CORPORATE SOCIAL RESPONSIBILITY AND CORPORATE FINANCIAL PERFORMANCE – IS THERE A LINK?

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Abstract

The "business as usual" model is no longer possible. Globalization, technological and demographical changes have lead to the change in the internal organization structures, processes and behaviour. Environmental, social and governance issues are becoming extremely powerful means of gaining competitive advantage on the global market. The purpose of

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the paper is to underline the importance of socially responsible business practices for the corporation. In order to emphasize the importance of socially responsible behaviour with regards to financial performance, the research was enriched with of the comparative analysis of the financial performances of 45 corporations listed on Dow Jones Sustainability World Index 2009/2010 that represent the top 10% of the leading sustainability companies out of the biggest 2500 companies in the Dow Jones Global Total Stock Market Index compared with non CSR corporations – not listed on DJSWI. Authors are presenting results of the econometric model which further confirmed that CSR firms in the average enjoy better financial performance that non-CSR firms.

1 INTRODUCTION

World we live in today is dramatically changing. The unsustainable growth model which was practised for decades was not harmonized with the challenges as the population growth, climate change and poverty. World population is constantly growing. It is expected to reach 9 billion in 2050. The greatest part of this growth will happen in developing regions. (I.e. Northern America with only 4.8% and Europe with only 7.2% while Asia will account for about 57.3% and Africa with 21.7%). (United Nations Population Division, 2006). Three billion poor people living in underdeveloped regions, with underdeveloped markets pose an enormous challenge and opportunity. Sustained growth and development is a necessary condition for sustained poverty reduction. Economic growth and poverty are two sides of the same coin (Škare, 2007). There are strong linkages between private sector development and reaching of the Millennium Development Goals (Lindhal, C., 2005, pg. 47-48) such as: (1) reducing the number of people living in extreme poverty by 2015 requires robust economic growth and a change from the current growth patterns to more sustainable ones, (2) investment in social sectors as primary education, child and maternal health, efforts to halt and reverse the prevalence of major diseases such as HIV/AIDS, malaria, safe water, and improved conditions for urban slum dwellers, (3) **private sector contribution through enhancing the effectiveness of social, human**

and infrastructure programmes as investors, operators and service providers and (4) **private sector development through changes in the global trade and finance systems, work standards, and transfer of technologies in certain sectors.** A key tenet of sustainable development is that resources and opportunities should be widely shared in society. Where this fails to occur, individuals, communities and ecosystems on which they depend are made vulnerable to external perturbations, to failures in governance, and the social crises (Adger and Winkels, 2007).

Thus, global contribution is necessary. It is a pre-condition for sustainable growth and development. The special emphasise should be put on international institutions, governments and multinational companies. Multinational companies have gained enormous power in the last decades, especially when the shareholder was not liable for any of the debts of the company other than the value of his investments in the particular company. Ever since the adoption of the principle of limited liability, at the end of 19th century, the conditions for rapid development of multinationals have been favourable. This was a sort of encouragement for companies and enabled them to expand even beyond the nation – state borders. In this way the multinational companies started to develop and expand worldwide. Their practice was not always favourable to all. The separation of management and ownership – *"managerial revolution"* led to the unmoral behaviour of managers. In this way, one company could be owned by thousands of small owners each of them responsible only for the share of its primer investment. Already in 18^{th} century, Adam Smith was warning that the separation of ownership and management may not be good step because it would enable managers to engage in unmoral activities in order to get huge financial awards. The evidence of this is shown with the bankruptcy of the South Sea Company, Enron, World Com...etc.

The recent economic crisis has revealed that the world economic policy that has been widely practices is not stable. The crisis of confidence in business has shown that the business as usual model is no longer possible. External environmental factors, trends and developments (globalization, technological change and demographics) lead to change in internal organization structures, processes and

behaviour (Buchanan and Huczynski, 2010). The new environment is disruptive, discontinuous change. It represents new paradigm, a new way of thinking about the workplace (Luthans, 2005, 11). Corporate social responsibility (CSR) is one of the responses to the imbalances resulting from the acceleration of the globalisation process (Swift and Zadek, 2002).
The purpose of the paper is to underline the importance of socially responsible business practices for the corporation. Thus, authors are presenting the results of comparative analysis of the financial performances of 45 socially responsible corporations listed on Dow Jones Sustainability World Index 2009/2010 compared with 45 non CSR corporations (meaning not being listed on Dow Jones Sustainability World Index). The Dow Jones Sustainability World Index (DJSI World) comprises more than 300 companies that represent the top 10% of the leading sustainability companies out of the biggest 2500 companies in the Dow Jones Global Total Stock Market Index. All of the corporations were selected from Fortune 500 World list. This is further enriched with the model which shows the link between corporate social responsibility and corporations' financial performance based on econometric modelling.

