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Marketing Investments and Corporate Social Responsibility

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Abstract: Although the short-term effects of marketing efforts that promote immediate consumer responses have been extensively investigated, the long-term impacts of marketing activities have received little attention. Marketing effects can be carried over time as consumers experience an emotional attachment to products and build trust and affection. In addition, a firm's advertising spending not only improves customer awareness of the firm's products and services but also serves to promote other company information, such as the firm's corporate social responsibility (CSR), a long-term strategic commitment to improving the welfare of customers and society. This paper focuses on the long-term effects of marketing investments by examining the relation between advertising expenditures and a firm's commitment to CSR, finding that firms with a higher advertising expenditure are more likely to have a higher CSR performance. The findings of this study demonstrate that marketing investments are related to a firm's long-term sustainable activities. Additionally, the finding may indicate that a firm's CSR initiatives are influenced by the extent to which the firm commits to advertising that promotes customer awareness of the firm's products and services.

Keywords: corporate social responsibility; advertising; marketing investment

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1. Introduction

This paper focuses on the long-term effects of advertising investment, one of the dimensions of marketing expenditures. In particular, it examines the relation between a firm's marketing investment in advertising and its commitment to corporate social responsibility (hereafter, CSR). Investment in intangible capital is important for enhancing a firm's future prosperity. Advertising investment is the major marketing activity that contributes to accumulating both tangible and intangible assets such as brand value [1,2], thus improving subsequent operating performance [3] and enhancing the firm's value [4]. However, brand value is rarely reported as an asset in financial statements, with advertising investment being treated as a current period operating expense in income statements under the U.S.'s generally accepted accounting principles. Most studies on marketing investments have focused on the short-term effects of advertising on consumer purchases [5] and investor attention in the stock market [6], while neglecting their potential long-term impacts that bring about a sustainable competitive advantage. Thus, this paper aims to examine the long-term effects of marketing activities on a firm's social sustainability efforts.

Marketing efforts including advertising not only induce immediate consumer responses and investor attention, but also trigger long-term impacts through customer retention, brand awareness, brand equity, and corporate reputation [2,7,8]. The long-term impact of advertising is considered a carryover effect on the consumer preferences and purchase intention with respect to the brand, lasting over several years and ultimately leading to an increase in the firm's value. Advertising is a current expense item in the income statement, but its characteristics are unusual in that it influences current sales and enhances future business. Moreover, it is of great importance for a firm to determine the extent of the carryover effects of advertising to make better marketing decisions. Despite the long-term impact of marketing investment and a firm's investment in advertising in order to gain competitive advantage, the prior literature has heavily focused on its short-term effects.

More customers are demanding responsible firms [9]. In addition, a recent article on CSR discusses the need for a firm's engagement in CSR activities "to make their business appear likable and conscientious" (Willens, M., "Global CSR: Hunting for ad growth, publishers target CSR budgets", The CSR journal, 10 February 2020). There are also mentions of the firm's CSR activities in relation to advertising activities that "CSR is becoming more central to brands' entire way of marketing and communicating". An examination of the direct link between advertising investments and CSR activities has not been extensively performed yet and the current study attempts to investigate the link between a firm's advertising and CSR commitments. Therefore, this paper tries to fill this literature gap by examining the relation between marketing investment and long-term sustainability efforts. To measure the long-term benefits of advertising, this paper considers that CSR reveals a firm's long-term value-enhancing activities and, thus, examines whether the advertising investments of a firm are related to CSR activities.

Using 37,801 firm-year observations (In these analyses, the authors use 1-year lagged independent variables to mitigate the endogeneity issue. Because of this, the sample size is slightly reduced.) from 1995 to 2015, this empirical study finds that firms with greater advertising investments are more likely to have a higher CSR score, supporting the idea that a firm's marketing investment positively affects its CSR activities and, consequently, its long-term sustainability efforts. Several robustness tests are conducted in this study. To address the endogeneity problem, Heckman two-stage analysis is conducted, supporting the positive effect of a firm's advertising expenditure on CSR activities. The authors further test the model with an alternative proxy for a firm's marketing investment and find consistent results. Finally, to examine the effect of industry on the relation between advertising investment and CSR, the sample is divided into two groups, namely advertising-intensive industries and controversial industries, with the results showing that the effect of advertising investment in the non-advertising-intensive industries (non-controversial industries) is much higher than that in the advertising-intensive industries (controversial industries). These results verify the positive link between marketing investment and CSR initiatives, suggesting that advertising investment has a long-term effect on a firm's sustainable efforts.

