International Research Journal of Applied Finance ISSN 2229 – 6891
Vol. X Issue – 1 January, 2019 www.irjaf.com

Analyzing the Relationship between Corporate Social Responsibility and Financial Performance

Yu-Min Lian* **Chia-Yun Wei** **Jie-Bei Wu** **An-Ge Tong**

Abstract

In this study, we conduct research on whether the corporate social responsibility (CSR) has a significant relationship with financial performance in terms of return on assets (ROA), return on equity (ROE), earnings per share (EPS), and market profit margin, with a special focus on quoted companies in Taiwan. The research design for this study is a quantitative, non-experimental, and exploratory correlational one, used to determine whether, and to what extent, a significant relationship exists between the dependent variable of CSR and the independent variables of financial performance. The problem is that leaders of organizations, stakeholders, or investors view CSR as an expensive obligation that does not necessarily contribute to the financial performance of the organization or might compromise a return on investment. CSR is found to be positive and significant related to the first hypothesis of EPS but not the second, third and fourth hypotheses of ROA, ROE, and gross profit margin. The implications of these findings can add to the practice of incorporating CSR into corporate strategy to improve financial performance and shareholder value as well as to contribute to gains for societies and communities. The opportunity exists to contribute to the current knowledge base with additional study, specifically in the quoted companies in Taiwan. Our findings will not only add credibility to the existing literature but also provide evidence based management research in the current economic environment.

Keywords: Corporate social responsibility, Return on assets, Return on equity, Earnings per share, Sales growth rate

JEL classification: C12, G15, G32

I. Background Information

In order to desire maximum profit, more and more corporation tend to cut lots of necessary cost to generate more revenue. Unfortunately, these decision makers of corporations neglect the importance of fairness severely, meaning that the outcome makes sacrifices for the public but creates astronomical profit for every shareholder of corporation. Additionally, there has been many international financial crisis, combined with business scandals, bringing much more harm to world economy and our environment. A range of reasons mentioned above all make us focus on the issue of corporate social responsibility (CSR). Therefore, in order to recover trust form the public, entrepreneurs start finding ways to strike balance between CSR and rapid economic growth. While corporations adopt CSR actively, it can help their businesses improve financial statement performance. It is possible to observe that there will exist numerous and creative opportunities if a company develops and implements CSR. Due to the direct relevance to financial statement, we select return on assets (ROA), return on equity (ROE), earnings per share (EPS), and gross profit market to be variables in the model for analyzing the relationship with CSR.

II. Motivation

The finding of this study can present several contributions. Decision makers of corporations could have a better sense about how much of profit they would get if they do CSR activities. Then better cost and management decisions in those corporations would be done. The result of this study should also be interested by public. It provides people outside the companies with a new viewpoint to evaluate those companies. External users of financial statements could assess a company's condition in a more comprehensive way rather than only focusing on numbers in financial statements. The most important is that entrepreneurs can aware the advantages of implementing CSR activities through this study. If more CSR activities implement, a more harmonious society would appear.

III. Literature Review

Over the past several decades, debates have continued over CSR and the associated impact on organizational financial performance (Geva, 2008). This discussion has resulted in a large body of literature supported by numerous and varying philosophical views. For the effect of CSR, stakeholder management theory, popularized by Freeman (1984), has two different dimension about the effect of CSR. And for the relationship between CSR and financial performance, many theories come up with various opinions. For instance, Trade-off theory hypothesizes a negative association between CSR and financial performance. On the contrary, Organizational legitimacy theory figure out a positive relationship between CSR and financial performance. Other than both two theories, Supply and demand theory suggests a neutral relationship between CSR and financial performance.

A. Stakeholder management theory

Freeman (1984) believes that all the individual and groups which can influence corporation's objectives are the stakeholder of corporation (Flak and Dertz, 2005). While in the development of this theory, two views are in discussion. Friedman (1970), the representative of the classical school, claims that every organization in the society has its own goal and the only goal of corporation is maximizing profit. Hence, corporation should only take charge of their shareholders and other organizations will be responsible for other problems in society. However, the scholars of social economics school think that every member can get benefits from a peace and prosperity society. Corporations should take the cost of creating a sustainable society. In other words, corporations should not only pursue profit maximization, but also make a harmonic situation.

