Analysis on Motivation of Corporate Social Responsibility in the View of Social Responsibility and Earnings Management Based on Regression Model

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Abstract

In the context of economic transformation, investors make wrong judgment on investment due to the existing problems such as the false accounting information and distortion of accounting information, which brings huge economic losses. The main reason is that enterprises cannot fulfill their social responsibilities. As the main body of social operation, enterprises provide some investors with valid and true internal information, which is the social responsibility they should fulfill. However, relevant enterprises conduct earnings management with illegal means for some special reasons at this stage, thus directly resulting in distortion of corporate accounting information, which is not conducive to information disclosure of corporate social responsibility. Therefore, this paper simply outlines the related concepts of corporate social responsibility and earnings management, and then analyzes the motivation of corporate social responsibility based on the relationship between social responsibility and earnings management in detail in order to provide theoretical reference for the related enterprises to disclose social information.

Keywords: Enterprise, Social Responsibility, Earnings Management, Analysis.

1. RESEARCH BACKGROUND

1.1 Literature review

Corporate earnings management mainly refers to the moral hazard caused by the enterprise under the conditions of information asymmetry, which seriously affects the operation of capital market (Feng et al., 2016). According to the corporate earnings management and social responsibility, the motivation related to fulfillment of corporate social responsibility is further analyzed in the paper, and a kind of speculative behavior caused by management’s seeking personal gain when fulfilling corresponding social responsibility is found (Li et al., 2007). As the intangible assets of enterprises, it is of great significance for enterprises to fulfill their social responsibilities. As earnings management is a major issue in modern enterprise management, the contract theory is introduced to study the relationship between corporate social responsibility and earnings management to find that there is a certain game relationship (Lin and Wang, 2013). However, due to some moral motives, the relevant managers of modern enterprises take corporate social responsibility “as a tool” to obtain more benefits, and even eliminate or cover up some inappropriate behaviors, which is not good for earnings management (Tang and Li, 2015). The equations of Shanghai and Shenzhen stock market are taken as the research object to mainly study the relationship between corporate earnings management and social responsibility. It is found that there is a positive relationship between the accrued, real earnings management and accounting responsibility of enterprise, and enterprise fulfilling social responsibility is also a kind of morality behavior (Song et al., 2017). At the same time, in order to better identify whether the enterprise assumes corporate social responsibility out of inductive management motivation, the performance of corporate earnings management and responsibility is verified according to the status of corporate earnings management, and the results show that there is no significant difference between them, which in turn determines what role a company plays in society (Deng et al., 2013). From the perspective of stakeholders, there is a positive correlation between corporate social responsibility and earnings management, which shows that in order to cover up the damage caused by social responsibility to the interests of relevant investors, enterprises will better perform accrued earnings management, thus further supporting the theory of opportunism (Song and Teng, 2016).
1.2 Research objectives

In the finance management activities of enterprises, social responsibility and earnings management as the main parts of management are the key link that enterprises must pay attention to in the process of operation (Song and Meng, 2016). From the perspective of corporate reputation, the positive performance of corporate social responsibility can enhance corporate reputation, and implementation of corporate earnings management can reduce the overall reputation of enterprises, while undertaking corporate social responsibility can effectively resist the negative impact of earnings management (Liu et al., 2014). It is found that relevant enterprises must fulfill relevant social responsibilities if they want long-term development through research on the relationship between government regulation and corporate earnings management from the perspective of game theory (Tan et al., 2016). Performance of corporate social responsibility can effectively reduce the abuse of information by internal staff and further increase corporate financial transparency (Deng et al., 2011). It is found that the better the corporate social responsibility is fulfilled, the easier the enterprises operate related projects and profits through the research on relationship between corporate earnings management and social responsibility based on the data from CSMAR, a listed company (Wan and Liu, 2014). Moreover, the higher the earnings management ability of comprehensive income is, the lower the information disclosure level of corporate social responsibility is. However, when large companies are listed, their social responsibility information must be disclosed appropriately. It is not difficult to find out that corporate earnings management has a significant impact on its ability of undertaking society responsibility (Liu and Li, 2011). If the related enterprises can still appropriately disclose social responsibility information under a lot of uncertain factors, they can more disguise the behavior of corporate earnings management, thus leading to a substantial increase in audit fees (Chen et al., 2016). Therefore, it is of great significance to further analyze the motivation of corporate social responsibility based on the relationship between social responsibility and earnings management.

