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Corporate Social Responsibility and Financial Performance in Korean Retail Firms*

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Abstract

Purpose – We examine how a Korean retail firm's social responsibility is related to its financial performances. The traditional view of corporation expects a negative relationship, while the stakeholder theory expects a positive one.

Research design, data, and methodology – We adopt the ESG score, published by Korean Corporate Governance Service to measure the level of socially responsible activity for the Korean retail firms. The ordinary least square method is adopted to investigate this relationship. The publicly traded retail firms are examined from 2011 to 2016.

Results – We find that the total ESG score is negatively related to ROE but shows no statistically significant relationship with ROA and Tobin's Q value. However, a firm's environmental score is negatively related with both of ROE and ROA. Its social score is no conclusive relationship with the performance measures. The governance score is negatively related to the value of Tobin's Q.

Conclusions – This paper generally supports the traditional view of corporate theory, especially in terms of ROE. This evidence is not well aligned with the existing study for Korean corporations generally documenting positive relationships. We find almost no empirical evidence supporting the stakeholder theory of corporation in the Korean retail industry,

Keywords: Corporate Social Responsibility, Financial Performance, Retail Industry.

JEL Classifications: G30, G32.

1. Introduction

Recently, a number of corporations have spent substantial resources to shape their decisions as socially responsible ones. Corporate social responsibility (CSR) has become one of important areas to which a CEO has to pay attention. In fact, some corporations have invested a significant amount of resources to enhance their CSR. Others still believe that the engagement in CSR is not well aligned with the

interests of their shareholders.

To resolve such a controversy, many researchers have tried to examine this relationship between CSR and financial performance. Yet, they have found contrasting results for this relationship depending on the choices of sample firms and the adoption of proxy variables representing the level of CSR. Pelozo (2009) surveyed the extant studies and confirmed no definite relationship; around 30% of academic articles provided a negative or inconclusive relationship and 70% of the articles presented a positive one.

We examine the relationship between CSR and financial performance in the Korean retail industry. This relationship is particularly important in the retail industry because the retail firms have to satisfy the demand of individual consumers. Individual consumers are potentially more sensitive to a corporation's engagement in CSR compared to corporate customers; corporate CEOs tend to care more about cost minimization in their purchase of intermediary goods.

To construct a proxy variable to measure CSR, we adopt a new set of data, the ESG scores. The Korean Corporate Governance Service publishes these scores annually, which

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grade a larger set of sample firms compared to the widely employed Korea Economic Justice Institute index (KEJI index). The total ESG score is calculated as the sum of a firm's environmental (E-score), social (S-score) and governance (G-score) scores. This total ESG score is adopted as our benchmark CSR measure. Yet, such a detailed categorization also allows us to investigate how each category of CSR affects corporate performance in different ways. In other words, the implications of a firm's environmental, social, and governance scores on financial performances are separately analyzed as well.

We employ a sample of Korean retail firms listed in KOSDAQ (Korean Securities Dealers Automated Quotations) and KOSPI (The Korea Composite Stock Price Index) markets from 2011 to 2016. To construct financial performance measure and other control variables, we use the firm-level financial statements provided by the WISEfn database. Three widely used financial performance measures are considered in the empirical examinations. Return on assets (ROA) and return on equity (ROE) measures are used to measure a firm's financial performance in terms of accounting profitability. Tobin's Q, which is closely associated with the market value of firm, is used to capture the valuation effect of CSR. The ordinary least square method is used to estimate the effect of CSR on financial performances.

The main findings of this paper are described as follows. First, we find a robustly negative relationship between CSR and ROE in the Korean retail industry when the total ESG score is adopted as the proxy variable for CSR. Yet, we find statistically insignificant relationship or no robust relationship between CSR and financial performances, when we consider ROA or Tobin's Q value as the performance measures. To be specific, the total ESG score is negatively related to ROA if we do not include the quadratic terms of firm size variables. However, it does not show statistically significant relations to ROA if these quadratic terms are controlled. The ESG score does not show significant relationships with Tobin's Q whether we control for the quadratic terms or not.

Second, we provide evidence that each component of the ESG scores affects financial performance measures differently. For example, a firm's environmental score is negatively correlated with both of the ROE and ROA, which implies poor profit generations from a firm's environmental investments. The social score shows no robust relationship with all of these three financial performance measures. Interestingly, the corporate governance score shows a significantly negative correlation with Tobin's Q measure, which implies a negative valuation effect from improvements of corporate governance structure.

We further examine whether the environmental score is the main driver for the negative CSR-performance relationship. For this purpose, we firstly include all of E/S/G-score into the empirical model. The estimation result

suggests that the environmental score is indeed a main source for the negative correlation, especially when we consider the potentially non-linear relationship between firm size and financial performance. We also calculate the sum of environmental and social score (ES-score) and examine its relationship with the measures of financial performances. The estimation results suggest a rather weak explanatory power of ES-score compared to E-score, which highlights again the importance of environmental scores in reducing accounting profits.

This work contributes to the existing literature in a number of ways. Most importantly, this work provides empirical evidence supporting a negative relationship between CSR and financial performance. This one is surprising if the characteristics of retail industry has been considered. The retail industry has individual consumers as their major source of customers and it is widely believed that the choice of individual customers is more susceptible to the engagement of socially responsible activities. Our findings contrast this widely accepted view in the retail industry and CSR activity might be costly even for the retail firms. This result is in line with the traditional view of corporate theory (Friedman, 1962; 2007), which highlights the increase in operating costs from additional CSR investments. On the contrary, our findings provide limited evidence supporting the stakeholder theory of corporation, which predicts a significantly positive relationship between CSR and financial performances.