(1) Trade-off theory

Based on Friedman (1970), investments are tradeoffs between stakeholders. CSR would lead to tradeoffs between profit maximization and socially responsive objectives. Therefore, CSR may increase the cost of corporation's resources which could be used in maximizing profit (Preston and O'Bannon, 1997).

(2) Organizational legitimacy theory

Organizational legitimacy theory argues all organizations must be accepted by their environment in order to survive and success (Dowling and Pfeffer, 1975; Hannan and Freeman, 1977; Meyer and Rowan, 1977). CSR could help to legitimize the corporation's role in society.

(3) Supply and demand theory

This theory claims there is an optimal level of CSR (Mcwilliams and Siegel, 2001; Salzmann, 2005). Companies could maximize profits by supplying the demanded amount of CSR. In conclusion, CSR has been considered as a strategy of many corporations. We think that a good level of CSR could help corporations get a better profit. For the purposes of this study a literature review is conducted, yet not an exhaustive review, to set the basis for establishing the CSR phenomenon and the management dilemma being studied. And the following chapter is organized around three major sections: (1) Financial Performance; (2) CSR; and (3) the link between CSR and Financial Performance. In the first section, financial performance is defined, followed by a discussion regarding the ROA, ROE, EPS, and Gross margin on sales for the financial performance. In the second section, CSR is defined, along with a discussion of CSR measurement. Some background regarding the difficulties defining CSR is included as well. In the final section, the CSR/financial performance link is discussed. This includes a summary of the theories that have been used to link CSR and financial performance. So in the following sub-section, we propose a series of hypotheses that link individual CSR dimensions to firm performance.

IV. Research hypothesis

The purpose of this quantitative non-experimental exploratory descriptive correlational methods study is to contribute to the existing knowledge base regarding CSR activities and the corresponding relationship, if any, to organizational financial performance. The research question includes: What is the relationship between organizations that are recognized as participating in CSR activities and the corresponding organizational financial performance as a measure of ROA, ROE, Gross Profit Margin, and EPS? Is there a variance between organizational financial performance and companies that have CSR? The minor questions that support achieving this purpose include:

1. What is the relationship between organizations that engage in CSR activities and the corresponding organizational EPS?

2. What is the relationship between organizations that engage in CSR activities and the corresponding organizational ROA?

3. What is the relationship between organizations that engage in CSR activities and the corresponding organizational ROE?

4. What is the relationship between organizations that engage in CSR activities and the corresponding organizational Gross Profit Margin?

To answer the research questions, we use the data due to the small sample size (n =73). In addition, we put forward the following four hypotheses to analyze the relationship.

Hypothesis 1
H01: The practice and execution of organizational CSR activities have no significant relationship with the earnings per share (EPS).
Ha1: The practice and execution of organizational CSR activities have a significant relationship with earnings per share (EPS).

Research Question 1 asked, "What is the relationship between organizations that engage in CSR activities and the corresponding organizational EPS?" The related null hypothesis predicted, "H01: The practice and execution of organizational CSR activities have no significant relationship with the earnings per share (EPS)." To answer this question, Table 4 displays the relevant Spearman rank-ordered correlation.

Hypothesis 2
H02: The practice and execution of organizational CSR activities has no significant relationship with the return on assets (ROA).
Ha2: The practice and execution of organizational CSR activities has a significant relationship with the return on assets (ROA).

Research Question 2 asked, "What is the relationship between organizations that engage in CSR activities and the corresponding organizational ROA?" The related null hypothesis predicted, "H02: The practice and execution of organizational CSR activities has no significant relationship with the return on assets (ROA)." To answer this question, Table 5 displays the relevant correlation.

