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## Article

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# Do corporate social responsibility activities enhance firm value? An empirical evidence from Taiwan

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## ABSTRACT

In the past few decades, companies have begun to pay attention to the issue of whether companies that are engaged in CSR activities enhance firm value remains a subject of debate. From the perspective of agency theory, high-CSR companies can encounter poor financial performance and a reduction in firm value because of managers' bad project selection. According to stakeholder theory, high-CSR companies face a positive relationship to financial performance and vament as a result of consideration for the benefits of stakeholders. This study collects CSR data from *CommonWealth Magazine* and examines how Taiwanese companies engaged in CSR activities affect corporate financial performance. The empirical finding shows that CSR is significantly positive to corporate financial performance. This result suggests that companies actively engaged in CSR activities bring a positive effect on firm value. Therefore, our evidence supports the stakeholder theory that high CSR companies benefit their stakeholders.

## IMPACT STATEMENT

Recently, there has been a change in the way businesses operate, with enterprises beginning to prioritize issues such as environmental protection, social responsibility, and corporate governance. They coexist and prosper alongside these concerns. Corporate social responsibility is a broad concept of sustainable development, while ESG embodies the principles of how CSR is implemented. This study examines the impact of CSR activities on corporate financial performance among Taiwanese companies. The empirical findings show a significantly positive correlation between CSR and corporate financial performance, suggesting that companies actively engaged in CSR activities bring positive effects to firm value. The evidence supports the stakeholder theory, indicating that high CSR companies benefit their stakeholders. The empirical implications suggest that advocating for CSR could strengthen favorable relationships with stakeholders, thereby benefiting companies. In practice, companies dedicated to engaging in CSR activities can enhance performance and increase value. The research results imply that promoting CSR activities is an investment rather than a cost, urging companies to increase their involvement in CSR activities without hesitation. From an investor's standpoint, endorsing companies' efforts in CSR is essential, not only for shareholders' profitability but also for overall sustainability. Policymakers should formulate comprehensive policies, providing incentives such as tax relief or support schemes to encourage companies to invest in CSR activities.

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## Introduction

The concepts of Corporate social responsibility (CSR) and ESG have become very prominent in recent years. In the past, the only thing that mattered about business management was the firm's financial performance. However, due to the appeal of climate change mitigation, making profits for investors is no longer the only consideration for business management. More investment indicators have begun to pay attention to environmental protection, social responsibility, corporate governance, and other aspects of coexistence and co-prosperity. CSR is a broad sustainability concept, while ESG is how to implement the principles of CSR. Therefore, sustainable management is the general direction that enterprises should

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pursue. Past research also indicates that CSR is a sustainable concept, involving issues, such as green innovation (Le, 2022; Le et al., 2022), sustainable energy supply (Le et al., 2021b), environmental concerns, social welfare, education, and other dimensions (Lai et al., 2010; McWilliams et al., 2006), and it is also crucial to the success or failure of sustainable development (Soojeen et al., 2019).

Nowadays many companies emphasize CSR vision and mission in formulating corporate policy. Indeed, involving in CSR activities is double-edged. No doubt it will enhance the image of a company, but it will influence resource allocation inevitably. Hence, it is worthwhile to examine the benefits and costs of CSR activities, particularly the impacts of CSR on a company's financial performance.

Except for Japan, Singapore, Hong Kong, and South Korea, Taiwan is one of the most important economies in East Asia. The electronics industry, especially the semiconductor industry in Taiwan, plays a pivotal role in the world. Taiwan is a member of the international community, and like foreign companies, many companies in Taiwan have been engaged in CSR activities. For example, Taiwan Semiconductor Manufacturing Co., Ltd. (TSMC) has built a water circulation system through water resource risk management to maximize the efficiency of each drop of water. Formosa Plastics Group established a foundation to actively cooperate with the government and various non-governmental organizations to gain an in-depth understanding of social needs, care, and assistance to underprivileged groups. Cathay United Bank signed the Equator Principles to effectively exert the influence of the financial industry on CSR, combine financial functions and environmental issues to achieve a low-carbon economy and implement CSR in the financial industry. Recently, due to the rage of COVID-19, TSMC and Hon Hai Technology Group (Foxconn) donated BioNTech COVID-19 Vaccine to the government and helped Taiwanese people to prevent the invasion of COVID-19.

Due to the importance of the economy in Taiwan, it is worthy to examine how CSR activities affect a company's financial performance. Can CSR activities enhance firm value? The debate on these issues has generated great attention in recent decades. Research related to the link between CSR and financial performance is mainly based on two theoretical arguments: agency theory and stakeholder theory.

On the one hand, engaging in CSR is seen as a source of conflict between different stakeholders. The claim can be traced back to Friedman (1970) in which the author proposes that the only responsibility of business is to increase profits. Several extensions of this view support a negative relationship between CSR's degree of involvement and firm value. Vance (1975) considers that CSR activities reduce the company's resources for unnecessary costs. Preston and O'Bannon (1997) suggest that some private management objectives may result in the company's resources being wasted due to overinvestment in corporate social responsibility. Hence, involving CSR activities is likely to create a competitive disadvantage for firm value. These arguments are just consistent with agency theory. For instance, Bénabou and Tirole (2010) indicate that corporate social responsibility is an express of managerial agency problem.

On the other hand, stakeholder theory argues that CSR activities will positively affect the firm's financial performance and its value. It can be regarded as value-enhancing view that advocates high CSR companies improve their reputation, gain, and benefit from employee loyalty and customers' support.<sup>1</sup> Cornell and Shapiro (1987) claim that a firm failing to meet stakeholder's interests will possibly give rise to market hesitation and then loss the opportunities of making profits. Waddock and Graves (1997) extend that better strategic skills of management due to stakeholders' consideration leads to high social performance which may also help companies achieve their high financial performance.

