Wen-Min Lu[1], Wei-Kang Wang[2], Dong-Sing He[3]

CORPORATE PERFORMANCE AND CORPORATE SOCIAL RESPONSIBILITY: A FRONTIER APPROACH

The purpose of this paper is to investigate the connection between corporate social responsibility (CSR) and corporate performance to advise managers to pay more attention to CRS to promote the competitive ability of firms. The results show that the effects of various corporate social responsibility dimensions indicators on profitability are not high. However, market value creation is affected by the dimensions of corporate governance, social interaction, diversity, environmental performance, and product-related issues. Firms should emphasize these 5 dimensions to increase competitiveness and thereby also increase market value.

Keywords: *corporate social responsibility; data envelopment analysis; performance.*

Вень-Мінь Лу, Вей-Кан Ван, Дун-Син Хе

ЕФЕКТИВНІСТЬ КОРПОРАЦІЇ І КОРПОРАТИВНА СОЦІАЛЬНА ВІДПОВІДАЛЬНІСТЬ: ГРАНИЧНИЙ ПІДХІД

У статті вивчено зв'язок між корпоративною соціальною відповідальністю (КСО) і ефективністю корпорації, розроблено рекомендації топ-менеджерам з розвитку КСО і підвищення конкурентоспроможності фірм. Результати показали, що вплив різних показників корпоративної соціальної відповідальності на рентабельність невисокий. Проте створення ринкової вартості залежить від рівня корпоративного управління, соціальної взаємодії, різносторонності, піклування про екологію і підвищення якості товарів. Фірми повинні враховувати ці 5 чинників для підвищення конкурентоспроможності і збільшення ринкової вартості.

Ключові слова: *корпоративна соціальна відповідальність, аналіз середи функціонування, ефективність.*

Рис. 2. Таб. 5. Літ. 27.

Вэнь-Минь Лу, Вэй-Кан Ван, Дун-Син Хе

ЭФФЕКТИВНОСТЬ КОРПОРАЦИИ И КОРПОРАТИВНАЯ СОЦИАЛЬНАЯ ОТВЕТСТВЕННОСТЬ: ГРАНИЧНЫЙ ПОДХОД

В статье изучена связь между корпоративной социальной ответственностью (КСО) и эффективностью корпорации, разработаны рекомендации топ-менеджерам по развитию КСО и повышению конкурентоспособности фирм. Результаты показали, что влияние различных показателей корпоративной социальной ответственности на рентабельность невысока. Тем не менее, создание рыночной стоимости зависит от уровня корпоративного управления, социального взаимодействия, разносторонности, заботы об экологии и повышения качества товаров. Фирмы должны учитывать эти 5 факторов для повышения конкурентоспособности и увеличения рыночной стоимости.

Ключевые слова: *корпоративная социальная ответственность, анализ среды функционирования, эффективность.*

Introduction. With negative experience from the past events like the global financial crisis, Enron debacle, Hurricane Katrina, the tsunami in South Asia, and labor

[1] Department of Financial Management, National Defense University, Taoyuan, Taiwan.
[2] Department of Accounting, Yuan Ze University, Taoyuan Country, Taiwan.
[3] Department of Financial Management, National Defense University, Taoyuan Country, Taiwan.

strikes due to the rise of human rights awareness, corporate social responsibility (CSR) has become an important issue for governments, corporations, and public interest groups. This has shifted the focus on the issues on societal problems, corporate governance and environmental protection. Profit-seeking organizations are expected to give back to the society and environment, besides maximizing the shareholders' value, because of the legal regulations stipulated by government and the efforts by public interests group. This creates a better social environment and ensures sustainable societies and businesses (Freeman, 1983; Wood, 1991; Prahalad and Hamel, 1994).

There is a great deal of literature and extended studies on CSR. Bowen and Rothmann (1953) and Arrow (1973) suggest that firms' business activities are closely related to society; thus, firms should take into consideration the interests of stakeholders. Ullmann (1985) points out that the implementation of various CSR initiatives could lead to improved financial performance. Furthermore, the implementation of CSR can not only enhance the firms' reputation and trust, but also can boost the brand's image and competitive advantage, which in turn leads to costs reduction (Porter and Linde, 1995). MCWilliams and Siegel (2001) also found that firms with the emphasis on CSR can attract more consumers. This indicates that the implementation of CSR is a type of product differentiation strategy.

