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Corporate Social Responsibility and Firm Performance: Evidence from Vietnamese Listed Companies

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Abstract: This study investigates the impact of socially responsible factors on corporate performance, including industries from the manufacturing and service/non-manufacturing sector. The study analyzes data of 50 Vietnamese private companies from 2015 to 2019. The analyses use five groups of stakeholders, including shareholders, employees, consumers and suppliers, environment, and general community to measure the performance of corporate social responsibilities (CSR). Meanwhile, company performance was estimated using Tobin's Q index, return on assets, return on equity, and earnings per share. CSR activities have a positive and significant effect on the development of the companies. However, these effects are not intensive. Among CSR groups, social dimension has the most influence, while environmental aspects are the least influential. Private small- and medium-sized companies in Vietnam should focus more on social responsibility activities to enhance their brand image and benefit their stakeholders while bringing sustainable values in financial activities. This study is one of the first CSR-based research in Vietnam under the proxy of Hexun framework.

Keywords: CSR, firm performance, listed company, Vietnam.

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INTRODUCTION

With 17 sustainable development goals were first introduced in 2015, United Nation Development Program (UNDP) created a new trend of development for businesses around the world, that is, the development will be associated with sustainable and long-term values. One of the biggest contributors to the popularity of CSR concept is the economist named Carroll (1979), who built a pyramid of four responsibility groups to represent the importance of each one. The most basic responsibility for businesses is to ensure efficient operations and generate annual profits. However, these activities must comply with government laws and regulations to make sure the effectiveness and the most difficult task is about philanthropic activities. One of the well-known theories is the stakeholder theory developed by a researcher named Freeman (2010), this theory states that corporate social responsibility refers to perform obligations involving the 5 groups which are affected by business decisions and operations. These groups are shareholders, workers, consumers and providers, the environment, and the community in general. One of the popular organizations called the Global Reporting Initiative (GRI) has released a reference framework for reporting CSR-related activities (GRI 4.0).

In Vietnam, the concept of CSR has really been introduced through the activities towards society of international enterprises and companies based in Vietnam since 2004 (Mai, 2017). Over nearly 20 years, along with economic enhancement, activities related to social responsibility have also received certain attention from the Vietnamese government and businesses. Specifically, in a 3-year survey study conducted by UNIDO and TNS Vietnam from 2010 to 2013, voluntary implementation of CSR activities has increased slightly compared to 2010, especially in electronic small and medium enterprises. In addition, 68.5% of SMEs employed Codes of conduct in 2013 compared to 41.5% in 2010. In an article written in 2016, author Loan quoted Mr. Tuan - director of the legal department at Vietnam Chamber of Commerce and Industry (VCCI) as follows "CSR has not become a norm yet, and it only exists in big corporations with international strategies and clients"..

We mentioned three main resources of CSR information which are surveys, agencies rating and ranking system and content analysis. According to Weber (2008), the performance of Corporate Social Responsibility can be measured in various way such as conducting questionnaire surveys, content analysis or using data on costs of CSR activities, reputation assessments and professional CSR ratings provided by different agencies.

Most of the Vietnamese studies use a set of questions basing on stakeholders' perceptions about how the company performs its social responsibility to collect data and the respondents vary from the public to the well-educated trainees and executive managers. For instance, the report End of Action Survey which was made by UNIDO and VCCI used data from a 3-year survey conducted by Taylor Nelson Sofres (TNS) Vietnam including 400 participants who are high-level managers. These leaders come from SMEs of three sectors: leather and footwear, electronics, textile, and garment (UNIDO, 2013).

On the other hand, the cost spending on CSR-related activities like donations and the investment in community can be used to measure CSR performance, according to (Soana, 2011). Because some scholars have defined that CSR cost can help corporates build a better image in public's eyes and reduce social pressures against them (Weshah et al., 2012)

The effect of Corporate Social Responsibility on firm performance has been studied over the decades and its findings are varied from positive, negative to irrelevant correlation. According to Margolis & Walsh (2003), most of empirical studies (approximate 50%) indicate that CSR have positive impact on corporate performance and there are seven studies represent a negative relation. The insignificant relationship is found in 28 studies while the mixed result is indicated by 20 research.

Stakeholder theory was initiatively introduced by Freeman in his book named Strategic Management: A stakeholder approach (2010) in which he suggested that companies can cause side effects to different parties that have interests in them. These parties can be divided into two groups; the first one is primary stakeholders who are influenced directly such as shareholders, investors, staff members, suppliers and consumers, general public. This group requires infrastructures and market in which laws and regulations must be abided, and to whom taxes and other obligations may be due, according to Clarkson (1995). The secondary stakeholders refers to external connection, comprising media and special interest groups who do not carry out transactions with the corporation and are not crucial to the company's survival (Clarkson, 1995).