Extensive empirical research has focused on the effects of a firm's CSR engagement on its financial performance. However, the results obtained in previous studies are mixed. From the perspective of agency theory, the empirical results of Preston and O'Bannon (1997) present that high-CSR companies might encounter poor financial performance and a reduction in firm value. In addition, several results support the viewpoint that the financial impacts of CSR are negative. Moore (2001) finds that CSR activities have a negative effect on the financial performance of corporations by examining the United Kingdom supermarket industry. López et al. (2007), using the Dow Jones Sustainability Index as a measure of CSR performance, also find that CSR is negatively associated with companies' financial performance. Statman et al. (2008) show that companies with higher CSR ratings are possibly linked to poor share performance. They point out investors are willing to sacrifice investment returns if social benefits can be achieved through their investments. Brammer et al. (2012) assert that small businesses involved in environmental protection have significantly lower stock returns.

In contrast, the argument that CSR has positive impacts has received significant support as well. From the perspective of stakeholder theory, Bartlett and Preston (2000) and Cochran et al. (1985) suggest

high-CSR companies can establish a positive correlation with financial performance and value enhancement. Cochran and Wood (1984) and Waddock and Graves (1997) show that CSR reputation ratings positively affect firms' financial performance. Conducting a meta-analysis of 52 studies, Orlitzky et al. (2003) report that social responsibility is likely to have a positive effect on firm performance. Jo and Harjoto (2011) also find that CSR can improve firms' market value. Giannarakis et al. (2016) investigate the relationship between the extent of Corporate Social Disclosure (CSD), which is used as a signal for CSR commitment, and financial performance of companies in the United States. Their results suggest that companies' engagement in socially responsible initiatives via CSD usually has positive effects on their financial performance. Soojee et al. (2019) argue that CSR has become crucial for sustainable development, thus investigating the correlation between social ties and CSR as well as firm performance in South Korean companies. Their findings show that CSR is positively related to firm performance, implying that engaging in CSR activities not only contributes to society but also provides competitive advantages. Furthermore, it concludes that CSR is essential for establishing and maintaining long-term relationships with various stakeholders, thereby driving company performance. Similarly, studies like those by Le et al. (2021a, 2021c, 2021d) and Yang et al. (2019) support the assertion of a positive correlation between CSR and firm performance from the stakeholders' perspective.

Regarding the empirical findings associated with Taiwan's companies, there exist some studies but the findings are inconsistent. Shen and Chang (2009) use quarterly data from 2005 to 2006 and report that Taiwan's companies engaged in CSR activities achieved a significant growth in pre-tax income and profit margin. Shen and Chang (2009) recognize that companies with superior performance are inclined to embrace CSR as they have surplus profits to invest in CSR activities, but not vice versa. After taking into consideration the endogeneity of CSR adoption, their findings support the positive effects of CSR. Chen and Lee (2017) apply the panel smooth transition regression method to analyze listed Taiwanese corporations during the period of 2010–2012. They conclude that CSR has a non-linear relationship with corporate value. Nonetheless, the investment in CSR does not augment value until it surpasses the transition point.

Our study can be seen as supplementary to the literature in the following two ways. First, different from the data used by Shen and Chang (2009), and research period employed by Chen and Lee (2017), we adopt unique data provided by CommonWealth Magazine from 2007 to 2019 to explore the relationship between CSR and Corporate financial performance. After excluding foreign companies, companies without financial reports, and missing data, the empirical finding shows that the coefficients of CSR are significantly positive to corporate performance. This result suggests that companies actively engaged in the CSR activities bring a positive effect on their firm value. Therefore, our evidence supports the stakeholder theory that companies' high CSR benefits their stakeholders.

Second, we address the issue of the relationship between CSR and firm value in extreme cases. On both ends of the scale, extremely high CSR engagements are possibly caused by managers' overinvesting in CSR activities; extremely low CSR companies may be in the situations where the managers are unable to deal with the complexity of environmental and social requirements. In these cases, we expect that CSR will not positively affect the firm value or no relationship between them. Our findings support this expectation and show that CSR involvement insignificantly affects firms' financial performance for extremely high CSR and extremely low CSR companies.

The structure of this paper is organized as follows: Section Literature review and hypothesis construction reviews the previous literature on the relationship between CSR and financial performance and constructs our hypotheses. Section Data and methodology describes the methodology and the data used in this study. Section Empirical results present the empirical findings, and Section Conclusions, implications, and limitations conclude the paper.

## Literature review and hypothesis construction

As CSR is crucial for sustainable development, many issues related to CSR have been extensively discussed by scholars. Specifically, the question of whether implementing CSR enhances company performance has attracted significant scholarly attention, resulting in controversial research findings. This study will propose two opposing hypotheses to understand the relationship between CSR and corporate financial performance.

From a managerial perspective, promoting CSR involves substantial costs and resource allocation, leading to a competitive disadvantage for the company and potentially eroding profits, thereby affecting shareholders' interests (Bénabou & Tirole, 2010; Preston & O'Bannon, 1997; Vance, 1975). This contention highlights that CSR is essentially an issue of managerial agency.

An agency problem exists when a conflict of interest exists between the shareholders and management of a firm. Jensen and Meckling (1976) argue that managers are self-interested, tending to maximize their welfare which can run counter to the shareholders' best interests. As a result, agency costs arise because of increasing investment inefficiency. The implication of agency theory is that managers have to maximize shareholder wealth, rather than over-allocate company resources to CSR activities for their own private benefits. Poorer investment opportunities selection will make the company suffer huge losses. At the same time, investors anticipate potential resource expropriations, which could increase financing costs as well. If managers excessively allocate corporate resources to CSR activities to seize the opportunity for private benefits, especially without well monitored by shareholders, firm value could deteriorate due to bad project selection. Accordingly, the negative relationship between CSR and corporate financial performance will be expected.