Because of the active promotion internationally by academia, more and more firms realize that investment in CSR is not just for building brand image and advertisement but also for gaining benefits. For business, the goal is to continuously develop and pursue financial performance. Currently, more than 52,400 companies worldwide have adopted the triple bottom line to evaluate corporate performance. In 2007, more than 2,900 worldwide brands representatives jointly formulated the 10 principles of CSR guidelines. Thus, more and more companies implement CSR and this implies that companies have recognized that CSR is not just an individual issue but a strong component in firm's competitive strength. Therefore, this paper investigates the connection between CSR and operating performance in order to advise managers to pay more attention to CRS to promote the competitive ability of firms.

This study adopts the free disposal hull (FDH) model and stratification DEA with one-way ANOVA to analyze the relationship between CSR and firm performance. The important contributions of this study include: (1) developing an innovative two-stage production process that includes profitability and market value creation to assess the operating performance of firms; (2) implementing one-way ANOVA to investigate whether or not CSR affects firm performance.

The remainder of this study is as follows. Section 2 presents the review of the related literature, Section 3 describes the procedures for data collection and the methodology. The empirical results of the analyses are presented in Section 4. Finally, conclusions are presented and suggestions for further research are made.

2. Literature Review. According to Orlitzky et al. (2003) in reviewing the collection of literature on the relationship between CSR and performance, it is clear that the relationship between them can be divided into 3 categories including positive relationship (Moskowitz, 1972; Parket and Eilbert, 1975; McWilliams and Siegel, 2001), negative relationship (Vance, 1975; Turban and Greening, 1997), and no relationship (Fogler and Nutt, 1975). Among these 3 categories, most of the literature concludes

that there is either a positive relation or negative relation between CSR and performance. The first is the negative relationship (Friedman, 1970; Hayek, 1960), it is argued that enterprise should consider making the maximum profit as the main objective without having to pay corporate social responsibility. The second is the positive relationship (Barney, 1991; Brown and Dacin, 1997; Maignan and Ferrell, 2001; Porter and Kramer, 2002), with the idea that CSR can strengthen organizational performance, improve brand image, corporate reputation and increase competitive advantage.

Surroca et al. (2010) indicated no direct relationship between corporate responsibility and financial performance. Becchetti and Trovato (2011) found that CSR practices do not significantly reduce firm efficiency. Becchetti and Trovato (2011) pointed that firms included in the Domini 400 index do not appear to be more distant from the production frontier than firms in the control sample, after controlling for the heterogeneity of production structure. The results found that adoption of CSR practices does not significantly reduce firm efficiency

This study is different from the past literature because we investigate the difference between operating performance of a company with CSR implementation and a company without CSR. The purpose of this study, based on the past literature, is to explore the relationship between CSR implementation and the performance of different industries.

3. Research Design.

3.1 The two-stage production process. Although organizational performance could be reasonably measured with the two-stage production process model proposed by Seiford and Zhu (1999), their selection of variables is slightly inappropriate. Therefore, this study revises the variables used by Seiford and Zhu (1999) by using more suitable and complete variables. The 3 input variables at the first stage used by Seiford and Zhu (1999) to measure profitability are assets, stockholders' equity, and employees. The composition of assets consists of working capital accumulated for funds usage, while the two major sources of funds (shareholders' equity and liabilities) come from internal funding and external funding, respectively. Using assets and shareholders' equity to measure profitability is misleading due to redundancy. It would not be appropriate to use these two types of capital together since their impacts on a firm are different (Myers, 1984). Therefore, these two types of capital with the different impact on corporate operation are inappropriate to be used to proxy for the effect of profitability.