Prior studies have tested the effect of advertising on various performance and non-performance variables such as brand value [1,2], customer loyalty [10], and firm performance [3] as well as the effectiveness of CSR such as firm value [11] and profitability [12]. However, not many studies have investigated the direct relationship between advertising spending and CSR engagement. A survey study examines the relationship between advertising disclosures and CSR practices and finds favorable consumer attitudes toward a firm that uses advertising which provides information about products and services, enhancing the consumers' assessments of the firm's CSR activities [13]. The current study differs from this research in two ways. First, the current research utilizes over 20 years of archival financial data of many companies in the U.S. Second, our research examines all industries other than the financial sector and regulated firms, while Wang [13] only focuses on credit card issuers.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature and develops the research hypothesis. Section 3 discusses the data, key variables, and research model, while Section 4 represents the empirical findings. Section 5 summarizes the conclusions.

2. Literature Review and Hypothesis Development

2.1. Advertising Investment and CSR

The current study is based on several strands of literature. The marketing literature has focused on the role of advertising in changing consumer beliefs and preferences, forming brand awareness, and ultimately influencing brand choice [14]. According to

Assmus et al. [5], the advertising effect on sales only lasts three to fifteen months, suggesting that a firm's investments in advertising are immediate and short-term. On the contrary, other studies support the idea that advertising has intermediate to long-term effects through influencing brand knowledge and consumer preferences and brand selection [14,15].

From the accounting perspective, advertising costs are expensed in the income statement as a current period operating expense when incurred, since the future economic benefits of advertising expenditures are uncertain and not easy to identify and measure. Accounting and finance research on advertising have mostly examined the effects of advertising on the stock market [6,16,17]. For example, the short-term effects of advertising expenditures on boosting stock prices has been discussed [6]. This paper finds that managers opportunistically invest in advertising to influence the short-term investor sentiment. In particular, it concludes that short-horizon managers adjust advertising spending to inside sales and seasoned equity offerings to attract investor return and, thus, temporarily boost stock returns.

However, effects of advertising and other promotional and brand marketing activities accumulate over the long term and help to build brand capital. Although advertising costs are expensed as a current period operating expense when incurred, marketing activities can be considered a long-term investment in assets that may produce substantial benefits beyond one accounting period and add lasting value to a firm. Recently, more studies have recognized the mid- to long-term effects of advertising on accumulating the intangible assets of a firm. For example, according to Wang et al. [2], the degree of advertising persistency measured using an autoregression model is positively related to the market value of a firm as measured by Tobin's Q. They claim that the Tobin's Q in the empirical model estimates the intangible value of a firm created by its advertising, since the model incorporates the control variables to separate other factors that influence the firm's value, with a more direct benefit of advertising being its link to the rise in the sales of a firm. Contrary to the finding that advertising inhibits a short-term increase in sales [5], there is a research report that investment in advertising leads to an increase in sales for up to four years, with an average of three years [17]. This study also conducts a valuation regression, finding that the market value is significantly associated with an investment in advertising. Similarly, one study reports that the long-term effects of advertising on sales have been underestimated [15]. However, this study emphasizes that the long-term effects of advertising on TV and radio are observed, but sales promotions may not help to produce long-term sales performance [15].

Advertising exposure, especially during childhood, leads to favorable brand evaluations as a child grows into adulthood because childhood memories are well recognized. Further, knowledge developed in childhood persistently influences attitudes and judgments with respect to brands and consumption decisions beyond childhood; thus, firms can benefit by promoting their brands by targeting children and youth. For example, advertising exposure during childhood persists into adulthood, affecting future brand evaluation and consumption [18]. As consumers, biased judgments and knowledge of unhealthy products obtained as a child from advertising directed towards children is difficult to correct and may require public efforts to help debias consumers [18]. Therefore, a firm needs to build a long-term marketing strategy to earn a sustainable competitive advantage and establish brand capital.

Definitions of CSR vary. In the early literature, Carroll [19] defines CSR as "the legal, economic, ethical and discretionary expectations that society has of organizations at a given point in time". Recently, CSR initiatives have been explained in terms of shareholder value creation [19] (p. 499). Porter and Kramer [20] define CSR as "policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. Shared value creation focuses on identifying and expanding the connections between societal and economic progress" [20] (p. 2).