Donaldson & Preston (1995) stated that stakeholder theory can be classified in three aspects that are descriptive, normative, and instrumental. The descriptive approach refers to the way that the corporate operates in the interest of its stakeholders. Concerning normative stakeholder theory, it depicts the reasons for the adoption of CSR , focusing on the moral and philosophical aspects (Yang et al., 2019). In addition, a normative approach explores the relation between the management of stakeholders and the achievement of firm goals. The instrumental theory analyzes whether a corporate can get benefits from CSR activities with a

combination of stakeholder's needs and social trustworthiness, a possible implication is that a company can acquire competitive advantages by maximizing its value (Jones, 1995). In short, stakeholder theory suggests that there is a positive relationship between CSR and firm performance.

The influences that CSR exerts on corporate performance have been studied in the light of stakeholder theory by so many scholars over the decades. The findings can be divided into three main aspects: positive, negative, and insignificant; besides that, there are some studies reveals the U-shaped relationship between CSR and the performance of firm.

Yang et al. (2019) found positive effects of CSR on firm financial indicators (except for Tobin's Q), using database from Hexun rating system of 125 pharmaceutical enterprises in 5 years. Additionally, the environmental aspect has the most profound impact, which is followed by customers and suppliers, employees respectively. In the context of Korea, an empirical investigation of 191 Korean listed firm using CSR overall score from KEJI index shows that CSR has a partial positive correlation with profitability and firm value; besides, the service or non-manufacturing firms are more influenced than manufacturing ones (Cho et al., 2019). Lin et al. (2009) and her partners identified that CSR influenced positively on financial performance of 1000 Taiwanese firms and in their study, research, and development (R&D) investments with charitable expenditure were used as independent variables. Furthermore, when the model is specified, they also found that CSR does not have much influence on short-term financial performance but a noticeable long-term fiscal advantage.

From Vietnamese perspective, Phung et al. (2019) defined a positive relationship between CSR and financial achievement of foreign-direct investment firms (FDI) in Ho Chi Minh city and suggested that manager's awareness of CSR practices will contribute to the improvement of firms' financial performance. Moreover, CSR activities which are related to suppliers have the most significant impact. The survey carried out by Institute of Labor Science and Social Affairs on 24 enterprises in two industries- leather footwear and textile showed that if firms implement CSR activities well, their revenues will grow by 25%, their labor capacity will rise from 34.2 million dong to 35.8 dong/1 laborer/year and the rate of export goods also move from 94% to 97% (Mai, 2017).

In the other side, some researchers state that CSR has a negative influence on corporate performance. In the study of British firms, by using environment, employment, and community service to measure CSR, Davis (1973) proposed that there is a negative correlation between CSR performance and price earnings ratio of firms. Selcuk & Kiymaz (2017) analyzed the relationship between corporate social responsibility disclosure and financial performance using database of 1,023 firm-years in Turkey. To evaluate CSR, authors used three units which are the number of sentences devoted to CSR on the annual report, the number of pages relevant to CSR and how many CSR dimensions were mentioned in their reports. The findings reveal that corporate social responsibility and return of assets have a negative relation, which means that if firms disclose more CSR information in their annual reports, they will have a lower ROA.

On the other hand, McWilliams & Siegel (2000) denied any significant correlation between CSR and firm performance. They argue that CSR activities can cause an extra cost beyond the company's original management expenditures and being loyal to the base purpose of maximizing shareholder profits is the fulfillment of social responsibility on it own. However, there are some studies reveal the mixed results, for instance, an empirical research made by Lin et al. (2019) reports that while CSR dimensions including the diversity of employees, labor rights, compensation for workers and benefits with training of worker safety and health can benefit firm's value, these dimensions do not have any significant impacts on firms stock return.

Besides the positive influence on firm profitability, CSR activities also help increase Tobin's Q which is an indicator of firm value. Choi et al. (2010) claim that there is a critical and positive link between Tobin's Q and

the components of CSR. This conclusion also is found by Ting et al. (2019) after analyzing the effect of firm's environmental, social and governance (ESG) on firm performance in both developed and emerging markets.

There are some scholars consider whether industries characteristics make any difference in reporting Corporate social responsibility. Most of the investigations provide the answer yes such as the study of 248 companies on Spanish Stock Market conducted by Casado-Díaz et al. (2014). The outcomes release that CSR exercises have stronger impact on service companies than manufacturing ones. Moreover, activities related to the environment, labor relations and good corporate governance are especially critical in the service industry. According to Do (2018), the company strategies for CSR components (environment, labor and society) are affected by the sort of industry.

Content analysis is a technique for collecting data from annual reports of a firm. It involves encoding qualitative and quantitative information into predefined lists to draw patterns in the presentation and reporting of information. Because CSR is in the initial stage of attracting the attention of businesses and government agencies, the measurement system of CSR-related activities of Vietnam has not really met international standards and not yet complete. This makes it difficult to collect and analyze data related to CSR dimensions. Due to the actual situation of CSR practice in Vietnam, the data in this paper will be collected basing on annual reports and CSR reports in a quantitative format and follow the CSR Hexun rating system.

The Hexun CSR rating framework is one of the greatest independent CSR rating systems in China, giving proficient CSR information for Chinese listed companies for a long period of time. The dimensions of CSR Performance include shareholders, employees, customers and suppliers, environment, and society.

