

# Empirical Study on Social Responsibility and True Earnings Management of Central Enterprises

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**Abstract.** This paper explores the relationship between the social responsibility of central enterprises and real earnings management. Empirical tests show that "the social responsibility of central enterprises is negatively correlated with real earnings management". Active fulfillment of social responsibility by central enterprises helps to reduce the degree of real earnings management. It is expected that this study will provide reliable experience and suggestions for corporate governance earnings management behavior and advocating active implementation of social responsibility.

## 1. Introduction

Carroll defines corporate social responsibility as "the sum of economic, judicial, ideological, moral and public responsibility that enterprises should assume to the outside world." British scholar Shelton believes that corporate social responsibility should be linked with the responsibility of corporate operators to meet various human needs both inside and outside the industry. Professor Liu Junhai in China believes that "corporate social responsibility means that a company can not only seek profits for its shareholders to the maximum extent as its sole purpose of existence, but also should have the obligation to safeguard and enhance the interests of other social subjects. [3] "Whether foreign or Chinese scholars, their discourse on the concept of corporate social responsibility has its merits. By synthesizing various definitions of corporate social responsibility, we believe that corporate social responsibility is the responsibility and obligation that enterprises undertake in order to satisfy the interests of stakeholders to maximize.

Earnings management is divided into accrued earnings management and real earnings management. Schipper, Healy and Wahlen respectively summarized and summarized this from the perspective of information view and accounting standards formulation. They believe that accrued earnings management is to change the earnings of enterprises by manipulating the accrued items rather than directly acting on the operating cash flow within the allowable scope of accounting standards. However, real earnings management is different. It mainly uses production control, sales control and cost control to construct real transactions that directly affect cash flow or have the possibility of influencing the value of enterprises (Graham, 2005; Gunny, 2005, 2020). The authoritative definition of real earnings management was proposed by Roychowdhury in 2006: Management is the excessive biased manipulation of the normal production and operation activities by the management, aiming at influencing stakeholders' judgment of brokerage performance and the results of financial reports. In short, real earnings management means that managers achieve earnings goals by constructing real trading activities.

## 2. Research hypothesis and design

In this paper, we study the relationship between social responsibility of central enterprises and real earnings management, taking social responsibility of central enterprises as independent variable and real earnings management as dependent variable. Therefore, we speculate that the negative

correlation between corporate social responsibility and real earnings management is dominant. At the same time, as the leader of the industry development, the possibility of the central enterprises perfunctorily fulfilling their social responsibility to cover up the real earnings management behavior is relatively small. Therefore, the positive correlation between the two has little impact on the relationship between them. To sum up, this paper assumes that there is a negative correlation between the social responsibility of central enterprises and real earnings management.

## 2.1 Measurement of True Earnings Management

This paper uses Roychowdury model to measure real earnings management. Three common methods of real earnings management are sales control, production control and cost control. The abnormal operating cash flow (ACFO), abnormal production cost (APROD) and abnormal controllable cost (ADISEXP) are selected as the measurement indicators to measure the degree of real earnings management.

Establish a linear regression model to estimate the normal CFO, PROD and DISEXP values of central enterprises, and then calculate the cash flow of abnormal operating activities (ACFO<sub>t</sub>/A<sub>t-1</sub>), abnormal production costs (ACFOD<sub>t</sub>/A<sub>t-1</sub>) and abnormal controllability costs (ADISEXP<sub>t</sub>/A<sub>t-1</sub>), and introduce a comprehensive variable (SRM-Proxy) as a measure of real earnings management based on Cohen's practice. The measurement index of the overall degree.

$$CFO_t/A_{t-1} = \alpha_0 + \alpha_1 \times (1/A_{t-1}) + \alpha_2 \times (S_t/A_{t-1}) + \alpha_3 \times (\Delta S_t/A_{t-1}) + \varepsilon_t \quad (2-1)$$

$$PROD_t/A_{t-1} = \alpha_0 + \alpha_1 \times (1/A_{t-1}) + \alpha_2 \times (S_t/A_{t-1}) + \alpha_3 \times (\Delta S_t/A_{t-1}) + \varepsilon_t \quad (2-2)$$

$$DISEXP_t/A_{t-1} = \alpha_0 + \alpha_1 \times (1/A_{t-1}) + \alpha_2 \times (S_t/A_{t-1}) + \varepsilon_t \quad (2-3)$$

$$SRM - Proxy_t/A_{t-1} = APROD_t/A_{t-1} - ACFO_t/A_{t-1} - ADISEXP_t/A_{t-1} \quad (2-4)$$

Among them, CFO represents the actual value of net cash flow of operating activities in the company's cash flow statement; PROD represents the actual production cost of the company in that year, and its calculation formula is: production cost = operating cost + inventory change (end inventory - beginning inventory); DISEXP represents the actual value of the company's controllable cost in that year, and its calculation formula is: actual controllable cost = sales cost + initial inventory. Management expenses; SRM-Proxy is the measurement index of comprehensive real earnings management; A<sub>t</sub>, A<sub>t-1</sub> represents the total assets of the company in the T and T-1 years respectively; S<sub>t</sub>, S<sub>t-1</sub> represents the sales of the company in the T and T-1 years respectively; St - St-1 represents the changes of the company's sales in the t year, respectively.