A large volume of literature discusses the reasons for a firm's CSR commitment, with some studies considering that CSR activities are conducted opportunistically by managers to gain personal benefits, resulting in excessive CSR spending, hampering the stakeholder value [21]. That is, CSR activities are intended to be a promotional tool for business or to hide their bad practices. Supporting this view, firms that are headquartered in tax havens or offshore finance centers (OFCs) actively engage in CSR activities, claiming that they are socially responsible [22].

Other studies disagree and focus on the positive aspects of a firm's CSR engagement, considering that CSR activities represent a firm's commitment to doing business responsibly. CSR firms have sound corporate governance [23] and are less likely to engage in earnings management [24]. Firms with high CSR are likely to build a favorable reputation, which in turn leads to the firms' long-term profitability [12]. Reputable firms can hire and retain highly qualified employees [25], ensure customer loyalty [26], build better brand recognition and awareness [27], and improve financial performance, such as the return on assets (ROA) and operating income growth [11]. A recent study argues that CSR initiatives by advertising-intensive firms, especially in areas of community and environment that are considered the most significant activities by customers, are positively associated with market share [28]. In other words, customers are more likely to buy better advertised products and services from more socially and environmentally responsible firms.

Some papers question whether advertising activities make CSR engagement more effective and successful. For example, Rahman et al. [28] attempt to examine the moderating role of advertising on the relation between CSR and firm performance. Rahman et al. [28] report that a firm's marketing strategy—specifically, advertising investment—is related to the success of CSR activities because advertisement of the firm's products and services increases customer awareness about the firm in general, and this customer reaction leads to successful marketing performance as measured by market share. That is, Rahman et al. [28] propose that a firm's advertising efforts and CSR initiatives are related. The authors of the paper argue that advertising efforts are effective in promoting customers' increased response to products and services as well as other company activities such as the firm's corporate social responsibility (CSR). Similarly, using Chinese data, Jia [29] discusses how advertising as "value appropriation activity," helps a firm to increase its public visibility, and allows firm activities such as CSR to be more recognized among stakeholders. Ultimately, advertising helps customers to build a positive image about a firm's products and services and view CSR activities favorably and reward the firm with more purchases.

Besides the discussion of whether the horizon of advertising investment is long-term or short-term, advertising makes it possible to pass on more information to consumers, not only about a firm's products and services but also about the non-profit-oriented activities of the firm [30]. Supporting this view, Rahman et al. [28] report that the successful outcome of CSR is contingent upon the extent of advertising relative to the firm's available resources.

2.2. Hypothesis Development

Overall, this strand of literature considers that CSR influences firm performance [11] and contributes to society and may represent a valuable intangible asset that ensures a firm's survival in the long term. Additionally, advertising investment is considered to bring about an immediate sales effect and yield future benefits by generating a stream of future revenue [2,7,8], and advertising investment contributes to the success of CSR initiatives [28]. In the current research, we attempt to examine the premise that a firm's investment in advertising is related to the CSR commitments. If advertising allows customers to be aware of a firm's products and services and foster a positive brand image, then the firms' commitment to CSR is expected to result in a favorable reaction.

Based on the aforementioned discussions that advertising may require long-term commitment to obtain a competitive advantage and that CSR requires a firm's long-term strategy—and, more importantly, based on the prior study's finding that advertising efforts promote customers' increased response to products and services, as well as the customers' attention to other company activities such as CSR—the authors propose the following hypothesis:

Hypothesis 1. *Advertising is positively associated with a corporation's commitment to CSR activities.*

3. Research Method

To investigate the link between advertising expenditure and CSR, this study focuses on non-financial U.S. public firms. Since financial institutions (Standard Industrial Classification (SIC) 6000–6999) and regulated firms (SIC 4900–4949) are subject to different regulations, the authors exclude firms in these industries from the sample. Information on advertising expenditures and other financial accounting data are obtained from the Compustat database. The final sample consists of 37,801 firm-year observations from 1995 to 2015. To mitigate the outlier effect, the authors winsorize all non-indicator variables at the 1% level.