Furthermore, the firm's main profit source should be generated from operating activities which depend on the support of capital and human resources. A firm's major sources of profitability are generated from shareholders' investments, operating activities, external financing, and assets disposition. Profit from operating activities could be carried over from the net income to retained earnings, and retained earnings are a part of equity. Disposal of assets are non-regular activities, which might give rise to non-recurring income; therefore, the source of funds on asset disposal is not appropriate for profitability analysis. Based on these concepts, this study measures organizational performance using equity, debt, and the number of employees.

Seiford and Zhu (1999) measured marketability at the second stage. The inputs are from the outputs of the first stage, which are revenue and net income. At the sec-

ond stage, the outputs are market value, return on investment, and earnings per share. This study does not use return on investment and earnings per share, because return on investment is prone to error, due to different points of investment. Earnings per share is calculated using after-tax net income divided by the number of shares outstanding. However, net income is already used as an input variable, therefore, it will be redundant to use earnings per share again as an output variable. Therefore, this study eliminates these two variables in Seiford and Zhu (1999), but retains market value in order to measure the market value creation[4] of tangible and intangible assets. We also introduce the use of intangible asset proxy to measure how the input creates value for firm under normal business operation and revised the phrase "second stage" to "market value creation". The modified model is as shown in Figure 1 in the hope that the model can measure organizational performance more prudently.

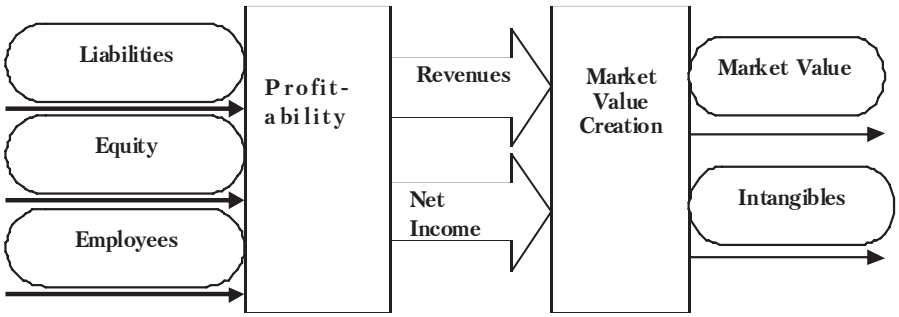

Figure 1. **Two-stage production process in corporate organization**

3.2 Data sources and sample selection. This research investigates the Domini 400 Social Index comprised of 400 representative companies selected from the list of 3,000 US public listed companies by an independent fair third-party. Those 3,000 companies have been assessed in terms of the degree of CSR implementation by Kinder, Lydenberg, Domini, and Co. Inc. (KLD). It is the first index in the US that uses society and environmental issues as selection criteria. The Domini 400 Social Index has provided social responsibility-oriented investors with a better baseline to understand the impact of CSR criteria on organization performance.

KLD started the selection for the Domini 400 Social Index by using the S&P 500 Index. About half of the companies in S&P 500 index were selected through first-stage screening. The remaining 150 companies are selected if they meet two criteria: First of all, a company must have extensive industry representativeness and can reflect the extant markets situation to social accountability investors. Secondly, a company must have a strong enterprise's community responsibility. A listed company might be removed and a company unlisted on the index can be added over time as KLD will join some other projects too, or revise the above-listed stated assessment criterion project.

[4] Tangible and intangible assets: Tangible assets are capital formed by liabilities and stockholders' equity while intellectual capital is intangible assets, which represent the hidden differences between market value and book value (Edvinsson and Malone, 1997).

To measure the degree of CSR, the 7 dimensions of KLD database is used for assessment, which can also be used to analyze the impacts of different indicators on organizational performance. The KLD index covers about 80 indicators under 7 dimensions of quantitative point addition and deduction. This study uses the 7 subdimensions to measure the degree of CSR implementation. The 7 dimensions of KLD index are environmental, corporate governance, diversity, human rights, production, employee relations, and civic duty. Many scholars have used these assessment ratings to study the social responsibility issues (Waddock and Graves, 1997; McWilliams and Siegel, 2001; Surroca et al., 2010).

