



SUSTAINABILITY REPORTING OF LISTED COMPANIES ON THE BELGRADE STOCK EXCHANGE

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Abstract:

This research is a contribution to the existing literature regarding sustainability and environmental reporting in Serbia. The goal is to emphasize sustainability reporting quality of the Belgrade Stock Exchange companies during the year 2017. Data from companies' web sites and sustainability reports and other documents are taken into analysis. The analysis was done using content method. The sample comprised the Belgrade Stock exchange companies for which CSR (corporate sustainability index) was created. The average value of this index is far below its value in countries with developed financial markets. The societal goal of this research is to increase Serbian managers' and policyholders' awareness regarding sustainability issues in order to increase qualitative and quantitative information reported by companies.

Keywords:

sustainability reporting, CSR index, reporting, non-financial information.

INTRODUCTION

Natural resources have enormous influence on the development of countries and the region, and on the allocation of production activities and factories. They also have an effect on characteristics of trade and development of international trade.¹ The quality of new applied solutions for the allocation of production as a result of using natural resources increases work productivity. Humans fight with nature and obtain excellent results which are materialized in improvement of production strengths. This, in turn, decreases the dependence on natural resources.² Technology development in agriculture decreases the cyclical movement of agricultural production and increases the return; new artificial raw materials decrease the dependence on non-renewable resources; the development of transportation and construction technology bridges distances.³ Contemporary development of society requires sustainability principles to be applied when material and energy resources are used. This leads to recycling of material and usage of alternative sources of energy. Serbia is involved in the circular economy process and waste management initiatives developed at the EU level.⁴ Putting all of the above into the context of our topic, we assume that Serbian companies will be frequently required to report data on sustainability, recycling and nature preservation, not only to comply with domestic reporting requirements, but to comply with EU regulations as well. If sustainability information is more included into regular management report or presented in footnotes that accompany financial statements, better quality of CSR re-

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- 1 Stanić, M., 2012. *Javne mjere i instrumenti u politici zaštite životne sredine*. Bijeljina, Univerzitet Sinergija.
- 2 Babić, B., 2012. *Zaštita stanovništva i imovine u vanrednim situacijama*. Bijeljina, Univerzitet Sinergija.
- 3 Simeunović, V., Lukić, M. & Stojanović, B., 2012. *Uloga lokalnih zajednica u poboljšanju sistema energetske efikasnosti*. Bijeljina, Univerzitet Sinergija.
- 4 GIZ. 2016. *Cirkularna ekonomija kao šansa za razvoj Srbije*, Beograd. Available at: <http://www.osce.org/sr/serbia/292311> [Accessed 24th of September 2017].



porting will be achieved. We hope that the new EU Directive 2014/95 about non-financial information will be translated into Serbian law in the near future and this, in turn, will force Serbian companies to become more accountable for sustainability than before the issuance of this Directive.

The paper has been divided into four parts. Firstly, literature review regarding CSR is presented, followed by sample description and methodology of the research. In the third part, the research results are presented. The last section reviews the results obtained through statistical analysis and raises future research questions.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Many academic studies have tried to show that corporate social and environmental responsibilities statistically correlate with company's financial performance measures, such as profitability, leverage, liquidity, total capital employed and the like.

Mwangi and Jerotich did a research using financial information from companies listed on the Nairobi Stock Exchange. They have arrived at the conclusion that CSR score and ROA are positively correlated. The correlation was quite strong. On the contrary, they found that insignificant positive relationship exists between CSR and other performance measures.⁵ Mwangi and Jerotich applied content analysis to their research. The Nairobi Stock Exchange companies from manufacturing, construction and allied sectors were taken into analysis. The research is cross-sectoral which makes the results more objective.

In 2014, Juhmani found that reporting on environmental and social aspects of business via web sites can be correlated with size, profitability, firm age, audit firm size and financial leverage.⁶ Content and statistical analysis is applied on the sample of the Bahrein stock exchange companies. The study has shown that audit firm size and leverage are positively associated with voluntary social and environmental information disclosure.

Rodriguez-Fernandez tried to make correlation between CSR reporting and financial performance in her study.⁷ Companies from Madrid Stock Exchange showed positive reactions in both ways – socially responsible companies were profitable in the observed period and profitable companies demonstrated responsibility regarding social aspects of business. To conclude, the study reveals that increased business performance of a company leads to social benefits.

A research done in Serbia showed that ecological and social aspects of businesses are neglected by companies that operate with hazardous substances.⁸ The research was done on the sample of companies from the energy sector, cement manufacturers and petrochemical companies. The results demonstrate that there is a lack of systemic approach when reporting about environmental information.