2 SUSTAINABLE DEVELOPMENT AND INCLUSIVE GLOBALIZATION

Challenges we have been facing today are: global population growth and ageing on the other side, global climate change and poverty. They are all very much connected and interdependent. The growth of population means more pressure on the scarce and existing resources, more emission of greenhouse gasses which consequently will cause even more environmental degradation and biodiversity loss. The most vulnerable will be the poor. The number is huge already today and according to the predictions, it will be even greater in the future, if not put under control. The only possible way to get out of this vicious cycle is through establishing the balance between the above mentioned challenges: population – environment – poverty. The way to achieve the balance is through sustainable growth and development which could contribute to the inclusive globalization. This would bring back the harmony between people and the nature. Sustainable development is the *"development which meets the needs of present without compromising the ability of future generation to meet their own needs"* (World Commission on Environment and Development, 1987:43). There are three pillars addressed with this definition - harmony between the environment, society and economy. Sustainable development which contributes to the inclusive rather than negative globalization needs good global governance surveillance. The UN Department of Economic and Social Affairs and its Division of Sustainable Development underlines that the achievement of sustainable development requires the integration of its economic, environmental and social components at all levels. This is facilitated by continuous dialogue and action in global partnership, focusing on key sustainable development issues (social and economic, natural resources, stakeholders) through different means of implementation of sustainable practice (education and awareness, capacity building, science, technology etc.)

Reaching inclusive globalization and sustainable development is not an easy task but with the constant effort it could be reachable in the years to come. As mentioned earlier, the overall cooperation is needed: international institutions with their special programmes focused on eradication of poverty and achievement of other Millennium Development Goals, governments with their focus on achievement of sustainable development within the nation-state and their role in setting conditions for that development, as well as multinational corporations with their responsible behaviour.

It is the private sector that produces goods and services, and generates employability and wealth. As the majority of the world's population in 2050 will live in developing nations, exactly these people should be successfully integrated into the market. This is the point of inclusive globalization. Inclusive globalization opts for inclusive businesses. Therefore, in order to contribute to the inclusive globalization, corporations should strive for being inclusive. Inclusive business is one which seeks to contribute towards poverty alleviation by including low-income communities within its value chain while not losing sight of the ultimate goal of business, which is to generate profits (WBCSD, 2008, 2). Apart from inclusive business other models that favour inclusive globalization are social enterprises. Social enterprises could be defined as private, autonomous, entrepreneurial organisations providing goods or services with an explicit aim to benefit the community. They are owned or managed by a group of citizens, and material interest of capital investors is subject to limits. They place very high value on their autonomy and on economic risk-taking related to ongoing socio-economic activity. They could be either prohibited legally from distributing profits, or are structured in order to exclude profits as the main goal (EMES and UNDP, 2008:18).

Pre-requisite for focusing on inclusive business is being socially responsible. Going in line with the main focus and purpose of this paper we will shed some light on corporate social responsibility – its main dimensions, benefits and perspectives.

2.1 BUSINESS IN THE SOCIETY

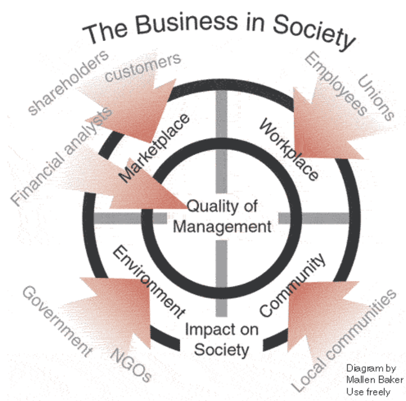
There is a huge debate today posed on the role businesses have in the world especially regarding the importance of their influence on the society. They function in the society and this means that they are taking something from the community, but on the other way around...there should be something they should give back to the same community they operate in.

Stakeholders are those who can affect, but can also be affected by an organization's activity. Many different contributions have been noted towards defining stakeholders and their role in the society. Most of the authors do agree that the difference can be made in between internal and external stakeholders where the former include investors or owners of the company and the company's employees, whilst the latter include government, customers, local community, NGOs and other civil groups.

To describe the role stakeholders have we could describe them as a company of six friends going out for a party. Each of them has its own special interest why he/she would like to go to the party; otherwise, he/she probably would not be interested into going to that party. Basically, they all share some kind of similar

interest into going to the party. The same thing is with different stakeholders who are interested in the company's behaviour; some of them are more, some of them less, but they are all interested in that particular company and its behavioural patterns because of the vicinity and contact with the company and because of its influence on them, whether direct or indirect.
For the company it is important to recognize its stakeholders, their interest, opportunities and challenges they pose to the company. Furthermore, company's responsibilities (economic, legal, ethical, and philanthropic) towards different stakeholders should not be forgotten, as well as strategies should be developed in order to get on the best possible way of managing challenges and opportunities of its stakeholders. Companies should develop an integrated strategy for stakeholder engagement that strengthens both - their relationships with stakeholders and their internal decision making processes. Meeting stakeholders will enhance company's reputation and facilitate its operations.
In the following picture, the company's stakeholders are presented, those internal and external as classified earlier in the text.