The results add new dimensions to the Korean studies examining the relationship between CSR and performances. Most studies provided empirical evidence supporting a positive CSR-performance based on the analysis of KEJI index. Jang and Choi (2010) and Kim and Wee (2011) are representative examples. The KEJI Index consists of sixty items which measure social costs and benefits related to corporation's activities. Index data is mainly gathered from government agencies including the Securities Supervisory Board, the National Assembly and the Consumer Protection Agency. Surveys of the targeted corporations and their trade unions are also used. A negative CSR-performance relationship is scarcely reported in the literature, when a specific subset of the KEJI index is examined, especially in the adoption of Tobin's Q value as the performance measure (Na & Hong, 2011). Yet, even the representative measure of CSR, the total ESG score shows negative relationship with ROE in our examination. The total ESG score shows no significant relationship with the other two performance measures unlike the prior studies.

Finally, our results suggest that each aspect of CSR may affect a firm's financial performance in different ways. We confirm that the environmental policy might play a critical role in shaping the negative CSR-financial performance relationships in terms of ROA and ROE, while the social score is little explanatory power in directing the relationship. A firm's governance score decreases the firm's Tobin's Q

value unlike the environmental and social scores. Such an inconsistent pattern has received limited attentions in the literature, which may need new theoretical developments for the CSR-performance relationships.

The remainder of this paper proceeds as follows. Section 2 contains the literature review. In section 3, we describe data and empirical strategies. Section 4 reports the results of our main analysis. Section 5 concludes.

2. Literature Review

It is still a controversy how a firm's engagement in CSR affect its financial performances. The stakeholder theory expects that additional CSR investments enhance the firm's financial performances (Freedman, 1984). This theory argues that a corporation increases its accounting performances from a higher level of labor productivity, a wider consumer base, and a better corporate reputation by investing additional resources to CSR. In particular, the broader consumer base is closely associated with the retail industry, which directly deals with individual consumers as well as customers.

However, the traditional view of corporate theory presents an opposite implications. For instance, Friedman (1962; 2007) argues that additional investments in CSR tend to raise a firm's operating costs and lead to poor accounting profits. Such lower accounting profits are also captured by the shareholder value of firms, resulting in a smaller market value of corporation as well.

Even in terms of empirical studies, this relationship between CSR and financial performance remains an unresolved issue. There are two major approaches in the empirical literature in the examination of CSR-performance relationship. The first approach considers the short-run impact of CSR engagements. Such a short-run impact is mostly captured by event study methodologies, which focus on the short-run abnormal returns from a set of identified events representing socially responsible/irresponsible activities. The extant studies found inconclusive short-run effects; Posnikoff (1997) supports a positive relationship while Wright and Ferris (1997) argues for the opposite relationship. Teoh et al. (1999) find no consistent relationship between CSR and a set of short-run financial performance measures.

This work is tightly related with the other approach, which examines a firm's financial performance by utilizing a variety of accounting performance measures. However, the relationship is still unresolved in the second stream of literature. Waddock and Graves (1997) find a positive CSR-performance relationship when they adopt ROA as the main accounting performance measure. They also argue that this relationship between CSR and financial performance becomes more significant when the accounting performances

are examined in subsequent periods. McGuire et al. (1988) provide similar conclusions. In contrast, Aupperle et al. (1985) find significant relationship between CSR and financial performances.

Our work is most closely associated with the prior studies that have examined CSR-performance relationship in the Korean market. The prior studies have mainly employed the KEJI index to measure the level of engagement in CSR. Most of the studies found a positive correlation between CSR and accounting performance variables. Jang and Choi (2010), and Kim and Wee (2011) are the representative ones supporting the positive relationship. There exist some exceptions as well. For instance, Na and Hong (2011) find a negative CSR-performance relationship, when they examine the pair of employ satisfaction index and Tobin's q value as proxy variables for CSR and financial performance, respectively. Similarly, Choi et al. (2010) find no conclusive relationship between the KEJI index and a variety of financial performance measures.

It is noteworthy that the potential bias from adopting the KEJI index is widely recognized in the extant literature. To be specific, the use of KEJI index results in potentially upward biases in estimating the CSR-performance relationship. There are probably two major sources of resulting such biases. The first one is related to the sample selection biases. The quantitative value of KEJI index is only disclosed for 200 corporations a year and most of these companies are large ones. These large companies are conglomerates; a large number of companies in the conglomerates may benefit from engagements in socially responsible activities at the conglomerate level. Furthermore, in terms of the KEJI index construction, the index previously incorporates a firm's profitability as a component of the index because a higher profitability potentially contributes to the overall economic growth in Korea. Cho and Park (2015) argue that a positive CSR-performance relationship weakens if they control for the profitability component in the KEJI index construction.

3. Data and Econometric Model

3.1. Data Description

This work uses the ESG score published by the Korean Corporate Governance Service. The Korean Corporate Governance Service grades a corporation's environmental, social, and governance aspects separately and provides the score for each category of activity. We denote each score as E-score, S-score and G-score, respectively. The total ESG score is naturally adopted as the benchmark measure of CSR, which is the sum of environmental, social, and governance scores. Each score of socially responsible activities is separately examined as well in our following

analyses. We collect financial statement variables from WISEfn, which is one of the financial information providers in the Korea. To examine subsequent effects of socially responsible activities on financial performances, we employ the ESG scores from 2010 to 2015 and the financial statement information from 2011 to 2016.

3.2. Empirical Model

To estimation the CSR-performance relationship correctly, the potential bias from omitted variables must be handled in the empirical model. Margolis and Walsh (2003) propose three common types of firm-level covariates, size, industry categorization, and market risks, to mitigate the omitted variable bias problems. McWilliams and Siegel (2000) point out the significance of R&D investments and advertising costs in determining firm-level financial performances. Callan and Thomas (2009) emphasize the potentially non-linear relationship between firm size proxy variables and financial performances.