To measure a firm's CSR commitment, the authors utilize its corporate social ratings, provided by MSCI environmental, social, and governance (ESG) stats (KLD). MSCI ESG stats annually evaluate a firm's CSR activities based on financial statements, media coverage, and government documents. The data cover all firms in the S&P 500 index as of 1991, the 1000 largest publicly traded U.S. firms from 2001 to 2002, and the 3000 largest publicly traded U.S. firms (by market capitalization) thereafter. KLD evaluates the strengths and weaknesses of a firm's CSR activities in terms of seven dimensions (i.e., corporate governance, community, diversity, employee relations, environment, human rights, and product) based on financial statements, media coverage, and government documents. If a firm carries out a good (harmful) policy, the firm earns one strength (concern) point in the dimension to which the policy belongs. The KLD score in each dimension is measured by calculating the differences between the strengths and the concerns; then, the composite KLD score is calculated by summing all dimension scores. Thus, a higher KLD score represents a better CSR performance. Following previous research [31–33], the authors first focus on the five dimensions (community, diversity, employee relations, environment, and product) related to primary stakeholders and, then, examine the other dimensions' effects. Jones [34] and Hillman and Keim [33] argue that firms can achieve sustainable competitive advantages and reap their long-term benefits by investing in relationships with stakeholders. Because this paper focuses on the long-term effect of CSR, the authors construct separate CSR variables using CSR ratings associated with primary stakeholders.

Raw CSR scores may create some problems, since the composition of CSR strengths and concerns changes over time. To overcome this problem, the authors also utilize adjusted CSR scores that divide the strengths and concerns of each dimension by their relative number of strength and concern indicators [35].

To estimate the relation between advertising expenditure and CSR, this study employs an empirical model specification (1) as follows:

$$\begin{aligned} \mathrm{CSR_{it}} &= \mathrm{a_0 + a_1ADV_{it} + a_2SIZE_{it} + a_3ROA_{it} + a_4RND_{it}} + a_5 GROW_{\mathrm{it}} \\ &+ \mathrm{a_6LEV_{it} + a_7MB_{it} + a_8HHI_{it} + industry\ dummy + year\ dummy} + \varepsilon_{\mathrm{it}} \end{aligned} \quad (1)$$

where CSR5 and CSR7 represent raw scores of the five or seven different dimensions of CSR activities for a firm i at time t, respectively. ACSR5 and ACSR7 are computed by dividing the strengths and concerns of each of the five or seven dimensions by the respective number of strengths and concerns, and then subtracting the sum of adjusted total concern scores from the adjusted total strength scores.

ADV is an independent variable that measures a firm's marketing investment in advertising. It represents advertising expenditure scaled by sales if the advertising expenditure is not missing. A number of control variables that may affect the level of CSR activities are considered in the model. As control variables that are shown in the literature to have an influence on CSR [36,37], the authors use firm size (SIZE), return on total assets (ROA), R&D expenses (RND), sales growth (GROW), leverage (LEV), market to book ratio

(MB), and industry concentration (HHI). SIZE is a natural logarithm of total assets, while ROA is the return on total assets, with both being the firms' fundamental characteristics indicating that large and profitable firms tend to be exposed to the market and high CSR activities. RND measures the R&D expenses divided by sales. Prior studies suggest that R&D activities influence a firm's future performance and signal the long-term prospect. For example, R&D spending is related to sales growth and productivity [38] and enhances the market value of the firm [39]. GROW and MB are considered in the model because growing firms are likely to increase their spending on advertising. GROW is the change in sales in year t from year t − 1. LEV is the ratio of total debts to total assets. MB is the market to book ratio. HHI represents the Herfindahl–Hirschman index, which measures the market concentration of each industry. Firms in a highly competitive market tend to care more about the long-term prospects. All variable definitions are found in the Appendix A.

4. Results

4.1. Empirical Results

The summary statistics of all variables used in this study are presented in Table 1. The mean (median) value of adjusted CSR5 is 7.449 (6), and the mean (median) for ACSR5 is −0.083 (−0.042), while the mean (median) value of adjusted CSR7 is 4.668 (3), and the mean (median) for ACSR7 is −0.117 (−0.086). The mean value of ADV is 0.011, indicating that firms, on average, spend around 1% of sales revenue on advertising. The mean value of RND is 0.099, suggesting that firms are more likely to spend on R&D compared to advertising. Other summary statistics in Table 1 are similar to those found in prior studies [36,37,40].

Table 1. Descriptive statistics.