Scheme 1 Business in Society



Source: http://www.mallenbaker.net/csr/images/businsoc.gif
When extensively committed and accountable to its stakeholders businesses could be considered inclusive. Inclusive companies enable stakeholders to identify priority issues and work together with them in order to find the best possible

solutions to the problem encountered. There should be a deep and extensive collaboration with different stakeholders at all levels. Definitely, company is not forced nor obligated to do everything its stakeholders want, but it is recommendable to listen to their needs and wants and try to find a balanced solution. There will always be a matter of trade-off between one solution or another. Good decision favourable to one group of stakeholders might not be appropriate for another one. Most of the companies are always forced to do different trade-offs.
In building excellence it is important to strive to be inclusive and thus contribute to the inclusive globalisation.
According to AA 1000 Accountability Principles Standard 2008, an organisation will adhere to the principle of inclusively when: (Accountability, 2008):

1. **It has made a commitment to be accountable to those on whom it has an impact or who have an impact on it.**
2. **It has in place a process of stakeholder participation that:**
3. is applied across the organisation (e.g. group and local level);
4. is integrated in the organisation, and
5. is ongoing and not 'one off'.
6. **It has in place, or has access to, the necessary competencies and resources to operate the process of stakeholder participation.**
7. **The stakeholder participation process:**
8. identifies and understands stakeholders, their capacity to engage, and their
9. views and expectations;
10. identifies, develops and implements appropriate, robust and balanced
11. engagement strategies, plans and modes of engagement for stakeholders;
12. facilitates understanding, learning and improvement of the organisation;

13. establishes ways for stakeholders to be involved in decisions that will
14. improve sustainability performance;
15. builds the capacity of internal stakeholders and supports building capacity for
16. external stakeholders to engage, and
17. addresses conflicts or dilemmas between different stakeholder expectations.
18. **The stakeholder engagement results in the involvement of stakeholders in**
19. **Developing and achieving an accountable and strategic response to sustainability.**

But, before becoming inclusive, the corporation should start with being socially responsible.

2.2 CORPORATE SOCIAL RESPONSIBILITY

There are many definitions of corporate social responsibility, and many different aspects covered by various definitions. The most important point is that all of the definitions cover three areas responsibility – economic, environmental and societal responsibility. This is why the underlying triple bottom line approach developed by John Elkington (1997) has been widely accepted.
The widely recognized and perhaps, the most cited definition is the one provided by Carroll (1991) who distinguishes four levels of business responsibilities - economic, legal, ethical and philanthropic.
Corporate social responsibility is concerned with what is – or should be – the relationship between global corporations, governments of countries and individual citizens (Crowther and Aras, 2008, 10). Acting in socially responsible manner involves undertaking actions that earn trust and respect from all stakeholders – operating in an honourable and ethical manner, striving to make the company

a great place to work, demonstrating genuine respect for the environment, and trying to make a difference in bettering society (Gamble and Thompson, 2009, 202). Commission of the European Communities defines CSR as a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis. According to the Business for Social Responsibility (BSR), corporate responsibility (or corporate citizenship) means *"...operating a business enterprise in a manner that consistently meets or exceeds the ethical, legal, commercial, and public expectations society has of business."* The World Business Council for Sustainable Development (WBCSD, 1999) defines CSR as the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large. The Prince of Wales International Business Leaders Forum sees CSR as open and transparent business practices that are based on ethical values and respect for employees, communities, and the environment. It is designed to deliver sustainable value to society at large, as well as to shareholders.

Corporate social responsibility is the micro aspect of sustainable development. It means that the company should be able to improve the capacity of the society to fulfill its aspirations whilst improving the economic well-being and quality of life of the community in which it operates. At the same time it is protecting the environment and improving its conditions. When focusing on the triple bottom line – company's environmental, social and economic aspects, sometimes, focusing on the financial aspect might be a bit confusing. Financial aspect does not only consider revenues, losses and profits, but also the other side which is often left with little or no attention at all. This other side includes creation of jobs, generation of income, wages, investment in human capital, goods bought and sold, taxes paid to the local community, region or state taxes which contribute to the overall development of the community and hence, region and state. This aspect of the triple bottom line should definitely be put on the top of the companies' priorities especially bearing in mind the crises we are facing today.

CSR brings many benefits to the corporation such as (Kotler and Lee,2009, pg. 22): (1) greater sales and achievement of greater market share, (2) strengthening the company's brand, (3) strengthening the corporate image and impact, (4) strengthening the capacity to attract and retain talented employees, (5) costs reduction, and (6) attract greater investors' and financial analysts' attention. Many of studies in the field of corporate social responsibility and corporate financial performance have found positive relationship between the two (Klassen and McLaughlin (1996), Orlitzky et.al. (2003), Allouche and Laroche (2005), Bird et.al.(2007), Beurden and Gossling, (2008) etc.).
But, CSR practices and benefits will remain limited unless they can be integrated into broader strategies, and public policies certainly have a role to play in this respect (Swift and Zadek, 2002). In order to bring good moral decisions, new managers have to rely on the following moral principles (Hodgson, K. (1992) in Klinicki and Kreitner, 2006, 35):

1. *Dignity of human life*: The lives of people are to be respected.