Liabilities, shareholders' equity, and the number of employees as at the beginning of 2008 are used as inputs to measure the output impact for 2008 at the first stage. The outputs generated, net income and revenue as of the 2008 year end, are used at the second stage of value creation as input items. Outputs for the second stage are market value and intangible assets. Variables used in this study are defined according to the COMPUSTAT database.

3.3 Methodology. The free disposal hull (FDH) model (Deprins et al, 1984) is used to develop stratification DEA. The basic motivation is to ensure that efficiency evaluations are effected from only actually observed performances. The CCR model is not allowed because they are derived and not actually observed performances. The concept of the stratification DEA in FDH model is shown in Figure 2.

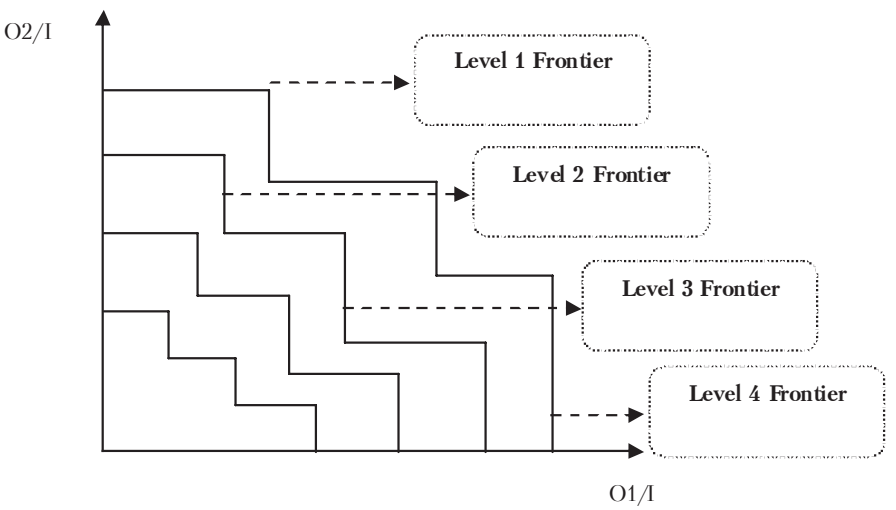

Figure 2. **The concept map of 4-level FDH DEA frontiers**

The stratification DEA in FDH model is introduced as follows. Let $J^1=\{DMU_j, j=1,\ldots,n\}$ (the set of all n DMUs). Interactively define $J^{l+1}=J - E^l$, where

$$E^l = \left\{ DMU_k \in J^l \middle| \phi(l,k) \right\} \quad (1)$$

$\phi(l,k)$ is the optimal value to the following LP when DMU_k is under evaluation.

$$\begin{aligned} &\underset{\lambda_j,\phi(l,k)}{Min}\ \phi(l,k) \\ &s.t. \\ &\sum_{j\in F(J^l)}\lambda_j x_{ij} \le \phi(l,k)x_{ik}, \\ &\sum_{j\in F(J^l)}\lambda_j x_{ij} \ge y_{rk}, \\ &\sum_{j\in F(J^l)}\lambda_j = 1,\ \lambda_j \in \{0,1\} \\ &\phi(l,k),\ \lambda_j \ge 0;\ \forall\, i \text{ and } r, j \in F(J^l) \end{aligned} \qquad (2)$$

where $j \in F(J^l)$ means $DMU_j \in J^l$, i.e., $F(.)$ represents the correspondence from a DMU set to the corresponding subscript index set. When $l = 1$ in Eq. (1), and E^l consists of all the frontier DMUs. These DMUs in set E^l define the first-level best-practice frontier. When $l = 2$, Eq. (2) gives the second-level best-practice frontier after the exclusion of the first-level frontier DMUs, and so on. In this manner we identify several levels of the best-practice frontiers. We call E^l the lth-level best practice frontier. The following algorithm accomplishes the identification of these best-practice frontiers by Eq. (1).

- Step 1: Set $l = 1$. Evaluate the entire set of DMUs, J^l, by Eq. (1) to obtain the first-level frontier DMUs, set E^l (the first-level best-practice frontier).