Previous empirical studies on the relationship between CSR and financial performance have been widely discussed, however, the empirical findings are not concluding. For example, Moore (2001) uses the supermarket industry as an empirical sample to examine the relationship between CSR and financial performance, the findings show that CSR is negatively relative to financial performance. López et al. (2007) also investigate the link between CSR and corporate financial performance. For the aim of the study, the sample firms are comprised of two groups, Dow Jones Sustainability Index (DJSI), and Dow Jones Global Index (DJGI). In contrast to DJGI firms, they find that CSR is negative to financial performance. Similarly, Kao et al. (2018) examine the relationship between CSR and performance in China by using a simultaneous equation approach. The empirical finding shows that CSR is significantly negative to firm performance. Based on the aforementioned literature and agency theory, we propose the hypothesis H1a as follows:

H<sub>1a</sub>: CSR is negatively relative to corporate financial performance.

Distinguished from agency theory which lays stress on the interests of shareholders, the stakeholder theory emphasizes the interests of all the parties in the corporation. In addition to investors, typical stakeholders encompass employees, customers, suppliers, communities, governments, or trade associations. Freeman (1984) advocates that managers should consider not only maximizing shareholder value but also taking into account the benefits of stakeholders. By serving the claims of stakeholders, companies can gain goodwill, reputation, employee loyalty, customer support, and society trust. Stakeholder theory highlights the nexus of CSR and corporate governance. CSR activities are considered the origin of competitive advantage. Dedication to CSR can benefit the corporation as a whole.

Compared to agency theory, the stakeholder theory focuses on the all interests of the company. Under this framework, manager considers all the stakeholders of the company. One of the stakeholders once gains, other stakeholders will also benefit from positive feedback. Therefore, the assertion of the theory is that managers should not only maximize shareholder value but also take into account the benefits of stakeholders. Stakeholder theory implies that companies committed to CSR activities may improve the company's image, enhance the firm reputation, motivate the morale of the employees, promote product sales, and thus bring positive benefits to the company.

For example, Bahta et al. (2021b) and Matten (2006) argue that it is essential for businesses to employ various methods to fulfill stakeholders' expected interests, maintaining good operation and sustainability as a crucial issue for economic entities. According to Agyemang and Ansong (2017) and Ansong (2017), the practice of sound CSR can attract more investors, customers, and employees, thus enhancing brand reputation and financial profits. Additionally, the study by Bahta et al. (2021b) also suggests that CSR enhances financial performance by improving relationships between companies and their primary stakeholders.

Numerous empirical studies have explored the positive impact of CSR on corporate financial performance. Giannarakis et al. (2016) investigate whether CSR enhances the financial performance of companies in the United States. Their results suggest that companies' engagement in socially responsible initiatives has positive effects on their financial performance. Similarly, Jo and Harjoto (2011) also examine whether CSR engagement enhances firm value. Their finding indicates that CSR is positively relative to the firm

value. Additionally, Orlitzky et al. (2003) executed a meta-analysis of 52 studies to explore the relationship between corporate social performance and corporate financial performance. The finding of the meta-analysis shows that corporate social performance is positively correlated with corporate financial performance. Soojee et al. (2019) argue that CSR has become crucial for sustainable development, thus investigating the correlation between social ties and CSR as well as firm performance in South Korean companies. Their findings show that CSR is positively related to firm performance, implying that engaging in CSR activities not only contributes to society but also provides competitive advantages. Furthermore, it concludes that CSR is essential for establishing and maintaining long-term relationships with various stakeholders, thereby driving company performance. Yang et al. (2019) examined the influence of overall CSR performance on Chinese pharmaceutical companies. Their research suggests a positive and significant impact of overall CSR scores on financial indicators, such as ROA, ROE, and EPS. Shekar and Kumaran (2019) investigated how CSR expenditures affected the financial performance of the top three information technology companies in India. Their research findings show a significantly positive effect of CSR on ROE. In other words, implementing CSR activities contributes to improving the performance of companies. Liu et al. (2020) investigated how CSR affected the financial performance of listed manufacturing companies in China. Their empirical results suggest that companies should actively practice CSR and enhance corporate stability to promote improvements in corporate financial performance. Le et al. (2021c) explored the correlation between CSR and firm performance by studying Vietnamese small and medium-sized enterprises (SMEs). The results demonstrate a remarkably positive influence of CSR on firm performance. In light of stakeholder theory and the empirical findings of the previous research, we propose the hypothesis H1b following:

H<sub>1b</sub>: CSR is positively relative to corporate financial performance.

## Data and methodology

### Data

The data we used included CSR score and corporate financial reports. The CSR data are collected from the website of *CommonWealth Magazine*, a publication that has been presenting its Excellence in CSR Award since 2007. The participating firms are classed into large enterprises, medium-sized enterprises, foreign enterprises, and little giant groups. The CSR score are evaluated based on corporate governance, corporate commitment, social engagement, and environmental sustainability. By ranking the CSR score, the top 100 companies are determined. The list of top 100 companies covers 50 large enterprises, 15 medium-sized enterprises, 15 foreign enterprises, and 20 little giants.

The corporate financial report data are obtained from TEJ IFRS Finance module and TEJ PUB DB module of Taiwan Economic Journal (TEJ) Database. Using the TEJ database, we calculate financial variables including the dependent variable Tobin's Q, return on asset (ROA), return on equity (ROE), and control variables, such as firm size, firm age, growth rate of net sales, the ratio of cash flow to the total asset. The research period in this study is from 2007 to 2019.

We obtained 902 firm-year CSR score data from the website of *CommonWealth Magazine*. The foreign companies are excluded due to the financial reports are not available in the TEJ database, the CSR score data retains 746 firm-year observations. In addition, when taking the missing value and unavailable financial reports into account, the remaining data involves 594 firm-year observations.