2. *Autonomy*: All persons are intrinsically valuable and have the right to self – determination.

3. *Honesty*: The truth should be told to those who have a right to know it.

4. *Loyalty*: Promises, contracts, and commitments should be honoured.

5. *Fairness*: People should be treated justly.

6. *Humaneness*: Our actions ought to accomplish good and we should avoid doing evil

7. *The common goal*: Actions should accomplish the "greatest good for the greatest number" of people.

In the following chapter the financial analysis of the UK top socially responsible corporations, as well as the econometric model which shows the interrelatedness between real GDP growth and CSR is presented.

3 EMPIRICAL ANALYSIS

In the first part of this chapter presents the comparative analysis of financial performances of 45 CSR corporations listed on Dow Jones Sustainability World Index 2009/2010 and 45 non CSR corporations (meaning not being listed on DJSWI). The period covered in the analysis: 2006 – 2008. In order to achieve better and more reliable results, all of the 90 corporations were selected from Fortune 500 World - annual ranking of the world's largest corporations which were ranked by total revenues for their respective fiscal years ended on or before March 31, 2009, 2008 and 2007. Furthermore, all of the corporations were divided by sector. The 45 corporations listed on DJSI Worlds 2009 were chosen as CSR corporations, whilst the other 45 as non CSR corporations. The paper was supplemented with this research to emphasize the positive impact socially responsible behaviour has on financial performances of corporations. Namely, the selected corporations do show good financial results.

The Dow Jones Sustainability Indexes are the first global indexes tracking the financial performance of the leading sustainability-driven companies worldwide. Based on the cooperation of Dow Jones Indexes and SAM they provide asset managers with reliable and objective benchmarks to manage sustainability portfolios. (Dow Jones Sustainability Indexes, 2009) The Dow Jones Sustainability World Index (DJSI World) comprises more than 300 companies that represent the top 10% of the leading sustainability companies out of the biggest 2500 companies in the Dow Jones Global Total Stock Market Index. On 30^{th} of September 2009 there were 317 corporations listed on the DJS World Index.

In the second part of this chapter authors are analysing the impact of the corporation's socially responsible behaviour on its financial performance. The period covered in the analysis: 2006 – 2008.

As a source of information annual reports were used. Data was filtered from the income statement, the balance sheet and the cash flow statement. Bloomberg and Capital IQ were used as the main databases for collecting the annual reports. Selected variables and their interpretation are presented hereafter. The calculations were done in Stata 11 and Eviews 7.

3.1 FINANCIAL PERFORMANCES OF THE SELECTED CSR AND NON CSR CORPORATIONS

This chapter focuses on interpretation of financial performances of the CSR corporations versus non CSR corporations. The selected corporations are presented in the appendix (Table 11).
The following table presents the comparative analysis of total revenue, net income and net operating income of CSR and non CSR corporations, respectively.
TABLE 1 Total revenue, net income and net operating income of CSR vs. non CSR corporations (in mln. USD)

	YEAR		
TOTAL FOR ALL SECTORS	2006	2007	2008
Total revenue CSR	3378743,825	3861650,338	4092932,573
Total revenue non CSR	2709825,480	3075168,660	3393754,120
Net income CRS	453928,130	520010,602	421262,041
Neto income non CRS	364140,310	345645,010	337138,740
Net operating income CSR	268403,968	376577,840	219029,164
Net operating income non CSR	235525,460	200348,730	150828,710

Source: Authors' research

Total revenue of CSR corporations grew from 3.378 trillion USD in 2006 to 4.092 billion in 2008. It was an increase of 14% from 2006 to 2007 and 6% from 2007 to 2008. The total revenue of non CSR corporations grew at an average rate of 11,5%. Net income of CSR corporations showed a different path, falling down from 453.9 billion to 421.2 billion in 2008. Net income of non CSR corporations was showing similar signs - falling from 364.1 billion USD in 2006 to 337.1 billion USD in 2008. Net operating income of CSR corporations took the same path – it fell down from 2006 compared with 2008. Net operating income of non CSR corporations was constantly falling down at an average of 20%. It can be noted that CSR corporations have always outperformed non CSR corporations measured with the above selected variables.

In the following table, the comparative analysis of total assets and total equity of CSR and non CSR corporations is presented.

