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DOES IT PAY OFF TO BE SOCIALLY RESPONSIBLE? EMPIRICAL EVIDENCE FROM LISTED COMPANIES

Today's companies are doing business in an environment that, in addition to the financial aspect, evaluates various aspects of their business. One of them includes the responsibility of a company to society as a whole. The main purpose of this paper is to investigate the impact of corporate social responsibility (CSR) on financial performance, which wil be measured using selected profitability ratios. Corporate social responsibility was measured by using a survey questionnaire, while for financial performance, secondary data (i.e., annual reports of investigated companies) were used. The questionnaire was addressed to the Chief Accounting/Financial Officer of Croatian listed companies. The results of correlation and regression analyses show a statistically significant positive association between CSR and financial performance.

Keywords: corporate social responsibility, financial performance, profitability ratios, listed companies, regression analysis.

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1. Introduction

According to Friedman (1962), the main purpose of corporate activity is to generate profit. However, in recent years, in addition to profit maximisation, there has been an increased focus on corporate social responsibility. According to Agarwal (2008), businesses depend on society for their existence as they receive inputs from the society (skilled/unskilled labour, raw material, etc.) and it is in their interest to take care of society.

Despite abundant literature on corporate social responsibility (CSR), there is not a generally accepted definition of this concept (Dahlsrud, 2008; Wood, 2010). The concept was perhaps most clearly defined by Carroll (1979: 499), who states that CSR "must embody the economic, legal, ethical, and discretionary categories of business performance." McWilliams and Siegel (2001:17) define CSR as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law", while the European Commission (2011) defines CSR as "the responsibility of enterprises for their impacts on society" and further emphasizes that enterprises should "have a process in place to integrate social, environmental, ethical human rights and consumer concerns into their business operations and core strategy in close cooperation with their stakeholders." Aguinis (2011:855) defines CSR as "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance."

Although it is obvious that corporate social responsibility contributes to a compan company's reputation, from the managerial point of view, the key issue is whether and to which extent such a concept contributes to the profitability of a company. Namely, as Cochran and Wood (1984) assert, if socially responsible activities were negatively correlated with financial performance, then managers would not want to pursue such activities, while on the other hand, if such activities were positively related, then management would pursue such activities and try to investigate such a relationship.

When investigating a possible CSR impact on financial performance, there are basically two opposite theories. The first is the one of neoclassical economists who state that CSR negatively influences the companies' financial performance (Waddock and Graves, 1997; Simpson and Kohers, 2002), as it uses the companies' scarce resources in activities which are not in line with the main purpose of the company, and that is to generate profit. That results in a competitive disadvantage. The second theory is stakeholder theory according to which CSR is positively associated with financial performance (Bowman and Haire, 1975; Wood, 1991), as investing in CSR contributes to a better reputation which eventually leads to a better financial result. Therefore, CSR benefits are long-term. Fombrun (1996) states that investment in corporate social responsibility becomes a strategic investment.

This paper adds to the existing literature by examining the connection between CSR and financial performance. An empirical study of the relationship between CSR and financial performance in Croatian listed companies was conducted. The study also examines the differences in CSR implementation according to company activities.

According to the results of the project "Accelerating CSR practices in the new EU member states and candidate countries as a vehicle for harmonization, competitiveness, and social cohesion in the EU" (UNDP Croatia March-May 2007), approximately 200 businesses in Croatia have integrated the concept of corporate social responsibility into their business.

2. Literature review

CSR, often referred to as corporate citizenship, corporate social performance (CSP) and sustainable responsible business, is in the focus of interest of management researchers and business practitioners (Akanbi and Ofoegbu, 2012:375). According to Waddock and Graves (1997), CSR measurement is a constant problem in research regarding corporate social responsibility. CSR can be measured by using two principal methods: reputation index (Moskowitz, 1972) and content analysis (Bowman and Haire, 1975). In the reputation index, "knowledgeable observers rate firms on the basis of one or more dimensions of social performance" (Cochran and Wood, 1984:43). This method has both advantages (the observer applies the same criteria to all companies observed) and disadvantages (possible subjectivity of the observer). The second method, i.e., content analysis, is the one in which "the extent of the reporting of CSR activities in various firm publications and especially in the annual report is measured" (Cochran and Wood, 1984:44). Once the variables in content analysis are chosen, the method is much more objective than the reputation index. However, "the choice of variables to measure is subjective" (Cochran and Wood, 1984:44). Akanbi and Ofoegbu (2012) and Hasan and Idris (2009) used a survey questionnaire to measure CSR.

The relationship between CSR and financial performance has been a subject of many studies but the results are mixed. One of the first studies on this relationship, conducted by Bowman and Haire (1975), showed that the firms with medium ratings for a degree of corporate social responsibility performed best. Similar results were obtained by Cochran and Wood (1984). They also maintain that the evidence of the relationship between CSR and financial performance is weak, to say the least. Published research has shown that there is no unambiguous association between corporate social responsibility and financial performance. Margolis and Walsh (2001) reported that among 95 observed studies, when treated as an independent variable, CSP has a positive relationship with financial performance in 42 studies, no relationship in 19 studies, a negative relationship in 4 studies, and a mixed relationship in 15 studies.