Hypothesis 3

H03: The practice and execution of organizational CSR activities have no significant relationship with the return on equity (ROE).

Ha3: The practice and execution of organizational CSR activities have a significant relationship with the return on equity (ROE).

Research Question 3 asked, "What is the relationship between organizations that engage in CSR activities and the corresponding organizational ROE?" The related null hypothesis predicted, "H03: The practice and execution of organizational CSR activities have no significant relationship with the return on equity (ROE)." To answer this question, Table 6 displays the relevant correlation.

Hypothesis 4

H04: The practice and execution of organizational CSR activities have no significant relationship with the Gross Profit Margin.

Ha4: The practice and execution of organizational CSR activities have a significant relationship with the Gross Profit Margin.

Research Question 4 asked, "What is the relationship between organizations that engage in CSR activities and the corresponding organizational Gross Profit Margin? "The related null hypothesis predicted, "H04: The practice and execution of organizational CSR activities have no significant relationship with the Gross Profit Margin." To answer this question, Table 7 displays the relevant correlation.

V. Variable Definition

1. Dependent variable (CSR)

Defining and measuring CSR originally referred to as corporate social responsibility is a complicated process. There are several methods for measuring CSR that recognized in the literature. The study utilizes a quantitative approach. A quantitative approach is considered suitable as the purpose of the research to examine the relationship between CSR and financial performance from a statistical perspective regarding Taiwan economic journal (TEJ). The methods to carry out this study by using data from the *Common Wealth Magazine* of 2007 to choose 73 companies, which are appraised as successful enterprises, to create a dummy variable 1 to mean CSR. However, dummy variable 0 refers to "non CSR".

2. Independent variable

(1) Earnings per share (EPS)

Earnings per share (EPS) is the portion of the company's distributable profit, allocated to each outstanding equity share. Earnings per share is an efficient indicator to estimate the profitability of an organization. If there exists growth in earnings per share, it means that a company not only create benefit to their stockholders but also attract new investors. Therefore, the research adopts earnings per share to the independent variable to represent the financial performance. Further, we expect that corporate social responsibility is positively correlated to earnings per share.

(2) Return on assets (ROA)
Return on assets measures the return on both common and preferred stockholder's investment annually. The ratio represents the percentage of profit a company earns in relation to its overall resources. In order to examine the relationship between financial performance and corporate social responsibility, the study uses ROA, which can significantly and efficiently represent an enterprise's profitability, to the independent variable.

(3) Return on equity (ROE)
Return on equity is a measure of analyzing financial performance. The ratio is calculated by dividing net income by shareholder's equity. In other words, ROE is also considered the return on net assets because of equity, which equals assets minus debt. Therefore, the study uses this indicator to examine its relationship with corporate social responsibility.

(4) Gross margin on sales (GROSS_MARGIN)
Gross margin is a company's total sales revenue minus its cost of goods sold, divided by total sales revenue, expressed as a ratio. The study expects that if an enterprise has the larger gross margin on sales, they have more ability and resource to participate in corporate social responsibility.

3. Control variable
(1) Firm size (SIZE)
It has been argued that small and medium-sized firm have less resource to take part in corporate social responsibility. However, large firms are likely to participate in CSR. In order to avoid its influence, the study uses total assets and then put the number in logarithms to control the functions.

(2) Leverage ratio (LEV)
It is mentioned that the leverage ratio has a significant influence on financial performance. The aim to fulfill corporate social responsibility is attained by a large amount of the company's assets. In other words, huge leverage ratio also impacts on financial performance. As a result, the research use LEV to be a control variable in order not to affect our results.