TABLE 2 Total assets and total equity of CSR vs. non CSR corporations (in mln. USD)

	YEAR		
TOTAL FOR ALL SECTORS	2006	2007	2008
Total assets CRS	12720889,643	16840666,148	17414699,364
Total assets non CRS	9641100,960	10874771,100	10621904,770
Total equity CRS	1795859,703	2114791,842	1938132,973
Total equity non CRS	1502029,300	1718875,770	1730746,270

Source: Authors' research

Total assets of CSR corporations reached 17.4 trillion USD in 2008. It could be noted an annual increase of an average 17,85 % in total assets. Total equity of CSR corporations soared from 1.7 trillion USD in 2006 to 1.9 trillion USD in 2008. The CSR corporations show better results compared with the non CSR corporations.

Total number of employees in both CSR and non CSr corporations is presented hereafter.

TABLE 3 Total number of employees in CSR vs. non CSR corporations (in thousands)

	YEAR		
TOTAL FOR ALL SECTORS	2006	2007	2008
Total number of employess CRS	6416334	6534165	6287572
Total number of employess non CRS	4876294	5582943	5755272

Source: Authors' research

From the table above it can be noted that the CSR corporations were employing 6.297.572 employees in 2008. These corporations were constantly employing more people than non CSR corporations.

P/E ratio analysis is presented in the Table 4.

TABLE 4 P/E ratio of CSR vs. non CSR corporations

	YEAR		
TOTAL SECTOR AVERAGE	2006	2007	2008
P/E ratio CRS	20,666	22,523	17,425
P/E ratio non CRS	21,489	16,818	11,870

Source: Authors' research

The average P/E ratio of CSR corporations in the period from 2006 – 2008 was 20,20. On the other side, the average P/E ratio of non CSR corporations was 16,72.

The achieved ROA and ROE of CSR vs. Non CSR corporations is presented in the Table 5.

TABLE 5 ROA and ROE of CSR and non CSR corporations

	YEAR		
TOTAL SECTOR AVERAGE	2006	2007	2008
ROA CRS	6,265	6,545	6,198
ROA non CRS	6,300	6,375	3,785
ROE CRS	21,226	20,396	13,768
ROE non CRS	16,274	15,114	8,490

Source: Authors' research

In the analysed period, the average ROA of CSR corporations was 6,33, whilst the average ROA of non CSR corporations was 5,48. The average ROE of CSR corporations was 18,46, whilst the average ROE of non CSR corporations was 13,29. Obviously, the average ROA as well as ROE of CSR corporations is higher compared with non CSR corporations.

In the Table 6, authors are presenting the EPS and BVS for both CSR and non CSR corporations.

TABLE 6 EPS and BVS for CSR and non CSR corporations

	YEAR		
TOTAL SECTOR AVERAGE	2006	2007	2008
EPS CRS	3,647	4,605	2,772
EPS non CRS	3,097	3,061	1,670
BVS CRS	24,653	29,112	26,509
BVS non CRS	22,809	25,063	24,326

Source: Authors' research

In the analysed period, the average EPS of CSR corporations was 3,67, whilst the average EPS of non CSR corporations was 2,61, obviously smaller. The average BVS of CSR corporations was 26.76, whilst the average BVS of non CSR corporations was 24.06.

3.2 THE IMPACT OF SOCIALLY RESPONSIBLE BEHAVIOUR ON THE FIRM'S FINANCIAL PERFORMANCE

This chapter presents the results, based on econometric models that show whether there is a link between socially responsible behaviour and corporation's financial results.

To analyse the impact of the corporations' socially responsible behaviour on its financial performance we use logit model of the form;

$$\begin{aligned} L_i = \left(\frac{P_i}{1-P_i}\right) &= \beta_1 + \beta_2 EMPLOYEES + \beta_3 REVENUE \\ &+\beta_4 INCOME + \beta_5 CSR + \beta_6 EQUITY + \beta_7 ASSETS + u_i \end{aligned} \tag{1}$$

where:

1. Y = 1 if corporations financial performance is positive (we set it positive if at least two of the key financial indicators EPS, ROA ar ROE are positive)

2. Y = 0 if corporations financial performance is negative (we set it negative if at least two of the key financial indicators EPS, ROA or ROE are negative)

3. EMPLOYEES = number of employees in the corporation (in thousands)
4. REVENUE = corporations' total revenue (in millions USD)
5. INCOME = corporations' operating income (in millions USD)
6. CSR = 1 if corporation is socially responsible (Dow Jones World Index 2009 was used as a database for CSR firms) and 0 if it is a non-csr corporation
7. EQUITY = corporations' total equity (in millions USD)
8. ASSETS = corporations' total assets. (in millions USD)

We use logit model in the analysis since we prefer it in relation to other discriminant analysis methods that are far stricter when it comes to normality assumptions. Not only, logistic distributions do not face the same problem and are found to be more robust in relation to other multivariate models. Logit models make possible to incorporate nonlinear effects and express the dependent variable in a binary relation following the logistic (probability) curve. In our analysis, since we lack of an comparable indicator such as Altman Z score we use dichotomous values as dependent variable in the model (firms having positive or negative financial performance).
We use the method of maximum likelihood to estimate the model (1) and the likelihood ratio statistics. Results of the estimated model (1) are presented below.