2. DEFINITION OF THEORY RELATED TO SOCIAL RESPONSIBILITY AND EARNINGS MANAGEMENT

After the completion of the first industrial revolution in the United Kingdom, the related businesses have seen rapid development. However, corporate social responsibility has not been better practiced in corporate management, and corporate social responsibility is only limited to the personal behavior of corporate managers. At present, the problems existing in corporate social responsibility mainly include the following points. First, how to shoulder the social responsibilities better has become a major problem faced by enterprises. Related enterprises should not only meet the interests of shareholders, but also ensure the interests of stakeholders, such as employees, suppliers, retailers and consumers in the operation process. The main problem for enterprises to shoulder their social responsibilities is how to reasonably distribute the interests of investors after balancing the interests of shareholders. Secondly, there are contradictions between how enterprises operate and social responsibility. At the present stage, the operation modes of enterprises are contradictory to their ability to undertake social responsibilities. How to ensure that enterprises can afford to assume their social responsibility while ensuring proper corporate governance has become a major problem facing business management. Thirdly, enterprises are less innovative when they fulfill their social responsibilities. In order to better match the scientific view of development, modern enterprises lack certain innovation in the fulfillment of social responsibility, thus making it difficult to create a new atmosphere for business operation, which is not conducive to enhancing the international competitiveness of enterprises.

United States, as a major branch of the empirical accounting research, is closely related to the financial and operational performance of an enterprise, which affects the overall operation and development of a company to a certain extent. Combined with the current research on corporate earnings management, corporate earnings management is divided into two major aspects: real earnings management and accrued earnings management. Among them, the real earnings management can be learned mainly through the following estimation model:

\[
\frac{\text{PROD}_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 S_{it} + \alpha_3 S_{it} + \alpha_4 \Delta S_{it} + \varepsilon_i
\]  

(1)

\[
\frac{\text{CFO}_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 S_{it} + \alpha_3 S_{it} + \alpha_4 \Delta S_{it} + \varepsilon_i
\]  

(2)

\[
\frac{\text{DISEXP}_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 S_{it} + \alpha_3 S_{it} + \varepsilon_i
\]  

(3)
In the above equation, $PROD_{i,t}$ mainly refers to the total cost of production of company $i$ in year $t$; $CFO_{i,t}$ mainly refers to the cash flow of business activities of company $i$ in year $t$; $DISEXP_{i,t}$ mainly refers to the appropriate expenses of company $i$ in year $t$; $A_{i,t-1}$ mainly refers to the total assets of company $i$ at the beginning of year $t$; $S_{i,t}$ mainly refers to the total operating income of company $i$ in the year $t$; $\Delta S_{i,t}$ mainly refers to the income changes of company $i$ in year $t$ compared with the previous year. According to the above explanation, it can be seen that the above equation is used to make classification and statistics of relevant corporate earnings, where let $RM_{i,t} = Ab_{t}PROD_{i,t} - Ab_{t}CFO_{i,t}Ab_{t}DISEXP_{i,t}$, the comprehensive management indicators of corporate earnings can be obtained.

The accrued earnings management can be learned through calculation of the following models:

$$TA_{i,t} = NI_{i,t} - CFO_{i,t}$$  \hspace{1cm} (4)

$$\frac{TA_{i,t}}{A_{i,t-1}} = \beta_0 * \frac{1}{A_{i,t-1}} + \beta_1 * \frac{\Delta REV_{i,t}}{A_{i,t-1}} + \beta_2 * \frac{PPE_{i,t}}{A_{i,t-1}} + \epsilon_i$$  \hspace{1cm} (5)

$$\frac{NDA_{i,t}}{A_{i,t-1}} = \beta_0 * \frac{1}{A_{i,t-1}} + \beta_1 * \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} + \beta_2 * \frac{PPE_{i,t}}{A_{i,t-1}}$$  \hspace{1cm} (6)

$$DA_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}} - \frac{NDA_{i,t}}{A_{i,t-1}}$$  \hspace{1cm} (7)

In the above equation, $TA_{i,t}$ mainly refers to the total accrued profit of company $i$ in year $t$; $NI_{i,t}$ mainly refers to the relative net profit of company $i$ in year $t$; $CFO_{i,t}$ mainly refers to the cash flow of company $i$ in year $t$; $A_{i,t-1}$ mainly refers to the total assets of company $i$ at the beginning of year $t$; $\Delta REV_{i,t}$ mainly refers to the business changes of company $i$ in year $t$ compared with previous year; $PPE_{i,t}$ mainly refers to the fixed assets of company $i$ in year $t$; $NDA_{i,t}$ mainly refers to the available assets of company $i$ in year $t$; $\Delta REC_{i,t}$ mainly refers to the changes in receivables of company $i$ in year $t$ compared with previous year; $DA_{i,t}$ mainly refers to the accrued profits that can be used for related events of company $i$ in year $t$. Combined with the above equation, the accrued profits of a company can be obtained, thus knowing the status of accrued management of the company.