### Methodology

To examine the relationship between corporate performance and CSR, the regression model is specified as follows

$$\begin{aligned} Performance_{i,t} = & \alpha + \beta_1 CSR_{i,t-1} + \beta_2 LnSize_{i,t-1} + \beta_3 LnAge_{i,t} + \beta_4 SalesGrowth_{i,t-1} + \beta_5 Lev_{i,t-1} + \beta_6 \frac{Cash_{i,t-1}}{AT_{i,t-1}} \\ & + \sum Industry\ Dummy + \sum YearDummy + \varepsilon_{i,t} \end{aligned} \quad (1)$$

where the dependent variable of left hand side in Equation (1) is measured by Tobins'  $q$ , return on asset (ROA), and return on equity (ROE), respectively. The first term of right hand side  $CSR_{i,t-1}$  measures the performance of corporate social responsibility which is evaluated by *CommonWealth Magazine*. The second to fifth term of right hand side are control variables including  $LnSize_{i,t-1}$ ,  $Lev_{i,t-1}$ ,  $SalesGrowth_{i,t-1}$ ,  $LnAge_{i,t}$ , and  $Cash_{i,t-1}/AT_{i,t-1}$ . To control the industrial effect and year effect, the industry dummy and year dummy are added to the regression model, and  $\varepsilon_{i,t}$  is the error term. The definitions of the variables are reported in Table 1.

## Empirical results

Table 2 reports the descriptive statistics of the variables. Our sample shows that the mean (standard deviation) of Tobins'  $Q$ , ROA, ROE are 1.29% (0.84%), 7.05% (6.22%), and 12.17% (11.41%), respectively. The higher volatilities suggest that the firms participating in the CSR assessment do not always perform better than the previous year. In other words, whether firms participating in CSR activities can enhance the firms' value still needs further multivariate regression analysis. The average of CSR score is 7.96. This result indicates that firms participating in the CSR assessment have received certain recognition in corporate governance, corporate commitment, social engagement, and environmental sustainability. As for the control variables, the mean (median) of firm size, firm age, sales growth, financial leverage, and cash to total assets ratio are 182,373 million NT dollars (58,189 million NT dollars), 31.95 (28.94), 4.49% (2.70%), 46.05% (45.99%), 5.22% (4.41%), respectively.

The correlation coefficients of the empirical variables are reported in Table 3. The correlation coefficients between CSR and Tobin's  $Q$ , CSR and ROA, and CSR and ROE are 0.2008, 0.1901, and 0.2076, respectively. The positive relationship between CSR and corporate financial performance indicates that firms engaged in CSR activities can bring a positive effect on firm value. In terms of the correlation between CSR and other independent variables, we can find that the CSR is positively relative to  $LnSize$ ,  $LnAge$ , and  $CASH/Total\ Asset$ . Therefore, the larger firms, older firms, or firms with a higher ratio of cash flow to total assets tend to be involved in more CSR activities. Interestingly, Table 3 also reports that CSR is positively relative to  $Lev$ , and negatively relative to  $Sales\ Growth$ . This finding shows that firms with high financial leverage or negative sales growth are still actively participating in CSR activities. In addition, the correlation coefficients of all the independent variables are quite low, and the absolute values of them are smaller than 0.4. This finding suggests that the multi-collinearities of the variables in this study are not serious.

**Table 1.** The definition of variables.

Variables	Definition
Tobins Q	Sum of the market value of equity and liabilities divided by the total assets
ROA	Net income divided by total assets
ROE	Net income divided by total equity
CSR	CSR score is evaluated by <i>CommonWealth Magazine</i>
$LnSize$	The natural logarithm of total assets
$LnAge$	The natural logarithm of the firm's age
Sales growth	The growth rate of sales
$Lev$	The ratio of the total liabilities scaled by total assets
$CASH/total\ assets$	The ratio of cash flow to total assets

**Table 2.** Descriptive statistics of the variables.

Variable	Mean	Std. Dev	Median	Min	Max	Skewness	Kurtosis	Obs
Tobins Q	1.29	0.84	1.01	0.07	5.39	1.55	2.91	594
ROA	7.05	6.22	6.07	-25.41	30.88	0.05	2.46	594
ROE	12.17	11.41	11.74	-79.14	69.68	-1.74	13.84	594
CSR	7.96	0.75	8.03	5.48	9.51	-0.75	0.70	594
Size (million)	182,373	376,545	58,189	970	3,674,276	5.61	39.47	594
Age	31.95	14.60	28.94	2.33	71.72	0.63	-0.24	594
Sales_Growth (%)	4.49	21.21	2.70	-88.71	268.70	4.54	48.05	594
Lev (%)	46.05	18.44	45.99	6.43	95.1	0.06	-0.73	594
$CASH/total\ assets\ (%)$	5.22	8.03	4.41	-33.21	48.54	0.67	4.38	594

**Table 3.** The correlation matrix of the variables.

Variables	Tobins Q	ROA	ROE	CSR	LnSize	LnAge	Sales Growth	Lev	CASH/Total Assets
Tobins Q	1.0000								
ROA	0.7011	1.0000							
ROE	0.5387	0.8726	1.0000						
CSR	0.2008	0.1901	0.2076	1.0000					
LnSize	−0.1246	−0.1979	−0.0945	0.2857	1.0000				
LnAge	−0.2226	−0.2381	−0.1782	0.0398	0.2199	1.0000			
Sales growth	0.0998	0.1406	0.1615	−0.0536	−0.0210	−0.0121	1.0000		
Levt-1	−0.3771	−0.3789	−0.0520	0.0060	0.3499	0.1806	0.0755	1.0000	
CASH/total assets	0.3745	0.3680	0.2642	0.0886	−0.0601	−0.1516	−0.0811	−0.3490	1.0000

**Table 4.** The regression of CSR on corporate performance.

	Tobins Q	ROA	ROE
Intercept	0.7404 (1.54)	9.0898*** (2.58)	5.4727 (0.78)
CSR	0.2915*** (5.07)	2.4754*** (5.90)	4.5786*** (5.47)
LnSize	−0.0282 (−1.41)	−0.5791*** (−3.97)	−1.1305*** (−3.89)
LnAge	−0.2585*** (−4.10)	−1.6840*** (−3.66)	−3.0950*** (−3.38)
Sales growth	0.6672*** (5.03)	5.7921*** (5.98)	10.7342*** (5.56)
Lev	−0.0115*** (−5.96)	−0.0754*** (−5.38)	0.0720** (2.57)
CASH/total assets	2.6613*** (7.07)	19.3854*** (7.06)	37.3707*** (6.83)
Year dummy	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes
Adj R-square	0.2968	0.3221	0.2000
OBS	594	594	594