METHODS

The data for this study included 50 companies in the top 500 best-profit private enterprises in 2019 according to annual report of Vietnam Report (VNR). Companies are selected basing on the following three criteria: a) the company has minimum capital investment is VND 1,000 billion, b) it is listed on 2 biggest Vietnamese stock markets which are Hanoi Stock Exchange (HNX), Ho Chi Minh Stock Exchange (HOSE) and has record of stock prices for 5 continuous years (2015-2019), c) it must have specific data for at least 3 CSR criteria such as Investment and development fund, Bonus and welfare fund, and corporate tax. The figures of 50 companies are taken from the two largest sources of databases on finance and securities in Vietnam, namely 'Shares 68' and Vietstock Finance. Most of the companies are listed on HOSE and belong to various industries such as food manufacturing, construction, and real estate. The final sample contains 250 firm-year observations over 5 years from 2015 to 2019.

CSR index is commonly the weighted normal of stakeholder's components. These components are made up by corporate fulfillment towards stakeholder's obligation and are taken from reliable database source such as KLD or Hexun rating in China. In Vietnam, over the past four years, the government has made great efforts to create a set of indicators (CSI) to measure the sustainability in business operation and development. The CSI comprises 98 questions covering 3 large groups: corporate governance, environment, labor, and society. However, because it was newly created and still in the process of changing to complete and come closer to international standards, the database of the CSI is not comprehensive and reliable. Therefore, to calculate the CSR performance, this study will make an independent variable following the framework of Hexun CSR rating system and will not calculate the overall CSR score. Besides, there is a new variable added basing on one criterion in the labor category of the GRI, which is the average training hours for one employee in a year.

Regarding the environmental dimension, since the use of renewable energy is not really popular and the cost of using it is quite high, very few Vietnamese enterprises produce goods using clean energy source. Instead, companies focus on researching innovations and solutions that help reduce the amount of electricity, water, and fuels consumed for manufacturing and operating activities to minimize costs. The summary of dependent variables construction will be provided in Table 1.

Table 1 The Construction of Independent Variables

Variables	Measurement
QUICK	Quick ratio is calculated by divided sum of current assets by short-term debts.
EQUI	Equity ratio is the total equity divided by the total assets.
R_D	Research and development expenditure is taken from the balance sheet of a company.
INC	Per capita income of workers.
TRA_H	Average training hours for employees per year.
CARE	Caring payment was taken from 'bonus and welfare fund' for employees.
BPLACE	Ranking annually of firm in the list of top best places to work.
QUA_C	Number of certifications related to product's quality.
MGF	Number of commitments related to mutual benefit between firm and customers, suppliers.
EVI_C	Number of environmental certifications.
SAVE	The sum of money saving due to the decrease in the amount of energy consumed.
TAX	The actual annual corporate tax.
DOT	The amount of money spent for charitable activities.

Most of the previous studies used a wide range of different indicators to measure the financial performance of a company and firm value such as ROA, ROE, growth rate of net income and Tobin's Q. Similarly, our study employs a proxy variable including both accounting-based and market-based which are Return on assets (ROA), Return on equity (ROE), earnings per share (EPS) and Tobin's Q.

In this study, ROA (Return on assets), ROE (Return on equity), EPS (earning per share) are used as three profitability indicators. The profitability ratios are employed to measure the overall efficiency and effectiveness of firm operating activities including firm decisions and policies-making. These above factors are the most frequently used in the studies related to firm performance.

Tobin's Q ratio is equal to a company's market value divided by the replacement cost of assets. Tobin's Q ratio is a common suggested by James Tobin of Yale University (Investopedia). It compares firm market value to the intrinsic one, if Tobin's Q value is greater than 1 that means its market value exceeds its book value, suggesting that the company may attract higher investment. On the contrary, if the Tobin's Q ratio is smaller than 1, the amount of the investment will decrease. The formula of Tobin's Q is illustrated as below:

$$Tobin's\ Q = \frac{Number\ of\ common\ outstanding\ share * end\ -\ of\ -\ period\ stock\ price}{Book\ value\ of\ total\ assets}$$

In expansion, when we investigate the impact of CSR dimensions on company value and profitability, the other components which may influence firm value having relation with CSR should be controlled. Therefore, the company's characteristics variables need to be constructed to handle any systematic issues. In detail, the firm size (SIZE), foreigner's ownership (FON) will be used. Concerning firm *i* in year *t*, the SIZE variable is measured as the natural logarithm of total assets, FON is the percentage of ownership of oversea shareholders.

Hypothesis 1, the association between CSR dimensions and each component of firm value and profitability will be estimated through panel-regression equations. The empirical models are illustrated as below:

$$Performance = \beta_o + \beta_1 * CSR - dimensions_{it} + \beta_2 * Ln(SIZE)_{it} + \beta_3 * FON_{it} + \varepsilon_{it} \quad (i)$$

Where Performance *i* is respectively ROA, ROE, EPS, and Tobin Q.