However, it is evident that the majority of research studies on the association between CSR and financial performance have demonstrated a positive relationship between these two variables (for example, Waddock and Graves, 1997; Hillman and Keim, 2001; Wood, 2010; Lin et al., 2009; Sun, 2012, Bai and Chang, 2015). Rettab et al. (2009), Arya and Zhang (2009), Uadiale and Fagbemi (2012), Ismail and Adegbemi (2013), and Kurapatskie and Darnall (2013) have also confirmed a positive correlation between CSR implementation and a company's financial performance.

The results of earlier studies conducted by Aupperle et al. (1985), McWilliams and Siegel (2000), Surroca et al. (2010) and Aras et al. (2010) did not show any association between corporate social responsibility and a company's financial performance (a neutral relation). Nelling and Webb (2009) proved the existence of a relationship between CSR and financial performance when using traditional ordinary least squares regression models. However, when using a fixed effects Granger causality approach, they found no evidence that CSR affects a firm's financial performance. Finally, there are several studies which have found a negative association between the two observed variables. This is explained by the fact that socially responsible companies have unnecessary costs that burden their financial results (Waddock and Graves, 1997), while on the other hand, managers may reduce investment in CSR in order to ensure short-term profits (Preston and O'Bannon, 1997).

Orlitzky et al.'s (2003) meta-analysis of 52 studies regarding CSP and financial performance showed that there is a small but positive association between CSP and financial performance, whereas the relationship is stronger for accounting-based measures than for market-based ones. In 2007, Margolis et al. repeated a meta-analysis on a sample of 167 studies and reported that the overall effect of social performance on financial performance is positive but minimal.

Research on the relationship between CSR and financial performance in Croatian companies is scarce. Vitezić (2011a) investigated the above-mentioned relationship in selected large Croatian companies and found that socially responsible companies have better financial performance. Vitezić (2011b) also conducted research on the relationship between selected companies' financial performance indicators (ROA, ROE, profit margin, earnings per share and price per share) and corporate social responsibility and found a positive relationship. Vitezić, Vuko and Morec (2012) used a sample of 42 large Croatian companies (22 that report and

20 that do not report on CSR activities) and concluded that companies with better financial results are more aware of their corporate social performance.

Research studies on the relationship between CSR and financial performance of a company can be divided into those that explore the short-run financial impact (abnormal returns) when firms engage in either socially responsible or irresponsible acts (Wright and Ferris, 1997; Teoh et al., 1999; Arya & Zang, 2009) and those which use measures of long-term financial performance, by using accounting or financial measures of profitability (Cochran and Wood, 1984; Aupperle et al., 1985).

One of the earlier research studies on the association between CSR and financial performance, conducted by Cochran and Wood (1984), used three ratios of financial performance: (1) the ratio of operating earnings to assets, (2) the ratio of operating earnings to sales, and (3) excess market valuation[1]. Saeidi et al. (2014) used the following ratios for determining the link between CSR and financial performance: ROE (return on equity), ROA (return on assets), ROI (return on investment), ROS (return on sales), sales growth, market share growth, net profit margin (NPM). Griffin and Mahon (1997), Waddock and Graves (1997) and Uadiale and Fagbemi (2012) used ROA and ROE, while Nelling and Webb (2009) and Sun (2012) used only one accounting indicator, i.e., ROA. Tsoutsoura (2004) and Aras et al. (2010) used ROA, ROE and ROS.

The control variable in this study is business activity of the company (Waddock and Graves, 1997). The companies were grouped according to the National Classification of Economic Activities. Although many studies have used company size as a control variable (e.g., Udayasankar, 2007; Aras et al., 2010, the Sun, 2012), it was not taken into account in this study since the companies listed on the Stock Exchange are mostly large companies.

After reviewing previous research studies on the link between financial performance of a company and the level of corporate social responsibility, it is evident that their results are inconclusive. When measuring financial performance, the authors start with the four most common measures (ROA, ROE, ROS and NPM), while corporate social responsibility is measured and tested as a one-dimensional construct. Thereby, the authors set two main (H1 and H2) and two auxiliary hypotheses (H1a and H1b):

H1: There is a positive relationship between the level of corporate social responsibility of Croatian listed companies and their financial performance.

H1a: There is a positive association between the level of corporate social responsibility of Croatian listed companies and profitability ratios (ROA, ROE, ROS, NPM), and

[1] EV = (market value of equity and book value of debt – total assets) / sales

H1b: There is a positive association between the level of corporate social responsibility of Croatian listed companies and accounting categories of revenue and profit.

H2: Companies vary in the degree of CSR implementation with regard to activity they do business in.

3. Methodology

3.1. Data collection methodology

Research studies on corporate social responsibility referring to the year 2014 was conducted on Croatian companies in the period from January to March 2015. The sampling frame was represented by the Croatian companies listed on the Zagreb Stock Exchange. According to the public announcement of the Official Register of Regulated Information (SRPI) of the Croatian Financial Services Supervisory Agency (HANFA), on 25 November 2014 there were 158 such companies. In other words, research is based on the sample made up of a publicly available list of listed companies[2]. From a research point of view, the target population is rather small (N = 158), and randomized sampling would be inappropriate for this study. The structured questionnaire addressed to the Chief Accounting Officer/Chief Financial Officer was sent to 158 companies by ordinary mail and by e-mail. The research framework did not include cities, companies in liquidation and delisted (unquoted) entities. The effective response rate was 50.63% (n = 80), which is considered highly satisfactory (14 and 66 questionnaires were returned by ordinary mail and by e-mail, respectively).