- Step 2: Exclude the frontier DMUs from future DEA runs. $J^{l+1}=J^l - E^l$. (If $J^{l+1}=\varnothing$, then stop).

- Step 3: Evaluate the new subset of "inefficient" DMUs, J^{l+1}, by Eq. (1) to obtain a new set of efficient DMUs, E^{l+1} (the new best-practice frontier).

- Step 4: Let $l=l + 1$. Go to step 2.

- Stopping rule: $J^{l+1}=\varnothing$, the algorithm stops.

4. Empirical Results.

4.1 The analysis of the industry operating performance. Among the 318 sample firms, 21.38% are consumer discretionary (68 firms), 15.72% of information technology (50 firms), and 15.09% industrials (48 firms) accounted for 52.19% of the total sample. This shows that these 3 industries are more willing to implement CSR. Table 1 shows that energy industry outperforms other industries with the efficiency score as high as 0.92. The input of energy industry is relatively lower than other industries but the output is a forward-looking indicator. This indicates that energy firms in the Domini400 Index are better decision makers in terms of resource allocations. As for the telecommunication services (0.89), utilities (0.88), consumer staples (0.83), and material industries (0.82), the decision-making in terms of profitability is moderate. The firms in finance and consumer discretionary industries need to improve their resource allocation ability. Firms suffered from the investment loss caused by the global financial crisis in 2008, which led to low repayment ability of borrowers and poor profitability. These firms must find a balance point to improve input. Due to economic downturn, consumers will give up non-daily necessities and spend money on necessities in the consumer discretionary industry. Besides expecting the economy to recover, this industry should also improve its resource allocation and use it favorably on profitability.

Market value creation represents the summation of tangible assets and intangible ones. Tangible assets is the source for firms to maintain current operation while intangible assets is the key in affecting whether firms are equipped with future competitiveness. Therefore, the effects of income and profit after tax from business activities towards intangible assets and market value creation not only affect the current operation status but also are critical for competitiveness and sustainable development. Table 1 shows that among the industries, the Energy industry has the best market value creation. This indicates higher emphasis on market value creation and higher future competitiveness. The market value creation of telecommunication services, consumer staples, and healthcare, and finances industries are moderate and should be enhanced to ensure sustainable operation. The industry with the worst performance is utilities with the efficiency score of 0.53. The inefficiency might be due to the fact that operational decisions and future operating directions are mostly decided by the government in public utility firms. Therefore, these firms are not very concerned about sustainable operation and competitiveness.

Table 1. **The average operating efficiency value in different industry**

Code	Industry	Item	Efficiency Score	
			Profitability	Market Value Creation
1000	Materials	Mean	0.82	0.62
		N	23	23
2000	Consumer Discretionary	Mean	0.67	0.64
		N	68	68
3000	Consumer Staples	Mean	0.83	0.79
		N	34	34
3500	Health Care	Mean	0.79	0.81
		N	31	31
4000	Energy	Mean	0.92	0.86
		N	12	12
5000	Financials	Mean	0.42	0.78
		N	36	36
6000	Industrials	Mean	0.80	0.64
		N	48	48
8000	Information Technology	Mean	0.70	0.72
		N	50	50
8600	Telecommunication services	Mean	0.89	0.83
		N	3	3
9000	Utilities	Mean	0.88	0.53
		N	13	13
	Total number of firms		318	318

In operating performance, energy industry has the best profitability and market value creation. The average efficiency scores are all higher than 0.8, showing that management of this industry not only pursues short-term profits, but also plan for future sustainable operation. In addition, healthcare and consumer staples industries

also emphasize heavily on operating performance. In these 2 industries, the two-stage efficiency scores are above 0.79. Although these 2 industries do not outperform the energy industry, these firms are concerned with the profitability and market value creation relative to other industries. These firms emphasize current profitability to fulfill the stakeholders' demand and also increase competitiveness.