In these equations, $CSR - dimensions_{it}$ variable represents for each component's value of corporate social responsibility of a firm *i* in year *t* whereas $Ln(SIZE)_{it}$ is a control variable calculated by the natural logarithm of the total assets in year *t* of firm *i.*

Hypothesis 2 concerns the influence of corporate fulfillment towards stakeholder's obligations on the performance of company in two types of industries: manufacturing and non-manufacturing one. It is said that the effect of CSR on service/non-producing industry is stronger than that on manufacturing companies. This estimation also uses four regression models as the H1; however, the size of sample will be narrower because it is divided into 2 different fields.

RESULTS AND DISCUSSION

The descriptive statistics of both independent and dependent variables are illustrated in Table 2 with N=250. In general, the average value of the factors related to workers and the environment are the smallest (1.968 for environmental certifications and 3.872 for policies related to common interests). These values are far from the figure for shareholders and society dimensions. This shows that few businesses really pay attention to improving the environment or expanding benefits to consumers and suppliers. In addition, many companies also try to contribute to society through donation and sponsor activities with an average value of 10,227.

The Table 2 show that the standard deviations of tax payment and caring amount are much high (341,591.8 and 126,716.3 respectively), indicating that CSR performance show up variously across companies in the sample, which means the industries characteristics can affect CSR practices considerably. There are many minimum values equal zero which represents the insufficiency of public information about CSR performance in Vietnam. The highest average value is belonged to tax dimension (170,998.2) then followed by donation and caring payment (56,233.78). The SAVE variables have zero median score, proposing that on average, firms in the sample do not take enough responsibility for environment improvement. The mean value for QUICK is higher than 1, which demonstrates that in general, the market value of 50 companies in the sample is greater than their book value so that it is good to invest in them. The average amount spent on research and development activities is also quite large which means companies are putting more concentration to innovative activities relating to the sustainable development.

The study of correlation among variables is provided in two tables as followings, in which dependent variables is the proxy of ROA, ROE, EPS, Tobin's Q while the independent variables contain per capita income of workers (INC), best place to work (BPLACE), TRA_H, CARE, QUA_C, EVI_C, SAVE, TAX, DOT, MGF. Because the number of independent are large (10 variables), we will illustrate the correlation only between 4 firm performance variables and 10 CSR indicators, the full version will be attached in Appendix 2.

It is noticeable that most enterprise social responsibility exert significant influence on ROA and Tobin's Q variables which are leading indicators of firm profitability and value. In detail, the item of caring payment (CARE), environmental certificates (EVI_C) and TAX is indicated to pose significant positive relation with assets income at 1% significance level. Besides, INC (average income per worker) affects ROA positively at 10% significance level while the result for mutual good faith and donation is not significant though they have positive association with ROA. Regarding EPS, there are only three CSR factors that have a significant relationship with it at level of significance of 1% (TAX, QUA_C) and 10% (CARE). The amount of donation impacts only ROE at 1% level of significance whereas there is no considerable individual correlation between saving energy (SAVE) and firm performance. The average hours of training employees (TRA_H) have a positive connection with firm profitability indicators except for EPS. Although EVI_C influences ROA, ROE, and Tobin's Q statistically significantly, it has no certain link with the earning per share.

In terms of Tobin's Q, it seems that the influence of CSR-dimensions on market-based value is the largest. For example, even though TAX records a significant effect on all of four firm performance variables, the coefficient value for Tobin's Q is the highest one (0.5115). The two indicators of the stakeholder group (R_D, EQUI) are found to affect both profitability and value of firm significantly.

Table 2 The Value of Descriptive Statistics of Variables

Variables	Mean	Median	Max	Min	SD
Dependent variables					
ROA	0.101	0.085	0.784	0.0003	0.0770
ROE	0.188	0.175	0.982	0.0040	0.1119
EPS	4296.423	2932.750	51291.500	51.0000	5056.5070
TOBIN_Q	0.784	0.539	6.810	0.0400	8.47E-01
Independent variables					
FON	25.506	20.940	76.900	0.0000	18.99612
SIZE	15146281	4296279	454000000	591651	52659846
QUICK	1.190	0.960	5.530	0.0300	0.929952
EQUI	0.494	0.469	0.873	0.0002	0.180807
R_D	304023.7	129616.5	3998331.0	400.000	530293.7
INC	156.929	138.260	512.980	57.6000	68.29469
TRA_H	20.21	3.48	225.75	0.000	40.13523
CARE	56233.78	17198.00	806604.00	-61.00	126716.3
BPLACE	4.440	0.000	88.000	0.0000	16.25964
QUA_C	5.704	5.000	9.000	2.0000	1.562739
MGF	3.872	3.000	9.000	0.0000	1.985797
EVI_C	1.968	2.000	5.000	0.0000	1.263869
SAVE	3133.938	0.000	116000.000	0.0000	15122.79
TAX	170998.200	57185.000	2241378.000	3.2340	341591.8
DOT	10227.28	1375.5	335000	0	37296.37

