small enterprises (growth of 180% in relation to 1993). Changes are also visible in the structure of industries, i.e. the number of enterprises in processing industry, mining industry, and electrical energy supply has been decreasing, as well as in trade, while the number of enterprises in financial and other service industries, as well as construction industry, has been increasing.

However, despite an increase in the number of entrepreneurs in the Republic of Croatia, some business results measured by physical and financial indicators do not have the same growth trend. In relation to 1993, the total number of employees was increased only by 7.7%, and there was evident decrease in the number of employees in large enterprises by 34.7%, and in medium-sized enterprises by 22.4%. Significant increase in the number of small enterprises in the analysed period also generated greater employment, so that, in relation to 1993, the number of employees increased by 167.1%. However, because of the crisis, the number of employees in small enterprises was reduced in the past three years and reached the level from 2006.

Although the number of large enterprises makes only 0.4%, they still employ a great number of employees (34%), like medium-sized enterprises, 18.5%, and the
The greatest number of employees works in small enterprises – 47.5%. However, it should be pointed out that only 2.1% of large and medium-sized enterprises employ 52.5% employees.

Figure 2: Dynamics of the number of employees

Source: Author’s calculation according to data by the FINA

In the period of 18 years, the number of enterprises which realised significantly higher revenues (by 12 times), but also expenses (by 10 times), in relation to 1993 was increasing. Declared profit was over 15 times higher, and losses over three times higher. However, consolidated financial result (realised net profit reduce by losses) is negative; i.e., Croatian economy as a whole realised losses in the first eight years, and significant shifts did not occur until 2001 to 2009, when the result was positive; i.e. there realisation of profit. The impact of financial crisis also reflected on Croatian economy, so the decreasing tendency of the positive financial result has been recorded since 2007.
Although the share of small enterprises is over 98%, large and medium-sized enterprises are the ones that make the basis of economic development considering the fact that they realise a significantly larger share of revenues and profit, and employ over 50% of employees. In 2010, small enterprises realised 43.7% of total losses in the economy. Large enterprises invested the most in new fixed assets – 56.2%. Medium-sized enterprises invested 13.4%, and small enterprises 30.4%.

The share of large and medium-sized enterprises in:
- the number of employees 52.5%
- realised revenues 66.7%
- realised profit 62.5%
- investments 69.6%

From the analysis of efficiency of the Croatian economy through expressed profit, i.e. indicators of return on assets and equity, it is notable that, until 2001, Croatian entrepreneurs generally operated at losses. Namely, the consolidated financial result was negative, which means that there were more enterprises which express losses than those earning profit. From 2001 to 2009, business performance was positive, but in 2010, small and medium-sized enterprises recorded losses (KN 6,511 mil.), so that, despite positive business performance of large enterprises (KN 4,848 mil.), negative financial result was recorded in the amount of KN 1,663 mil.
Reasons for lower efficiency, except for a number of other factors, were inefficiency of Croatian economy and insufficient asset turnover, especially of current assets. Namely, in 2010, it took 224 days on average for the turnover of current assets (in small enterprises, 283 days, medium-sized 217 and large 172 days). The problem lies in long-term lack of liquidity; during these eighteen years, it is evident that available funds hardly cover liabilities. Nonpayable liabilities grow every year, and by the end of 2010, they reached the level of 29.6 billion kunas. Receivables were collected every 90 days on average, and inventory turnover average was every 52 days. Large enterprises collected faster – every 80 days on average, and average number of days inventory in stock is 52 days, while the slowest turnover was recorded in small enterprises where average number of days of receivables outstanding was every 112 days, and inventory turnover was every 68 days.

Profitable corporate performance were realised in the period between 2001 and 2009, where average return on assets amounted 1.6%, and return on equity 3.4% on average. Large enterprises realised higher return – 2% on average on assets and 3.7% on equity. Medium-sized enterprises recorded the average rate of 1.4% on assets, and 3.3% on equity. Small enterprises recorded the worst results and were mostly unprofitable, except in the period from 2005 and 2009, when their average rate of return on assets was 1.5%, and on equity 4.9%.