4.2 Corporate social responsibility and operating performance. Table 2 shows the industry distribution in each group. 115 firms in Group 1 at the profitability stage, accounted for 36.16% of the total sample. 109 firms in Group 2 accounted for 34.28% of the total sample. 52 firms in Group 3 accounted for 16.35% of the total sample. There are 42 firms in the inefficient group, accounting for 13.21% of the total sample. The summation of Groups 1 and 2 is 70.44% of the total sample size, which shows that the firms in Domini 400 index are concerned with the resource allocation at the profitability stage. These firms are committed to allocating human resources and funding in the most efficient way. In Group 1, the energy industry achieves the first level efficiency frontier of 91.57%. This shows that the majority of firms in the energy industry have higher profitability. However, the profitability ratios of the financial and consumer staples industries, which are in the inefficient group 4, are only 33.33% and 23.53%. This shows that the 2008 profitability of these 2 industries should be improved.

Table 2. **The industry distribution in each group — profitability**

		Profitability								
Code	Industry	Group 1	%	Group 2	%	Group 3	%	Group 4	%	Total
9000	Utilities	6	46	6	46	1	8	0	0	13
8600	Telecommunication services	2	67	1	33	0	0	0	0	3
8000	Information Technology	17	34	13	26	13	26	7	14	50
6000	Industrials	19	40	20	42	5	10	4	8	48
5000	Financials	6	17	11	31	7	19	12	33	36
4000	Energy	11	92	0	0	0	0	1	8	12
3500	Healthcare	13	42	12	39	6	19	0	0	31
3000	Consumer Staples	15	44	15	44	3	9	1	3	34
2000	Consumer Discretionary	18	26	22	32	12	18	16	24	68
1000	Materials	8	35	9	39	5	22	1	4	23
	Total	115		109		52		42		318

Table 3 shows the industry distribution in the market value creation. In general, the market value creation in each industry is poor. Group 1 accounted for 9% of the total sample, Group 2 accounted for 21% of the sample, Group 3 accounted for 27% but Group 4 accounted for 43%. This shows that the execution effect of market value creation for each industry in 2008 is poor. It may be due to the 2008 global financial crisis as the stock prices decline and the market value is relatively lower. It is also caused by the shrinkage in the creation of intangible assets. In Group 1, telecommunication services and finance are better in execution. Other industries had very high ratio in the inefficient Group 4. Under the concept of sustainable operation, the execution of market value creation needs to be strengthened to improve efficiency.

Table 4 shows there are no significant differences between the efficiency groups and the CSR dimensions variables at the profitability stage. This indicates that the profitability of the Domini 400 Index firms is not affected by CSR dimensions. The insignificant effect is due to the sample of this study that is characterized by a very high level of CSR implementation. As implementing CSR is also one of corporate missions, it is not easy to differentiate the effects on profitability. This also shows that all firms view positively the social responsibility that should be born. These firms are willing to keep implementing CSR in respond to community needs regardless profitability.

Table 3. **The industry distribution in each group — market value creation**

		Market Value Creation								
Code	Industry	Group 1	%	Group 2	%	Group 3	%	Group 4	%	Total
9000	Utilities	0	0	0	0	2	15	11	85	13
8600	Telecommunication services	1	33	1	33	1	33	0	0	3
8000	Information Technology	4	8	11	22	20	40	15	30	50
6000	Industrials	2	4	7	15	7	15	32	67	48
5000	Financials	10	28	8	22	8	22	10	28	36
4000	Energy	1	8	1	8	0	0	10	83	12
3500	Health Care	5	16	11	35	9	29	6	19	31
3000	Consumer Staples	4	12	13	38	7	21	10	29	34
2000	Consumer Discretionary	1	1	13	19	26	38	28	41	68
1000	Materials	0	0	2	9	5	22	16	70	23
	Total	28		67		85		138		318

Table 4. **One-way ANOVA analysis for profitability efficiency groups**

	DEA Efficiency Groups and Mean					
Variable	Group 1	Group 2	Group 3	Group 4	Total	F (p-value)
	(N = 28)	(N = 67)	(N = 85)	(N = 138)	(N = 318)	
Corporate Governance	0.28	0.26	0.23	0.07	0.24	0.151
Community	0.44	0.41	0.58	0.29	0.43	0.343
Diversity	1.58	1.42	1.75	1.48	1.54	0.639
Employee Relation	0.81	0.72	0.54	0.62	0.71	0.308
Environment	0.55	0.62	0.62	0.26	0.55	0.140
Human Rights	0.03	0.03	0.04	0.02	0.03	0.968
Product	0.20	0.19	0.19	0.21	0.20	0.994

