Research on the Impact of Social Responsibility of Construction Companies on Corporate Performance

Luqi Zhang

1540394158@qq.com

Department of engineering management, School of economics and management, Beijing Jiaotong University, No. 3, Shangyuan village, Beijing, China.

Abstract. Drawing upon the stakeholder theory, this study selects performance indicators for construction enterprises and social responsibility evaluation criteria towards stakeholders including shareholders, creditors, employees, customers, suppliers, government, society, and environmental protection. The primary aim is to investigate the relationship between a company's fulfillment of social responsibility and its overall performance.The findings reveal a positive correlation between the fulfillment of social responsibility towards shareholders and suppliers, and a company's performance. Conversely, social responsibility fulfillment towards creditors, customers, and government shows a negative correlation with performance. Notably, the relationship between government social and environmental responsibility and corporate interests is not statistically significant. In light of these results, this study provides actionable recommendations for enterprises to enhance their social responsibility efforts.

Keywords: construction companies, stakeholders, social responsibility, corporate performance

1 Introduction

The construction industry is a pillar industry in China and an important part of China's economic system. Nowadays, under the background of economic globalization, the competition in the construction market is becoming increasingly fierce. While constantly promoting technological innovation, enterprises should also actively fulfill their social responsibilities Therefore, it is very necessary to study the impact of construction enterprises' social responsibility on performance from the perspective of stakeholders, so as to provide reasonable suggestions for construction enterprises to effectively assume social responsibility, promote enterprises to improve performance and achieve sustainable development.

Corporate social responsibility (CSR) first appeared in Western countries in the nineteenth century, and in 1923. Subsequently, scholars carried out research based on this[1]. By integrating the literature, the issue of the impact of CSR on corporate performance is a hot topic in the field of business management, and scholars at home and abroad have conducted a lot of research on it. clarkson first used stakeholder theory to quantitatively evaluate CSR performance, formally introducing stakeholder theory into CSR research [2]. amrou et al. used the benchmarking method to test to get that companies with better CSR performance in the same category have higher indicators of good business performance market valuation [3]. Li Ling used tourism

ICEMBDA 2023, October 27-29, Tianjin, People's Republic of China

DOI 10.4108/eai.27-10-2023.2342017

industry as the research object and analyzed that the active social responsibility of tourism enterprises can lead to performance improvement [4]. Zheng Pei et al. took Chinese listed companies as the subject of analysis to conduct an empirical study on the relationship between CSR and financial performance [5]. Hou Yong et al. took listed construction companies as the subject of their study, and the results showed that the social responsibility of enterprises to different stakeholders was positively, negatively, and insignificantly correlated with corporate performance [6].Bo et al. conducted a study from the perspective of stakeholders and obtained that a virtuous circle does exist in China's large construction enterprises in the overall and most decomposition links [7]. Xue Peng analyzed the moderating effect of executive incentives on in between social responsibility and performance [8]. Shu Huan analyzed the intrinsic linkage between social responsibility and corporate long- and short-term values of construction companies with a sample of Chinese listed construction companies in Shanghai and Shenzhen A-shares[9]. In addition, some scholars have studied the relationship between CSR and financing cost, and green innovation performance[10][11]. Therefore, the relationship between CSR and performance of construction enterprises is analyzed in the context of China's national conditions and the construction industry's own characteristics, so as to help construction enterprises take effective measures to fulfill their social responsibility and thus promote performance improvement.

2 Research Design

2.1 Theoretical basis and research hypothesis

In this paper, we measure corporate social responsibility from the perspective of stakeholders: shareholders, creditors, employees, customers, suppliers, government, society and the environment.