Table 1. *Other variables*

Variable name	Variable code	Variable measurement	Expected direction
Corporate Social Responsibility	CSR	The data are from the *Common Wealth magazine* of 2007 to choose successful enterprises and create a dummy variable 1 to mean CSR. Dummy variable 0 refers to "non CSR"	
Earnings Per Share	EPS	(Net income-preferred dividend)/weighted average shares outstanding	+
Return on assets	ROA	Net income/average total assets	+
Return on equity	ROE	Net income/shareholder's equity	+
Gross margin on sales	GROSS_MARGIN	Net sales/gross margin	+
Frim size	SIZE	Log(total assets)	+
Leverage ratio	LEV	Total liability/total assets	-

VI. Model Setting

In order to test the relationship between corporate social responsibility and financial performance, the study creates four different models to examine whether the dependent variable and independent variable have a significant positive effect.

$$CSR_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \varepsilon_{it} \quad \text{(Model1)}$$

$$CSR_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \varepsilon_{it} \quad \text{(Model2)}$$

$$CSR_{it} = \beta_0 + \beta_1 ROE_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \varepsilon_{it} \quad \text{(Model3)}$$

$$CSR_{it} = \beta_0 + \beta_1 GROSS\_MARGIN + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \varepsilon_{it} \quad \text{(Model4)}$$

VII. Descriptive Statistics

1. CSR definition

In this study, we regard the listed company which are rewarded by *Common Wealth Magazine*'s Corporate Citizenship Award in 2017 as CSR companies. In contrast to the company with CSR, we regard other listed company as companies without CSR. Corporate Citizenship Award is selected by three steps. In the first step, foreign businessmen in Taiwan whom are recommended by expert will take part in the investigation for listed companies which get profit in three consecutive years. In the second step, *Common Wealth Magazine* will evaluate the report from those businessmen and invite accounting firms and guild in different industries to score. After the two steps, a jury organized by ten people who have high credibility and social prestige will integrate the score and companies' data then select the final ranking.

2. Data collection

For this study, we use publicly available secondary data published in Taiwan Economic Journal which is the most professional database in Taiwan. We use all the listed financial data of companies in 2017. From Table 1, we can know that CSR companies have higher EPS, ROA, and ROE than other listed companies in average. But the gross margin of CSR companies in average is lower than other companies. It suggest that CSR companies perhaps have a better financial performance. Table 2 is the variables' correlation coefficient matrix of the total sample. In this Table, CSR has a significant positive relationship with EPS, ROA, ROE and SIZE.

Table 2. *The summary statistics of variables*

Variable	Type	N	Average	SD	Minimum	Maximum
EPS	Total	2064	1.741	5.742	-43.250	193.650
	CSR	75	4.965	5.726	-2.330	29.830
	Non-CSR	1989	1.619	5.708	-43.250	193.650
ROA	Total	2064	2.099	13.073	-134.760	84.670
	CSR	75	7.095	8.960	-46.290	36.970
	Non-CSR	1989	1.911	13.168	-134.760	84.670
ROE	Total	2047	3.239	29.257	-420.640	612.230
	CSR	75	12.498	13.260	-57.860	78.300
	Non-CSR	1972	2.887	29.641	-420.640	612.230
GROSS	Total	1975	225.225	7239.095	-15227.55	314188.89
MARG	CSR	66	31.376	166.871	-37.610	1286.700
	Non-CSR	1909	231.927	7363.079	-15227.55	314188.89
SIZE	Total	2064	6.596	0.913	3.273	10.905
	CSR	75	7.570	1.053	3.560	9.947
	Non-CSR	1989	6.560	0.887	3.273	10.905
LEV	Total	2064	0.067	0.103	0.000	0.832
	CSR	75	0.065	0.085	0.000	0.321
	Non-CSR	1989	0.067	0.104	0.000	0.832

Table 3. *Pearson & Spearman Correlation coefficient matrix*

	CSR	EPS	ROA	ROE	GROSS MARG	SIZE	LEV
CSR	1	0.109**	0.074**	0.062**	-0.005	0.207**	-0.03
EPS	0.161**	1	0.490**	0.403**	-0.07	0.199**	-0.069**