Table 3 The Initial Regression Model with 4 Dependent Variables

Variables	Model 1_ ROA	Model 2_ ROE	Model 3_ EPS	Model 4_ Tobin's Q
FON	-0.0005*	-0.0009**	-43.0662**	0.0024
LOG(SIZE)	-0.0274***	-0.0411***	-1183.6040***	-0.2078***
QUICK	0.0063	-0.0035	191.8110	0.0410
EQUI	0.0865***	0.0189	2961.6580	0.8295***
R_D	6.69E-09	1.79E-09	0.0014*	2.76E-07***
INC	1.76E-04**	0.0003***	6.1487	0.0027***
TRA_H	2.20E-04**	0.0005***	-1.1448	0.0010
CARE	-1.03E-07	-1.46E-07	-0.0015	2.19E-06***
BPLACE	0.0001	0.0012***	62.9766***	-0.0067***
QUA_C	0.0046*	0.0061	1027.3100***	0.0650***
MGF	-1.25E-03	-0.0078**	-282.0406	0.0280
EVI_C	-2.74E-03	-0.0071	-765.1625***	0.1139***
SAVE	-5.19E-07	-6.14E-07	-0.0400	-2.84E-05***
TAX	1.60E-07***	2.28E-07***	0.0043***	8.43E-07***
DOT	2.23E-07**	4.58E-07***	0.0152*	1.65E-06*
C	0.4120	0.7443	16343.9100	2.0664
Adj. R-square	0.4365	0.3338	0.2024	0.6584

The outcomes of model for ROA stated that the explanatory power of CSR dimensions for it is 43.65%, in which tax payment and donation have positive correlation at a significance level below 1%. In other words, it is 99% confident to say that the return on asset is affected by tax corporate and the amount spent on charitable activities. Besides, the number of quality certificates (QUA_C) and the ownership of foreign investors (FON) also have significant influence on ROA but in the opposite way. If the ownership of non-domestic investors increases by 1%, ROA can drop by 0.0005%, in contrast, if the company get one more certificate, its return of assets can rise by 0.0046%. The effect of environmental factors is insignificant at the 10% significance level, and they affect firm profitability negatively.

Regarding model 2, based on the result of the estimation, it can be concluded that 33.38% (adjusted R-squared) of ROE is explained by CSR practice including nine factors which is like ROA. The employee's related dimensions are found to have statistically significant relationship with ROE such as BPLACE (β=0.0012), INC (β=0.0003) and TRA_H (β=0.0005). Similarly, the higher amount of tax and donation expended can lead to the greater return received which means social factors have certain positions in improving firm performance. However, the environmental certifications (EVI_C) and saving cost of using energy (SAVE) do not exert any significant effects on internal return.

Estimating the impact social responsibility has on earning per share (EPS), the result shows that financial performance of firm is 20.24% (adjusted R-squared) explained by the components of CSR. BPLACE (*β*=62.976), QUA_C (*β*=1027.31) and TAX (*β*=0.0043) exert considerable correlation with the income per share, at a significant level lower than 1%. Likewise, the amount of donation (DOT) with coefficient of 0.0152 affects EPS positively at below 5% level of significance. Contrastingly, EVI_C (*β*=-765.162) has a significantly negative correlation with share's earning and most of the other factors related to labor and environment exert insignificant negative effects on EPS.

Finally, the association between company value (Tobin's Q) and its social responsibility is examined by the regression analysis of Hypothesis 2 with the findings in the last column in Table 3. Regarding table 3, CSR's explanatory power on Tobin's Q is quite high, at 65.84% (adjusted R-squared). The most CSR-related variables pose a positive significant influence on firm value (Tobin's Q) except for BPLACE (*β*=-0.0067) and SAVE (*β*=-2.84E-05). In addition, average training hours (TRA_H) and mutual good fair (MGF) are found to have no significant relation with Tobin's Q although they have positive signs.

Table 4 Summary of Hypothesis Testing Result

Hypothesis	Contents	Results of examination
H1	CSR dimensions will increase firm profitability	Partial satisfaction
H2	CSR practices can help improve company value	Partial satisfaction

Many international research mention that depending on the characteristics of each industry, the impact of CSR related activities on company performance can be varied which indicates that the approach to do social responsibilities should be different in each industry category. For example, CSR will have a greater impact on the service and consumer industries (Casado-Díaz et al., 2014) because of public awareness. And vice versa, manufacturing enterprises will not significantly have been affected by opinions of the public. Hence, we will estimate the differences in the influence of CSR practice on the businesses performance by two kinds of industries.

The Table 5 exhibits the difference between Non-manufacturing/Service and Manufacturing industries in term of CSR's effect on ROA and ROE:

Table 5 Summary of Impact of CSR Dimensions on ROA and ROE by Industry

	Model 1: ROA		**Model 2: ROE**	
	Manufacturing	**Non-manufacturing**	**Manufacturing**	**Non-manufacturing**
CSR Significant variables	. INC, CARE, TAX (***) . QUA_C, DOT (**)	. TAX, DOT (***) . INC, QUA_C (**)	. INC, CARE, MGF TAX, DOT (***)	. INC, DOT (**) . TRA_H, BPLACE, MGF, TAX (***)
CSR Insignificant variables	TRA_H (0.5928)	TRA_H (0.2013), CARE (0.5769)	. TRA_H (0.1129), BPLACE (0.1942)	CARE (0.1782)
Adjusted R-squared	0.6966	0.7032	0.4521	0.5801