Shareholders are the key investors in a business and play a vital role in the proper operation of the business. Under the supervision of shareholders, enterprises are able to operate efficiently. Creditors are important providers of funds to enterprises, and enterprises that develop scientific financial systems and have a good reputation are more likely to receive continued investment from creditors, thus promoting the flow of funds. Construction enterprises actively assume social responsibility and establish a positive corporate image. Loan costs are thus reduced, and corporate performance will be significantly improved. Employees are the direct creators of enterprise value, and the efficiency of employees is closely related to the performance of construction enterprises. The survival and development of an enterprise is inseparable from its customers. Construction enterprises strictly adhere to quality standards and provide customers with high-quality engineering products, which help form a stable source of customers and enable sustainable development. The effective supply of materials and equipment is an important guarantee for the normal production of enterprises, and reaching a good cooperative relationship with suppliers to reduce business costs will help enterprises to improve their competitiveness. The government plays an important macro-control role in the market economy system. Construction enterprises pay taxes on time and in accordance with regulations, and strictly comply with the policy provisions, so that they can get government support in terms of tax benefits and construct a good external business environment. Enterprises participate in social charity activities, which helps to create a healthy and good corporate image, enhance corporate

reputation and influence, and play a promotional role to form a brand effect. In the current era of advocating low-carbon environmental protection, construction enterprises actively implement environmental responsibility, reasonable environmental protection expenditure can enable enterprises to reduce the workload of dealing with construction waste, to a certain extent, to reduce unnecessary expenditure of enterprises, to promote the performance of enterprises to play a significant role.

The social responsibility of construction enterprises to shareholders, creditors, employees, customers, suppliers, government, society and the environment is significantly and positively correlated with corporate performance.

2.2 Definition of variables

2.2.1 Dependent variable.

According to the existing literature to obtain the main indicators to measure the performance of enterprises are accounting indicators and market return indicators, this paper selects the return on assets (ROA), which reflects accounting information, and the market indicator Tobin's Q value to indicate the performance of construction enterprises.

2.2.2 Independent variables.

In terms of measuring social responsibility, the social responsibility indicators of this paper are finally obtained by compiling the research results of scholars, following the existing indicators and modifying them with the characteristics of construction enterprises. The specific calculation method of each index variable is shown in Table 1.

Table 1. Indicator Variables Table

Variables	Index Name	Index calculation method
ROA	ROA	Net profit/average total assets
Tobin- Q	Tobin- Q	Enterprise market value/total assets
Stockholders（x1）	ROE	Net profit/net assets
Creditor（x2）	Cash flow debt ratio	Net cash flow from operating activities/total liabilities
Staff（x3）	Wage payout rate	Cash paid to employees/income from main business
Customer（x4）	Cost ratio of main business	Main business cost/main business income
Suppliers（x5）	Accounts Payable Turnover Ratio	Average balance of main business cost/accounts payable
Government（x6）	Tax revenue ratio	Taxes paid/total revenue
Socity（x7）	Social contribution rate	Donation expenditure/Net profit
Environment（x8）	Environmental input rate	Environmental expenditure/net profit

2.3 Model Construction

To test the above hypothesis the model constructed in this paper is shown in equation (1)：

$$
\begin{aligned}
ROA &= \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + \alpha_4 x_4 + \alpha_5 x_5 + \alpha_6 x_6 + \alpha_7 x_7 + \alpha_8 x_8 + \varepsilon_1 \\
TuobinQ &= \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \varepsilon_2
\end{aligned} \tag{1}
$$

2.4 Data sources

This paper selects listed companies in the construction industry in 2019-2020, excluding those with incomplete data disclosure, and finally selects eleven listed companies such as Beixin Building Materials, Gezhouba, and China Railway Construction. The data are obtained from the social responsibility reports of the selected listed companies and the corresponding financial information in the Guotaian database.

3 Empirical analysis

SPSS24.0 statistical software was used for analysis to obtain descriptive statistics of the sample corresponding to responsibility and performance indicators, as shown in Table 2

3.1 Descriptive statistics analysis

Table 2. Descriptive Statistics

	Min	Max	Mean	Std.dev
ROA	0.01495	0.13628	0.0355543	0.03404691
Tuobin-Q	0.84431	3.57425	1.2154759	0.78591784
Stockholders（x_1）	0.03862	0.16577	0.0826821	0.03780973
Creditor（x_2）	-0.07327	0.33670	0.0606174	0.10137368
Staff（x_3）	0.02650	0.13962	0.0715733	0.02766657
Customer（x_4）	0.66316	0.90909	0.8634485	0.07111443
Suppliers（x_5）	1.13996	7.16291	2.4533925	1.66458866
Government（x_6）	0.01910	0.07354	0.0359952	0.01633903
Socity（x_7）	0.00065	0.02022	0.0062213	0.00657109
Environment（x_8）	0.00221	0.27525	0.0705445	0.07571335