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

In Table 5, there are no significant effects between employee relationship and human rights and firms' market value creation. This shows that market value creation do not have significant impact on the execution of employee relationship and human rights. The motivation for firms to execute CSR is self-realization. There are significant differences between the market value creation efficiency groups and the 5 dimensions, which include corporate governance, social interaction, diversity, envi-

ronmental, and product issues. Market value creation efficiency has impact on the execution of these 5 dimensions. More efficient firms will have better execution results. For example, corporate governance, social interaction, and diversity dimensions are higher in Group 1 than in other groups. Although the product issue and environmental dimensions of Group 1 is slightly worse than Group 2, the average scores of Groups 1 and 2 are still larger than Groups 3 and 4. There is no significant association between market value creation and employee relationship and human rights.

Table 5. **One-way ANOVA analysis for market value creation efficiency groups**

	DEA Efficiency Groups and Mean					
Variable	**Group 1**	**Group 2**	**Group 3**	**Group 4**	**Total**	**F (p-value)**
	(N = 28)	(N = 67)	(N = 85)	(N = 138)	(N = 318)	
Corporate Governance	0.43	0.39	0.19	0.15	0.24	0.001**
Community	1.04	0.58	0.40	0.26	0.43	0.002**
Diversity	2.61	2.07	1.62	1.01	1.54	0.000***
Employee Relation	0.82	0.85	0.76	0.59	0.71	0.187
Environment	0.54	0.82	0.51	0.44	0.55	0.035*
Human Rights	0.04	0.06	0.04	0.01	0.03	0.377
Product	0.21	0.31	0.20	0.14	0.20	0.068*

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

This shows that the market value creation has no effects on these 2 dimensions, and the average scores of the groups in these 2 dimensions are also closer. This indicates that the execution of these 2 dimensions is quite similar and they are therefore not the sources of competitiveness. Firms should improve the 5 dimensions execution including corporate governance, social interaction, diversity, environmental and product issue to improve competitiveness. Increasing the execution of these 5 dimensions can add to firms' values. Therefore, these 5 indicators are the key indicators regarding firms' competitiveness and sustainable operation.

5. Conclusion. People in the modern society enjoy the profitability brought by the rapid development and business globalization but ignore the issues like rigorousness of corporate governance, environmental protection, employees and minority rights, production safety, and the quality of sales and marketing. The consequences of ignorance include the nature counterattack suffered by the whole world population, collapse of firms, and labor collective strikes in recent years. The human living environment has become more severe and firms' operation environment has become tougher. In order to improve the situation, governments have set up various rules and regulations. Many US firms that dominate the economic life have also started to focus on CSR and expect these initiatives to improve their operational and living environment to further maintain sustainable operations. The empirical results and academic points of view indicate that firms should not prioritize profitability when executing CSR, but should look into the future. It is hoped that good social environment can be created through the actions that address society needs. In addition, these actions can bring good reputation and build brand image, which will further increase competitiveness. A harmonious society can ensure a favorable business environment, which can lead to sustainable operations.

References:

1. *Arrow, K. J.* (1973). Social responsibility and economic efficiency, Public Policy, Vol. 21 No. 3, pp. 303-317.

2. *Barney, J.* (1991). Firm resources and sustained competitive advantage, Journal of Management, Vol. 17 No. 1, pp. 99-120.

3. *Becchetti, L. and Trovato, G.* (2011). Corporate social responsibility and firm efficiency: a latent class stochastic frontier analysis, Journal of Productivity Analysis, Vol. 36 No. 3, pp. 231-246.

4. *Brown, T. J. and Dacin, P. A.* (1997). The company and the product: Corporate associations and consumer product responses, Journal of Marketing, Vol. 61 No. 1, pp. 68-84.