Table 6 represents the comparison of CSR relation with EPS and Tobin's Q in two kinds of industries:

Table 6 Summary of Impact of CSR Dimensions on EPS, Tobin's Q by Industry

	Model 4: EPS		Model 5: Tobin's Q	
	Manufacture	**Non-manufacture**	**Manufacture**	**Non-manufacture**
CSR Significant variables	All variables (***)	All variables (***)	. INC, CARE, BPLACE, QUA_C, MGF, SAVE (***) . DOT (**)	. INC, MGF, EVI_C, TAX, DOT (***)
CSR Insignificant variables			EVI_C (0.1933), TAX (0.2342)	CARE (0.6792, BPLACE (0.4054), SAVE (0.5131), QUA_C (0.1549)
Adjusted R-squared	0.4325	0.5915	0.6955	0.8009

According to the result of the Likelihood test, the pooled regression model is applied for all firm profitability (ROA, ROE, EPS) and firm value indicators (Tobin's Q). After concerning three error tests and excluding unnecessary variables, the final regression models for each dependent variable is illustrated as below:

(1) ROA = 0.3332 + 0.1094**EQUI*$_{it}$ + 0.002**INC*$_{it}$ + 0.0001**TRA_H*$_{it}$ + (-1.44E-07)**CARE*$_{it}$ + 0.0065**QUA_C*$_{it}$ + 1.48E-07**TAX*$_{it}$ + 2.47E-07**DOT*$_{it}$ + (-0.0243)**Ln(SIZE)*$_{it}$.

(2) ROE = 0.733 + 0.0003**INC*$_{it}$ + 0.004**TRA_H*$_{it}$ + (-1.69E-07)**CARE*$_{it}$ + 0.0011**BPLACE*$_{it}$ + (-0.048)**MGF*$_{it}$ + 2.05E-07**TAX*$_{it}$ + 4.82E-07**DOT*$_{it}$ + (-0.0394)**Ln(SIZE)*$_{it}$ + (-0.0004)**FON*$_{it}$.

(3) EPS = 13856.58 + 675.2921**QUA_C*$_{it}$ + (-0.0308)**SAVE*$_{it}$ + 0.0039**TAX*$_{it}$ + 0.0172**DOT*$_{it}$ + (-967.3829)**Ln(SIZE)*$_{it}$.

(4) Tobin's Q = 1.4778 + 0.9083**EQUI*$_{it}$ + 2.20E-07**R_D*$_{it}$ + 0.002**INC*$_{it}$ + 1.16E-06**CARE*$_{it}$ + (-0.0028)**BPLACE*$_{it}$ + 0.0737**QUA_C*$_{it}$ + 0.0347**MGF*$_{it}$ + 0.0805**EVI_C*$_{it}$ + (-1.99E-05)**SAVE*$_{it}$ + 7.27E-07**TAX*$_{it}$ + 1.84E-06**DOT*$_{it}$ + (-0.1592)**Ln(SIZE)*$_{it}$.

From the results obtained through the equations, it can be concluded that activities related to social responsibility have a certain influence on the performance of the company. However, none of the five CSR dimensions has a full impact on the company's profits and value.

Specifically, in terms of shareholder groups, most of these factors do not affect the firms' internal profits as well as the company's market value, especially, the QUICK variable is said to have no relation to the firm's performance. Meanwhile, R_D only affects the value of Tobin's Q, which is consistent with Luo & Bhattacharya's idea that both advertising and R&D activities play an important role in generating valuable market-based assets (2009). The change of total assets is the most influential factor on corporate performance when it impacts all of four dependent variables (ROA, ROE, EPS and Tobin's Q), but this effect is negative.

The number of caring activities spent for employees and the average income per worker have a positive influence on ROA, ROE and Tobin's Q. Improving the living standard of staffs can lead to the lower of turnover rate and the higher of productivity because employees will get more motivation to work and stronger satisfaction. Overall, our results suggest that CSR efforts to promote labor assist Vietnamese companies to enhance financial performance.

The quality of products has received enormous attention from the public recently, after a huge number of scandals relating to poison and sickness caused by the poor-quality products and our findings indicate that

the number of product quality certifications has a positive and significant (p< 0.05) relation with ROA, EPS and Tobin's Q. If firms pay more attention to developing product quality, their reputation will go up, they will attract more consumers and raise the sale revenues, which may result in higher profit. Besides, the company needs to put more consideration into suppliers' common interests because the material is a very important part of every company operating activity.

Although environmental protection is one the biggest missions of corporates nowadays, almost 50 firms in the sample seem to pay too little attention to environmental issues. Only Tobin's Q is influenced significantly by environmental indicators, while the number of environment certificates affect Tobin's Q positively, the amount of saving energy has a negative relationship with firm market value. One reason for this situation is that the company only does some relevant activities to the environment if they help to improve its reputation or to satisfy international requirements of exportation.