This paper adopts the following empirical models in estimating CSR-performance relationship in the Korean retail industry. Based on the suggestions of Waddock and Graves (1997), we estimate the relationship between the ESG score in the current fiscal year and the financial performance of next fiscal year. To take account of the omitted bias problems, we include a wide range of firm-level covariates representing size, market risk, R&D expenditures and advertising costs. The first empirical model only examines the linear relationship among financial performance measures and the set of independent and control variables:

$$P_t = \alpha + \beta' ESG_{t-1} + \gamma' (INV_t, RD_t, ADV_t, LEV_t, EMP_t, SALE_t, AT_t) + \epsilon_t$$

where the pair of (α, β, γ) represents the set of coefficient vectors.

To control for the potential non-linearity issue, we include the square of size proxy variables in the second empirical model:

$$P_t = \alpha + \beta' ESG_{t-1} + \gamma' (INV_t, RD_t, ADV_t, LEV_t, EMP_t, SALE_t, AT_t, SALE_t^2, AT_t^2) + \epsilon_t$$

where the pair of (α, β, γ) represents the set of coefficient vectors as well.

<Table 1> Definition: Variables of Interests

Data	Descriptions
ROA	Net income divided by an average of total assets (period t and t-1)
ROE	Net income divided by an average of total equity (period t and t-1)
Tobin's Q	Sum of market value of equity and book liability value normalized by total assets
ESG score	Sum of the environmental, social and governance score
E-score	Environmental score
S-score	Social score
G-score	Governance score
INV	Capital expenditure divided by total sales (%)
RD	R&D expenses divided by total sales (%)
ADV	Advertising expenses divided by total sales (%)
LEV	Total liability divided by total equity (%)
EMP	Number of employees
SALE	Logarithm of total sales in million won
AT	Logarithm of total book assets in million won

P_t is the dependent variable of our empirical models, which represents a set of financial performance measures. We include following three performances measures. ROA is the return on assets, which is defined as net income dividend by the average book asset value of the current and previous fiscal year. The measure evaluates the profitability of a firm's total asset holdings. ROE is the return on equity, which is the ratio between current period net income and the average book equity value of the current and previous fiscal years. The variable captures a firm's profitability from the perspective of shareholders. The last measure is Tobin's Q value, defined as the ratio between the market value of firm to its replacement costs.

The first independent variable, ESG is the total ESG score or a set of each score component, which measures a firm's level of engagement in socially responsible activities. As illustrated above, we choose the total ESG score as the representative measure for CSR. The E-score, S-score and G-score are separately investigated as well in the subsequent analyses. We also construct the ES-score, which is defined as the sum of environmental and social scores.

We include other firm characteristic variables to mitigate the aforementioned omitted variable bias problems. The variable construction is in line with Callan and Thomas (2009). To take account of firm size effects, we include three different covariates. SALE is defined as the logarithm of annual sales in million won in the current fiscal year; AT represents the logarithm of total book asset value of a corporation; EMP points to the total number of employ in the current fiscal year. LEV is the debt to equity ratio, which proxies the riskiness of a corporation. RD is the R&D expenditure normalized by the current period total sales. ADV is a firm's advertising costs, which is also normalized by the current period total sales. INV is the amount of a

firm's physical capital acquisition, which is standardized by the total sales. The industry effect is not considered here because we restrict our sample firms to the retail industry. <Table 1> contains the definition of variables used in our empirical models.

To estimate the above empirical models, we adopt the ordinary least square methods. This approach has been widely used in the literature. The examination of Callan & Thomas (2009) is a representative example adopting the ordinary least square method in estimating CSR-performance relationship. All standard errors are clustered by the firm-level ticker code.

4. Empirical Results

4.1. Summary Statistics

Before entering our main empirical analysis, we firstly provide the summary statistics results. In <Table 2>, we document the mean, median, 1st and 3rd quartile and standard deviation of each variable distribution. The total ESG score, E-score, S-score, and G-score values are separately analyzed. All of the three financial performance measures are included in the table: ROA, ROE and Tobin's Q values. The table also contains information about the following variables: R&D expenditure, capital expenditure, advertisement costs, leverage ratio, sales, total asset value, and the number of employees.

<Table 2> provides a number of interesting results. Most of all, <Table 2> reports that the E-score is less significantly contributes to the total ESG score compared to S-score and G-score. The mean of E-score is 65.6, which is quite smaller than the corresponding mean values of E-score and G-score, 87.1 and 90.5, respectively.

Yet, the standard deviation of E-score is significantly larger than that of S-score or E-score, in spite of its small average value. The standard deviation of E-score is 59.7,

which is more than twice as much as the standard deviation of G-score. This standard deviation of E-score is even almost 20% larger than that of S-score. This large standard deviation suggests a potentially significant role of E-score in the determination of CSR-performance relationship.

The table also shows different characteristics in between the ROA/ROE distributions and Tobin's Q value distribution. For example, the mean value of ROA/ROE is smaller than its median counter parts, which implies a left-skewed distribution. In contrast, the mean of Tobin's Q value is greater than its median counter-part, which implies a right-skewed distribution. While all of these three variables are widely accepted to measure the financial performance of a corporation, such discrepancy suggests probably different CSR-performance relationship in accordance with the choice of financial performance measure.

<Table 3> presents the pairwise correlation coefficients among our variables of interests. The total ESG score, E-score, S-score, and G-score values are separately analyzed in the table. The above three financial performance measures, ROA, ROE, and Tobin's Q, are examined in the table as well. R&D expenditure, capital expenditure, advertisement costs, leverage ratio, sales, total asset value, and the number of employees are also included.

<Table 3> presents a couple of interesting results. Most interestingly, <Table 3> indicates relatively small correlation coefficients or negative coefficient between the total ESG score and the three measures of financial performance. For instance, the estimated correlation coefficient between the ESG score and ROA is 0.19, which is substantially smaller compared to the corresponding coefficients between the ESG score and size proxy variables (EMP, SALE, and AT). The coefficient decreases when we examine the relationship between the ESG score and ROE. The correlation coefficients even turns to negative in between the total ESG score and Tobin's Q value. Note that such weak correlation or negative correlation is not well aligned with the stakeholder theory of corporation.

