

An Empirical Study on Inter-temporal Interaction between Corporate Social Responsibility and Financial Performance

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Abstract: Based on the sample of listed companies, this paper empirically analyzed the cross-temporal interaction between corporate social responsibility and financial performance by using the fixed effect model regression method. And the impact of the nature of property rights and ownership concentration on the relationship between them. The research results show that the corporate social responsibility of the first phase has a significant positive impact on the current financial performance, and the financial performance of the first phase has a significant positive impact on the current social responsibility. Listed companies have different impacts on the financial performance of the society in fulfilling corporate social responsibility, but they have shown positive effects during the three periods of lag, indicating that there is a lag effect.

1. Introduction

Due to China's rapid economic development and increasingly fierce market competition, drastic environmental changes have also posed new challenges to the survival and development of enterprises. In order to seek immediate benefits, many enterprises have neglected the social responsibilities that enterprises should undertake as "social people" in a country with Chinese socialist characteristics [1]. At the same time, with the development of social economy, the voice of social responsibility for enterprises is rising day by day, making enterprises pay more attention to product quality, environmental pollution, occupational safety, labor disputes and other issues [2]. Compared with foreign enterprises, Chinese enterprises have made great progress in fulfilling their corporate social responsibility, especially the corporate social responsibility of listed companies. Under this circumstance, it is necessary to further analyze the influence relationship between the two on the basis of summarizing the existing research [3]. Both state-owned enterprises and private enterprises, which represent the main body of the Chinese market economy, should place the corresponding social responsibilities in an important position in business management [4]. Corporate social responsibility theory and stakeholder theory have once again ushered in the climax of development in the West. Both government agencies and experts and scholars recognize the necessity of corporate social responsibility [5]. Social responsibility will inevitably require companies to consume certain resources, which conflicts with the company's goal of pursuing profits. In order to explore whether corporate social responsibility has a positive impact on financial performance, this paper uses empirical research methods to study the above issues.

2. Literature Review

Corporate Social Responsibility (CSR) refers to the company's responsibility to employees, consumers, communities and the environment while creating profits and taking legal responsibility to shareholders. The direction of the relationship between corporate social responsibility and financial performance, that is, whether corporate social responsibility and financial performance are positively or negatively related, or not related. Most studies believe that corporate social responsibility has a positive correlation with corporate financial performance, and the inconsistency in the selection of data and indicators for corporate social responsibility evaluation. Due to the lack of authoritative corporate social responsibility evaluation methods, domestic and foreign research uses subjective evaluation methods such as content analysis. Corporate social responsibility

performance [6]. Enterprise is a community of interests based on material. It is based on the use of investment by all parties. It includes not only the investment capital of shareholders, but also the market capital of customers and the public environment capital of the government. Corporate social responsibility is to meet the requirements of stakeholders. Good social responsibility is the requirement of legal operation. The stakeholders need to be adjusted according to the impact of the expansion of business transformation, and the construction projects in enterprises need to be adjusted.

Due to limited resources, enterprises have to balance among different stakeholders, and corporate social responsibility to other stakeholders will affect the economic interests of shareholders, specifically by increasing financial costs and reducing financial performance [7]. However, the impact of corporate social responsibility may lag behind, and there may be cross-temporal interaction between corporate social responsibility and corporate financial performance. At the same time, corporate social responsibility performance is greatly affected by the size of the enterprise, and organizational size difference is the most basic dimension to explain the differences in other aspects of the organization. Therefore, it takes a period of time for an enterprise to obtain the trust and support of relevant stakeholders by fulfilling its social responsibility. Compared with the mature capital markets in the West, there are many differences in the governance environment and the corporate system. If the conclusions of the research on Western enterprises are directly applied to China, they may be biased. In addition, some scholars believe that there is a positive interaction between CSP and CFP performance [8]. The impact of the company's current financial performance on the later social responsibility is greater than the impact on the current social responsibility.

3. Research Design

3.1. Data source and sample selection

In this study, according to the “Guidelines for the Classification of Listed Companies”, the financial report information of 20 listed companies of the stock exchange was selected. The 50 research samples included 25 communication and cultural industries, 30 real estate and construction industries, and 10 financial industries. Excluding companies that have been listed for less than three years in the sample period, it requires at least three years of data to study the lag problem; Excluding companies in the financial and insurance industries, the financial and insurance listed companies have significant differences in financial structure with other non-financial listed companies due to their own particularity.

3.2. Main variable definition and model setting

Independent variable corporate social responsibility. To measure the company's social responsibility, take the value of social contribution per share. Increase the value created by the company for other stakeholders in the current year, such as taxes created for the country, wages paid to employees, interest on loans paid to creditors such as banks, and the amount of donations made by the company to other stakeholders, and deduct other social costs incurred by the company due to environmental pollution, etc. The establishment of financial performance research indicators needs to eliminate the “noise” in financial earnings management, and then use the pre-tax profit of the company's total assets as a financial performance indicator. The total score of the CSR is summarized and sorted according to the corresponding weights set. This method relies on the analyst's personal judgment and is subject to personal subjective factors, and because the number of samples selected during the study is often small, the results obtained are often not universal.

Due to the convenience of obtaining financial indicators, there is no strong comparability for listed companies of different industries and sizes. Therefore, this paper uses EPS as a substitute for financial performance. The impact of corporate social responsibility on financial performance has a lag effect. That is, compared with other corporate social responsibilities, the positive impact of early social responsibility on current financial performance is greater. As a comprehensive financial

indicator, it reflects the financial performance of the company's production efficiency, profitability, financial leverage, etc., and can better reflect the financial performance of the company. By subtracting the actual accrued profit margin from the estimated normal profit margin, we can manipulate the accrued profit margin; by subtracting the pre-tax profit margin from the actual total assets interest and operating profit margin, we can get the pre-tax profit margin of the total assets excluding earnings management. It is not difficult to collect information that can affect the stock price as well as the stock price. Financial indicators mainly measure CFP from the perspective of overall performance based on the data published in the company's financial statements.