ROA	0.100**	0.923**	1	0.763**	-0.008	0.281**	-0.033
ROE	0.125**	0.945**	0.956**	1	-0.001	-0.238**	0.006
GROSS MARG	-0.005	0.216**	0.235**	0.262**	1	-0.002	-0.014
SIZE	0.197**	0.389**	0.230**	0.300**	-0.003	1	0.063**
LEV	0.017	-0.059**	-0.070**	-0.040	0.010	0.212**	1

Note: ** suggests 1% significant level, Upper right half is Pearson correlation coefficient; Lower left half is Spearman correlation coefficient

VIII. Analysis and Discussion

1. Impact of EPS on CSR

Table 4. Impact of EPS on CSR

CSR	Regression coefficients	*t*-value	*p*-value
EPS	0.0020194	2.74	0.006**
SIZE	0.0162033	8.37	0.000***
LEV	-0.0080959	-0.20	0.840

The Table 4 shows that EPS, SIZE, and CSR are positively correlated and significant; LEV is negatively correlation. Among them, with a p-value<0.01, CSR has a significantly positive correlation with the regression coefficient of 0.0020194 (t-value = 2.74), and statistical results show that if the company has high EPS, then its CSR will rise. The regression coefficient of scale to CSR is -0.0080959 (t-value = -0.20), which indicated a negative correlation. SIZE has a significantly positive correlation with the regression coefficient of 0.0162033 (t-value = 8.37). Table 4 summarizes the relationships of EPS, SIZE, LEV, and CSR. Therefore, the company with high earning per share has a positive impact on corporate social responsibility, and the company's scale are significantly positively correlated. Additionally, LEV is negatively correlated with CSR.

2. Impact of ROA on CSR

Table 5. Impact of ROA on CSR

CSR	Regression coefficients	*t*-value	*p*-value
ROA	3.69e-06	0.01	0.992
SIZE	0.0174894	8.70	0.000***
LEV	-0.0169791	-0.42	0.672

The Table 5 shows that ROA, SIZE, and CSR are positive; ROA and CSR has no significant relationship. However, CSR and SIZE are significant positive, and LEV have a significantly negative relationship; Thereby, indicating that large scale company will practice CSE perform better. With a *p*-value<0.001, the regression coefficient of LEV to CSR is -0.0169791 (*t*-value = -0.42), indicating significantly negative coreelation. The regression coeffiecient of ROA to CSR is 3.69e-06 (*t*-value=0.01), indicating a positive correlation. LEV has a significantly nagative correlation with the return coefficient of CSR of -0.0169791 (*t*-value=-0.42). Table 5 shows that CSR is positively related to ROA and SIZE, negatively to LEV.

3. Impact of ROE on CSR

Table 6. Impact of ROE on CSR

CSR	Regression coefficients	*t*-value	*p*-value
ROE	0.000027	0.18	0.855
SIZE	0.0173978	8.89	0.000***
LEV	-0.0169533	-0.42	0.673

Table 6 shows that ROE, SIZE and CSR are positive, and LEV are negative. ROE and CSR has no significant relationship. However, SIZE and CSR are significant positive correlation. At *p*-value<0.01, SIZE has a significantly positive correlation with the regression coefficient of CSR of 0.0173978 (*t*-value=8.89). Additionally, ROE has a positive correlation with the regression coefficient of CSR of 0.000027 (*t*-value-0.855). the regression coefficient of LEV to CSR is -0.0169533 (t-value=-0.42). Table 6 shows that the CSR is not significant for ROE; thus, ROE has no significant impact on CSR. SIZE is significantly positove correlated with CSE. LEV is negatively correlated with CSR.