Taking into consideration current business results, it is evident that in the past ten years, Croatian enterprises operate more efficiently and the conclusion is derived that conditions for socially responsible corporate actions were created in this period. Large enterprises have more efficient business activities and are more involved in the concept of corporate social responsibility. Following the world trends and fighting for competitiveness, Croatian enterprises started to accept the social responsibility concept and certain global guidelines. According to data provided by the Croatian Business Council for Sustainable Development (HRPSOR), only 39 enterprises were covered. However, there are also enterprises which are not formally included in the Council, and yet, they uphold social responsibility principles and have their own reports. Thus, the sample included 22 enterprises (14

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7 They are known under Global Reporting Initiative (GRI) reporting guidelines.
8 Croatian Business Council for Sustainable Development was founded in 1997 and presently comprises 39 enterprises. In cooperation with the Affiliation on Socially Responsible Corporate Actions of the Croatian Chamber of Commerce, the Social Responsibility Index is published. Rating criteria are the following: economic sustainability, inclusion of socially responsible corporate actions in the business strategy, work environment, environment protection, market relations and community relations (NB).
9 All statements, according to the GRI’s own concept, contain information on economic, ecological and social aspect of corporate performance and are available on the websites of some selected enterprises.
members of the Council and eight enterprises which are not, but do have social responsibility reports), which, in relation to Council members, makes over 56%. This is mostly the case with large enterprises (91%), and only 9% of medium-sized enterprises, while small enterprises are not included. The enterprises which do not show any social responsibility attributes made the second sample, i.e. a total of 20 enterprises was covered (90% of large enterprises, 5% of medium-sized and 5% of small enterprises). Since three most significant industries have been dominating in terms of business results in the past decade: processing industry, trade, and information and communication industry, the sample mostly covered these industries. A series of data published on the Zagreb Stock Exchange website from 2002 to 2010 were used to calculate financial indicators in order to measure efficiency.

4. Correlation between efficiency and corporate social responsibility – research results

Based on the determined fact that Croatian economy has become more efficient in the past 18 years, greater responsibility to ecological and social aspects of corporate performance may be expected. Based on the analysis of the business performance of Croatian entrepreneurs, higher efficiency was recorded in the past decade. Therefore, this period was selected for the analysis of correlation between efficiency and corporate social responsibility. Thus, the first hypothesis was set:

**H1: higher efficiency level stimulates enterprises to socially more responsible performance**

For this purpose the most frequently used efficiency indicators were selected: return on assets or ROA, return on equity or ROE, margin profit or MP, earnings per share or EPS and price per share or PPS. Data obtained by the Zagreb Stock Exchange were used for the period from 2004 to 2010. This is also the period in which Croatian enterprises recorded the best financial results. The used data referred to 22 enterprises which report on social responsibility, for which it was possible to find data for a nine-year period (from 2002 to 2010). The second series of data, from 2002 to 2010, referred to 20 enterprises whose data were published on the Zagreb Stock Exchange, but which do not report on social responsibility, so it is assumed that they do not allocate funds for individual social responsibility aspects.

Descriptive statistics results are the following:
Table 1: Descriptive statistics for overall sample

<table>
<thead>
<tr>
<th>Indicators</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>345</td>
<td>-.420</td>
<td>.354</td>
<td>.02880</td>
<td>.084684</td>
</tr>
<tr>
<td>ROE</td>
<td>345</td>
<td>-26.783</td>
<td>.893</td>
<td>-.03701</td>
<td>1.495423</td>
</tr>
<tr>
<td>MP</td>
<td>345</td>
<td>-1.322</td>
<td>.615</td>
<td>.03393</td>
<td>.155711</td>
</tr>
<tr>
<td>EPS</td>
<td>293</td>
<td>-305</td>
<td>1783</td>
<td>70.50</td>
<td>190.384</td>
</tr>
<tr>
<td>PPS_R</td>
<td>242</td>
<td>1</td>
<td>24117</td>
<td>1131.69</td>
<td>2396.540</td>
</tr>
</tbody>
</table>