\*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

Table 4 explains the regression results of CSR on corporate financial performance. The coefficients of CSR on Tobin's Q, ROA, and ROE are 0.2915, 2.4754, and 4.5786, respectively, and all of them are significant at the 1% level. The coefficients of CSR are positive and significant to corporate financial performance indicating that the firms devoted to the CSR activities are useful to increase firms' value. This evidence supports hypothesis H1b and the stakeholder theory. Regarding the control variables, we find that the coefficients of firm size are significantly negative to ROA and ROE but not Tobin's Q. It is possible that the growth opportunities for larger firms are fewer and further deteriorate firms' value. The coefficients of firm age are significant and negative to corporate financial performance, therefore, compared to younger firms, older firms are more likely to be in the mature or recession stages of the business life cycle and have less investment opportunities resulting in a loss of firms' value. The coefficients of the growth rate of firms' net sales and the ratio of cash flow to total assets are significantly positive to corporate financial performance. These results indicate that it provides more resources for firms to invest and further stimulates the increase of firm's value. Corresponding to our knowledge, the result that leverage is significant and negative to Tobin's Q, and ROA indicates firms with higher debt ratios thereby damaging their firm value. However, the finding also shows that leverage is also significantly positive to ROE. The possible reason is that the substantial increase in ROE is due to the increase in liabilities.

### Robust test

#### Endogeneity issue

There may be some variables are omitted in this study and result in the endogenous problem in CSR and corporate financial performance. In this study, the instrument variable is employed to exclude a possible bias caused by the endogenous problem. The selection of instrument variables has to satisfy two conditions. Firstly, the instrument variable should be highly correlated with the endogenous explanatory variable. Secondly, the correlation between the instrument variable and the error term should be zero.

**Table 5.** The 2SLS regression of CSR on corporate performance: addressing endogeneity.

	First stage CSR (1)		Second stage		
			Tobins Q (2)	ROA (3)	ROE (4)
Intercept	−1.6030*** (−3.70)	Intercept	0.8869 (1.52)	8.7486** (2.05)	1.7919 (0.21)
CSR_IND	0.8509*** (14.61)	CSR	0.2470** (2.20)	2.5791*** (3.14)	5.6975*** (3.50)
LnSize	0.1096*** (9.52)	LnSize	−0.0215 (−0.86)	−0.5949*** (−3.25)	−1.3006*** (−3.58)
LnAge	−0.00313 (−0.08)	LnAge	−0.2603*** (−4.05)	−1.6798*** (−3.57)	−3.0495*** (−3.27)
Sales growth	0.0315 (0.38)	Sales growth	0.6671*** (4.94)	5.7924*** (5.85)	10.7371*** (5.48)
Lev	−0.0032*** (−2.74)	Lev	−0.0116*** (−5.84)	−0.0751*** (−5.15)	0.0762*** (2.64)
CASH/total assets	0.3509 (1.51)	CASH/total assets	2.6867*** (6.94)	19.3263*** (6.82)	36.7330*** (6.54)
Year dummy	Yes	Year dummy	Yes	Yes	Yes
Industry dummy	Yes	Industry dummy	Yes	Yes	Yes
Adj <i>R</i> -square	0.6603	Adj <i>R</i> -square	0.2714	0.2930	0.1758
OBS	594	OBS	594	594	594

\*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

Following Benlemlih and Bitar (2016), Naseem et al. (2019), and Samet and Jarbouli (2017), we use the industry-year average of CSR as an instrument variable to perform 2SLS regression. We regress the CSR on the instrument variable and all other independent variables in the first stage and calculate the predicted value of CSR. In the second stage, the corporate financial performance is regressed on the predicted value of CSR and all other independent variables. Table 5 reports the results of 2SLS regression. The column (1) in Table 5 reports the regression result of the first stage. The coefficient of CSR\_IND is significantly positive to the CSR, and the adj *R*-Square is quite high. This result indicates that the industry-year average of CSR is suitable as an instrument variable and the regression model on stage one fits very well, it can explain most of the variations of the regression model. All the coefficients of CSR in columns (2)–(4) of Table 5 are still significant and positive to the three measurements of corporate financial performance. In general, this finding is consistent with the OLS results that the firms engaged in CSR activities indeed enhance firm value.

Although the different proxies of CSR or different sample periods and firms used might lead to these conflicting empirical results, one important feature must not be overlooked. Both works of Chen and Lee (2017) and Shen and Chang (2009) coincidentally indicate that the relation between CSR engagement and firms' financial performance or firm value seems to be non-linear. Likewise, Barnett and Salomon (2006) study the stock-selection strategies of mutual funds and find a reverse U-shape relationship between CSR and company performance.

Accordingly, we argue that companies' CSR performance and their value present a nonlinear relationship. The OLS technique assumes that the marginal effects of each explanatory variable are constant within the whole range, which does not effectively capture the nonlinearities between corporations' CSR activities and their value. It is appropriate to use the quantile regression technique to illustrate the endogeneity issue. If the positive relationship between CSR and corporate financial performance is not driven by extreme quantiles, it is evidence that CSR and corporate financial performance have endogenous problems.

For this purpose, we regress Tobin's *Q* on CSR and other controlled variables, and the results are reported in Table 6. All the coefficients of CSR in Table 6 are positively relative to Tobin's *Q*, but are not significant in 1, 5, and 99% quintile levels. Thus, the positive relationship between CSR and corporate financial performance is a mean result and not driven by extreme quintiles. The implication is that we should take endogeneity into account when investigating the relationship between CSR and corporate financial performance.

