An Empirical Study on Corporate Social Responsibility and Financial Performance-Take the Industry of Ecological Protection and Environmental Governance as an Example

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Abstract: In order to study how to fulfill the social responsibility under the premise of enhance the value of the enterprise, this article selects 2018 ecological protection and environmental governance industry listed companies, a total of 34 sample size, from the perspective of stakeholders, to fulfill the social responsibility and enterprise value related to the empirical analysis, according to the analysis results to determine whether a hypothesis is established. And on this basis, it discusses how to improve the value of enterprises under the premise of fulfilling social responsibility.

Keywords: Corporate social responsibility, Ecological protection and environmental governance industry, Financial performance

1. Introduction

In the new normal of economy, low-carbon economy and green development are advocated, and economic development is no longer a one-sided pursuit of GDP growth. "Corporate Social Responsibility (CSR)" begins to appear frequently in the public eye, and has been studied more and more extensively by academic circles and business managers. The value of an enterprise can no longer be measured solely by economic output. The value of an enterprise to the society is becoming more and more diversified. In addition to being responsible for shareholders, employees and creditors, it is also increasingly required to assume certain responsibilities to stakeholders such as the environment, government, community and society. As the policy support of the rapid development of industry, ecological protection and environmental control for the implementation of the industry's social responsibility is also more and more attention by people, based on the ecological protection and environmental governance in listed companies as the research object, adopt the combined method of theoretical analysis and empirical research to explore the relationship of real estate enterprise social responsibility and financial performance, in order to get some meaningful conclusions.

2. Reaserch Design

2.1. Sample Selection and Data Sources

In this paper, all enterprises in the ecological protection and environmental governance industry of 18 years were selected from the Jumchao Information Network. When screening the relevant samples, ST, *ST and enterprises with incomplete data were eliminated and input manually.

2.2. Research Hypothesis

The stable and long-term bond between the enterprise and the stakeholders is that the enterprise can try its best to meet the basic requirements of the individuals or organizations related to the enterprise, so as to realize the long-term stability of the enterprise. Based on the analysis from the perspective of six stakeholders, this paper proposes the research hypothesis of this paper.

Hypothesis 1: Corporate accountability to creditors will have a positive effect on corporate performance

Creditors are the main providers of corporate funds. It is impossible for an enterprise to develop

only with equity capital. Creditors put money into a business in the expectation that they will be able to get their principal and interest back at maturity. If a company fails to live up to its social responsibilities, creditors will impose financial restrictions on their contracts or impose tougher loan conditions in the future. Therefore, enterprises with better social responsibility performance will obtain relatively easy loan conditions, and the liquidity of corporate funds is higher, which is conducive to the implementation of corporate strategies.

Hypothesis 2: Corporate responsibility to customers will have a positive effect on corporate performance

Consumers are the last link in the chain of creating economic benefits of enterprises. Only when consumers recognize the products produced by the enterprise and pay consideration for them can the economic benefits of the enterprise be realized. Therefore, enterprises must attach great importance to the type and quality of products. On the one hand, they can meet the purchasing needs of consumers, and on the other hand, they can enhance consumers' loyalty to the enterprise, so that consumers can drive consumers and bring more income to the enterprise.

Hypothesis 3: Corporate responsibility to suppliers will have a positive effect on corporate performance

With the concept of win-win gradually gaining popularity, the relationship between suppliers and enterprises is no longer a "one-shot deal". Instead, they pursue value maximization, bear risks and share benefits together. The behavior of enterprises has deeply affected the supply chain. Suppliers are more willing to cooperate with enterprises with good social responsibility behavior, which can reduce the operation risk of suppliers and bring more lenient repayment conditions to enterprises.

Hypothesis 4: Corporate accountability to shareholders will have a positive effect on corporate performance

Whether it is a partnership or a limited liability company, there are shareholders before an enterprise exists. As the founder of the enterprise, the shareholders invest the initial capital of the enterprise in order to gain capital appreciation in the process of the development of the enterprise. The production and operation activities of an enterprise must first meet the interests of shareholders. Only then can the shareholders have confidence in the future development of the enterprise, continue to invest in the enterprise or attract more investors, and the enterprise can obtain greater room for progress.