	Q1	Median	Mean	Q3	Std. Dev.	N
CSR5	4.000	6.000	7.449	8.000	5.355	37,081
CSR7	1.000	3.000	4.668	6.000	5.119	37,081
ACSR5	−0.337	−0.042	−0.083	0.125	0.385	37,081
ACSR7	−0.389	−0.086	−0.117	0.117	0.447	37,081
ADV	0.000	0.000	0.011	0.011	0.026	37,081
SIZE	6.222	7.399	7.495	8.620	1.746	37,081
ROA	0.047	0.109	0.102	0.166	0.129	37,081
RND	0.000	0.000	0.099	0.035	0.422	37,081
GROW	−0.010	0.075	0.127	0.193	0.314	37,081
LEV	0.032	0.251	0.292	0.481	0.258	37,081
MB	1.264	2.014	2.899	3.382	3.660	37,081
HHI	0.031	0.041	0.065	0.078	0.061	37,081

This study performs multivariate regression and Heckman two-stage analysis. The regression results are reported in Tables 2 and 3, respectively. Columns (1) and (3) provide the results for CSR5 and CSR7, respectively, while columns (2) and (4) provide the results for ACSR5 and ACSR7. The results demonstrate that the coefficients of ADV from columns (1) to (4) are significantly positive, showing that firms with a higher advertising investment are more likely to have higher CSR scores.

In the regression, almost all control variables are significant, with the adjusted R2 being 89% for column (1), suggesting that the model specification is well fitted. Interestingly, the coefficient of RND is also significantly positive, confirming that even when controlling for a firm's other investment activities, the effect of advertising expenditure on CSR is incrementally significant. This finding supports the notion proposed by this study that a firm's marketing investment positively affects the CSR activities and, consequently, the long-term sustainability efforts.

Table 2. Marketing investments and corporate social responsibility: OLS regression.

	(1)	**(2)**	**(3)**	**(4)**
Variable	**CSR5**	**ACSR5**	**CSR7**	**ACSR7**
ADV	6.692 ***	0.994 ***	6.350 ***	0.913 ***
	(5.30)	(4.79)	(4.52)	(3.80)
SIZE	0.496 ***	0.060 ***	0.362 ***	0.038 ***
	(15.76)	(12.27)	(10.58)	(6.72)
ROA	1.145 ***	0.202 ***	1.184 ***	0.209 ***
	(5.07)	(5.22)	(4.83)	(4.74)
RND	0.425 ***	0.070 ***	0.375 ***	0.061 ***
	(6.27)	(5.66)	(5.22)	(4.49)
GROW	−0.121 ***	−0.016 **	−0.074	−0.012
	(−2.79)	(−2.00)	(−1.55)	(−1.31)
LEV	−1.059 ***	−0.148 ***	−1.026 ***	−0.151 ***
	(−8.12)	(−6.59)	(−7.28)	(−5.97)
MB	0.034 ***	0.005 ***	0.026 ***	0.003 **
	(5.90)	(4.78)	(4.28)	(2.35)
HHI	0.609	0.161	−0.028	−0.256
	(0.68)	(0.92)	(−0.03)	(−1.13)
Observations	30,368	30,368	30,368	30,368
Adjusted R-Squared	0.866	0.162	0.820	0.143
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes

Note: All independent variables are lagged by 1 year. Standard errors are robust to heteroscedasticity and clustered at the firm level. t-statistics are in parentheses. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 3. Marketing investments and corporate social responsibility: Heckman 2-stage regression.

	(1)	**(2)**	**(3)**	**(4)**
Variable	**CSR5**	**ACSR5**	**CSR7**	**ACSR7**
ADV	6.688 ***	0.993 ***	6.345 ***	0.912 ***
	(5.29)	(4.78)	(4.51)	(3.80)
SIZE	0.497 ***	0.060 ***	0.363 ***	0.038 ***
	(15.77)	(12.29)	(10.60)	(6.74)
ROA	1.150 ***	0.204 ***	1.190 ***	0.210 ***
	(5.09)	(5.25)	(4.85)	(4.77)
RND	0.447 ***	0.077 ***	0.396 ***	0.067 ***
	(6.28)	(5.92)	(5.25)	(4.75)
GROW	−0.122 ***	−0.016 **	−0.074	−0.012
	(−2.81)	(−2.03)	(−1.56)	(−1.33)
LEV	−1.059 ***	−0.148 ***	−1.026 ***	−0.151 ***
	(−8.12)	(−6.57)	(−7.28)	(−5.95)
MB	0.034 ***	0.005 ***	0.026 ***	0.003 **
	(5.91)	(4.78)	(4.28)	(2.35)
HHI	0.584	0.155	−0.051	−0.262
	(0.65)	(0.88)	(−0.05)	(−1.16)
Mills	−0.030 **	−0.008 **	−0.027 *	−0.008 *
	(−2.24)	(−2.23)	(−1.90)	(−1.91)
Observations	30,356	30,356	30,356	30,356
Adjusted R-Squared	0.866	0.163	0.820	0.143
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes

Note: This table provides results of Heckman 2-stage regression. Mills is the inverse Mills ratio calculated from the first stage probit regression. All independent variables are lagged by 1 year. Standard errors are robust to heteroscedasticity and clustered at the firm level. T-statistics are in parentheses. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

The authors perform Heckman two-stage analysis to address the endogeneity problem. Some studies argue that CSR activities positively affect brand equity and advertising intensity [41–43], implying that there is a concern about reverse causation under which firms with high CSR activities are more likely to spend advertising expenditures. Following Willis and Rogers [44], the authors regress the first stage model as:

$$ADV = a_0 + a_1PCM + a_2HHI + a_3SIZE + a_4GROW + e \quad (2)$$

where ADV is a dummy variable equal to 1 if a firm has advertising expenses. PCM is a price–cost margin measured by dividing the operating expenses by sales, while HHI is the Herfindahl index using SIC two-digit codes. SIZE is a natural logarithm of the total assets, and GROW is the change in sales in year t from year $t - 1$.

Many firms with higher advertising expenditures share similar characteristics, such as higher exposure to customers, favorable reputation, and so on. From the first-stage regression, the inverse Mills ratio is obtained and then included in the second-stage regression. Similar results hold as provided in Table 3. In particular, the coefficient of ADV in column (1) is 6.688 and is significantly positive at the 1% level. This is almost the same magnitude demonstrated by the coefficient of ADV in Table 2, implying that even after controlling for endogeneity, the results consistently support the positive effect of a firm's advertising expenditure on CSR activities.

4.2. Additional Robustness Tests

The authors perform a battery of unreported robustness tests to ensure the validity of the findings. First, since more than half of the sample firms do not report advertising expenditure, high CSR ratings may not be the result of high marketing investments but may be a characteristic of a firm with positive marketing investments. Therefore, the authors limit the sample to include only those firms with no missing values for advertising expenditures in the income statement, resulting in 12,727 firm-year observations used to conduct the same analysis. The findings show that all coefficients of ADV are significantly positive, thus consistently supporting the hypothesis.

Second, the authors test the model using an alternative proxy for a firm's advertising expenses—one dimension of marketing investment. Since advertising activities are not a one-time decision but, rather, are continuous to capture the effect of advertising activities of a firm over the long term, the average amount of advertising expenditure over a duration may be relevant. Two alternatives of advertising expenditure measures are considered: an average of advertising expenditure for the past three years and a dummy variable equal to one if the ADV is greater than the industry median value of ADV, and zero otherwise. Findings yield positive and statistically significant coefficients of the average advertising and the dummy variable, confirming that advertising expenditure is an important variable with respect to CSR activities.

Lastly, the authors divide the sample into two groups, namely advertising-intensive (manufacturing, transportation, communications, electric, retail trade, and services industries are classified as advertising-intensive industries) vs. non-advertising-intensive industries and controversial vs. non-controversial industries. Since the impact of a firm's marketing investment on CSR can differ across industries, the authors first classify the sample based on whether the average advertising expenditures of the industries are above the median. For advertising-intensive industries, the effect of a firm's marketing investment on CSR is expected to be relatively lower than that of non-advertising-intensive industries. Consistent with the prediction, the coefficient of ADV in non-advertising-intensive industries is much higher than that of ADV in advertising-intensive industries. In the tabulated results, authors find that all coefficients of ADV are significantly positive, indicating that advertising expenditure has a positive impact on CSR, regardless of whether the firm belongs to advertising-intensive industries or not. However, consistent with the prediction, the coefficient of ADV in non-advertising-intensive industries is much higher than that of ADV in advertising-intensive industries.