## Discussion

Scholars have extensively debated the influence of CSR implementation on a firm's performance. Some studies suggest that engaging in CSR activities is seen as a cost that erodes company profits, leading to

**Table 6.** The quantile regression of CSR on corporate performance.

	0.01 Coefficient	0.05 Coefficient	0.10 Coefficient	0.25 Coefficient	0.5 Coefficient	0.75 Coefficient	0.9 Coefficient	0.95 Coefficient	0.99 Coefficient
Intercept	0.6023 (0.14)	0.7367* (2.08)	0.8599*** (2.73)	0.4796 (1.14)	1.4915*** (3.33)	1.4341** (2.53)	0.1189 (0.11)	−1.5930 (−0.78)	−1.4530 (−0.05)
CSR	0.0553 (0.51)	0.0663 (1.44)	0.1100** (2.28)	0.2249*** (4.71)	0.2642*** (5.04)	0.2686*** (4.56)	0.2690** (2.10)	0.5809** (2.26)	1.0060 (1.34)
LnSize	−0.0206 (−0.59)	−0.0208 (−1.29)	−0.0306** (−2.05)	−0.0278* (−1.86)	−0.0436*** (−2.84)	−0.0312 (−1.29)	0.0564 (0.95)	0.0324 (0.30)	−0.0727 (−0.29)
LnAge	−0.0738 (−0.63)	−0.0995* (−1.68)	−0.0994* (−1.94)	−0.1832*** (−4.35)	−0.2783*** (−6.29)	−0.2846*** (−3.65)	−0.4921*** (−2.98)	−0.1604 (−0.73)	0.0995 (0.19)
Sales growth	0.1236 (0.73)	0.1006* (1.84)	0.1952*** (3.33)	0.3517** (2.22)	0.5963** (2.23)	1.2568*** (3.03)	1.3120*** (3.34)	1.3597*** (3.08)	1.5907 (1.29)
Lev	0.0003 (0.12)	0.0003 (0.27)	−0.0026*** (−2.63)	−0.0079*** (−6.33)	−0.0125*** (−8.13)	−0.0146*** (−5.28)	−0.0111** (−2.45)	−0.0190*** (−2.64)	−0.0286* (−1.66)
CASH/total assets	0.2055 (0.25)	0.7334* (1.85)	0.7160** (2.19)	1.4724*** (3.65)	2.1499*** (5.45)	2.9443*** (5.49)	3.2582*** (4.43)	2.5566*** (3.12)	2.6353 (0.74)
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

poor performance. Therefore, there is a negative correlation between CSR and firm performance. In contrast to literature that views CSR as a cost, some research findings indicate that investing in CSR activities can actually contribute to improved firm performance. Furthermore, some studies also suggest that the relationship between CSR and firm performance is not linear, either positively or negatively correlated.

In summary, how does a company's commitment to CSR affect its performance? To clarify the relationship between CSR and firm performance, this study develops two opposing hypotheses based on agency theory and stakeholder theory to interpret the relationship between CSR and firm performance. Under the hypothesis of agency theory, managers representing the company may allocate resources excessively to CSR activities for personal benefit, especially in the absence of proper shareholder supervision, potentially deteriorating company value due to inappropriate investment choices, resulting in a negative relationship between CSR and firm performance. If the hypothesis of stakeholder theory holds, managers not only aim to maximize shareholder value but also consider the interests of stakeholders, ensuring benefits for all stakeholders. Commitment to CSR activities can enhance corporate image, improve corporate reputation, boost employee morale, stimulate product sales, and consequently bring positive benefits to the company. Therefore, a positive relationship exists between CSR and company performance.

The preliminary findings of this study indicate a significant positive relationship between CSR and firm performance. Although the initial findings support the stakeholder hypothesis, further confirmation of their relationship is sought. To address endogeneity issues and ascertain whether a nonlinear relationship exists between CSR and firm performance, this study employs both 2SLS regression and quantile regression models.

Firstly, whether the regression model constructed in this study suffers from variable omission, leading to endogeneity issues and potential bias in the research findings, is examined. To address endogeneity, this study uses instrumental variables and employs the 2SLS technique to reevaluate the relationship between CSR and firm performance. Even after considering endogeneity, the research findings remain unchanged, supporting the stakeholder hypothesis. Secondly, to investigate the potential nonlinear relationship between CSR and firm performance, this study also employs quantile regression. Based on the results of quantile regression, a positive relationship between CSR and firm performance is observed, although at the 1, 5, and 99% quantiles, this positive relationship is not statistically significant.

Both the preliminary findings and the robustness tests of this study support the stakeholder hypothesis. It suggests that companies should promote CSR while considering the interests of all stakeholders to enhance firm performance and increase corporate value. Compared to prior research, this study makes two main contributions. Firstly, distinct from previous studies in Taiwan, this research utilizes unique CSR score data provided by *CommonWealth Magazine* to examine the relationship between CSR

and firm performance. Secondly, employing more rigorous methodologies, this study clarifies the relationship between CSR and firm performance, thus filling gaps in the current literature.

## Conclusions, implications, and limitations

Previous research on the relationship between CSR and corporate financial performance has been widely discussed, however, the empirical results have not been conclusive. Some studies find the evidence that CSR is negatively related to corporate financial performance. It indicates that companies committed to CSR activities are useless to enhance firm value. However, the empirical findings in other studies are that CSR has a positive impact on corporate financial performance. In other words, the company devoted to CSR activities can contribute to the enhancement of firm value.

Taiwan is a very important economy in the world; thus, it is worth to explore whether Taiwanese companies engaged in CSR activities assist in the enhancement of firm value. Different from the data, research period, and research methodology used in the previous literature on CSR in Taiwan, this study adopts the CSR data provided by *Common Wealth Magazine* and re-examines the relationship between CSR and corporate financial performance.

After considering the control variables, the empirical finding shows that CSR is positive relative to corporate financial performance. This result supports the stakeholder theory that companies engaged in CSR activities are assistants to the enhancement of firm value. In addition, this study also takes the endogenous issues into account and conducts robust tests. The robust test shows that the positive relationship between CSR and corporate financial performance is not changed.