<Table 2> Summary Statistics

Variable	N	Mean	S.D.	1st Quartile	Median	3rd Quartile
ESG score	367	243.3	120.2	163	220	297
E-score	367	65.6	59.7	16	48	102
S-score	367	87.1	50.3	53	72	113
G-score	367	90.5	28.7	71	92	108
ROA	367	-1.0	12.5	-1.1	1.5	4.6
ROE	367	-3.7	39.7	-1.9	3.6	8.9
Tobin's Q	367	1.3	0.9	0.8	1.0	1.4
INV	367	4.5	8.7	0.6	1.5	4.2
RD	367	0.4	1.5	0.0	0.0	0.1
ADV	367	1.7	3.8	0.1	0.5	1.6
LEV	367	128.2	143.3	46.4	91.7	169.6
EMP	367	1,575.3	4,609.6	78	263	663
SALE	367	12.9	2.2	11.6	12.5	14.5
AT	367	13.1	1.9	11.6	13.1	14.4

Next, the correlation between E-score and G-score is relatively small at 0.37 compared to the correlations among other pairs of E/S/G scores. While the G-score shows a generally weak correlation with the total ESG score and S-score, its correlation with E-score is significantly smaller than the other coefficients. Such weak correlation implies potentially distinctive role of E-score and G-score in shaping CSR-performance relationship.

<Table 3> also shows that the Tobin's Q value is even negatively related to the other financial performance measures. To be specific, the Tobin's Q shows the correlation coefficient of -0.31 and -0.14, with ROA and ROE, respectively. This finding is in line with the results of

<Table 2>, which emphasize distributional differences in between ROA/ROE and Tobin's Q values. These negative correlations may reflect the qualitative differences among the financial performance measures. The Tobin's Q value is closely associated with market value/replacement costs of a corporation, while ROA/ROE is more related to a firm's accounting profit level.

4.2. Main Results

We now turn to estimate the relationship between CSR and financial performances.

<Table 3> Pairwise Correlation Coefficients

No.	Variable	1	2	3	4	5	6	7
1	ESG score	1.00						
2	E-score	0.90	1.00					
3	S-score	0.93	0.74	1.00				
4	G-score	0.67	0.39	0.57	1.00			
5	ROA	0.19	0.07	0.18	0.34	1.00		
6	ROE	0.08	-0.02	0.11	0.18	0.67	1.00	
7	Tobin's Q	-0.17	-0.07	-0.17	-0.26	-0.31	-0.14	1.00
8	INV	0.02	-0.03	0.06	0.03	0.06	0.06	-0.01
9	RD	-0.13	-0.08	-0.12	-0.17	-0.37	-0.13	0.37
10	ADV	-0.01	-0.11	0.05	0.10	0.08	0.06	-0.03
11	LEV	0.08	0.07	0.06	0.08	-0.10	-0.42	-0.14
12	EMP	0.56	0.57	0.52	0.24	0.10	0.08	-0.09
13	SALE	0.68	0.52	0.67	0.58	0.41	0.26	-0.27
14	AT	0.68	0.51	0.69	0.55	0.40	0.24	-0.32

No.	Variable	1	2	3	4	5	6	7
1	ESG score							
2	E-score							
3	S-score							
4	G-score							
5	ROA							
6	ROE							
7	Tobin's Q							
8	CAPEX	1.00						
9	RD	0.00	1.00					
10	ADV	0.18	-0.02	1.00				
11	LEV	-0.03	-0.07	-0.14	1.00			
12	EMP	0.03	-0.07	-0.06	-0.01	1.00		
13	SALE	-0.05	-0.23	-0.07	0.24	0.48	1.00	
14	AT	0.12	-0.23	0.04	0.19	0.53	0.92	1.00

<Table 4> Total ESG Score and Financial Performance

	ROA		ROE		Tobin's Q	
ESG Score	-0.015**	-0.005	-0.075***	-0.060***	0.000	-0.000
	(-2.24)	(-0.76)	(-3.64)	(-2.91)	(0.08)	(-0.66)
INV	0.104	0.048	0.425**	0.336	0.007	0.009*
	(1.49)	(0.74)	(1.98)	(1.58)	(1.32)	(1.69)
RD	-2.321***	-2.029***	-1.950*	-1.539	0.187***	0.176***
	(-6.27)	(-5.96)	(-1.72)	(-1.37)	(6.49)	(6.15)
ADV	0.192	-0.031	0.065	-0.268	0.001	0.009
	(1.27)	(-0.22)	(0.14)	(-0.58)	(0.07)	(0.75)

LEV	-0.020***	-0.018***	-0.149***	-0.147***	-0.000	-0.001*
	(-5.02)	(-5.05)	(-12.22)	(-12.23)	(-1.60)	(-1.83)
EMP	-0.000*	0.000	-0.001	-0.000	0.000	-0.000
	(-1.88)	(0.93)	(-1.39)	(-0.11)	(1.29)	(-0.19)
SALE	2.961***	26.832***	12.011***	50.965***	0.144**	-0.632*
	(3.84)	(6.15)	(5.08)	(3.54)	(2.39)	(-1.72)
AT	0.301	0.460	-1.882	-7.719	-0.287***	-0.457
	(0.34)	(0.07)	(-0.69)	(-0.38)	(-4.12)	(-0.88)
SALE2		-0.962***		-1.564***		0.031**
		(-5.70)		(-2.81)		(2.22)
AT2		0.011		0.250		0.006
		(0.05)		(0.32)		(0.30)
INTERCEPT	-36.43***	-186.68***	-96.84***	-303.11***	3.13***	9.07***
	(-7.59)	(-7.21)	(-6.58)	(-3.54)	(8.37)	(4.16)
N	367	367	367	367	367	367
adj. R-sq	0.309	0.425	0.354	0.377	0.202	0.227

The symbols ***, **, and * represent statistical significance at 1%, 5% and 10%, respectively.