3.1.1. Sample description

The use of listed companies in exploring the link between CSR and financial performance in studies is common (e.g., Ducassy (2012) – 44 French listed companies; Uadiale and Fagbemi (2012) – 40 listed companies; Crisostomo et al. (2011) – 78 listed companies; Aras and Kutlu (2010) – 40 listed companies). In ad-

[2] Financial statements of listed companies in the Republic of Croatia referring to previous reporting periods are publicly available.

dition, research on CSR conducted in 2007 by the UNDP Croatia ("Accelerating CSR practices in the new EU member states and candidate countries as a vehicle for harmonization, competitiveness and social cohesion in the EU") has shown that this concept is used mostly by large and listed companies and foreign-owned companies and exporters. Table 1 provides an overview of the main characteristics of the sample.

Table 1.

DESCRIPTION OF THE SAMPLE

Variable		n	%
Company activity	Manufacturing	35	43.75
	Non-manufacturing	45	56.25
	Total	**80**	**100.00**
Head office according to NUTS II classification	Pannonian Croatia	57	71.25
	Adriatic Croatia	23	28.75
	Total	**80**	**100.00**
Respondent's position within the company	Chief financial/accounting officer	47	58.75
	Accounting personnel	24	30.00
	Controlling personnel	9	11.25
	Total	**80**	**100.00**
Highest level of educational attainment	Certificate below the bachelor level	12	15.00
	University and professional undergraduate study programme	5	6.25
	University graduate study programme	50	62.50
	Postgraduate specialist and PhD	13	16.25
	Total	**80**	**100.00**
Foreign ownership in the company	0%	51	63.75
	0.1 – 10%	11	13.75
	10.1 – 25.00%	3	3.75
	25.1 – 49.90%	3	3.75
	50% or more	12	15.00
	Total	**80**	**100.00**
Number of employees	Up to 250	38	47.50
	250-500	15	18.75
	501 or more	27	33.75
	Total	**80**	**100.00**

Source: Research results

The surveyed companies were grouped according to the location of their head offices using the NUTS II classification[3b] into those located in the Pannonian Croatia (71.25%) and the Adriatic Croatia (28.75%). The companies' head offices are located in 37 cities across Croatia. The largest number of head offices is located, as expected, in Zagreb (37.50%), followed by Rijeka and Varaždin with 5%, while other cities make up less than 5%.

In terms of the respondents'position within the company, they were divided into Chief Financial Officers or competent financial experts from the Accounting/Financial Department. The majority of questionnaires were filled in by Chief Financial Officers and Chief Accounting Officers (these categories account for 58.75% of the total number of surveyed companies), followed by accounting personnel (30%), while the remaining questionnaires (11.25%) were filled in by, for example, control officers, accounting advisors or an internal auditors.

As for the level of educational attainment, most respondents have completed a university graduate programme (M.Econ.) (i.e., 62.50%) and, on average, they have 15.5 years of work experience. With regard to the ownership in the company, more than half of the surveyed companies, i.e., 85% are entirely privately owned, while companies in which foreign ownership exceeds 50% constitute only a small percentage of the sample (15%).

The National Classification of Economic Activities 2007 was used to group companies according to their activities. Most companies are in the manufacturing industry (25%), followed by financial and insurance activities (16.3%). Companies involved in accommodation and food service activities comprise 15% of the surveyed companies, while 12.5% are involved in agriculture, forestry and fishing. Other activities make up 31.2%. For the purpose of our analysis, the surveyed companies were grouped into two categories: manufacturing and non-manufacturing companies. Manufacturing companies include operators involved in manufacturing, utilities, construction, water management, agriculture, fishing and forestry. The non-manufacturing group comprises trade and service operators and includes trade, financial and other services, transport and communications, hotels, restaurants and tourism. It is evident that non-manufacturing companies are more represented in the survey than manufacturing companies (56.3% vs. 43.8%, respectively).

[3] A new classification has been applied since 1 January 2013 (Croatian Bureau of Statistics), whereas 1 July 2013 is used for the purposes of the Cohesion Policy (since EU accession).

3.1.2. Questionnaire

The questionnaire was designed with the intention of testing and comparing the understanding and the level of companies' awareness of the concept of corporate social responsibility and the level of social responsibility of the same companies in their business from a financial perspective.

The questionnaire consists of two sections with a total of 32 questions. In addition to 20 general questions (A), the structured questionnaire contained 12 (B) business demography-related questions. The respondents' statements (A) were measured on a five-point Likert scale. The dependent and independent research variables of are explained below.

3.1.2.1. Dependent variables

A company's financial performance indicators represent the dependent variables. The source of accounting data on financial performance was the questionnaire, as well as the database *Poslovna Hrvatska* (www.poslovna.hr). Respondents who did not enter the financial performance data were asked to leave their company names so that researchers could look up and enter the missing data themselves. Accordingly, in this part of the dataset there is some missing data (Table 2), either because the respondents did not provide them or because the data for 2014 were not available until April 2015.

Financial performance is analysed using profitability ratios: ROE (return on equity), ROA (return on assets) and ROS (return on sales) and NPM, as well as the accounting categories of realised profit and annual revenue. These variables were chosen according to the theoretical framework of this research.

3.1.2.2. Independent variable – corporate social responsibility

Given previous research, it is evident that there is a methodological controversy in choosing the method for measuring social responsibility. The authors were in favour of one-dimensionality of the construct, which includes questions on all stakeholders in a company. Independent variables were taken from the questionnaire conducted by the European Commission in 2012 as part of the research "Flash Eurobarometer 363: How Companies Influence Our Society: Citizens'

View". The survey was created to investigate the perception of citizens about the impact of businesses on society as a whole. Six particles were used that constitute part of research in which the authors asked respondents to indicate, according to their opinion, the main positive impacts of companies on the society. Consequently, the study of CSR measurement was based on the above methodological assumption itself.