The last factor of CSR towards society is found to be significantly and positively linked with all of four firm indicators. Many firms choose fundraising or donating and conducting charity programs to fulfill their responsibilities toward society. These activities help companies build a better image in the public's eyes. However, they should concentrate more on creating long-term and sustainable value to the community.

When examining the influence of corporate social obligations on the performance of enterprise, one of the key factors should be considered is type of industry. Different industries will have different approaches to exercise CSR so that CSR effects on each kind of industry will be varied. According to Do (2018), companies in food industry seem to focus on externally-dimension of CSR such as society and community issues while garment enterprises set their priority to internal-focused components of CSR which is labor.

According to two tables which summarize how social responsibility factors impact the performance of the company in the manufacturing and service / non-manufacturing sectors, we find that the overall effect of CSR activities on the service industry is greater than the manufacturing one. Specifically, the return on assets of manufacturing enterprises only be approximately 70% affected by CSR dimensions while that of service companies is 70.32%. Besides that, the market value of service enterprises is 80% influenced by social responsibility activities whereas the figure for manufacturing enterprises is only 69.55%. This outcome is consistent with the statement made by Casado-Díaz et al. (2014) who analyzed the differentiated CSR actions in servicing industry.

In addition, activities related to saving energy or charitable activities have a negative impact on manufacturing businesses. It is also worth noting that caring payment for workers influences businesses in manufacturing field more significantly than that on service or non-manufacturing industry.

The results confirm that there is a positive correlation between social responsibility activities and firm performance, so small and medium-sized companies in Vietnam should focus more on engaging in corporate social responsibilities, especially those related to customers, suppliers, and the environment. Empirical results show a negative relationship between environmental factors and the efficiency of manufacturing companies. This suggests that most manufacturing firms do not pay adequate attention to environmental issues. On the other hand, if the costs of improving the environment such as using clean energy are high, companies will see that as a threat to their profits. Therefore, policies and regulations need to issue objectivity and more stringent policies to help companies raise awareness of their environmental responsibilities.

There is an insignificant relationship between CSR and EPS. These findings indicate that the importance of CSR needs to be closely linked to the development of Vietnam's stock market. The State Securities Commission should impose stricter rules on the disclosure of CSR information such as requiring a separate report for CSR-related activities and requiring them to provide higher quality CSR information for the public. Moreover, the

government and VBCSD should improve the CSI index and further comprehensive CSR rating system like KEJI or Hexun to support empirical studies in the future. Moreover, the low correlation coefficient between CSR and corporate performance illustrates that CSR makes a tiny contribution to the growth of financial performance. If the economic benefits are too weak to be perceived, companies will choose to ignore CSR activities or even consider them as a threat to the profit's reduction. Therefore, the government may provide allowances for CSR investments or release tax exemptions for social responsibility activities.

The findings show that, for different indicators, the effect of CSR on them will not be the same. In relation to ROA, labor and social groups are the most influential factors which exert positive relationship with it. Meanwhile, dimensions related to customers and suppliers have not had significant influence. This conclusion is on the contrary to the analysis outcome of Phung et al. (2019) Similarly, two estimators of *shareholders* group does not relate to the development of firm performance significantly. The two variables of tax and donation which represent social groups have a statistically significant positive effect on ROE. There is only one factor that belongs to the group of customers and suppliers impacting ROE, which is MGF (mutual good faith), but this effect is negative. Besides, the group of environmental factors has not exerted any significant impact on the company's profits.

Regarding the company's value, the outcomes suggest that CSR poses a positive and broad influence on Tobin's Q value. Specifically, all five CSR groups have significant influence on the value of Tobin's Q, except for the best place to work variable. Among them, activities related to the environment have the greatest impact on increasing the company's value in the market. In addition, the empirical results of the relationship between CSR and enterprise performance in different industries exhibit that the impact of CSR on companies in the service/non-manufacturing industry is greater than that in manufacturing enterprises. While the interest in labor such as caring payment contributes significantly to the profits of manufacturing companies, it has no significant impact on firms in the service industry. In general, the hypothesis that CSR will contribute significantly to the improvement of firm performance is partially supported. This conclusion is consistent with the paper's findings of Cho et al. (2019).

CONCLUSION

Along with the trend of sustainable development of businesses in recent years, researchers and managers have begun to pay more attention to the implementation of social responsibilities. In CSR related reports, the relationship between CSR factors and company performance is the most concerned topic. Of similar interest, this paper uses empirical analysis to test whether social responsibility-related activities affect a company's profits and values. Besides, the paper also assesses whether the impact of CSR on different industries is the same and the analysis is based on stakeholder theory developed by Caroll in 1973 and the Hexun CSR framework. The data sample is collected from the 50 best profitable private companies in 2019 which are listed on two largest stock exchanges in Vietnam: HNX (Hanoi Stock Exchange) and HOSE (Ho Chi Minh Stock exchange). A total of 250 observed variables are gathered over 5 years, from 2015 to 2019. To test the influence of CSR factors on each financial indices of firm, panel regression models were applied. When examine the correlation between CSR dimensions and firm performance in Vietnam context over 5 years from 2015 to 2019, there are some unavoidable limitations. The first drawback is about the sampling data, this study only used a five-year period from 2015 to 2019, showing a relatively short period in panel regression analysis. In addition, only 50 listed profitable companies are selected for the sample which can create a bias to represent the entire manufacturing