TABLE 8 Regression Results of (1)

Variable	Coefficient	Std.error	Z statistics	Probability
C	0.824691	0.667227	1.235997	0.2165
EMPLOYEES	5.47E-06	3.69E-06	1.481631	0.1384
REVENUE	-4.79E-05	1.59E-05	-3.019825	0.0025
INCOME	0.000249	0.000122	2.035974	0.0418
CSR	1.797925	0.966910	1.859455	0.0630
EQUITY	9.36E-05	3.94E-05	2.374255	0.0176
ASSETS	-2.88E-06	1.11E-06	-2.604208	0.0092
McFadden R-squared 0.448285 LR statistic 37.76411 Prob(LR statistic) 0.000001				

Dependent variable: Financial performance (FP)

Method: ML-Binary Logit

Convergence achieved after 9 iterations

Source: Authors' calculation in Stata 11.Below we show regression interpretation for the coefficients in odds-ratios terms.

TABLE 9 Regression Results of (1) in odds-ratios terms

Variable	Odds Ratio	Std.error	Z statistics	Probability
EMPLOYEES	1.000005	3.69E-06	1.48	0.138
REVENUE	0.9999521	0.0000159	-3.02	0.003
INCOME	1.000249	0.0001223	2.04	0.042
CSR	6.03711	5.837342	1.86	0.063
EQUITY	1.000094	0.0000394	2.37	0.018
ASSETS	0.9999971	1.11E-06	-2.60	0.009

Dependent variable: Financial performance (FP)

Method: ML-Binary Logit

Convergence achieved after 9 iterations

Source: Authors' calculation in Stata 11.

Results presented in the Table 10 and Table 11 demonstrate the existence of strong positive nexus between corporations' financial performances and socially responsible behaviour. One can note that if CSR increases by a unit, corporations' financial performance (FP) increases by 1.797925 displaying positive relationship between financial performance and socially responsible behaviour. For every unit change in CSR, the log odds of positive financial performance (versus corporations' negative financial performance) increases by 1.797925. A more meaningful interpretation of the regression results is provided in the Table 11 in terms of odds ratio for all variables in (1). Now it could be noted that for a unit change in CSR, to odds of corporations having positive financial performances increase by 6.03711 factor. This means that for a corporation being socially responsible (that is a CRS corporation) odds of having positive financial performance are 6.03711 times larger than odds for a non-CSR firm. Therefore, a CSR corporation is 6 times more likely to have better financial performance than a non-CSR corporation.

Table 10 displays the measure of fit results.

TABLE 10 Measures of Fit for logit of fp

Log-Lik Intercept Only:	-42.121	Log-Lik Full Model:	-23.239
D(83):	46.477	LR(6):	37.764
		Prob > LR:	0.000
McFadden's R2:	0.448	McFadden's Adj R2:	0.282
Maximum Likelihood R2:	0.343	Cragg & Uhler's R2:	0.564
McKelvey and Zavoina's R2:	0.818	Efron's R2:	0.432
Variance of y*:	18.099	Variance of error:	3.290
Count R2:	0.911	Adj Count R2:	0.500
AIC:	0.672	AIC*n:	60.477
BIC:	-327.007	BIC':	-10.765

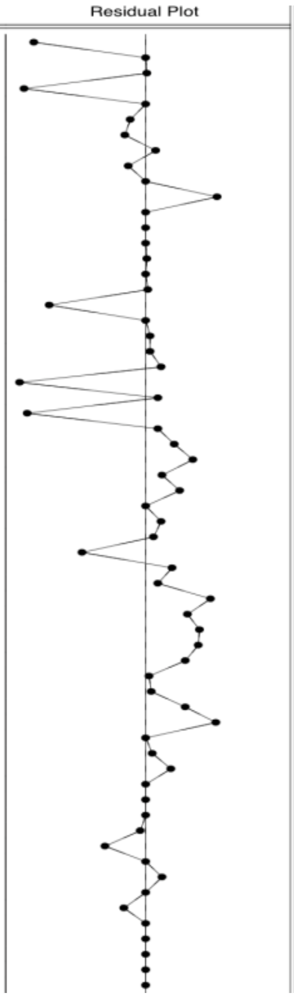
Source: Authors' calculation in Stata 11.

From the results displayed in the Table 12 we can see that the model fits the data well and that all variables (except constant and employees) are statistically significant at 1, 5 and 10% level proving the validity of variables choice. The McFadden's R-squared and McFadden's Adjusted R-squared have the same interpretations as adjusted R-squared in linear regression. Likelihood ratio test

(LR) shows that slope coefficients are simultaneously different from zero. Expected sings of the regression coefficients are in accordance with the theory and hypothesis we formulate in the study. In addition, as we can check in the table 3, they are statistically significant. Test results suggest that a model is a good fit with observed and fitted frequencies in good agreement (see below).