Six items were analysed to measure corporate social responsibility. *To what extent does your company generate benefits for society as a whole* (V16): (a) by paying taxes, (b) by creating new jobs, (c) by developing innovative products and services, (d) by contributing to economic growth, (e) by ensuring benefits for the local community, and (f) by providing training for your employees. All items were measured on a 5-point Likert scale, where 1 indicated complete disagreement with the proposed statements, and 5 indicated strong agreement.

3.2. Statistical analysis

In order to test the research proposition, several statistical methods were used. Factor analysis was deployed to test the structure of variables and assess the dimensionality of the construct being measured. In examining the correlation between manifest variables, we used Bartlett's test of sphericity, which should be statistically significant ($p < 0.05$), and the Kaiser-Meyer-Olkin (KMO) test. Fulgosi (1988: 277) states that Kaiser and Rice (1974) set the following scale for interpreting the KMO test: values around 0.9 – excellent, values around 0.8 – very good, values around 0.7 – good, values around 0.6, values around 0.5 – poor, and values under 0.5 – unacceptable.

Psychometric properties of the proposed construct being measured were also examined. In assessing the reliability of the construct and the dimensions of the measuring instrument, *internal consistency* was measured using Cronbach's reliability coefficient. In addition to the reliability coefficient, the inter-item correlations and the item-total correlation were measured. The *t- test* procedure for independent samples and ANOVA were used to test the difference between the average score on the level of corporate social responsibility in the company and business demography of the surveyed companies. Correlation and regression analysis tested the relationship of corporate social responsibility of companies and their financial performance indicators. The analysis of the collected data was conducted by using IBM SPSS Statistics 22.0 software.

4. Results and discussion

As the financial performance indicators are the dependent variables of this research, Table 2 describes the company in terms of the four ratios and two accounting categories.

Table 2.

THE SURVEYED COMPANIES' FINANCIAL PERFORMANCE RATIOS AND CATEGORIES

Financial performance ratios	n	Minimum	Maximum	Mean	Standard deviation
ROE (%)	74	-47.3	13.3	0.1	7.92
ROA (%)	74	-744.3	236.1	-5.5	92.76
ROS (%)	75	-277.9	28.4	-4.4	37.94
NPM (%)	75	-583.7	44.5	-12.9	79.94
RR (HRK)	69	3,040,700.0	22,294,000,000.0	1,129,296,981.0	2,996,154,988.00
CP (HRK)	69	-399,229,062.0	1,139,720,248.0	59,954,059.0	250,402,239.00

Source: Research results

2014 data were used for the financial performance ratios and categories of the surveyed companies as follows: return on equity (ROE), return on assets (ROA), return on sales (ROS), net profit margin (NPM) as the ratio of net income and revenues, realised revenue (RR) and current profit (CP).

Factor analysis was used to check the dimensionality of the construct of corporate social responsibility. The values in the correlation matrix for the six observed items are above 0.5, and the value of Bartlett's test of sphericity for the correlation matrix statistical significance is $\chi^2 = 179.94$ (df = 15, $p < 0.001$). The KMO test result is also satisfactory since it amounts to 0.852. One-dimensionality of the construct measured with six items was confirmed as all the items are loaded in one general factor that can be called *corporate social responsibility*, with factor loadings on items greater than 0.5 (Table 3).

Table 3.

FACTOR MATRIX – CORPORATE SOCIAL RESPONSIBILITY ITEMS

Items	Factors
V16d	0.890
V16f	0.833
V16c	0.818
V16b	0.731
V16e	0.687
V16a	0.539

Source: Research results

Table 4.

INTERNAL CONSISTENCY OF THE CONSTRUCT BEING MEASURED

		CSR
No. of items		6
Cronbach's alpha		0.847
Item average		3.895
Average inter-item correlation		0.477
Average item-total correlation		0.631
CSR scale	Average	23.37
	Standard deviation	4.815

Source: Research results

Factor analysis suggests that the measured construct is one-dimensional, which explains 57.63% of variance. Psychometric analysis of the measured construct shows its internal consistency since Cronbach's alpha is 0.847. The measured construct has an acceptable level of reliability (Cronbach's alpha > 0.8) as well as other psychometric properties (inter-item correlation > 0.4, item-total correlation > 0.6). The above procedures have shown that the measured construct can be considered reliable and one-dimensional. Based on the results, the proposed factor may be used as a manifest variable that was built as the average score of the mentioned variables.

Table 5.