Mijatović and Stokić (2010) conducted a survey of Serbian companies from various sectors in order to show the difference between reporting on social, environmental and other issues in economy in transition. They showed that having ISO 9000 and ISO 14000 certificates and better corporate ethical practices had an influence on corporate sustainability practice of Serbian companies.⁹ Multinational companies have developed CSR practice more than Serbian companies. Internal management rules and regulations influenced CSR reporting more than ISO standards implemented in companies.

Čeha finds that socially responsible companies are at the same time leaders in the business quality area.¹⁰

Čibukić demonstrates that corporate social responsibility in contemporary economy is business philosophy that has been adopted since the last quarter of the 20th century.¹¹

Stojanović (2015) finds that environmental reporting form in Serbia is influenced by characteristics of companies and context in which they operate.¹² The form of environmental reports needs to be further developed.

Jakovljević shows that entities are quite persistent in defending their status quo. There are many advantages of corporate social responsibility reporting. For example, strategic social reporting increases good organisational characteristic of companies.¹³ Corporate responsibility as strategic determination of business increases financial performance of company, decreases some costs, reinforces ethical behaviour and job satisfaction, and enhances business reputation.

5 Mwangi, C. & Jerotich, O., 2013. The Relationship between Corporate Social Responsibility Practices and Financial Performance of Firms in the Manufacturing, Construction and Allied Sector of the Nairobi Securities Exchange. *Centre for Promoting Ideas, USA*, 3(No.2), pp. 81-90.

6 Juhmani, O., 2014. Determinants of Corporate Social and Environmental Disclosure on Websites: the Case of Bahrain. *Universal Journal of Accounting and Finance*, 2(4), pp. 77-87.

7 Rodriguez-Fernandez, M., 2016. Social responsibility and financial performance: The role of good corporate governance. *BRQ Business Research Quarterly*, Tom 19, pp. 137-151.

8 Knezevic, G., Stanistic, M. & Stanistic, N., 2009. Environmental issues and Financial Reporting Trends: Evidence from Serbia. *Economia Aziendale online International Business Review*, pp. 139-150.

9 Mijatovic, I. & Stokic, D., 2010. The Influence of Internal and External Codes on CSR Practice: The Case of Companies Operating in Serbia. *Journal of Business Ethics*, Tom 94, pp. 533-552.

10 Čeha, M., 2011. *Uloga korporativne društvene odgovornosti u savremenom poslovanju u Srbiji*. Available at: <http://www.singipedia> [Accessed 24th of September 2017].

11 Čibukić, F., 2015. *Korporativna društvena odgovornost globalnih i lokalnih kompanija u zemljama Jugoistočne Evrope*. Available at: <http://www.singipedia> [Accessed 24th of September 2017].

12 Stojanović, M., 2015. Izveštavanje o zaštiti životne sredine-normativni i računovodstveni aspekti. Available at: http://nardus.mpn.gov.rs/handle/123456789/13/browse?type=naslovi_metadate&value=Izve%C5%A1tavanje+o+za%C5%A1titi+%C5%BEivotne+sredine+-+normativni+i+ra%C4%8Dunovodstveni+aspekti [Accessed 24th of September 2017].

13 Jakovljević, S., 2016. *Ostvarivanje društvene odgovornosti i održivog razvoja u turizmu Srbije*. Available at: <http://www.singipedia> [Accessed 24th of September 2017].



Montecchia, Giordano and Grieco (2016) based on a sample of 237 companies from Milan Stock Exchange showed that all of the Italian listed companies can be classified into “selfie” companies (they do show large quantity of CSR information but not the integration of it into business), companies with full integration, companies that are not CSR oriented and companies with the room for improvement.¹⁴

Based on the research papers discussed above, the following hypothesis can be defined:

H1: Listed companies in Serbia show low value of CSR index.

H2: CSR index is highly influenced by adequate web presentation of CSR, social media and code of ethics.

Hypothesis will be tested on companies listed on the Belgrade Stock Exchange. For the purpose of the research CSR index has been created. The index has been created based on the paper by Montecchia, et al. and it will be slightly modified in order to better suit our research purpose.

SAMPLE DESCRIPTION AND METHODOLOGY

The sample consists of 113 companies from industrial sector of which 24 are big and 89 medium sized. All of the companies are listed on the Belgrade Stock Exchange and they are selected in a haphazard manner. Descriptive statistics is applied in this research and calculations are done by the SPSS (Statistical Package for Social Sciences). In social and economic research, when large data are collected from various sources, analysis is considered to be adequate.¹⁵ We applied content method when collecting CSR information from company’s websites and management report. We also used other documents (if presented) to get information regarding social and environmental reporting language, words, phrases used as well as to collect quantitative CSR information.