<Table 4> estimates our first and second empirical models to evaluate CSR-performance relationship. For each performance measure, we estimate both models by using the ordinary least square method. The table uses the total ESG score as the proxy variable for a firm's engagement in socially responsible activities. The first two columns use the ROA as financial performance measures. The next and last two columns adopt ROE and Tobin's Q as the performance variables, respectively. The empirical models include a wide range of firm characteristic variables such as R&D expenditure, capital expenditure, advertisement costs, leverage ratio, sales, total asset value, and the number of employees. <Table 4> also documents the estimated coefficients and corresponding t-values (in parenthesis), which are clustered by each firm id. The number of observations and the adjusted R2 value for the estimated models are reported as well.

<Table 4> presents a number of interesting results. Most of all, the total ESG score is negatively related to the performance measure of ROE. This result is robust to the inclusion of other firm-level covariates and the consideration of potentially non-linear relationship between firm size and financial performance. For instance, the estimated coefficient on the total ESG score is -0.075 and -0.060, respectively, in our first and second empirical models, when we use ROE as the performance measure. Both coefficients are statistically significant at 1% level. This finding is in line with the traditional view of corporation (Friedman, 1962; 2007) but is inconsistent with the stakeholder theory of corporation (Freeman, 1984).

It is noteworthy that this coefficient on the total ESG score is statistically significant, even though the coefficients on some other control variables are not. For example, the coefficient on advertising cost is statistically insignificant for both empirical models in the examination of ROE. R&D expenditure is significant only when we exclude potentially non-linear relationship in the same analysis. This finding

strengthens our findings on CSR-financial performance relationship in the case of ROE performance measures.

In case of the other two performance measures, ROA and Tobin's Q, the estimation results do not robustly confirm statistically significant relationship. For instance, the coefficient on the total ESG score is significant in the first empirical model but is not significant in the second model, when we adopt ROA as the financial performance measure. This inconclusive results does not support the traditional view of corporation and argues against the stakeholder theory of corporation.

Note that our findings in <Table 4> are not in line with the prior empirical studies conducted in Korea. For example, Jang and Choi (2010), and Kim and Wee (2011) provide positive CSR-performance relationship in the Korean financial market. This contrasting results might be due to the adoption of different CSR proxy variables. To be specific, most of the prior studies proxy the level of CSR by using the KEJI index. Yet, the KEJI index only includes a small sample of large firms, which may lead to sample selection bias. More importantly, the KEJI index is widely recognized to overestimate CSR-performance relationship because of its measure construction problem (Cho & Park, 2015).

This finding might be surprising if the characteristics of retail industry are taken into account. Broader consumer bases are argued as one of key benefits from a firm's engagements in socially responsible activities. Because individual consumers are the major customers for the retail industry, we may expect a positive CSR-performance relationship in the industry; An enlarged consumer base might be particularly beneficial to the retail industry. Yet, our finding rather robustly suggests a negative relationship between CSR and financial performance in the Korean retail industry, especially in terms of ROE.

Next, we separately analyze the effect of a firm's environmental, social and governance activities on a firm's financial performances.

<Table 5> Environmental Score and Financial Performance

	ROA		ROE		Tobin's Q	
E-Score	-0.033*** (-2.77)	-0.021* (-1.89)	-0.150*** (-4.16)	-0.133*** (-3.70)	0.001 (1.32)	0.001 (0.85)
INV	0.095 (1.36)	0.042 (0.66)	0.383* (1.80)	0.295 (1.40)	0.008 (1.39)	0.009* (1.71)
RD	-2.318*** (-6.28)	-2.028*** (-5.98)	-1.949* (-1.73)	-1.529 (-1.37)	0.187*** (6.48)	0.176*** (6.15)
ADV	0.147 (0.97)	-0.053 (-0.38)	-0.144 (-0.31)	-0.456 (-0.99)	0.002 (0.18)	0.009 (0.76)
LEV	-0.020*** (-4.94)	-0.018*** (-5.07)	-0.147*** (-12.13)	-0.146*** (-12.21)	-0.000 (-1.60)	-0.001* (-1.77)
EMP	-0.000 (-1.43)	0.000 (1.27)	-0.000 (-0.85)	0.000 (0.34)	0.000 (0.74)	-0.000 (-0.50)
SALE	2.830*** (3.74)	27.048*** (6.22)	11.284*** (4.87)	52.350*** (3.66)	0.138** (2.33)	-0.641* (-1.75)
AT	0.246 (0.28)	-0.398 (-0.06)	-2.203 (-0.81)	-10.055 (-0.49)	-0.291*** (-4.20)	-0.367 (-0.70)
SALE2		-0.970*** (-5.77)		-1.638*** (-2.96)		0.031** (2.20)
AT2		0.045 (0.19)		0.332 (0.43)		0.002 (0.11)
INTERCEPT	-35.544*** (-7.63)	-182.68*** (-7.10)	-91.631*** (-6.43)	-298.027*** (-3.52)	3.198*** (8.80)	8.544*** (3.94)
N	367	367	367	367	367	367
adj. R-sq	0.309	0.425	0.354	0.377	0.202	0.227

The symbols ***, **, and * represent statistical significance at 1%, 5% and 10%, respectively.