NATIONAL CLASSIFICATION OF ECONOMIC ACTIVITIES 2007 AND THE AVERAGE FOR THE CSR SCALE OF THE SURVEYED COMPANIES

	N	Mean	Std. Deviation	Std. Error
Agriculture, forestry and fishing	10	3.68	0.8108	0.25639
Manufacturing	17	4.23	0.4928	0.11952
Electricity, gas, steam and air conditioning supply	1	5.00		
Construction	4	3.67	1.0985	0.54924
Wholesale and retail trade; repair of motor vehicles and motorcycles	8	4.29	0.5020	0.17748
Transport and storage	1	3.50		
Accommodation and food service activities	12	3.22	1.0525	0.30383
Information and communication	3	4.05	0.3859	0.22278
Financial and insurance activities	11	3.85	0.8180	0.24665
Professional, scientific and technical activities	1	4.17		
Other service activities	5	4.17	0.4714	0.21082
Total	73	3.89	0.8026	0.09393

Source: Research results

Table 6

CORRELATION MATRIX

		ROE	ROA	ROS	NPM	RR	CP	CSR
ROE	Pearson Correlation	1						
	Sig.							
	n	74						
ROA	Pearson Correlation	0.704***	1					
	Sig.	0.000						
	n	74	74					
ROS	Pearson Correlation	0.229**	0.427***	1				
	Sig.	0.050	0.000					
	n	74	74	75				
NPM	Pearson Correlation	0.119	0.343***	0.936***	1			
	Sig.	0.313	0.003	0.000				
	n	74	74	75	75			
RR	Pearson Correlation	0.034	0.071	0.096	0.073	1		
	Sig.	0.784	0.564	0.434	0.550			
	n	68	68	69	69	69		
CP	Pearson Correlation	0.127	0.301**	0.212*	0.135	0.620***	1	
	Sig.	0.303	0.013	0.080	0.270	0.000		
	n	68	68	69	69	69	69	
CSR	Pearson Correlation	0.097	0.248**	0.293**	0.312***	0.254**	0.267**	1
	Sig.	0.430	0.041	0.015	0.009	0.044	0.034	
	n	68	68	69	69	63	63	73
*** Correlation is significant at the 0.01 level (2-tailed)								
** Correlation is significant at the 0.05 level (2-tailed)								
* Correlation is significant at the 0.1 level (2-tailed)								

Source: Research results

CSR implementation was analysed in relation to a company's activity. Table 5 compares the average ratings of CSR practices grouped according to the activities ($F = 1.957$, $p > 0.05$), while Table 6 shows these ratings grouped into manufacturing and non-manufacturing ($t = 1.09$, $df = 71$, $p > 0.05$) activities.

Table 7.

THE AVERAGE FOR THE CSR SCALE AND A BREAKDOWN OF COMPANIES BY TYPE OF ACTIVITY

Activities	N	Mean	Std. Deviation	Std. Error Mean	t-test for Equality of Means
Manufacturing	32	4.0	0.74	0.1299	$t = 1.086$, $df = 71$, $p > 0.05$
Non-manufacturing	41	3.8	0.85	0.1327	

Source: Research results

Whatever course is taken to analyse business activities, the companies are homogeneous in terms of the application of CSR practices and activities; in other words, statistically significant differences have not been found; hence, the hypothesis H2 is rejected. Thus, it is possible to conclude that the surveyed companies use CSR equally regardless of the activity they perform, and further differences in companies with regard to this variable were not tested.

The analyses and results described above meet all requirements for testing the research hypotheses set in this paper. Pearson's correlation coefficient was used to assess the relationship between financial performance and CSR (Table 7).

The association between the variable *corporate social responsibility* and financial performance ratios and categories of the companies is positive and statistically significant for all indicators except for ROE. Correlation analysis was used to determine the magnitude and direction of the relationship between the variables. Based on the established association and the value of the predictor variable, regression analysis predicts the values of the dependent variables.

Table 8.

REGRESSION MODEL COEFFICIENTS

Dependent variables	r	r^2	F	Unstandardized Coefficients		Standardised Coefficients Beta	sig.
				B	Standard Error		
ROE	0.097	0.009	0.63	11.241	14.159	0.097	0.430
ROA	0.248	0.062	4.325	2.448	1.177	0.248	0.041**
ROS	0.293	0.086	6.285	13.846	5.523	0.293	0.015**
NPM	0.312	0.097	7.238	37.306	13.867	0.312	0.009***
RR	0.254	0.065	4.211	608,649,753,665	296,591,549,609	0.254	0.044**
CP	0.267	0.071	4.689	101,886,742,874	47.052,588,803	0.267	0.034**

*** statistically significant predictor ($p < 0.01$)

** statistically significant predictor ($p < 0.05$)

Source: Research results

Regression analysis was performed where the independent variable was the use of *corporate social responsibility* and the dependent variables were tested one after another as listed in Table 7. In other words, when testing the hypotheses, only one variable was identified as independent, while the other six variables were dependent variables. Table 8 shows the results of simple regression analysis, in which individual parameters of financial performance and the use of CSR were looked at, and the calculation and assessment of the regression coefficient.

According to the results of correlation analysis, the impact of predictors on the dependent variable was assessed as statistically significant for all of the observed dependent variables except for ROE ($p > 0.05$). If the coefficient of determination and significance of set models are compared, it can be noticed that the coefficient of determination is highest when NPM is set as the dependent variable ($r^2 = 0.097$, $F = 7.238$, $p < 0.01$), and for this model it can be concluded that almost 10% of variation (9.7) in financial performance of companies measured by NPM is the result of variation in the level of implementation of corporate social responsibility practices. In terms of the magnitude of the determination coefficient, the regression model, in which ROS was set as the dependent variable ($r^2 = 0.086$, $F = 6.285$, $p < 0.05$), comes next. In the remaining models, in which the impact of CSR on dependent variables has been assessed as significant (RR, CP and ROA), the determination coefficient ranges between 5 and 10%.