4. Impact of gross profit margin on CSR

Table 7. Impact of Gross profit margin on CSR

CSR	Regression coefficients	*t*-value	*p*-value
GROSS MARG	1.86e-06	0.19	0.848
SIZE	0.0151757	8.06	0.000***
LEV	-0.182351	-0.15	0.880

Table 7 show that CSR and GROSS MARG has no sognificant relationship. SIZE and CSR is significant positive and LEV is negatively correlated with CSR. At a *p*-value <0.01, the regression coefficient of SIZE is 0.00151757 (t-value=8.06), thereby indicating a significantly posotive correlation. Moreover, GROSS MARG has no relationship with CSR of the regression coeffiecnt of 1.86e-06 (t-value=0.19). The regression coeffient of LEV and CSR is -0.182351 (*t*-value=-0.15). Table 7 shows that CSR is not significant for GROSS MARG, thus GROSS MARG has no significant impact on CSR. SIZE is significantly positive corelated with CSR. LEV is negatively correalted with CSR.

VIII. Conclusion

We examine the relationship between CSR and financial performance in a way that is unique—rich in theory, broad in perspective, and thorough in scope.Overall, the empirical results of this study can not suggest that there is a positive relationship regarding the level of CSR activities based on the CSR scoring of each company that is assigned as a result of numerous factors and the corresponding financial performance. But the findings indicate a positive significant relationship with CSR using the financial metric of EPS. Yet, the findings indicate a negative relationship with the financial metrics ROA, ROE, and Gross Profit Margin, based on the data set and methodology applied. In summary, the goal is to test whether a significant relationship existed between CSR and identified financial metrics commonly used to measure organizational financial performance. The main contribution of this study is that CSR demonstrates a positive and significant relationship with the financial metric EPS, but only positive and not significant for the financial metrics of ROA, ROE, and Gross profit margin.

References

Dowling, J., and J. Pfeffer, 1975. Organizational Legitimacy: Social Values and Organizational Behavior. The Pacific Sociological Review 18, 122–136.

Flak, L.S., and Dertz, W., 2005. Stakeholder theory and balanced scorecard to improve IS strategy development and management in public sector. Iris'28 Conference, Kristiansand, Norway.

Freeman, R. E., 1984. Strategic Management: A Stakeholder Approach. Boston, MA: Pitman.

Friedman, M., 1970. The Social Responsibility of Business Is to Increase its Profits. The New York Times.

Geva, A., 2008. Three Models of Corporate Social Responsibility: Interrelationships between Theory, Research, and Practice. Business & Society Review (00453609) 113, 1–41. doi:10.1111/j.1467-8594.2008.00311.x

Hannan, M. T., and J. Freeman., 1977. The Population Ecology of Organizations. American Journal of Sociology 82, 929–964.

McWilliams, A., and D. Siegel., 2001. Corporate Social Responsibility: A Theory of the Firm Perspective. Academy of Management Review 26,117–127.

Meyer, J. W., and B. Rowan., 1977. Institutionalized Organizations: Formal Structure as

Myth and Ceremony. The American Journal of Sociology 83, 340–363.

Salzmann, O., A. Ionescu-somers, and U. Steger., 2005. The Business Case for Corporate Sustainability: Literature Review and Research Options. European Management Journal 23, 27–36.

Authors

Yu-Min Lian*
Department of Business Administration, Fu Jen Catholic University, No. 510, Zhongzheng Rd., Xinzhuang Dist., New Taipei City 24205, Taiwan.
E-mail addresses: 140476@mail.fju.edu.tw, 95352506@nccu.edu.tw

Chia-Yun Wei
Department of Accounting, Fu Jen Catholic University, No. 510, Zhongzheng Rd., Xinzhuang Dist., New Taipei City 24205, Taiwan.

Jie-Bei Wu
Department of Financial Management, Guizhou University, No. 2708, South Section of Huaxi Rd., Huaxi Dist., Guiyang City 550025, Guizhou Province, P.R.China.

An-Ge Tong
Department of Accounting, Fu Jen Catholic University, No. 510, Zhongzheng Rd., Xinzhuang Dist., New Taipei City 24205, Taiwan.

*corresponding author

Acknowledgements

The authors sincerely thank the anonymous referees for helpful comments and suggestions. Yu-Min Lian is grateful for the funding support from the Ministry of Science and Technology under grant MOST107-2410-H-030-020.