Valid N (listwise) 211

Source: Author

ROA= return on assets
ROE= return on equity
MP= profit margin
EPS = earnings per share
PPS= price per share

Table 2: Descriptive statistics for enterprises with CSR reporting system

<table>
<thead>
<tr>
<th>Indicators</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>175</td>
<td>-.239</td>
<td>.354</td>
<td>.05622</td>
<td>.072738</td>
</tr>
<tr>
<td>ROE</td>
<td>175</td>
<td>-.633</td>
<td>.601</td>
<td>.10522</td>
<td>.138633</td>
</tr>
<tr>
<td>MP</td>
<td>175</td>
<td>-.819</td>
<td>.505</td>
<td>.07224</td>
<td>.117604</td>
</tr>
<tr>
<td>EPS</td>
<td>133</td>
<td>-110</td>
<td>1783</td>
<td>123.05</td>
<td>242.365</td>
</tr>
<tr>
<td>PPS_R</td>
<td>116</td>
<td>1</td>
<td>24117</td>
<td>1202.60</td>
<td>2666.543</td>
</tr>
</tbody>
</table>

Valid N (listwise) 92

Source: Author

Table 3: Descriptive statistics for enterprises without CSR reporting

<table>
<thead>
<tr>
<th>Indicators</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>170</td>
<td>-.420</td>
<td>.290</td>
<td>.00058</td>
<td>.087005</td>
</tr>
<tr>
<td>ROE</td>
<td>170</td>
<td>-26.783</td>
<td>.893</td>
<td>-.18343</td>
<td>2.118885</td>
</tr>
<tr>
<td>MP</td>
<td>170</td>
<td>-1.322</td>
<td>.615</td>
<td>-.00551</td>
<td>.178964</td>
</tr>
<tr>
<td>EPS</td>
<td>160</td>
<td>-305</td>
<td>819</td>
<td>26.82</td>
<td>116.487</td>
</tr>
<tr>
<td>PPS_R</td>
<td>126</td>
<td>18</td>
<td>14350</td>
<td>1066.41</td>
<td>2126.666</td>
</tr>
</tbody>
</table>

Valid N (listwise) 119

Source: Author
Average results of the selected indicators significantly differ in the case of enterprises which record their social responsibility through their reports, from the enterprises without reports, so it is assumed that they do not allocate funds for ecology and social needs. The values of certain indicators, such as ROA, amounts 5.6% on average with standard deviation of 7.9%, while the average value of this indicator is 0.06%, with standard deviation of 8.7% in enterprises which do not report on corporate social responsibility. Thus, business profitability measured by return on assets and return on equity, as well as margin profit, are much better in socially responsible enterprises which submit transparent reports. Likewise, capital market values their stocks more.

This research conducted on the sample of Croatian enterprises does not differ from the majority of similar researches around the world which confirm the correlation between financial performance results and corporate social responsibility. The obtained results indicate that more efficient enterprises are also socially more responsible, i.e. it is assumed that higher efficiency of corporate performance also enables more investments in the ecological and social needs. The set hypothesis was tested by the parametric and non-parametric method, and it is confirmed that there is significant difference in reporting profitability of enterprises with CSR and without CSR. The parametric method (T-test) indicates that the difference in arithmetic means between groups is statistically significant, i.e. in this case, arithmetic mean difference is significant for ROA, MP and EPS on the level of 1%, and it is statistically insignificant for EPS. The non-parametric test (Mann-Whitney test) applied for two independent samples measured by the ordinal scale, confirms that there is significant difference in ranks between enterprises with CSR and without CSR, for all analysed variables. This mean that these two distribution function differ with respect to median value.
Table 4: Independent sample test (T-test)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Levene's Test for Equality of Variances</th>
<th>test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>ROA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.248</td>
<td>,619</td>
<td>6,453</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>4,326</td>
<td>,000</td>
<td>329,062</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>4,283</td>
<td>,039</td>
<td>1,798</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1,773</td>
<td>,078</td>
<td>170,406</td>
</tr>
<tr>
<td>MP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>,341</td>
<td>,559</td>
<td>4,782</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>4,754</td>
<td>,000</td>
<td>290,820</td>
</tr>
<tr>
<td>EPS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>22,607</td>
<td>,000</td>
<td>4,444</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>4,194</td>
<td>,000</td>
<td>181,989</td>
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<tr>
<td>PPS_R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>,018</td>
<td>,894</td>
<td>4,441</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>,347</td>
<td>,663</td>
<td>219,783</td>
</tr>
</tbody>
</table>