Further, this study examines the link between advertising expenditures and CSR initiatives for controversial industries versus non-controversial industries. Following Jo and Na [45], controversial industries include the alcohol, gambling, tobacco, firearms, military, oil, cement, and biotech industries, while non-controversial industries refer to other industries. Since the effect of CSR on firm performance or risk is different depending on whether the firm belongs to controversial industries or not [45,46], the authors expect that the relation between CSR and marketing investment is different between controversial and non-controversial industries. The coefficient of ADV in non-controversial industries is significantly positive and greater than that of ADV in controversial industries, suggesting that the effect of a firm's marketing investment is pronounced for non-advertising-intensive and non-controversial industries, while highlighting the marginal effect of a firm's marketing investment on specific industries. In sum, the authors find that firms with high advertising expenditures are more likely to have sustainable CSR performance after controlling for other activities such as R&D.

5. Conclusions

Although advertising investment significantly contributes to the profitability of a firm, and despite its potential long-term impacts, the extant literature has focused on the short-term effects of advertising, such as the immediate sales and stock market responses. Thus, this paper explores the long-term effects of advertising by examining advertising investment in relation to sustainability commitment and CSR. To measure the long-term influence of advertising, the authors investigate whether a firm's advertising is likely to have an effect on its commitment to socially and environmentally responsible practices, finding that a firm's advertising investment demonstrates a positive relation with CSR activities. It implies that advertising investment could be a long-term management strategy to ensure a firm's survival by building the firm's value in the long term.

The findings of this paper contribute to the related literature. Regarding the debate on the characteristics of advertising investments, this paper verifies that advertising investments are closely related to a firm's long-term efforts. One of the reasons to focus on the short-term effects of advertising is attributed to the difficulty in constructing a measure to accurately assess the effectiveness of advertising over long periods, with earlier studies utilizing the decayed advertising effects on sales. However, using CSR as a measure, this paper investigates whether a firm that invests in marketing adopts a long-term business perspective, based on research evidence that CSR firms set high moral standards to ensure that they stay responsible and accountable for the wellbeing of society and the environment as a whole.

Second, the extant advertising literature from an accounting and finance perspective has mostly focused on the effects of advertising on financial returns [3] and the market value of the firm [6,16]. However, in this paper, the authors contribute to the extant literature by investigating the intangible aspects of advertising investment, finding that firms with higher advertising expenditures are more likely to have a higher CSR, which implies that advertising investment influences a firm's sustainable efforts and leads to an increased commitment to CSR activities. This research has some limitations. First, there are some limits to the validity of measurement in the current study. In particular, CSR is utilized as a proxy for a firm's long-term value-enhancing practices, but some argue that CSR activities can be opportunistic for reputation building. Moreover, although CSR is used as an aggregate variable to capture a firm's sustainable efforts, the long-term effects of advertising investment may be captured by other factors, such as royalty, which could be a valuable area for future research. Second, the current paper's finding is based on the archival financial data. Additionally, it is not easy to test the direct link between advertising and CSR without assuming that there are other variables interacting with this relationship.

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Appendix A

Table A1. Variable Definitions.

Variable	Descriptions
Dependent Variable:	
CSR5	Net score of CSR ratings, measured as total strengths minus total concerns for 5 dimensions of CSR; community, diversity, employee relations, environment, and product
CSR7	Net score of CSR ratings, measured as total strengths minus total concerns for 7 dimensions of CSR; community, corporate governance, diversity, employee relations, environment, human rights, and product
ACSR5	Adjusted score of CSR ratings; strengths and concerns of each of the 5 dimensions (community, diversity, employee relations, environment, and product) is divided by its respective number of strengths and concerns and the sum of adjusted total strength is subtracted by the sum of the adjusted total concern scores
ACSR7	Adjusted score of CSR ratings; strengths and concerns of each of the 7 dimensions (community, corporate governance, diversity, employee relations, environment, human rights, and product) is divided by its respective number of strengths and concerns and the sum of adjusted total strength is subtracted by the sum of the adjusted total concern scores
Advertising expenditure:	
Adv.	Advertising expenditure scaled by sales in year t − 1
Firm characteristics:	
SIZE	The log of total assets
ROA	Return on assets
RND	Research & Development expense
GROW	Sales growth
LEV	Total debt divided by total assets
MB	Borrower's market-to-book ratio of assets
HHI	Herfindahl–Hirschman Index based on SIC two-digit code

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