We collected information related to the construction of CSR index from the web sites of 113 companies. Index methodology was modelled on the one published in the work of Italian authors¹⁶ and it was slightly modified.

The following Likert scale was developed and used in this research:

Table 1. 1 Lickert scale

Lickert scale	
0	No information
1	Only one sentence
2	Two sentences
3	Little details
4	Detailed presentation
5	Well presented

Source: Author’s own calculation

When web site and additional documents contained no data, value 0 has been assigned to CSR variable. In other cases if one or two sentences were written and explained, values ranged from 2 to 5. The maximum value was 5, meaning that the whole report has been dedicated to the specific variable. Totals for each company were calculated and then divided with the maximum company’s score in the sample.

RESEARCH RESULTS

In this section research results for Serbian listed companies are presented.

Descriptive statistics regarding variables are provided in the Table 2. The table shows the minimum, maximum for each variable followed by statistical mean and standard deviation. The same descriptive statistics can be found in other researches as well.¹⁷

According to the results from Table 2, the highest average is 1.4071 and it is a measure of the accessibility variable and the lowest mean is 0.1327 representing *future investments variable*. This leads to the conclusion that Serbian companies are more prone to support CSR by giving information on the homepage where it can be easily accessed by stakeholders than to support it through financial investments.

The highest standard deviation of 1.78228 was reached in the variable termed *code of ethics*. The results are quite disappointing because all of the companies from sample were big and medium-sized and they should have had code of ethics developed. Individual results in this section considerably deviate from the mean. The lowest standard deviation is achieved with the *future investment* variable.

CSR index total is 0.190885 and standard deviation is 0.183962. The total index value is quite low which does not come as a surprise. Serbia’s economy is in the period of transition with liquidity problems, low foreign investments and companies who have their own survival as primary goals, rather than fostering CSR awareness.

14 Montecchia, A., Giordano, F. & Grieco, C., 2016. Communicating CSR: integrated approach or Selfie? Evidence from the Milan Stock Exchange. *Journal of Cleaner Production* 136, pp. 42-52.

15 Neuman, L.W. 2014. Social research methods: Qualitative and quantitative approach. Pearson Education Limited. Edinburgh Gate.

16 Montecchia, A., Giordano, F. & Grieco, C., 2016. Communicating CSR: integrated approach or Selfie? Evidence from the Milan Stock Exchange. *Journal of Cleaner Production* 136, pp. 42-52.

17 Juhmani, O., 2014. Determinants of Corporate Social and Environmental Disclosure on Websites: the Case of Bahrain. *Universal Journal of Accounting and Finance*, 2(4), pp. 77-87.



Table 2. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Mission	113	.00	5.00	.3628	1.10245
CSR on homepage	113	.00	5.00	.7434	1.59675
Accessibility/Access to information	113	.00	5.00	1.4071	1.55631
Social media	113	.00	5.00	.6726	1.29175
Code of ethics/ Establishing ethical practice	113	.00	5.00	1.3009	1.78228
CSR projects	113	.00	5.00	.4867	1.27556
Partnership	113	.00	5.00	.4336	1.22384
Certificates	113	.00	5.00	.7434	1.40648
Future investments	113	.00	5.00	.1327	.55909
CSR index	113	.0000	.8000	.190885	.1839621
Valid N (listwise)	113				

Source: Author's own calculations

Table 3. Pearson standard moment correlation

		CSR index	Mission	CSR home page	Access to information	Using social media	Establishing ethical practice
CSR index	Pearson Correlation	1	.550**	.752**	.603**	.409**	.741**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	113	113	113	113	113	113
Mission	Pearson Correlation	.550**	1	.413**	.262**	.021	.276**
	Sig. (2-tailed)	.000		.000	.005	.821	.003
	N	113	113	113	113	113	113
CSR home page	Pearson Correlation	.752**	.413**	1	.531**	.370**	.498**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	113	113	113	113	113	113
Access to information	Pearson Correlation	.603**	.262**	.531**	1	.169	.470**
	Sig. (2-tailed)	.000	.005	.000		.073	.000
	N	113	113	113	113	113	113
Using social media	Pearson Correlation	.409**	.021	.370**	.169	1	.350**
	Sig. (2-tailed)	.000	.821	.000	.073		.000
	N	113	113	113	113	113	113
Establishing ethical practice	Pearson Correlation	.741**	.276**	.498**	.470**	.350**	1
	Sig. (2-tailed)	.000	.003	.000	.000	.000	
	N	113	113	113	113	113	113