Source: Author

However, reverse question is also posed, i.e. does the fact that enterprises are socially more responsible contribute to their achievement of better financial results. Thus, the following hypothesis was set:

\( H2: \text{socially more responsible performance may improve efficiency and reputation of the enterprise} \)

This thesis is supported by various research, but very few research managed to provide quantitative verification of this correlation. Although social responsibility has been a subject of research for almost 30 years, there is still no consistent and integral quantitative measuring metrics. Namely, there the problem occurs in the quantification of social responsibility attributes whose effects are expressed in a qualitative manner (for example, no violations of human rights, no litigations, no corruption, ensured health care, no emissions of harmful gases, established environmental management system, etc.). Socially responsible performance has a positive effect on the enterprise’s reputation as a valuable, but intangible part of the enterprise’s assets (Griffin, 2008). Social responsibility especially affects loyalty and satisfaction of customers, as well as other indirect stakeholders (society, unions, the media, etc.) (Helm, 2007, Sarsted et al, 2008). In the reputation assessment, one of the criteria is responsibility to ecology and society. Previous research (Vitezić,
N., 2011) has shown that management and administration rate product quality first on the list of reputation attributes, followed by labour force, vision and strategy of the enterprise, and financial results, while socially responsible and corporate management are rated last. On the other hand, customers rank product quality first, and social responsibility ranks second. This indicates that consumers are aware of the necessity to raise awareness on ecological and social issues and support business policy of the enterprises oriented on socially responsible performance. Thus, it is very likely, although quantitative measuring is impossible, that there is a correlation between social responsibility and efficiency, i.e. that socially more responsible enterprises will have greater turnover, in spite of the costs of socially responsible performance, that they will achieve greater benefits, which will improve their efficiency.

Ultimately, it was defined by qualitative analysis that 22 socially responsible enterprises submit public reports on their performance through an entire series of indicators; not only economic; also those which point out harmful effects to the environment (for example, emission of gasses, waste waters, use of energy, water, harmful materials, etc.), effects on society (labour relations, healthcare and work safety, education, human rights, corruption, etc.), which means that they allocate certain funds for this purpose. Research has shown that these enterprises achieve better financial results, which are used to measure business efficiency, so it is fairly certain that corporate social responsibility has a positive effect on efficiency and vice versa, that higher efficiency enables and stimulates corporate social responsibility.

5. Conclusion

This research confirms the set hypotheses – correlation between efficiency and social responsibility. Research results indicate that, predominantly large Croatian enterprises, which have been efficient and socially responsible in their business performance for a number of years, i.e. whose financial results measured by return on assets and equity, profit and price per share, are significantly better than those of enterprises which do not report their social responsibility. Therefore, it is assumed that they do not allocate funds for ecology or other social programmes and other social benefits. There is also reverse correlation; i.e. that social responsibility has a positive effect on efficiency of the enterprise, but its scientific quantification is more difficult. Prior research confirmed the effect of social responsibility on reputation