and non-manufacturing industry. Moreover, there are many restrictions for data collection because of the unavailable information and limited resources. Because CSR activities are not really popular and compulsory so that not many companies publish detailed statistics for their social responsibility. Even when they disclosure the information, it does not fully cover five groups of CSR; therefore, it causes time-wasting and some obstacles in choosing sample companies. Secondly, this study investigates the influence of CSR activities on financial performance of firms basing on stakeholder theories and Hexun rating framework. However, relying on the Vietnamese market's characteristics, it is difficult to use all of 38 CSR indicators of Hexun system to estimate CSR performance. Therefore, in the study, there are only 10 sectors chosen to measure CSR, leading to the absence of overall score for CSR and a possibility of biased problem. It is hoped that future surveys will be able to minimize the impact of these restrictions to provide more valuable and reliable information to support the research on the impact of social responsibility activities on the development of businesses.

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Appendix 1 The Likelihood test between firm performance and CSR

Equations	Effect tests	Statistics	d.f	Probability
ROA and CSR	Cross-section F	6.6091	-49,185	0.000
	Cross-section Chi-square	252.9474	49	
ROE and CSR	Cross-section F	7.1251	-49,185	0.000
	Cross-section Chi-square	265.0709	49	
EPS and CSR	Cross-section F	4.4757	-49,185	0.000
	Cross-section Chi-square	195.4556	49	
Tobin's Q and CSR	Cross-section F	5.0370	-49,185	0.000
	Cross-section Chi-square	211.9081	49	

Appendix 2 The summary results of Breush and Pagan test

Breush & Pagan test	**ROA**	**ROE**	**EPS**	**Tobin's Q**
LM statistics	$LM_1 = n^* R^2 = 250^* 0.2057 = 51.425$	$LM_2 = n^* R^2 = 250^* 0.2791 = 69.775$	$LM_3 = n^* R^2 = 250^* 0.1883 = 40.075$	$LM_4 = n^* R^2 = 250^* 0.2530 = 63.25$
Comparison	LM_1 > Chisao (0.95, 9) = 16.919	LM_2 > Chisao (0.95, 9) = 16.919	LM_3 > Chisao (0.95, 6) = 12.592	LM_4 > Chisao (0.95, 12) = 21.02607
Decision	Reject H_0	Reject H_0	Reject H_0	Reject H_0

Appendix 3 Correlation Analysis Between Dependent and Independent Variables

Corr	ROA	ROE	EPS	TOBIN_Q	FON	SIZE	QUICK	EQUI	R_D	INC	TRA_H	CARE	QUA_C	MGF	EVI_C	SAVE	TAX	DOT
ROA	1																	
ROE	0.843	1																
EPS	0.441	0.4927	1															
TOBIN_Q	0.569	0.4081	0.2159	1														
FON	0.128	-0.0213	0.0888	0.3678	1													
SIZE	-0.167	-0.1505	-0.0955	-0.0884	-0.0646	1												
QUICK	0.184	-0.0348	0.0807	0.2325	0.3911	-0.1877	1											
EQUI	0.418	0.1561	0.1800	0.4807	0.3942	-0.1571	0.3944	1										
R_D	0.272	0.1518	0.2266	0.5077	0.4208	-0.0084	0.1657	0.3075	1									
INC	0.120	0.0870	0.0067	0.1338	0.0657	0.2267	0.1085	0.0993	0.1313	1								
TRA_H	0.138	0.1594	-0.0134	0.1958	0.0544	-0.0460	-0.1022	0.0865	0.0431	-0.0590	1							
CARE	0.240	0.2271	0.1228	0.3950	0.2723	0.2318	-0.0865	0.0933	0.4495	0.4016	0.0815	1						
QUA_C	0.178	0.1102	0.2725	0.3596	0.3624	0.2360	0.0239	0.1240	0.2991	0.1109	0.1525	0.3047	1					
MGF	0.009	-0.1061	-0.0348	0.1278	0.2740	0.2162	0.0836	0.1566	0.1740	0.2289	0.3286	0.1218	0.2867	1				
EVI_C	0.203	0.1817	0.0198	0.3507	0.1047	-0.2085	-0.1070	0.1564	0.2572	-0.0458	0.1864	0.1869	0.1904	-0.1825	1			
SAVE	0.076	0.0742	-0.0429	0.0003	0.1037	0.1708	-0.0997	0.0502	0.1924	0.5644	-0.0481	0.6582	0.1357	0.0945	0.1699	1		
TAX	0.428	0.3641	0.2075	0.5115	0.2525	0.2467	-0.0040	0.1934	0.4868	0.3457	0.0516	0.8271	0.3227	0.1569	0.2000	0.4835	1	
DOT	0.086	0.1716	0.1031	0.0414	-0.0328	0.0583	-0.1193	-0.0543	-0.0378	-0.0919	-0.0367	0.1091	-0.0742	-0.2250	-0.0246	0.0093	0.0783	1