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Author's own calculations



Results were obtained using IBM SPSS statistics version 23. Pearson correlation coefficients and significance for each of the variable used in the creation of this index are provided in Table 3. Pearson coefficient shows strength and sign of the relationship, while significance shows whether the results are statistically important.¹⁸ If Sig. (2-tailed) < 0.05 the correlation between the variable is considered strong. Correlation is quantitative dependence between two variables and ranges from -1 and 1. If the correlation is close to 1 relationship is positive and strong and if it is close to 0 there are no relationships between the variables.¹⁹ In our research coefficient of 0.752 was reached for the variables CSR index and CSR

homepage. The correlation is considered strong and positive. It means that companies with more CSR information on the website have higher value of CSR index. Significance of the relationship is also given (.000). Establishing ethical corporate practice has almost the same correlation with the CSR index as the CSR on homepage variable (0.741, Sig. 0.000). Access to information, mission and using social media are positively but not strongly correlated with the CSR index. The lowest correlation is established between CSR index and using social media to promote CSR. It means that Serbian companies do not use social media sites for these purposes.

Table 4. Pearson correlation coefficients

		CSR index	CSR projects	Partnership	Certificates	Future investments
CSR index	Pearson Correlation	1	.685**	.433**	.653**	.373**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	113	113	113	113	113
CSR projects	Pearson Correlation	.685**	1	.275**	.424**	.146
	Sig. (2-tailed)	.000		.003	.000	.122
	N	113	113	113	113	113
Partnership	Pearson Correlation	.433**	.275**	1	.273**	.189*
	Sig. (2-tailed)	.000	.003		.003	.045
	N	113	113	113	113	113
Certificates	Pearson Correlation	.653**	.424**	.273**	1	.328**
	Sig. (2-tailed)	.000	.000	.003		.000
	N	113	113	113	113	113
Future investments	Pearson Correlation	.373**	.146	.189*	.328**	1
	Sig. (2-tailed)	.000	.122	.045	.000	
	N	113	113	113	113	113

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Author's own calculations

Table 4 shows the lowest value of coefficient between variable CSR index and future investments in CSR. It means that Serbian companies do not make investments in providing better quality of CSR activities. Significance is 0.000 which is considered lower than 0.05. The highest value of coefficient was reached for the CSR projects and certificates (coefficients 0.685 and 0.653, respectively). Serbian companies highly value the idea of posting certificates obtained and social projects information on their web sites. This is due to the fact that financing social projects (paying scholarship for

students, giving donations to health care service etc.) has a huge and positive impact on corporate reputation. The same holds true for ISO certificates that companies quite often post on their websites as well.

CONCLUSION

The purpose of this paper is to attract attention of policy-holders by helping them change rules and regulations for

18 Živković, S., 2015. *Analiza podataka u SPSS-u Priručnik iz statistike*. Podgorica: De Facto Consultancy.

19 Žižić, M., Lovrić, M. & Pavličić, D., 2007. *Metodi statističke analize*. Beograd: Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu.



non-financial reporting (CSR reporting). When the new European Directive 2014/95 was launched all EU member states started to translate this directive into domestic rules and laws. Serbia is a candidate country. These weak results obtained for Serbian listed companies show that we do not make any preparations for the acceptance of this Directive into our domestic laws. If the sample of listed companies (big and medium-sized) shows low value of CSR index, then the situation is even worse for other entities forming Serbian economy. No environmental and CSR awareness of companies' accountants and managers seems to be one justification for the results. The other is that non-financial reporting is not compulsory in our country because we have candidate status and the implementation of this directive has not been on our agenda yet. Reporting of non-financial information is still subordinated to financial reporting which is mandatory. Accountants do think that CSR information is not important or not used by stakeholders in our economic community. The results obtained in this analysis are not surprising. Regarding the H1, Serbian companies show low value of CSR index. On the other hand, H2 is partially accepted. Serbian companies do not use social media much to promote their environmental and social activities. The highest influence on CSR index is generated from accessibility of information and from code of ethics.

In conclusion, Serbian listed companies are not much focused on environmental and social issues. Information is fragmented and there is no standardized non-financial reporting practice. Companies acquire individual approach when presenting such information. Stakeholders can only be informed regarding CSR activities on homepage but without detailed reports and explanations. There is a lack of comprehensive and precise information about real CSR activities and their influence on costs, profitability, cash flows. Without some rules and regulations in this area, this low quality of CSR reporting by Serbian companies will exist for a long time in the future.

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