The theoretical and practical implications of the research results are as follows: Theoretically, the outcomes of this study suggest that advocating for CSR could fortify favorable relationships with stakeholders, thereby bringing positive benefits to companies. In practice, companies dedicated to engaging in CSR activities can receive positive feedback, enhancing company performance and increasing company value. From a company perspective, the research results imply that promoting CSR activities is an investment rather than a cost. Consequently, companies ought to increase their involvement in CSR activities and be willing to invest in CSR without hesitation. From an investor's standpoint, investors should not only consider shareholders' profitability but also to endorse companies' efforts in CSR. As for policy makers, they should formulate more comprehensive policies, providing incentives, such as tax relief or support schemes to enhance incentives for companies to invest in CSR activities.

As for the limitations of this study, the data on CSR scores needed for this study were gathered from *CommonWealth Magazine*. *CommonWealth Magazine* annually assesses invited companies based on international indicators and evaluation methods, comprehensively evaluating companies' CSR performance across four major dimensions: 'corporate governance', 'corporate commitments', 'social engagement', and 'environmental sustainability'. Since the CSR ratings are based on an invitation system, it was not possible to rate all companies in Taiwan. Consequently, during the 13-year research period and after excluding foreign companies and missing values, only 746 firm-year observations were available for empirical analysis. Therefore, due to the limitations of the data, the study's sample may not be fully representative. Additionally, because of the nature of secondary data, this study couldn't include data from small and medium-sized enterprises (SMEs). Subsequent research could further progress in the aforementioned directions, particularly if primary data from SMEs were attainable. This would enable a more in-depth exploration of the role of stakeholders in CSR and its impact on company performance, and even sustainable performance.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Note

1. Research on how CSR contributes to company reputation, brand image, brand loyalty, customer purchase intention, and innovation development is widely discussed in management literature, such as (Kotler, 2005; Le, 2022; Le et al., 2021a, 2021c, 2021d; Zhu et al., 2014).

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## References

- Agyemang, O. S., & Ansong, A. (2017). Corporate social responsibility and firm performance of Ghanaian SMEs: Mediating role of access to capital and firm reputation. *Journal of Global Responsibility*, 8(1), 47–62. <https://doi.org/10.1108/JGR-03-2016-0007>
- Ansong, A. (2017). Corporate social responsibility and firm performance of Ghanaian SMEs: The role of stakeholder engagement. *Cogent Business & Management*, 4(1), 1333704. <https://doi.org/10.1080/23311975.2017.1333704>
- Bahta, D., Yun, J., Islam, M. R., & Bikanyi, K. J. (2021b). How does CSR enhance the financial performance of SMEs? The mediating role of firm reputation. *Economic Research*, 34(1), 1428–1451. <https://doi.org/10.1080/1331677X.2020.1828130>
- Barnett, M. L., & Salomon, R. M. (2006). Beyond dichotomy: The governance relationship between social responsibility and financial performance. *Strategic Management Journal*, 27(11), 1101–1122. <https://doi.org/10.1002/smj.557>
- Bartlett, A., & Preston, D. (2000). Can ethical behaviour really exist in business. *Journal of Business Ethics*, 23(2), 199–209. <https://doi.org/10.1023/A:1006037107565>
- Bénabou, R., & Tirole, J. (2010). Individual and corporate social responsibility. *Economica*, 77(305), 1–19. <https://doi.org/10.1111/j.1468-0335.2009.00843.x>
- Benlemlih, M., & Bitar, M. (2016). Corporate social responsibility and investment efficiency. *Journal of Business Ethics*, 148(3), 647–671. <https://doi.org/10.1007/s10551-016-3020-2>
- Brammer, S., Hojmosse, S., & Marchant, K. (2012). Environmental Management in SMEs in the UK: Practices, pressures and perceived benefits. *Business Strategy and the Environment*, 21(7), 423–434. <https://doi.org/10.1002/bse.717>
- Chen, R. C. Y., & Lee, C. H. (2017). The influence of CSR on firm value: An application of panel smooth transition regression on Taiwan. *Applied Economics*, 49(34), 3422–3434. <https://doi.org/10.1080/00036846.2016.1262516>
- Cochran, P. L., & Wood, R. A. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal*, 27(1), 42–56. <https://doi.org/10.2307/255956>
- Cochran, P. L., Wood, R. A., & Jones, T. B. (1985). The composition of boards of directors and incidence of golden parachutes. *Academy of Management Journal*, 28(3), 664–671. <https://doi.org/10.2307/256121>
- Cornell, B., & Shapiro, A. C. (1987). Corporate stakeholders and corporate finance. *Financial Management*, 16(1), 5–14. <https://doi.org/10.2307/3665543>
- Freeman, R. E. (1984). *Strategic management: A stakeholder Approach*. Pitman.
- Friedman, M. (1970). The social responsibility of business is to increase its profits. *The New York Times Magazine*, September 13.
- Giannarakis, G., Konteos, G., Zafeiriou, E., & Partalidou, X. (2016). The impact of corporate social responsibility on financial performance. *Investment Management and Financial Innovations*, 13(3), 171–182. [https://doi.org/10.21511/imfi.13\(3-1\).2016.03](https://doi.org/10.21511/imfi.13(3-1).2016.03)
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jo, H., & Harjoto, M. (2011). Corporate governance and firm value: The impact of corporate social responsibility. *Journal of Business Ethics*, 103(3), 351–383. <https://doi.org/10.1007/s10551-011-0869-y>
- Kao, E. H., Yeh, C. C., Wang, L.-H., & Fung, H.-G. (2018). The relationship between CSR and performance: Evidence in China. *Pacific-Basin Finance Journal*, 51, 155–170. <https://doi.org/10.1016/j.pacfin.2018.04.006>
- Kotler, P. (2005). The role played by the broadening of marketing movement in the history of marketing thought. *Journal of Public Policy & Marketing*, 24(1), 114–116. <https://doi.org/10.1509/jppm.24.1.114.63903>
- Lai, C.-S., Chiu, C.-J., Yang, C.-F., & Pai, D.-C. (2010). The effects of corporate social responsibility on brand performance: The mediating effect of industrial brand equity and corporate reputation. *Journal of Business Ethics*, 95(3), 457–469. <https://doi.org/10.1007/s10551-010-0433-1>