This paper uses the above index system and variable control analysis method to analyze the intertemporal relationship between corporate social responsibility and financial performance. Compared with the smaller enterprises, the public pays more attention to the larger enterprises, so the larger enterprises will be subject to more pressure from the public to bear CSR. As an overall indicator to measure the performance of corporate social responsibility. Based on the stakeholder theory, the “total amount of corporate social contribution” is divided into employee wages and welfare expenses paid to employees, dividends distributed to investors, profits or interest paid. Since corporate social responsibility and corporate financial performance are affected by many factors, this paper refers to the research of relevant researchers, and only selects variables such as significant asset size, financial leverage, and enterprise growth as control variables. See Table 1 below.

Table 1 Variable definition table

	Variable name	Definition
Dependent variable	Financial performance	(net profit - non-operating income and expenses) / total number of shares
Independent variable	Corporate social responsibility	Social contribution per share = (net profit + financial expenses + business tax and surcharge + cash paid to employees and paid for employees + income tax expenses + donations) / total number of shares
Control variable	Financial leverage	Asset-liability ratio
	Enterprise scale	Natural logarithm of total assets
	Growth opportunities	Increase rate of business income

4. Descriptive Statistics and Empirical Results

4.1. Sample descriptive statistics

From the results of the regression, we can infer that the real market is not perfect, and there are many irrational factors, which make it difficult for all stakeholders to timely and comprehensively grasp the information about corporate social responsibility. Therefore, the result of corporate social responsibility is a win-win situation. It can ensure the interests of stakeholders and bring long-term financial benefits to the enterprise, which is conducive to the realization of the goal of maximizing the interests of the enterprise. This shows that the performance of the sample company's social responsibility is generally low. The data shows that while the listed companies in China maximize the value of the enterprise, they also take into account the interests of all stakeholders. However, as can be seen from the maximum and minimum values, there are still a small number of companies that are not only unable to create wealth for shareholders, but consume social resources (see Table 2).

Table 2 Descriptive statistical analysis of variables

Variable	Mean	Standard deviation	Minimum value	Maximum
EPS	0.36	0.15	3.38	10.33
CSR	0.14	0.05	2.08	9.15
Growth	0.66	1.03	3.46	8.16

4.2. Correlation analysis

On the basis of the regression model, a certain correlation analysis between the variables is carried out, and it is found that the correlation coefficient between the variables is very small, and there is no multicollinearity. Since the impact of corporate social responsibility on financial performance has a certain lag period, corporate social responsibility may bring benefits and internalized operating costs after the lag period. In fact, with the expansion of the enterprise scale, the enterprise will consciously fulfill its corporate social responsibility and shape its image. Therefore, the selected sample companies are highly representative. Through the analysis of other control variables, several conclusions can be drawn: the stock rights of the sample companies are relatively concentrated; the debt ratio is on the high side. About 1/5 of the sample companies belong to monopoly industries.

4.3. Regression results and discussions

Table 3 below lists the regression results. In the regression results, the regression coefficient of CSR is positive, which indicates that enterprises undertaking more social responsibilities are conducive to improving the profitability of enterprises, which is in line with the hypothesis. Due to the lack of a common standard for ranking the importance of different dimensions of social responsibility, the content analysis method mostly uses the average weight method to calculate the comprehensive index of corporate social responsibility, but in fact the weights of different indexes are quite different. In the financial industry, the impact of the employee contribution rate on the return on total assets is statistically significant, and its impact on the return on total assets is positive. Since the financial performance of the enterprise requires a process of operation and accumulation, and the process of corporate social responsibility requires a decision-making process and indicators that reflect the financial performance of the enterprise have a certain time, in a specific time period, financial performance to the corporate society The impact of responsibility may also be lagging.

Table 3 Regression results on corporate social responsibility

	Model (EPS)
CSR	0.362
Size	0.012
Growth	0.46

The impact of the employee contribution rate of the enterprise on the return on total assets is statistically significant, and its impact on the return on total assets is positive. The acquisition of CFP requires a process of accumulation, rather than a one-step process, and the investment in CSR needs to compare the cost and return of CSR, and coordinate and communicate with each other to make investment decisions. Employees are stakeholders of human capital. Through investing in employee training, enterprises can promote employees to master skills skillfully, which is conducive to reducing enterprise costs and providing more competitive products and services for enterprises. We should focus on improving the joint efforts of financial risk management, incorporate financial risk management into the corporate culture construction system, form a financial risk management culture, and become a common standard for all employees of enterprises.

5. Conclusions

In summary, although corporate financial risks are ubiquitous and have strong objectivity, through effective financial risk management, corporate financial risks can be prevented and controlled. Through the setting of control variables, it indicates that the company scale and financial leverage will have a negative impact on the current financial performance, the former is less significant, and there is also a lag effect. There is a significant positive correlation between China's social responsibility performance and financial performance. Good social responsibility performance will have a positive impact on the performance of the company, and vice versa. In fulfilling social responsibilities, enterprises pay more attention to fulfilling social responsibilities

for mental workers. These abundant resources will be used in CSR fields such as improving employee benefits, paying taxes according to law, and developing public welfare undertakings to create unique long-term competitive advantages that competitors cannot surpass and imitate. Therefore, CSR performance has been improved, and this improvement effect is more obvious in the later period.

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