Based on the results, the following conclusions have been drawn about the hypotheses:

Research hypotheses		Decision on the formulated hypotheses
H1	CSR → Financial performance	Partially not rejected
H1a	CSR → Profitability ratios	Partially not rejected
H1b	CSR → Account categories	Not rejected
H1c	CSR → Company activity	Rejected

Although the results of correlation and regression analyses show a statistically significant positive association between CSR and financial performance, the *magnitude* of the variable *corporate social responsibility* is questionable due to low coefficients of determination. Considering its limitation to multiple dependent variables, regression analysis was conducted as a simple regression analysis in which the impact of other variables that may affect financial performance has not been tested.

Therefore, the obtained results (r^2) were to a certain extent expected, given that in exploring the link between CSR and financial performance, there are many variables that intervene. Ullman (1985) even states that because of those intervening variables, the relationship between CSR and financial performance does not exist.

5. Conclusion

The aim of this research was to determine whether there is a relationship between the level of corporate social responsibility of Croatian listed companies and their financial performance, and if so, what kind of relationship that is. A structured questionnaire was used, and the results showed a statistically significant positive association between CSR and financial performance (H1) of companies measured by profitability ratios ROA, ROS and net profit margin (H1a). One ratio (ROE) did not show any statistically significant association between CSR and financial performance of the company although the results of regression and correlation analyses do not contradict the proposed hypotheses with their positive values (H1a). The amendments to the Ordinance on the structure and content of annual financial statements (OG No. 38/08, 130/10) abolished the item of loss above the equity value. Thus, the total loss is reported exclusively as liabilities for the year and accumulated loss regardless of whether its value is below the value of assets (the sum of positive items of capital and reserves) or the loss exceeds the value of capital. In the latter case, the item capital and reserves will be in the negative, the sum total of the liabilities will be lower, because the balance sheet will be balanced "mathematically" so that the loss above the equity value is reduced by the remaining liability items (liabilities, deferred revenue and long-term provisions) (Jurić, 2010: 31) which is in line with the Fourth Directive of the EU.

This study has also showed a positive association between the level of corporate social responsibility of Croatian listed companies and accounting categories of revenue and profit (H1b). Furthermore, it was also tested whether there was any difference in the level of CSR implementation with regard to activity the company does business in. However, this connection has not been proven so that companies are homogeneous in the implementation of CSR (H2).

Generally, it could be concluded that this study follows the conclusions of other research, which demonstrate the positive relationship between CSR and financial performance (for example, Lin et al., 2009; Wood, 2010; Sun, 2012; Vitezić 2011a and 2011b). Large corporations, whose securities are listed on the stock exchange, generally show better results in the implementation of corporate social responsibility, but they also record better financial results (measured by ROA, ROE, ROS, and NPM) than companies in which the implementation of corporate social responsibility is weaker. The paper explains and confirms the fact that the success of a company does not depend solely on financial indicators, but also on corporate social responsibility.

Since it is important for managers to know that the use of CSR contributes to the profitability of a company, this conclusion could be useful for them in making decisions related to corporate social responsibility. As stated by Orlitzky et al. (2003: 426), if "managers believe that CSP is an antecedent of CFP, they may eventually actively pursue CSP because they think the market will reward them for doing so." Moreover, corporate social responsibility should be incorporated in the business strategy of each company as well as their annual reports.

Research limitations

It should be mentioned that this study has several limitations. First, one must be cautious when interpreting the results of this study because the association between CSR and financial performance may be caused by some other factors. Nelling and Webb (2009) also raise an interesting question: "Does good financial performance cause a firm to become more socially responsible, or does a high level of CSR leads to subsequent superior financial performance?"

Therefore, the obtained results (r^2) were to some extent expected, given that in exploring the link between CSR and financial performance, there are many variables that intervene. Ullman (1985) even states that because of those intervening variables the relationship between CSR and financial performance does not exist.

In future research, it would be desirable to measure the impact of other variables of the business entity on corporate financial performance, i.e., other financial ratios/categories that can be linked to financial performance (e.g., investment ratios - earnings per share, dividend per share, dividend payout ratio, the price-earnings ratio and the dividend yield); variables observed from the managerial perspective (quality of products/services, processes, cost management system, quality management system, etc.), as well as other business demography data. Furthermore, based on the results of this research authors suggest European Commission to conduct a research on socially responsible business, where companies will be used as respondents. For such research, it is appropriate to use an adapted measuring instrument, as the one that has been tested in this paper.

A potential problem with this research lies in the fact that it included data for one observation year only. Hence, what is recommended is longitudinal monitoring of the connection of both measurable financial and other components of the company with the level of its CSR implementation.

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REFERENCES

1. Agarwal, S. K. (2008). Corporate Social Responsibility in India. New Delhi: Response Books.
2. Aguinis, H. (2011). “Organizational responsibility: Doing good and doing well“, APA handbook of industrial and organizational psychology, (3), 28: 855-879.
3. Akanbi, P. A., Ofoegbu, O. O. (2012). “Impact of Corporate Social Responsibility on Bank Performance in Nigeria”, Journal of US-China Public Administration, (9), 4: 374-383.