The results in the table show that the maximum total net asset margin is 13.6% and the minimum is 1.51%, and the maximum Tobin's Q value is 3.57 and the minimum is 0.84, indicating that there is some variation in performance between firms. The maximum value of return on net assets is 0.17 and the minimum value is 0.03, which shows that the degree of responsibility to shareholders varies among firms. The cash flow debt ratio has a maximum value of 0.34 and a minimum value of -0.07, indicating the existence of companies that do not have good guarantees related to the interests of creditors. From the situation of salary payment and main business cost ratio, there is not much difference among the enterprises, and the degree of responsibility to employees and customers is good. The value of accounts payable turnover ratio has some difference among the enterprises, and the maximum and minimum values of tax revenue ratio,

social contribution ratio and environmental protection input ratio are obtained, and the enterprises are low in social welfare and environmental protection input.

3.2Correlation analysis

The data were analyzed for correlation using SPSS24.0 software, and the results are shown in Table 3.

Table 3 Variable correlations

	ROA	Tuobin-Q	x1	x2	x3	x4	x5	x6	x7	x8
ROA	1									
Tuobin-Q	0.966**	1								
x_1	0.820**	0.707*	1							
x_2	0.880**	0.907**	0.754**	1						
x_3	0.096	0.145	0.434	0.417	1					
x_4	-0.877**	-0.941**	-0.544	0.874**	-0.109	1				
x_5	0.897**	0.931**	0.574	0.892**	0.079	-0.930**	1			
x_6	0.703*	0.756**	0.380	0.731*	0.096	-0.910**	0.852**	1		
x_7	-2.99	-0.181	-0.394	-0.041	0.149	0.095	-0.112	-0.064	1	
x_8	0.88	0.201	-0.149	0.205	0.082	-479	0.237	0.658*	0.119	1

The results of correlation analysis can be obtained that the social performance indicators ROA and Tobin's Q of construction companies have significant positive correlation with the evaluation indicators of shareholders, creditors, suppliers and government fulfillment of social responsibility, and significant negative correlation with the evaluation indicators of customer responsibility, and insignificant correlation with the responsibility of employees, environmental protection and society.

3.3Regression analysis

Regression analysis was conducted to further explore the degree of interaction between variables, and the results are shown in Table 4.

The regression results in Table 4 show that when measuring social performance by ROA and Tobin's Q, construction enterprises' responsibility to shareholders and suppliers is significantly and positively correlated with their performance, which proves that the original hypothesis is valid, while enterprises' fulfillment of social and performance to creditors, customers, and government is negatively correlated and does not support the original hypothesis, probably due to construction enterprises' own characteristics, the large amount of costs invested in the construction process and the adoption of The mode of raising debt for construction, in addition, construction companies assume social responsibility to employees, society, and environmental protection is not significantly related to corporate performance, probably because of the large number and mobility of labor workers involved in construction, thus not contributing significantly to the long-term performance of the company. In addition, because the construction industry has not yet reached a certain level of enthusiasm for public welfare activities, donation expenditures are generally low, which has not yet formed a good effect on the enhancement of corporate image, and is at a preliminary stage in terms of environmental protection investment,

which has failed to achieve a long-term cumulative effect and thus cannot significantly improve corporate performance.