10 Social responsibility reports, pursuant to Global Reporting Initiative (GRI) methodology, or their own methodology, have been published on the website of individual enterprises and contain economic, ecological and social aspects of corporate actions expressed through quantitative and qualitative data.
and image of the enterprise, so it is very likely that this also reflects on the financial result and total efficiency of the enterprise. Social responsibility, as an integral part of sustainability of enterprises, appears as a challenge in the long run, but also a cry for change of the neoliberal approach in economics. Enterprise, as a key economic factor, which was rational, economic, and technical, becomes a social entity which should meet the demands of the environment. At the same time, this calls for changes in the management and business policy of enterprises which should focus on meeting the interests of all directly and indirectly connected entities. Such approach is the base for development of social responsibility concept which is not unambiguously defined, but, basically, represents a moral obligation of the enterprise management to synchronise economic growth with the needs of the environment, i.e. that, except for economic goals, it should also pursue ecological and social goals on the way to the valuable general sustainability goal. Except for moral responsibility, a precondition for application of the social responsibility concept are also efficient corporate actions. Social responsibility produces certain costs, but at the same time gains certain benefits. This is why there is a causal relationship between efficiency and social responsibility. The contribution of this research is verification of the fact that success of individual Croatian enterprises is not only the result of economic circumstances, but also of their orientation to socially responsible business policy and strategy. Likewise, results of this research confirm the set hypothesis and correspond to the majority of similar world research, which represents a contribution to the broader economic science. This research also has limitations; namely, it is necessary to include qualitative social responsibility variables which would confirm the hypothesis that socially responsible behaviour has a positive effect on business efficiency, which will be the point of assessment in future research. It should be pointed out that social responsibility in Croatia is still on voluntary basis and that very small number of enterprises participate in the CSR Index. Therefore, including certain social responsibility aspects in legislation should be considered.

References


Povezanost društveno odgovornog i efikasnog poslovanja u hrvatskim poduzećima

Neda Vitezić

Sažetak

Cilj je istraživanja utvrditi da li postoji korelacija između efikasnosti i društveno odgovornog poslovanja hrvatskih poduzeća. U istraživanju se pošlo od premise da veća efikasnost poduzeća ima utjecaja na stupanj razvijenosti društvene odgovornosti poduzeća i obrnuto da društveno odgovornije poslovanje pozitivno utječe na efikasnost. U istraživanjima više autora dokazana je veza između društvene odgovornosti i financijskog poslovanja, reputacije poduzeća, dodane vrijednosti. No, nisu istraživani slučajevi tranzicijskih gospodarstava koja se u relativno kratkom vremenu od prijelaza na tržišno gospodarstvo orijentiraju na društveno odgovorno gospodarenje i održivost kao krajnji cilj poduzeća. Koncept društvene odgovornosti podrazumijeva uravnoteženost ekonomskih, ekoloških i društvenih ciljeva, što znači raspodjelu sredstava na više sudionika pa se može pretpostaviti da će efikasnija poduzeća prije prihvatiti koncept održivosti i društveno odgovornije se ponašati. Pored teorijske osnove o društvenoj odgovornosti, polazište u empirijskom dijelu je dinamička analiza o poslovanju poduzetnika u Republici Hrvatskoj za razdoblje od 1993. do 2010. godine, temeljem koje je odabran uzorak onih poduzeća koja transparentno izvještaju o društvenoj odgovornosti. Glavni rezultat dobiven univariantnom analizom potvrđuje da poduzeća koja su društveno odgovornija imaju i bolje financijske rezultate, odnosno iskazuju veću efikasnost, te imaju i veću reputaciju. Postojala su i ograničenja u istraživanju a vezano za kvalitativno utvrđivanje utjecaja društvene odgovornosti na efikasnost. Zaključuje se postojanje međusobne uzročno-posljedične veze između efikasnosti i društvene odgovornosti tj. veća ostvarena razina efikasnosti omogućava i veća izdvajanja u cilju društveno odgovornijeg poslovanja i obrnuto, društveno odgovornijim poslovanjem utječe se na reputaciju a time i na bolju efikasnost poslovanja mjerenjem financijskih pokazateljima.

Ključne riječi: efikasnost, društvena odgovornost, održivo hrvatsko gospodarstvo

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