4. Aras, G., Aybars, A., Kutlu, O. (2010). "Managing corporate performance: Investigating the relationship between corporate social responsibility and financial performance in emerging markets", International Journal of Productivity and Performance Management, (59), 3: 229-254.
5. Arya, B., Zhang, G. (2009). "Institutional reforms and investor reactions to CSR announcements: evidence from an emerging economy", Journal of Management Studies, (46), 7: 1089-1112.
6. Aupperle, K. E., Carrol, A. B., Hatfield, J. D. (1985). "An empirical examination of the relationship between corporate social responsibility and profitability", Academy of Management Journal, (28), 2: 446-463.
7. Bai, X., Chang, J. (2015). "Corporate social responsibility and firm performance: The mediating role of marketing competence and the moderating role of market environment", Asia-Pacific Journal of Management, (32), 2: 505-530.
8. Bowman, J. E., Haire, M. A. (1975). "A strategic posture toward corporate social responsibility", California Management Review, (18), 2: 45-58.
9. Carrol, A. B. (1979). "A three-dimensional conceptual model of corporate performance", The Academy of Management Review, (4), 4: 497-530.
10. Cochran, P. L., Wood, R. A. (1984). "Corporate Social Responsibility and Financial Performance", Academy of Management Journal, (27), 1: 42-56.
11. Crisostomo, V. L., Freire, F., Vasconcellos F. (2011). "Corporate social responsibility, firm value and financial performance in Brazil", Social Responsibility Journal, (7), 2: 295-309.
12. Dahlsrud, A. (2008). "How Corporate Social Responsibility is Defined: an Analysis of 37 Definitions", Corporate Social Responsibility and Environmental Management, (15), 1: 1-13.
13. David, L. W., Phil, V. (2005). Corporate social responsibility: An examination of leader morality as antecedent. Proceedings from the Annual Meeting of the Christian Business Faculty Association. San Diego, C.A.: Point Loma Nazarene University.
14. Ducassy, I. (2012). "Does Corporate Social Responsibility Pay Off in Times of Crisis? An Alternate Perspective on the Relationship between Financial and Corporate Social Performance", Corporate Social Responsibility and Environmental Management, (20), 3: 157-167.
15. Eerma, D., Friedrich, P., Mošnja-Škare, L. (2012). "Standardni okvir društveno odgovornog računovodstva – mogućnosti integracije u tradicionalni računovodstveni sustav institucija visokog obrazovanja", Ekonomska misao i praksa, (21), 1: 279-314.
16. European Commission. "Corporate Social Responsibility: a new definition, a new agenda for action", accessed February 19, 2016, http://europa.eu/rapid/press-release_MEMO-11-730_en.htm
17. European Commission. "Flash Eurobarometer 363. How Companies Influence Our Society: Citizens' View", TNS Political & Social, April 2013. accessed October 2015, http://ec.europa.eu/public_opinion/flash/fl_363_en.pdf

18. Fauzi, H., Idris, K. (2009). "The Relationship of CSR and Financial Performance: New Evidence from Indonesian Companies", Issues in Social and Environmental Accounting, (3), 1: 66-87.
19. Fombrun, C. (1996). Reputation: Realizing Value from the Corporate Image. Boston: Harvard Business School Press.
20. Friedman, M. (1962). Capitalism and freedom. Chicago: University of Chicago Press.
21. Griffin, J. J., Mahon, J. F. (1997). "The corporate social performance and corporate financial performance debate: twenty-five years of incomparable research", Business and Society Review, (36), 1: 5-31.
22. Hillman A, Keim G. (2001). "Shareholder value, stakeholder management, and social issues: what's the bottom line?", Strategic Management Journal, (22), 2: 125-139.
23. Ismail, F.O., Adegbemi, O. (2013). "Does Corporate Social Responsibility Improve Financial Performance of Nigerian Firms? Empirical Evidence from Triangulation Analysis", Acta Universitatis Danubius Œconomica, (9), 3: 22-36.
24. Izmjene i dopune Pravilnika o strukturi i sadržaju godišnjih financijskih izvještaja (NN, br. 38/08. – 130/10. i dalje), November 2010. accessed October 2015, http://www.fina.hr/lgs.axd?t=16&id=11529, http://www.fina.hr/lgs.axd?t=16&id=16833.
25. Jurić, Đ. (2010). "Gubitak iznad visine kapitala", Računovodstvo, revizija i financije (RRIF), (20), 5: 31-34.
26. Kapoor, S., Sandhu, H. S. (2010). "Does it Pay to be Socially Responsible? An Empirical Examination of Impact of Corporate Social Responsibility on Financial Performance", Global Business Review, (11), 2: 185-208.
27. Kurapatskie, B., Darnall, N. (2013). "Which corporate sustainability activities are associated with greater financial payoffs?", Business Strategy and the Environment, (22), 1: 49-61.
28. Lin, C. H., Yang, H. L., Liou, D. Y. (2009). "The impact of corporate social responsibility on financial performance: Evidence from business in Taiwan", Technology in Society, (31), 1: 56-63.
29. Margolis, J. D., Elfenbein, H. A., Walsh, J. P. (2007). Does it pay to be good? A meta-analysis and redirection of research on the relationship between corporate social and financial performance. Working Paper. Michigan: Ross School of Business - University of Michigan.
30. Margolis, J. D., Walsh, J. P. (2001). People and profits? The search for a link between a company's social and financial performance. Mahwah, NJ: Lawrence Erlbaum Associates.
31. Mathews, M. R. (1984). "A Suggested Classification for Social Accounting Research", Journal of Accounting and Public Policy, (3), 3: 199-221.
32. McWilliams, A., Siegel, D. (2000). "Corporate social responsibility and financial performance: correlation or misspecification?", Strategic Management Journal, (21), 5: 603-609.