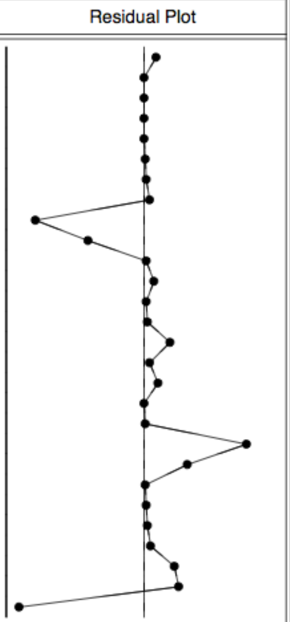
FIGURE 1 Model Goodness of Fit

obs	Actual	Fitted	Residual
1	0.00000	0.77990	-0.77990
2	1.00000	0.99957	0.00043
3	1.00000	0.99544	0.00456
4	0.00000	0.84922	-0.84922
5	1.00000	1.00000	3.6E-07
6	0.00000	0.10568	-0.10568
7	0.00000	0.14689	-0.14689
8	1.00000	0.92834	0.07166
9	0.00000	0.12473	-0.12473
10	1.00000	0.99998	2.2E-05
11	1.00000	0.50210	0.49790
12	1.00000	0.99990	0.00010
13	1.00000	0.99984	0.00016
14	1.00000	0.99978	0.00022
15	1.00000	0.99410	0.00590
16	1.00000	0.99777	0.00223
17	1.00000	0.98463	0.01537
18	0.00000	0.66873	-0.66873
19	1.00000	0.99975	0.00025
20	1.00000	0.96874	0.03126
21	1.00000	0.96734	0.03266
22	1.00000	0.89224	0.10776
23	0.00000	0.88016	-0.88016
24	1.00000	0.91899	0.08101
25	0.00000	0.82623	-0.82623
26	1.00000	0.91565	0.08435
27	1.00000	0.79785	0.20215
28	1.00000	0.67367	0.32633
29	1.00000	0.88565	0.11435
30	1.00000	0.76114	0.23886
31	0.00000	3.7E-05	-3.7E-05
32	1.00000	0.89461	0.10539
33	1.00000	0.94637	0.05363
34	0.00000	0.44651	-0.44651
35	1.00000	0.81743	0.18257
36	1.00000	0.91522	0.08478
37	1.00000	0.54918	0.45082
38	1.00000	0.70823	0.29177
39	1.00000	0.62563	0.37437
40	1.00000	0.63097	0.36903
41	1.00000	0.72573	0.27427
42	1.00000	0.97913	0.02087
43	1.00000	0.96308	0.03692
44	1.00000	0.72623	0.27377
45	1.00000	0.50764	0.49236
46	1.00000	0.99925	0.00075
47	1.00000	0.95422	0.04578
48	1.00000	0.82690	0.17310
49	1.00000	0.99839	0.00161
50	1.00000	0.99951	0.00049
51	1.00000	0.99984	0.00016
52	0.00000	0.03494	-0.03494
53	0.00000	0.27887	-0.27887
54	1.00000	0.99968	0.00032
55	1.00000	0.88620	0.11380
56	1.00000	0.99991	9.0E-05
57	0.00000	0.14892	-0.14892
58	1.00000	0.99901	0.00099
59	1.00000	0.99879	0.00121
60	1.00000	1.00000	1.1E-06
61	1.00000	0.99999	9.2E-06
62	1.00000	0.99741	0.00259



Source: Author calculation

obs	Actual	Fitted	Residual
63	1.00000	0.91784	0.08216
64	1.00000	0.99634	0.00366
65	1.00000	0.99965	0.00035
66	1.00000	0.99988	0.00012
67	1.00000	0.99963	0.00037
68	1.00000	0.99467	0.00533
69	1.00000	0.98399	0.01601
70	1.00000	0.96378	0.03622
71	0.00000	0.77421	-0.77421
72	0.00000	0.39452	-0.39452
73	1.00000	0.98425	0.01575
74	1.00000	0.93083	0.06917
75	1.00000	0.98695	0.01305
76	1.00000	0.97926	0.02074
77	1.00000	0.81337	0.18663
78	1.00000	0.95980	0.04020
79	1.00000	0.90235	0.09765
80	1.00000	0.99915	0.00085
81	1.00000	0.98967	0.01033
82	1.00000	0.27187	0.72813
83	1.00000	0.69716	0.30284
84	1.00000	0.98930	0.01070
85	1.00000	0.98671	0.01329
86	1.00000	0.97884	0.02116
87	1.00000	0.95453	0.04547
88	1.00000	0.78657	0.21343
89	1.00000	0.75341	0.24659
90	0.00000	0.88966	-0.88966



Source: Author calculation

The Figure 1 above indeed confirms the hypothesis presented in the paper that CSR corporations in the average enjoy better financial performance that non-CSR corporations. Probability to achieve positive financial results is 6 times higher for CSR corporations in relation to the non-CSR corporations. From 90 observations only 7 have high residuals showing that the model (1) fits the data well and that in practice CSR corporations are more likely to achieve positive financial results on the market.