In <Table 5>, we estimate the first and second empirical models by using the environmental score as a specific proxy variable for a firm's CSR activity. For each performance measure, we estimate both models based on the ordinary least square method. The first two columns use the ROA as financial performance measures. The next and last two columns adopt ROE and Tobin's Q as the performance variables, respectively. The empirical models include a wide range of firm characteristic variables such as R&D expenditure, capital expenditure, advertisement costs, leverage ratio, sales, total asset value, and the number of employees. <Table 5> also reports the estimated coefficients and corresponding t-values (in parenthesis). The standard errors are clustered by each firm id. The number of observations and the adjusted R² value are documented as well.

<Table 5> shows a variety of noticeable results. Most interestingly, the environmental score is negatively correlated with both of the ROA and ROE measures. This finding is robust to the consideration of omitted variable bias problems and the inclusion of quadratic terms for sales and asset size. For example, the estimated coefficient on the total E-score is -0.021 and -0.133, respectively for ROE and ROA performance measures, when we adopt the second empirical model. As in <Table 4>, the finding is in line with the traditional view of corporation (Friedman, 1962; 2007) but is inconsistent with the stakeholder theory of corporation.

In case of Tobin's Q measure, the estimated coefficients

are statistically insignificant. The consideration of potentially non-linear relationship between size and financial performance does not alter this result. This inconclusive result still argues against the stakeholder theory of a corporation which predicts a significantly positive relationship.

The implications of these findings are similar to those of <Table 4>. The results of <Table 5> are not well aligned with the extant studies having examined CSR-performance relationship in the Korean financial market. It also provides no empirical evidence supporting a positive CSR-performance relationship in the retail industry. The coefficients on E-score are significant in ROA and ROE regressions, while those of some widely accepted control variables are not.

In <Table 6>, we examine the first and second empirical models with the social score as the proxy variable for CSR. For the three performance measures, we report estimation results for both models by using the ordinary least square method. In line with the previous tables, the first two columns use the ROA as financial performance measures. The next and last two columns adopt ROE and Tobin's Q as the performance variables, respectively. A wide range of firm covariates are included as control variables such as R&D expenditure, capital expenditure, advertisement costs, leverage ratio, sales, total asset value, and the number of employees. The estimated coefficients and corresponding t-values (in parenthesis) are reported. The standard errors

are clustered by each firm id. the number of observations and the adjusted R² value are also included.

The results of <Table 6> differ from those of <Table 5>. Most importantly, we cannot find a robust relationship between the social score and financial performance measures. To be specific, the social score is negatively related to ROA and ROE if the quadratic terms of sales and asset size are excluded. Yet, the social score shows statistically insignificant relationship with ROA and ROE, if these two quadratic terms are included in the examination. In line with the previous tables, the S-score does not show significant relationship with Tobin's Q value. This finding suggests that the robustly negative CSR-ROE relationship reported in <Table 5> relies substantially on the environmental score variation rather than social score variation.

As in the previous tables, our estimation results with social scores do not argue for the stakeholder theory of corporation. All of the estimated coefficients are statistically insignificant or negatively significant, which are not in line

with the prediction of stakeholder theory. <Table 6> confirms again the limited explanatory power of stakeholder theory in the examination of CSR-performance relationship.

<Table 7> shows the estimation results for the first and second empirical models with the governance score as a proxy variable for a firm's CSR activity. The first two columns use the ROA as financial performance measures. The next and last two columns adopt ROE and Tobin's Q as the performance variables, respectively. A variety of firm characteristic variables are included to mitigate the omitted variable bias problems. This set of variables contains R&D expenditure, capital expenditure, advertisement costs, leverage ratio, sales, total asset value, and the number of employees. The estimated coefficients and corresponding t-values (in parenthesis) are reported. The standard errors are clustered by each firm id. The number of observations and the adjusted R² value are documented as well. The symbols ***, **, and * represent statistical significance at 1%, 5% and 10%, respectively.

<Table 6> Social Score and Financial Performance

	ROA		ROE		Tobin's Q	
S-Score	-0.045**	-0.016	-0.142**	-0.099	0.000	-0.001
	(-2.37)	(-0.88)	(-2.27)	(-1.53)	(0.40)	(-0.82)
INV	0.110**	0.050	0.443*	0.347	0.007	0.009*
	(1.99)	(1.15)	(1.86)	(1.55)	(1.54)	(1.89)
RD	-2.290***	-2.022***	-1.894***	-1.496**	0.187***	0.176***
	(-5.70)	(-5.36)	(-2.87)	(-2.35)	(5.81)	(5.79)
ADV	0.215**	-0.019	0.118	-0.244	0.001	0.009
	(2.07)	(-0.22)	(0.33)	(-0.80)	(0.05)	(0.80)
LEV	-0.020***	-0.019***	-0.150***	-0.147***	-0.000	-0.001
	(-2.89)	(-3.03)	(-4.75)	(-4.42)	(-1.58)	(-1.61)
EMP	-0.000*	0.000	-0.001**	-0.000	0.000	-0.000
	(-1.93)	(1.18)	(-2.00)	(-0.49)	(1.60)	(-0.27)
SALE	2.951**	26.727***	11.391***	50.304**	0.142	-0.637
	(2.63)	(5.18)	(3.34)	(2.29)	(1.43)	(-1.39)
AT	0.508	0.182	-1.549	-6.089	-0.290**	-0.456
	(0.42)	(0.03)	(-0.39)	(-0.24)	(-2.60)	(-0.63)
SALE2		-0.958***		-1.563*		0.032*
		(-5.00)		(-1.89)		(1.81)
AT2		0.025		0.194		0.006
		(0.11)		(0.20)		(0.21)
INTERCEPT	-38.731***	-184.61***	-98.730***	-312.004***	3.166***	9.075**
	(-4.37)	(-5.17)	(-4.16)	(-3.03)	(4.31)	(2.02)
N	367	367	367	367	367	367
adj. R-sq	0.315	0.426	0.346	0.369	0.202	0.227

The symbols ***, **, and * represent statistical significance at 1%, 5% and 10%, respectively.