33. Moskowitz, M. (1972). "Choosing socially responsible stocks", Business and Society, (1), 1: 71-75.
34. Nelling, E., Webb, E. (2009). "Corporate social responsibility and financial performance: the "virtuous circle" revisited", Review of Quantitative Finance and Accounting, (32), 2: 197-209.
35. Orlitzky, M., Schmidt, F. L., Rynes, S. L. (2003). "Corporate Social and Financial Performance: A Meta-analysis", Organization Studies, (24), 3: 403-441.
36. Preston, L. E., O'Bannon, D. P. (1997). "The corporate social-financial performance relationship: a typology and analysis", Business and Society, (36), 4: 419-429.
37. Rettab, B., Brik, A., Mellahi, K. (2009). "A study of management perceptions of the impact of corporate social responsibility on organizational performance in emerging economies: The case of Dubai", Journal of Business Ethics, (89), 3: 371-390.
38. Saeidi, S., Sofian, S., Saeidi, P., Parisa Saeidi, S., Alireza Saeidi, S. (2015). "How does corporate social responsibility contribute to firma financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction", Journal of Business Research, (68), 2: 341-350.
39. Servaes, H., Tamayo, A. (2013). "The impact of corporate social responsibility on firm value: The role of customer awareness", Management Science, (59), 5: 1045-1061.
40. Sun, L. (2012). "Further evidence on the association between corporate social responsibility and financial performance", International Journal of Law and Management, (54), 6: 472-484.
41. Surroca, J., Tribo, J. A., Waddock, S. "Corporate responsibility and financial performance: The role of intangible resources", Strategic Management Journal, (31), 5: 463-490.
42. Swati Chauhan, A. (2014). "A Relational Study of Firm's Characteristics and CSR Expenditure", Procedia Economics and Finance, (11), 23-32.
43. Teoh, S. H., Welch, I., Wazzan, C. P. (1999). "The Effect of Socially Activist Investment Policies on the Financial Markets: Evidence from the South African Boycott", Journal of Business, (72), 1: 35-89.
44. Tsoutsoura, M. (2004). Corporate social responsibility and financial performance: the "virtuous circle" revisited. Working Paper Series, No. 7. Berkeley: University of California.
45. Uadiale, O. M., Fagbemi, T. O. (2012). "Corporate Social Responsibility and Financial Performance in Developing Economies: The Nigerian Experience", Journal of Economics and Sustainable Development, (3), 4: 44-54.
46. Udayasankar, K. (2007). "Corporate social responsibility and firm size", Journal of Business Ethics, (83), 2: 167-75
47. UNDP-a Hrvatska."Ubrzanje praksi društveno odgovornog poslovanja u novim zemljama članicama EU i zemljama kandidatkinjama kao sredstvo usklađivanja, konkurentnosti i društvene kohezije u EU", accessed February 26, 2016, http://www.undp.hr/upload/file/205/102973/FILENAME/DOP_hr.pdf

48. Ullmann, A. A. (1985). "Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U.S. firms", The Academy of Management Review, (10), 3: 540–57.
49. Vitezić, N. (2011a). "Corporate Reputation and Social Responsibility: An Analysis of Large Companies in Croatia", International Business & Economics Research Journal, (10), 8: 85-96.
50. Vitezić, N. (2011b). "Correlation between social responsibility and efficient performance in Croatian enterprises". U: Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu vol. 29, No. 2, Rijeka: Ekonomski fakultet u Rijeci, str. 423-442.
51. Vitezić, N., Vuko, T., Morec, B. (2012). "Does Financial Performance Have an Impact on Corporate Sustainability And CSR Disclosure - a Case of Croatian Companies", Journal of Business Management, (13), 5: 40-47.
52. Waddock, S., Graves, S. (1997). "The corporate social performance – financial performance link", Strategic Management Journal, (18), 4: 303-319.
53. Wood, D. J. (1991). "Corporate social performance revisited", Academy of Management Review, (16), 4: 691-718.
54. Wood, D. J. (2010). "Measuring corporate social performance: A review", International Journal of Management Reviews, (12), 1: 50-84.
55. Wright, P., Ferris, S. P. (1997). "Agency conflict and corporate strategy: The effect of divestment on corporate value", Strategic Management Journal, (18), 1: 77-83.

ISPLATI LI SE BITI DRUŠTVENO ODGOVORAN? EMPIRIJSKI PODACI IZ KOTIRAJUĆIH PODUZEĆA

Sažetak

Današnja poduzeća posluju u okruženju koja, osim financijskog aspekta, vrednuju različite aspekte vlastitog poslovanja. Jedan od njih uključuje i odgovornost poduzeća prema društvu u cjelini. Glavna svrha ovog rada je istražiti utjecaj društveno odgovornog poslovanja (DOP) na financijsku uspješnost poslovanja poduzeća koja će biti mjerena omjerima profitabilnosti. Društveno odgovorno poslovanje mjereno je pomoću istraživačkog upitnika, dok su za financijsku uspješnost korišteni sekundarni podaci (tj. godišnja izvješća istraživanih poduzeća). Upitnik je bio upućen voditeljima računovodstva/financijskim direktorima kotirajućih poduzeća. Rezultati korelacijske i regresijske analize pokazuju statistički značajnu pozitivnu povezanost između društveno odgovornog poslovanja i financijske uspješnosti.

Ključne riječi: društvena odgovornost, financijska uspješnost, omjeri profitabilnosti, listajuća (kotirajuća) poduzeća, regresijska analiza.