4 CONCLUSION

Socially responsible behaviour should be considered as an important determinant in today's' ordinary business practice. Corporations are perceived as institutions that make part of the society and thus, will be judged by how they do their business with respect to different stakeholders in the society. Thus, it is of vital importance for corporations - especially big multinationals which are becoming more powerful than nation-states – to invest in social responsibility. There are numerous ways how to invest as well as reasons why to invest in good social practices.

The results of the research performed by the authors have shown that socially responsible corporations outperform other corporations in terms of their financial and social performance. The first part of the analysis showed that CSR corporations have shown a much better financial performance in the analysed period form 2006 – 2008 compared with the non CSR corporations. This was enriched with the econometric analysis which has confirmed the hypothesis presented in the paper that CSR firms in the average enjoy better financial performance than non-CSR firms. The regression results demonstrate the existence of strong positive nexus between corporations' financial performances and socially responsible behaviour. If CSR increases by a unit, corporations' financial performance (FP) increases by 1.797925 displaying positive relationship between financial performance and socially responsible behaviour. With regards to odds ratio for all variables it could be noted that for a unit change in CSR, to odds of corporations having positive financial performances increase by 6.03711 factor. Thus, the probability to achieve positive financial results is 6 times higher for CSR corporations in relation to the non-CSR corporations.

Corporations should take care of their environment, respect the society and keep up of being economically sustainable. These are the key features for the corporations' future positive development. Being socially responsible brings financial benefits for the corporation.

5 APPENDIX

TABLE 11 The selected non CSR and CSR corporations

SELECTED CORPORATIONS	
non CSR	**CSR**
semiconductors and other electronic components	
FLEXOTRONICS INTERNATIONAL LTD.	INTEL
petroleum refining	
EXXON MOBIL CORP	ROYAL DUTCH SHELL
CHEVRON CORP	BP
CONOCOPHILLIPS	TOTAL
CHINA NATIONAL PETROLEUM CORP	ENI
VALERO ENERGY CORP	PETROBRAS
banks (commercial and savings)	
HBOS PLC	ING GROUP
MORGAN STANLEY	DEXIA GROUP
GROUPE CAISSE D'EPARGNE	HSBC HOLDINGS
BANK OF AMERICA CORP.	BNP PARIBUS
SOCIETE GENERALE	BANCO SANTANDER
INDUSTRIAL AND COMMERICIAL BANK OF CHINA	ROYAL BANK OF SCOTLAND
telecommunications	
AT&T CORP.	DEUTSCHE TELEKOM
NIPPON TELEGRAPH&TELEPHONE CORP.	TELEFONICA
VERIZON COMMUNICATIONS INC	VODAFONE
FRANCE TELECOM SA	CHINA MOBILE TELECOMUNICATION
VIVENDI SA	TELECOM ITALIA

SPRINT NEXTEL CORP	BT GROUP PLC
pharmaceuticals	
PFIZER INC	GLAXOSMITHKLINE
MERCK&CO INC	ROCHE GROUP
WYETH	SANOFI-AVENTIS
BRISTOL-MYERS SQUIBB CO.	NOVARTIS
ELI LILLY & CO.	ASTRA ZENECA
electronics and electronical equipment	
HON HAIN PRECISION INDUSTRY CO LTD	SIEMENS
KONINKLIJKE PHILIPS ELECTRONICS NV	SAMSUNG ELECTRONICS
TYCO INTERNATIONAL	HITACHI
EMERSON ALECTRIC CO	TOSHIBA
WHIRLPOOL CORP	PANASONIC CORP.
SONY CORP	SUMITORNO ELECTRIC INDUSTRIES
SHARP CORP/JAPAN	SCHNEIDER ELECTRIC
motor vehicles and parts	
FORD MOTOR CO	TOYOTA
NISSAN MOTOR CO LTD	VOLKSWAGEN
HONDA MOTOR CO LTD	DAIMLER
PEUGEOT SA	BMW AG
food consumer products and services	
TESCO PLC	NESTLE
CVS CAREMARK CORP	UNILEVER PLC
KROGER CO/THE	CARREFOUR
WALGREEN CO	METRO AG
GROUPE AUCHAN SA	PEPSICO
AEON CO LTD	KRAFT FOODS
SEVEN GROUP HOLDINGS LTD	GROUP DANONE
computers, office equipment	
CANON	HEWLETT PACKARD
APPLE	DELL
ASUSTEK COMPUTERS	FUJITSU
QUANTA COMPUTERS	NEC CORP

Source: Authors' research

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