Hypothesis 5: Corporate responsibility for employees will have a positive effect on corporate performance

In today's society, the power of knowledge continues to emerge, and innovation and development have become the mainstream idea of social development. As the main force of enterprise innovation and the largest human capital of an enterprise, employees are an indispensable part of an enterprise to achieve strategic goals and competitive advantages. The basic production of an enterprise cannot be separated from employees, and the business decisions of an enterprise need employees even more, and the strategic formulation of an enterprise needs excellent employees. If an enterprise wants to form a scarce and unrepeatable competitive advantage, it must pay attention to the selection and cultivation of talents. Therefore, the enterprise needs to meet the interests of employees, such as rich remuneration, good working environment, etc. Only in this way can the enthusiasm of employees be improved and economic benefits be created for the enterprise.

Hypothesis 6: Corporate responsibility to the government will have a positive effect on corporate performance

The government is the policy maker and implementer. If an enterprise can pay taxes on time or carry out public welfare activities, it may get more tax preferences, market access or other forms of subsidies from the government. If an enterprise has poor social responsibility, the government will impose sanctions on the enterprise according to relevant laws and regulations, which will affect the social image of the enterprise. In the long run, whether the enterprise can continue to exist will be a big problem.

2.3. Indicator Design

In this paper, the rate of return on total assets is taken as the index of financial performance of the explanatory variable, and the explanatory variables are successively selected as the liquidity ratio,

earnings per share, employee profit level, income tax rate, cash ratio and operating cost ratio as the corresponding indexes of creditors, shareholders, employees, government, suppliers and consumers. In the selection of control variables, this paper selects the capital structure as the control variable. Specific variables are shown in the table below:

Table 1

Variable types		Variable	variable name	A formula to calculate
explained variable	financial performance	ROA	rate of return on total assets	(profit total+ interest payments) / Average total assets
explanatory variables	creditors	LR	current ratio	current assets/current liabilities
	shareholders	EPS	earnings per share	net profit / weighted average number of common shares outstanding
	employees	EI	employee profit level	salary payable / gross operating income
	government	ITR	income tax rate	income tax expense / profit total
	supplier	CR	cash ratio	(cash + Cash equivalents)/Current liabilities
	consumers	MOC	Operating cost ratio	total operating cost / gross operating income
control variables		DEBT	capital structure	total liabilities / total assets

2.4. Modeling

According to the assumptions and design variables proposed in the previous paper, combined with previous scholars' research, this paper puts forward the following research model.

$$ROA_{it}=\beta_0 it+\beta_1 LR_{it}+\beta_2 EPS_{it}+\beta_3 EI_{it}+\beta_4 ITR_{it}+\beta_5 CR_{it}+\beta_6 MOC_{it}+\varepsilon_{it}$$

3. Empirical Analysis

3.1. Descriptive Statistics

Before the research hypothesis verification, the relevant data of 136 information technology enterprises were analyzed by descriptive statistics. The results are shown in the table below.

Table 2: Descriptive Statistics

Descriptive statistic

	N	minimum	maximum	mean value	standard deviation
return on total assets	34	-.19	.15	.0279	.05720
current ratio	34	.43	4.93	1.3558	1.00367
operating cost rate	34	.40	.86	.6788	.12145
cash ratio	34	.04	2.36	.4012	.55618
earnings per share	34	-.81	1.08	.3787	.41548
employee profit level	34	.00	.07	.0191	.01545
asset income tax rate	34	.00	.02	.0082	.00576
effective n（list status）	34				

From the descriptive statistics of 34 listed companies in the ecological protection and environmental governance industry in 2018, it can be seen that the difference between the maximum and minimum values of ROA, MOC, EI and ITR is small, among which the difference of index ITR is the smallest, only 0.02. There was a large difference between the maximum and minimum values of LR, CR and EPS, and the largest was LR with a difference of 4.5. This indicates that there is no obvious gap between the financial performance of enterprises, the social responsibility of enterprises to customers, the social responsibility of enterprises to employees, and the social responsibility of enterprises to the government in this industry. In particular, there is almost no difference in the social responsibility of enterprises to the government.

In terms of standard deviation, the standard deviation of LR is the largest, reaching 1.00367, while the standard deviations of other indicators are all small, among which the smallest is ITR, with a standard deviation of 0.00576. This indicates that in this industry, the situation of enterprises' fulfillment of their creditors' social responsibility fluctuates greatly, while other indicators fluctuate less. Among them, enterprises' fulfillment of their social responsibility to the government fluctuates least, and there is almost no difference.