## 2.2 Selection of samples and establishment of models

In this paper, CSR selected the "Top 100 Lists of Social Responsibility of State-owned Listed Enterprises in China" published in Southern Weekend in 2013 and 2014 as the sample. The financial data of real earnings management, return on net assets, asset-liability ratio, ownership concentration and company size all come from CCER economic and financial database. It mainly selected the list of social responsibility of state-owned listed enterprises in China. Enterprise financial statements database, financial indicators analysis database and governance structure database from 2012 to 2014

.After excluding the financial industry and enterprises with incomplete data, the final sample number is 128.

$$SRM-Proxy_t/A_{t-1} = \alpha_0 + \alpha_1 \times CSR_t + \alpha_2 \times ROE_t + \alpha_3 \times LEV_t + \alpha_4 \times H_5_t + \alpha_5 \times SIZE_t + \varepsilon_t$$

## 3. Empirical Research

### 3.1 Descriptive statistics

Table 1 describes statistics

	N	Minimum	maximum	mean	standard deviation
SRM-Proxyt/At-1	128	-.658288293	.945525483	.00062965460	.27092554532
CSRt	128	32.00	65.37	46.2826	7.76422
ROEt	128	-46.947	43.377	10.23198	12.348591
LEVt	128	13.0918	88.3332	64.781262	15.3761808
H5t	128	.04208448	.63539414	.2890896841	.13015203945
SIZEt	128	22.8745591	27.3874466	25.080731340	.9942455790
Valid N (list state)	128				

From Table 4-1, we can see that the minimum value of SRM-Proxyt/At-1 is about -0.658, the maximum value is about 0.946, and the average value is about -0.0006. This shows that there are great differences in the real earnings management of state-owned enterprises in different countries, which is in line with the current social development situation. Secondly, the standard deviation of CSRt of central enterprises is 7.764, which shows that there are great differences in the degree of attention and fulfillment of CSRt among state-owned enterprises in different countries, and that the maximum value of CSRt is 65.37, the minimum value is 32.00 and the average value is 46.28, which confirms the fact that CSRt of enterprises in China is just at the beginning and is still at the primary stage of development. Corporate social responsibility awareness is not high enough, there is a lot of room for progress.

### 3.2 Relevance analysis

Table 2 Relevance analysis

	SRM-Proxyt/At-1	CSRt
SRM-Proxyt/At-1	Pearson correlation	1
	Significance (bilateral)	.319
	N	128
CSRt	Pearson correlation	-.089
	Significance (bilateral)	.319
	N	128

Table 2 shows that  $r=-0.089$  is negative between dependent variables and independent variables, indicating that the real earnings management of central enterprises is negatively related to social responsibility, which is consistent with the assumption that there is a negative correlation between the real earnings management and the social responsibility of central enterprises. But  $|R|=0.089 < 0.5$  and  $P=0.319$  show that the correlation between real earnings management and social responsibility of central enterprises is low.

### 3.3 Regression analysis

Table 3 coefficient a

Model, non	standardized coefficient, Model, non		t	Sig.
	standard coefficient	standard error		
B	Standar	error	version	
(constant)	-.621	.544	-1.141	.256
CSRt	-.002	.003	-.047	.563
ROEt	-.004	.002	-.185	.218
LEVt	.008	.001	.476	.636
H5t	.184	.173	.089	.727
SIZEt	.006	.024	.020	.820

T-test of regression equation shows that the B value represents regression coefficient and the regression coefficient of CSRt is -0.002. Although the correlation with dependent variable SRM-Proxy is weak, it proves once again that the real earnings management degree of central enterprises is negatively correlated with social responsibility. At the same time, through Table 4-5, we can see that besides social responsibility, the real earnings management degree of central enterprises is negatively correlated with the return on net assets of enterprises, and positively correlated with asset-liability ratio, ownership concentration and company size. The sig value of LEVt is less than 0.05 among the five variables in the observation table, so it can be judged that besides the significant correlation between asset-liability ratio and the degree of real earnings management, other variables have no significant impact on real earnings management.

### 4. Conclusion

The empirical research of this paper has the following conclusions: First, the degree of fulfilling social responsibility of the central enterprises is different, and there are great differences in the degree of real earnings management. Secondly, the degree of real earnings management of central enterprises is negatively correlated with social responsibility. Active fulfillment of social responsibility can restrain enterprises from carrying out real earnings management.

The empirical research in this paper shows many limitations. Firstly, the limitations of real earnings management measurement mentioned above. At present, the most commonly used real

earnings management measurement model, Roychowdhury model, is not perfect because it relies too much on scholars' speculation to measure the degree of real earnings management. At the same time, the model has a large amount of calculation, complicated process and is prone to large errors.

### **References**

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