<Table 7> Governance Score and Financial Performance

	ROA		ROE		Tobin's Q	
G-Score	0.041 (1.19)	0.053* (1.85)	-0.021 (-0.31)	-0.001 (-0.01)	-0.005** (-2.27)	-0.005** (-2.63)
INV	0.097* (1.71)	0.037 (0.84)	0.427* (1.76)	0.329 (1.43)	0.008* (1.70)	0.010** (2.01)
RD	-2.323*** (-5.81)	-1.999*** (-5.23)	-2.067*** (-3.20)	-1.529** (-2.44)	0.185*** (5.83)	0.173*** (5.75)
ADV	0.139 (1.39)	-0.095 (-1.11)	0.029 (0.09)	-0.358 (-1.35)	0.006 (0.46)	0.014 (1.13)
LEV	-0.019** (-2.64)	-0.018*** (-2.79)	-0.147*** (-4.50)	-0.145*** (-4.21)	-0.001* (-1.81)	-0.001* (-1.77)
EMP	-0.000** (-2.55)	0.000 (1.39)	-0.001*** (-2.98)	-0.000 (-0.64)	0.000 (1.41)	-0.000 (-0.46)
SALE	2.278* (1.92)	26.915*** (5.25)	10.585*** (3.06)	50.940** (2.26)	0.188* (1.89)	-0.641 (-1.46)
AT	0.152 (0.13)	0.754 (0.13)	-2.768 (-0.69)	-1.182 (-0.05)	-0.290** (-2.61)	-0.397 (-0.57)
SALE2		-0.989*** (-5.04)		-1.620* (-1.88)		0.033* (1.98)
AT2		-0.000 (-0.00)		-0.023 (-0.02)		0.003 (0.12)
INTERCEPT	-32.834*** (-3.81)	-190.99*** (-5.95)	-82.450*** (-3.67)	-345.354*** (-3.52)	3.045*** (4.64)	8.921** (2.08)
N	367	367	367	367	367	367
adj. R-sq	0.305	0.433	0.330	0.362	0.217	0.244

The symbols ***, **, and * represent statistical significance at 1%, 5% and 10%, respectively.

<Table 7> presents a set of important results as well. Most interestingly, the governance score is negatively related to Tobin's Q value. The coefficient on G-score is -0.005 for both of our empirical models, which is statistically significant at 1% level. In other words, we find a negative CSR-performance relationship even when the Tobin's Q variable is adopted as a financial performance measure. This finding provides another piece of empirical evidence supporting the traditional view of corporation (Friedman, 1962; 2007).

Such a distinctive pattern is in line with the pairwise correlation coefficient reported in <Table 3>. <Table 3> shows that G-score is weakly correlated with E-score and S-score, which implies qualitative difference in between a firm's governance activity and its environmental/social activities.

In sum, the analysis based on each category of E/S/G score indicates (1) a negative relationship between the environmental score and ROA/ROE measure; (2) no significant relationship between the social and financial performance measures; (3) a negative relationship between the governance score and Tobin's Q measure.

<Table 8> includes all of the environmental, social, and governance scores in the empirical models to robustly confirm the above findings in <Table 5>, <Table 6>, and

<Table 7>. The first two columns still use the ROA as financial performance measures. The next and last two columns adopt ROE and Tobin's Q as the performance variables, respectively. The same set of control variables are included as well. The estimated coefficients and corresponding t-values (in parenthesis) are reported.

<Table 8> generally confirms our previous results even though we include all of the E/S/G score in the empirical models. Most of all, a firm's environmental score shows negative correlations with ROA and ROE. This tendency is more significant if we control the potential non-linearity between firm size and financial performances. For instance, with the inclusion of size quadratic terms, the estimated coefficients on E-score are -0.021 and -0.138, respectively for the financial performance measures of ROA and ROE. In line with <Table 6>, the S-score does not show robustly significant relationship with all of three financial performance measures. Finally, the coefficient on G-score is significantly negative when we use Tobin's Q value as the financial performance measure. This result is robust whether we include the quadratic terms of sales and asset size variables or not. All of these results are in line with our previous findings.

<Table 8> E/S/G score and Financial Performance

	ROA		ROE		Tobin's Q	
E-Score	-0.019	-0.021*	-0.134*	-0.138*	0.002	0.002
	(-1.27)	(-1.72)	(-1.91)	(-1.95)	(1.26)	(1.27)
S-Score	-0.044*	-0.014	-0.045	0.001	0.000	-0.001
	(-1.80)	(-0.65)	(-0.95)	(0.02)	(0.14)	(-0.70)
G-Score	0.068*	0.066*	0.050	0.048	-0.006**	-0.005**
	(1.75)	(1.92)	(0.77)	(0.77)	(-2.30)	(-2.56)
INV	0.093*	0.032	0.385*	0.285	0.009*	0.011**
	(1.66)	(0.72)	(1.68)	(1.31)	(1.73)	(2.05)
RD	-2.246***	-1.987***	-1.885***	-1.502**	0.183***	0.173***
	(-5.49)	(-5.09)	(-3.03)	(-2.47)	(6.05)	(5.96)
ADV	0.126	-0.110	-0.144	-0.513*	0.008	0.017
	(1.21)	(-1.28)	(-0.47)	(-1.96)	(0.62)	(1.34)
LEV	-0.020***	-0.018***	-0.148***	-0.145***	-0.001*	-0.001*
	(-2.80)	(-3.08)	(-4.90)	(-4.61)	(-1.88)	(-1.94)
EMP	-0.000	0.000*	-0.000	0.000	0.000	-0.000
	(-1.02)	(1.92)	(-0.63)	(0.42)	(0.52)	(-0.93)
SALE	2.450**	27.069***	11.061***	52.482**	0.183*	-0.665
	(2.13)	(5.43)	(3.51)	(2.45)	(1.84)	(-1.50)
AT	0.611	-1.367	-1.849	-10.539	-0.298***	-0.330
	(0.51)	(-0.21)	(-0.50)	(-0.40)	(-2.67)	(-0.46)
SALE2		-0.989***		-1.659**		0.034**
		(-5.24)		(-2.06)		(2.00)
AT2		0.088		0.353		0.001
		(0.36)		(0.35)		(0.03)
INTERCEPT	-38.720***	-179.25***	-95.083***	-297.476***	3.163***	8.638**
	(-4.44)	(-5.24)	(-4.15)	(-2.83)	(4.49)	(2.01)
N	367	367	367	367	367	367
adj. R-sq	0.329	0.440	0.359	0.383	0.220	0.245

The symbols ***, **, and * represent statistical significance at 1%, 5% and 10%, respectively.