3.2. Correlation Analysis

The Pearson correlation analysis results of the data of ecological protection and environmental governance industry in 2018 are shown in Table:

Table 3: Correlation analysis

The correlation

		rate of return on total assets	current ratio	operating cost ratio	cash ratio	earnings per share	employee profit level	asset income tax rate
rate of return on total assets	Pearson correlation	1						
current ratio	Pearson correlation	.356*	1					
operating cost ratio	Pearson correlation	-.550**	-.271	1				
cash ratio	Pearson correlation	.436**	.918**	-.431*	1			
earnings per share	Pearson correlation	.849**	.373*	-.434*	.495**	1		
employee profit level	Pearson correlation	-.174	-.030	-.306	.089	-.033	1	
asset income tax rate	Pearson correlation	.596**	.237	-.254	.289	.518**	-.188	1

*. Significant correlation at 0.05 level (bilateral).

**. There was a significant correlation at the .01 level (bilateral).

According to the above table, the correlation coefficient between the rate of return on total assets and the liquidity ratio is 0.356, which is significantly correlated at the level of 0.05, indicating that the relationship between creditors' social responsibility and corporate financial performance is positively correlated.

There is a significant negative correlation between the rate of return on total assets and the operating cost rate at the level of 0.01, indicating that the financial performance of enterprises in the ecological protection and environmental governance industry is negatively correlated with their social responsibility to customers.

The correlation coefficient between ROA and cash ratio is 0.436, which is significantly positive at the level of 0.01, indicating that there is a positive correlation between the financial performance of enterprises in this industry and the social responsibility of suppliers.

The correlation coefficient between the rate of return on total assets and earnings per share is 0.849, which is significantly positive at the level of 0.01, indicating that the social responsibility of shareholders of ecological protection and environmental governance enterprises is positively correlated with financial performance.

The correlation coefficient between the rate of return on total assets and employee profit level is -0.174, but the double-tail test is not significant, so there is no correlation between the two.

The correlation coefficient between the rate of return on total assets and the income tax rate on assets is 0.596, which is significantly correlated at the level of 0.01, indicating that the corporate performance of this industry is positively correlated with the government's social responsibility.

3.3. Regression Analysis

Table 4: Analysis of variance results

Anova[b]

model		Sum of squares	df	The mean square	F	Sig.
1	regression	.091	6	.015	23.466	.000a
	residual	.017	27	.001		
	total	.108	33			

a. Predictive variables: (constant), asset income tax rate, employee profit level, liquidity ratio, operating cost ratio, earnings per share, cash ratio.

b. dependent variable: rate of return on total assets

Table 5: Regression analysis results

Coefficient*

model	nonstandardized coefficient		standard coefficient	t	Sig.	collinearity statistics	
	B	standard error	trial version			tolerance	VIF
1 (constant)	.096	.037		2.576	.016		
Current ratio	.013	.012	.220	1.017	.318	.127	7.874
Operating cost rate	-.158	.046	-.336	-3.447	.002	.626	1.599
Cash ratio	-.028	.024	-.268	-1.127	.270	.105	9.514
Earnings per share	.092	.014	.668	6.391	.000	.545	1.834
Employee profitability	-.722	.324	-.195	-2.232	.034	.781	1.281
Asset income tax rate	1.521	.922	.153	1.649	.111	.691	1.446

a. Dependent variable: rate of return on total assets

According to the above model, multiple linear regression analysis results are obtained after sample operation. According to relevant results, the adjusted R-square value is 0.803, that is, the fitted linear regression model reflects 80.3% of the information of the original data, which is more ideal than the previous adjusted R-square 0.798. In the ANOVA results, F statistic is equal to 23.466, better than 19.611 before the asset-liability ratio is excluded. The probability P =0.000 is less than the significance level of 0.05, indicating that the regression model has passed the significance test on the whole and has certain statistical significance.

(1)There is no correlation between corporate CSR fulfillment and corporate financial performance. The standard coefficient of liquidity ratio, 0.220, is positive, and the value of sig. is 0.318, which does not pass the significance test, so the Sig. The value is not significant, hypothesis 1 failed to be tested.