5. *Deprins, D., Simar, L. and Tulkens, H.* (1984). Measuring labor-efficiency in post offices, in: M. Marchand, P. Pestieau and H. Tulkens. (Eds.), The Performance of Public Enterprises: Concepts and Measurement, Amsterdam, North Holland, pp. 243-267.

6. *Edvinsson, L. and Malone, M. S.* (1997). Intellectual Capital. Harper Collins Publishers, New York, NY.

7. *Fogler, H. R. and Nutt, F.* (1975). A note on social responsibility and stock valuation, The Academy of Management Journal, Vol. 18 No. 1, pp. 155-160.

8. *Freeman, R. E.* (1983). Strategic management: Stakeholder approach, Advances in Strategic Management Review, Vol. 1 No. 1, pp. 31-60.

9. *Friedman, M.* (1970). The social responsibility of business is to increase its profits, available at: http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html (accessed 24 July 2012).

10. *Hayek, R.* (1960). Social responsibility of business manager, Academy of Management Journal, Vol. 7 No. 1, pp. 135-143.

11. *Maignan, I. and Ferrell, O. C.* (2001). Corporate citizenship as a marketing instrument: Concepts, evidence and research directions, European Journal of Marketing, Vol. 35 No. 3/4, pp. 457-484.

12. *McWilliams, A. and Siegel, D.* (2001). Corporate social responsibility: A theory of the firm perspective, The Academy of Management Review, Vol. 26 No. 1, pp. 117-127.

13. *Moskowitz, M. R.* (1972). Choosing socially responsible stocks, Business and Society, Vol. 1 No. 1, pp.71-75.

14. *Myers, S. C.* (1984). The capital structure puzzle, The Journal of Finance, Vol. 39 No. 3, pp. 575-592.

15. *Orlitzky, M., Schmidt, F. L. and Rynes, S. L.* (2003). Corporate social and financial performance: a meta-analysis, Organization Studies, Vol. 24 No. 3, pp. 403-441.

16. *Parket, I. R. and Eilbirt, H.* (1975). Social responsibility: the underlying factor, Business Horizons, Vol. 18 No. 4, pp. 5-10.

17. *Porter, M. E. and Kramer, M. R.* (2002). The competitive advantage of corporate philanthropy, Harvard Business Review, Vol. 80 No. 12, pp. 56-69.

18. *Porter, M. E. and van der Linde, C.* (1995). Green and competitive: ending the stalemate, Harvard Business Review, Vol. 73 No. 5, pp. 120-134.

19. *Prahalad, C. K. and Hamel, G.* (1994). Strategy as a field of study: why search for a new paradigm?, Strategic Management Journal, Vol. 15 No. 2, pp. 5-16.

20. *Rothmann Bowen, H.* (1953). Social Responsibilities of Business, Harper & Row, New York, NY.

21. *Seiford, L. M. and Zhu, J.* (1999). Profitability and marketability of the top 55 U.S. commercial banks, Management Science, Vol. 45 No. 9, pp. 1270-1288.

22. *Surroca, J., Tribo, J. A. and Waddock, S.* (2010). Corporate responsibility and financial performance: the role of intangible resources, Strategic Management Journal, Vol. 31 No. 5, pp. 463-490.

23. *Turban, D. B. and Greening, D. W.* (1997). Corporate social performance and organizational attractiveness to prospective employees, The Academy of Management Journal, Vol. 40 No. 3, pp. 658-672.

24. *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, Vol. 10 No. 3, pp. 540-557.

25. *Vance, S.* (1975). Are socially responsible firms good investment risks?, Management Review, Vol. 64 No. 8, pp. 18-24.

26. *Waddock, S. A. and Graves, S. B.* (1997). The corporate social performance-financial performance link, Strategic Management Journal, Vol. 18 No. 4, pp. 303-319.

27. *Wood, D. J.* (1991). Corporate social performance revisited, The Academy of Management Review, Vol. 16 No. 4, pp. 691-718.

Стаття надійшла до редакції 12.09.2012.