- Le, T. T., Ngo, H. Q., & Aureliano-Silva, L. (2021a). Contribution of corporate social responsibility on SMEs' performance in an emerging market – The mediating roles of brand trust and brand loyalty. *International Journal of Emerging Markets*, 18(8), 1868–1891. <https://doi.org/10.1108/IJOEM-12-2020-1516>
- Le, T. T., Ngo, H. Q., & Hong, T. (2021b). Role of corporate social responsibility in sustainable energy development in emerging economy. *International Journal of Energy Economics and Policy*, 11(2), 172–186. <https://doi.org/10.32479/ijeep.10774>
- Le, T. T., Ngo, H. Q., & Hong, T. (2021c). Effects of corporate social responsibility on SMEs' performance in emerging markets. *Cogent Business & Management*, 8(1), 1878978. <https://doi.org/10.1080/23311975.2021.1878978>
- Le, T. T., Ngo, Q. H., Hong, T., & Dang, K. T. (2021d). The contribution of corporate social responsibility on SMEs performance in emerging country. *Journal of Cleaner Production*, 322, 129103. <https://doi.org/10.1016/j.jclepro.2021.129103>
- Le, T. T. (2022). How do corporate social responsibility and green innovation transform corporate green strategy into sustainable firm performance? *Journal of Cleaner Production*, 362, 132228. <https://doi.org/10.1016/j.jclepro.2022.132228>
- Le, T. T., Vo, X. V., & Venkatesh, V. G. (2022). Role of green innovation and supply chain management in driving sustainable corporate performance. *Journal of Cleaner Production*, 374, 133875. <https://doi.org/10.1016/j.jclepro.2022.133875>
- Liu, W., Shao, Z., Yang, C., Ding, T., & Zhang, W. (2020). The impact of CSR and financial distress on financial performance – Evidence from Chinese listed companies of the manufacturing industry. *Sustainability*, 12(17), 6799. <https://doi.org/10.3390/su12176799>
- López, M. V., Garcia, A., & Rodriguez, L. (2007). Sustainable development and corporate performance: A study based on the Dow Jones Sustainability Index. *Journal of Business Ethics*, 75(3), 285–300. <https://doi.org/10.1007/s10551-006-9253-8>
- Matten, D. (2006). Why do companies engage in corporate social responsibility? Background, reasons and basic concepts. In *The ICCA handbook on corporate social responsibility*. John Wiley and Sons, Ltd.
- McWilliams, A., Siegel, D. S., & Wright, P. M. (2006). Corporate social responsibilities: Strategic implications. *Journal of Management Studies*, 43(1), 1–18. <https://doi.org/10.1111/j.1467-6486.2006.00580.x>
- Moore, G. (2001). Corporate social and financial performance: An investigation in the U.K. supermarket industry. *Journal of Business Ethics*, 34(3/4), 299–315. <https://doi.org/10.1023/A:1012537016969>
- Naseem, T., Shahzad, F., Asim, G. A., Rehman, I. U., & Nawaz, F. (2019). Corporate social responsibility engagement and firm performance in Asia Pacific: The role of enterprise risk management. *Corporate Social Responsibility and Environmental Management*, 27(2), 501–513. <https://doi.org/10.1002/csr.1815>
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, 24(3), 403–441. <https://doi.org/10.1177/0170840603024003910>
- Preston, L. E., & O'Bannon, D. P. (1997). The corporate social-financial performance relationship: A topology and analysis. *Business & Society*, 36(4), 419–429. <https://doi.org/10.1177/000765039703600406>
- Samet, M., & Jarboui, A. (2017). How does corporate social responsibility contribute to investment efficiency? *Journal of Multinational Financial Management*, 40(2), 33–46. <https://doi.org/10.1016/j.mulfin.2017.05.007>
- Shen, C. H., & Chang, Y. (2009). Ambition versus conscience, does corporate social responsibility pay off? The application of matching methods. *Journal of Business Ethics*, 88(S1), 133–153. <https://doi.org/10.1007/s10551-008-9826-9>
- Shekar, M. C., & Kumaran, R. (2019). Impact of CSR on firms' financial performance – A study by select Indian IT companies. *IPE Journal of Management*, 9(1), 85–94.
- Soojeen, S. J., Ko, H., Chung, Y., & Woo, C. (2019). CSR, social ties and firm performance. *Corporate Governance: The International Journal of Business in Society*, 19(6), 1310–1323. <https://doi.org/10.1108/CG-02-2019-0068>
- Statman, M., Fisher, K. L., & Anginer, D. (2008). Affect in a behavioral asset-pricing model. *Financial Analysts Journal*, 64(2), 20–29. <https://doi.org/10.2469/faj.v64.n2.8>
- Vance, S. C. (1975). Are socially responsible corporations good investment risks? *Management Review*, 64(8), 18–24.
- Waddock, S. E., & Graves, S. B. (1997). The corporate social performance-financial performance link. *Strategic Management Journal*, 18(4), 303–319. [https://doi.org/10.1002/\(SICI\)1097-0266\(199704\)18:4<303::AID-SMJ869>3.0.CO;2-G](https://doi.org/10.1002/(SICI)1097-0266(199704)18:4<303::AID-SMJ869>3.0.CO;2-G)
- Yang, M., Bento, P., & Akbar, A. (2019). Does CSR influence firm performance indicators? Evidence from Chinese pharmaceutical enterprises. *Sustainability*, 11(20), 5656. <https://doi.org/10.3390/su11205656>
- Zhu, Y., Sun, L.-Y., & Leung, A. S. M. (2014). Corporate social responsibility, firm reputation, and firm performance: The role of ethical leadership. *Asia Pacific Journal of Management*, 31(4), 925–947. <https://doi.org/10.1007/s10490-013-9369-1>