Possible reasons: associated with the particularity of the industry, ecological protection and environmental governance industry companies invest creditors do not need too much, or in the industry at the present stage also didn't have a lot of investors to realize the investment value of the industry, creditors not attract enough investment, so companies perform creditors have no has a significant influence on corporate financial performance.

(2) There is a significant negative correlation between CSR fulfillment and financial performance. The standard coefficient of operating cost ratio -0.336 is less than 0, and the sig. value is 0.002, which is significant at the level of 0.05. Therefore, enterprises' fulfillment of customer social responsibility is negatively correlated with corporate financial performance, which is inconsistent with Hypothesis 2.

Possible reasons: the enterprise is currently launching new products, and these products in the market has not been favored by consumers; Or the enterprise is upgrading the quality of its products, and the price rises accordingly, while the purchasing power of consumers has not been improved correspondingly. Therefore, the fulfillment of customer social responsibility does not have a positive effect on the financial performance of the enterprise.

(3) There is no correlation between an enterprise's fulfillment of supplier social responsibility and

its financial performance. The standard coefficient of cash ratio -0.268<0, Sig. The value of 0.270>0.05 is not significant. So there is no correlation. It indicates that the enterprise's fulfillment of suppliers' social responsibility can not promote the financial performance of the enterprise, so Hypothesis 3 is not valid.

Possible reasons: this is because the management of Chinese enterprises on suppliers is not sound enough, the enterprises will use these funds for other investment or operation, resulting in the enterprises will pay within the supplier's deadline.

(4) There is a significant positive correlation between corporate social responsibility and corporate financial performance. The standard coefficient of earnings per share is 0.668, and the sig. value is 0.000<0.05, which passes the significance test. Therefore, the rate of return on total assets is positively correlated with earnings per share. The fulfillment of shareholder social responsibility will improve the financial performance of enterprises. Hypothesis 4 has been verified.

(5) There is a significant negative correlation between corporate social responsibility and corporate financial performance. The standard coefficient of employee profit level is negative, Sig. value 0.034 is significant at the level of 0.05. It indicates that there is a negative correlation between the enterprise's fulfillment of employees' social responsibility and the enterprise's financial performance. Hypothesis 5 is not valid.

Possible reasons: China has a large population, and the ecological protection and environmental governance industry does not have high requirements on the level of labor force. Therefore, it is difficult for enterprises to bring excess profitability to their employees because of their investment in employees, and at the same time, it is difficult for them to quickly transform into positive enterprise value. Therefore, the fulfillment of corporate social responsibility to employees cannot be mutually promoted with corporate value.

(6) There is no correlation between government social responsibility and corporate financial performance. The sig. value of asset income tax rate is 0.111, which fails the significance test. Therefore, there is no correlation between the total asset turnover rate and the asset income tax rate,hypothesis 6 is not tested.

Possible reasons: It is related to the particularity of the industry. Enterprises in the ecological protection and environmental governance industry are government-sponsored enterprises. Due to the environmental protection advocated in recent years, the government has always attached great importance to them and given greater support to the industry, no matter how much the enterprise contributes to the government (the contribution mainly refers to tax). The government will always support and fund ecological protection and environmental governance industry enterprises.

4. Conclusions and Suggestions

4.1. The conclusion

According to the above theoretical analysis and empirical research, the conclusion of this paper is as follows: the fulfillment of social responsibility of food enterprises is affected differently by different stakeholders. Specifically, the fulfillment of social responsibility of shareholders will improve the financial performance of enterprises, and the two are significantly positively correlated; There is a significant negative correlation between the performance of corporate social responsibilities to customers and employees. The better the performance of corporate social responsibilities to customers and employees, the lower the corporate financial performance. There is no correlation between an enterprise fulfilling its social responsibilities to creditors, suppliers and the government and its financial performance, that is, the degree to which an enterprise fulfills its social responsibilities to creditors, suppliers and the government will not affect its financial performance.

4.2. Suggest

Based on the above empirical conclusions, this paper puts forward how to improve the performance of corporate social responsibility for enterprises in the ecological protection and environmental governance industry.

Enterprises should not only focus on the immediate interests, but also regard the fulfillment of social responsibility as part of their long-term development plan. Moreover, they need to pay more

attention to the disclosure of social responsibility information, which can provide investors with more valuable social responsibility information. If an enterprise can have a more long-term vision and actively fulfill its social responsibilities to various stakeholders, its financial performance will be improved.

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