<Table 9> ES Score and Financial Performance

	ROA		ROE		Tobin's Q	
ES-Score	-0.023***	-0.012	-0.093**	-0.077*	0.001	0.000
	(-2.73)	(-1.41)	(-2.32)	(-1.83)	(1.09)	(0.28)
INV	0.100*	0.046	0.410*	0.324	0.007	0.009*
	(1.84)	(1.06)	(1.76)	(1.47)	(1.55)	(1.83)
RD	-2.298***	-2.023***	-1.881***	-1.501**	0.186***	0.176***
	(-5.74)	(-5.36)	(-2.97)	(-2.43)	(5.88)	(5.79)
ADV	0.175*	-0.033	-0.014	-0.325	0.001	0.008
	(1.86)	(-0.41)	(-0.04)	(-1.18)	(0.08)	(0.69)
LEV	-0.020***	-0.019***	-0.149***	-0.147***	-0.000	-0.001
	(-2.86)	(-3.08)	(-4.94)	(-4.62)	(-1.64)	(-1.60)
EMP	-0.000	0.000	-0.000	0.000	0.000	-0.000
	(-1.33)	(1.44)	(-0.87)	(0.10)	(1.31)	(-0.39)
SALE	2.936**	26.874***	11.584***	51.225**	0.138	-0.633
	(2.60)	(5.28)	(3.51)	(2.41)	(1.41)	(-1.37)
AT	0.411	-0.423	-1.624	-10.154	-0.293**	-0.402
	(0.34)	(-0.07)	(-0.44)	(-0.40)	(-2.60)	(-0.55)
SALE2		-0.961***		-1.585**		0.031*
		(-5.11)		(-2.01)		(1.77)
AT2		0.048		0.352		0.004
		(0.20)		(0.36)		(0.13)
INTERCEPT	-37.682***	-181.64***	-98.813***	-291.675***	3.224***	8.721*
	(-4.33)	(-5.12)	(-4.36)	(-2.74)	(4.42)	(1.94)
N	367	367	367	367	367	367
adj. R-sq	0.318	0.428	0.359	0.381	0.204	0.226

The symbols ***, **, and * represent statistical significance at 1%, 5% and 10%, respectively.

In <Table 9>, we examine how the sum of environmental and social scores are related to the set of financial performance measures. If the environmental score is the major factor leading to the negative CSR-performance relationship in the case of ROA and ROE, we expect statistically insignificant or less significant coefficients on the sum of environmental and social score (ES-score), compared to their counterparts in the environmental score reported in <Table 5>. The first two columns still use the ROA as financial performance measures. The next and last two columns adopt ROE and Tobin's Q as the performance variables, respectively. The set of control variables remain unchanged from that of <Table 5>. The table reports the estimated coefficients, corresponding t-values (in parenthesis), the number of observation and the adjusted R² value.

In line with the above arguments, <Table 9> shows a relatively weak explanatory power of ES-score compared to that of E-score. For instance, the coefficient on ES-score shows no statistical significance with ROA measure, unlike the corresponding coefficient on the E-score, as in <Table 5>. While the coefficient on ES-score is negatively significant in case of ROE regression, its estimated coefficient becomes smaller compared to that of E-score documented in <Table 5>. This finding highlights again the significant role of environmental score driving poor performances, measured by ROA and ROE.

5. Concluding Remarks

5.1. Summary

This paper examines how a Korean retail firm's engagement in socially responsible activities affects its financial performances. For this purpose, we use the ESG score, published by Korean Corporate Governance Service to measure the level of socially responsible activity for the Korean retail firms. We also examine each category of the ESG score - environmental, social and governance scores, separately in the subsequent analyses of CSR-performance relationship. The ordinary least square method is adopted to estimate the relationship for the sample of Korean retail firms from 2011 to 2016.

Our analysis shows that the total ESG score is negatively related to ROE but shows no statistically significant relationship with the other financial performance measures, ROA and Tobin's Q value. However, a firm's environmental score is negatively related with both of ROE and ROA, which represents accounting profitability of a corporation. Interestingly, the governance score is negatively related to the value of Tobin's Q. However, the social score does not provide robust relationships with all of these three financial performance measures.

5.2. Implications

These results contribute to the prior literature from a number of perspective. Most of all, our finding argues for the traditional view of corporation, which expects a negative relationship between CSR and financial performance. Almost all of our empirical results do not support the stakeholder theory of corporation predicting a significantly positive CSR-performance relationship. Next, these findings are not well aligned with the extant Korean studies using the KEJI-index; in fact, the extant studies have recognized potentially upward biases in the estimation of CSR-performance relationship if the KEJI index is used as a proxy variable for CSR. Finally, we emphasize distinctive roles of E-score/S-score/G-score in the determination of CSR-performance relationship, which may require developments of new theories.

5.3. Future Research

While we emphasize the distinctive role of each score component in CSR-performance relationship, we have not found concrete economic mechanism behind such results. Formal analysis on this topic is beyond the scope of our paper and is left to future researches.

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