Table 4. Return to the results

Variables	ROA		Tuobin-Q	
	Coefficient	P	Coefficient	P
C	0.282	0.041	13.418	0.013
x_1	0.539	0.011	5.427	0.035
x_2	-0.097	0.046	-3.306	0.048
x_3	-0.156	0.139	2.687	0.250
x_4	-0.318	0.036	-13.971	0.013
x_5	0.010	0.063	0.257	0.047
x_6	-0.642	0.042	-33.035	0.023
x7	0.170	0.513	0.463	0.941
x8	-.0.011	0.606	-0.024	0.186
R2	0.992		0.990	
P	0.007		0.008	

4 Conclusion

The above analysis shows that the responsibility of construction enterprises to shareholders and suppliers will promote corporate performance, the responsibility to creditors, customers and government is negatively correlated with corporate performance, the responsibility to government social and environmental protection is not significantly correlated with corporate social performance, in addition, the strength of responsibility of each enterprise is different, so the impact on performance will also be different. In the context of economic globalization, China still needs to further improve the corporate social responsibility system and evaluation system from the legal point of view, strengthen supervision and management, regulate the content and form of disclosure of corporate social responsibility reports, stipulate the specific aspects that must be disclosed by each enterprise, and at the same time, reward enterprises that take the initiative to assume social responsibility and severely punish those who evade it.

Construction enterprises are an important force in promoting the development and progress of the country, and should actively assume corporate responsibility, establish a sound social responsibility management system body, management concept, adopt green construction, introduce new materials and technologies. New methods, construction waste and wastewater discharge in line with the standard norms, to protect the practical demands of the stakeholders, improve the environmental awareness and safety awareness of employees, the organic combination of social responsibility and corporate interests, and effectively ensure the sustainable development of enterprises.

References

[1] Pedersen E R . Modelling CSR: How Managers Understand the Responsibilities of Business towards Society[J]. Journal of Business Ethics, 2010, 91(2):155-166. DOI: https://doi.org/10.1017/beq.2017.8.

[2] Clarkson, M. E. A stakeholder framework for analyzing and evaluating corporate social performance. Academy of Management Review, 1995, 20(1):92-117. https://doi.org/10.2307/258888

[3] Amrou Awaysheh, Randall Heron, Tod Perry. On the relation between corporate social responsibility and financial performance[J]. Strategic Management Journal, 2020, 41(6) : 965-987.DOI: 10.5772/intechopen.93573

[4] Ling Li. A typical correlation analysis of tourism corporate social responsibility and financial performance: based on stakeholder perspective[J]. Enterprise Economy, 2015(08): 162-167. DOI:10.13529/j.cnki.enterprise.economy.2015.08.032.

[5] Pei Zhen, Yixiu Li. Research on the impact of corporate social responsibility on financial performance: Based on empirical evidence of listed companies in China[J].Financial Theory and Practice, 2020,41(06): 64-71. DOI:10.16339/j.cnki.hdxbcjb.2020.06.009.

[6] Yong Hou, Wenlin Gu. The influence of social responsibility on corporate performance of listed companies in construction industry[J].Journal of Wuhan University of Technology (Information and Management Engineering), 2015,37(06): 799-802. DOI: CNKI:SUN:WHQC.0.2015-06-030

[7] Bo Xiong,Weisheng Lu,Martin Skitmore,K.W. Chau,Meng Ye. Virtuous nexus between corporate social performance and financial performance: a study of construction enterprises in China[J]. Journal of Cleaner Production, 2016,129: 223-233 .DOI: 10.5772/intechopen.93573.

[8] Peng Xue. Research on the influence of social responsibility of international engineering construction enterprises on corporate performance[D].Tianjin University ,2020..

[9] Huan Shu, Yiyin Xu. .Analysis of the influence mechanism of construction enterprise social responsibility on enterprise value —— Regulation effect of redundant resources[J].Resources and Industries, 2021:1-16. DOI:10.13776/j.cnki.resourcesindustries.20211129.001.

[10] Zhenzhong Guan, Yiwen Wang. Study on the impact of corporate social responsibility on the cost of debt financing.[J].Price theory and practice . .
http://kns.cnki.net/kcms/detail/11.1010.F.20230614.1721.002.html.

[11] Rong Ran, DiDong.Inhibit or promote: Corporate social responsibility and green [J] Innovation performance Research Management.,2023,44(06):95-106.
DOI:10.19571/j.cnki.1000-2995.2023.06.010.