3. ANALYSIS OF MOTIVATION OF CORPORATE SOCIAL RESPONSIBILITY BASED ON THE RELATIONSHIP BETWEEN SOCIAL RESPONSIBILITY AND EARNINGS MANAGEMENT

3.1 Research assumptions and data sources

It can be seen from the above-mentioned relevant theoretical analysis that the performance of corporate social responsibility is mainly due to the ethical behavior of managers. In order to reflect the sense of corporate social responsibility, enterprises enhance the transparency of financial performance, thereby reducing the related earnings management. The behavior of performance of corporate social responsibility is mainly out of opportunism in order to avoid the relevant management risk of enterprises and establish a good image of corporate management for society, so as to cover up corporate earnings management. Therefore, it can be seen that there is a significant correlation between corporate social responsibility and earnings management. Corporate earnings management is divided into accrued and real earnings management to research the relationship between corporate social responsibility and earnings management. Bases on this, the following assumptions are proposed in the paper:

H1: There is a direct proportion relationship between performance of corporate social responsibility and accrued earnings management. The better the corporate social responsibility is fulfilled, the higher the degree of corporate earnings management is, which mainly shows that the motivation of corporate social responsibility is out of opportunism.

H2: There is an inverse proportion relationship between the ability of an enterprise to fulfill its social responsibility and its real earnings management. In case an enterprise can better assume social responsibility, its earnings management will be more restrained within the enterprise. This shows that the motivation of corporate social responsibility is out of morals.
In order to verify the above assumptions, the manufacturing-related enterprises in Shanghai and Shenzhen from 2012 to 2016 are selected as the research sample in the paper, excluding the data from ST companies and the company with a large number of lost data. Finally, the data from 198 enterprises is obtained and used for the following empirical analysis.

### 3.2 Variable selection and model building

The relevant variables are set based on the above theoretical analysis, as shown in Table 1.

<table>
<thead>
<tr>
<th>Variable Selection and Description</th>
<th>Variable setting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variable</strong></td>
<td></td>
</tr>
<tr>
<td>Corporate social responsibility</td>
<td>CSR</td>
</tr>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
</tr>
<tr>
<td>Accrued earnings management of enterprise</td>
<td>DA</td>
</tr>
<tr>
<td>Abnormal management costs generated in enterprise</td>
<td>Ab_PROD</td>
</tr>
<tr>
<td>Total quantity of real earnings management of enterprise</td>
<td>RM</td>
</tr>
<tr>
<td><strong>Control variable</strong></td>
<td></td>
</tr>
<tr>
<td>Scale of enterprise</td>
<td>SIZE</td>
</tr>
<tr>
<td>Debt ratio of enterprise</td>
<td>LEV</td>
</tr>
</tbody>
</table>

The following model is established combined with the variables set above:

\[
DA_{i,j} = \beta_0 + \beta_1\text{CSR}_{i,j} + \beta_2\text{RM}_{i,j} + \beta_3\text{SIZE}_{i,j} + \beta_4\text{LEV}_{i,j} + \varepsilon
\]  
\[
\text{Ab_PROD}_{i,t} = \beta_0 + \beta_1\text{CSR}_{i,j} + \beta_2\text{DA}_{i,j} + \beta_3\text{SIZE}_{i,j} + \beta_4\text{LEV}_{i,j} + \varepsilon
\]  
\[
\text{RM}_{i,j} = \beta_0 + \beta_1\text{CSR}_{i,j} + \beta_2\text{DA}_{i,j} + \beta_3\text{SIZE}_{i,j} + \beta_4\text{LEV}_{i,j} + \varepsilon
\]

### 3.3 Descriptive statistics and test of validity and reliability

SPSS 20.0 software is mainly used in the research to calculate the average and standard deviation of the above variables, so as to accurately make statistics of the overall characteristics of the above model, and the related statistical results are shown in Table 2. According to the data in Table 2, it can be seen that the deviations of variables set above are less than 2, indicating that the above variables are well aggregated, which proves that the overall model setting is valid and further data inspection and analysis can be conducted.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standard deviation</th>
<th>Mean value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR</td>
<td>0.865</td>
<td>4.35</td>
<td>320</td>
</tr>
<tr>
<td>DA</td>
<td>1.096</td>
<td>3.88</td>
<td>320</td>
</tr>
<tr>
<td>Ab-PROD</td>
<td>1.154</td>
<td>4.00</td>
<td>320</td>
</tr>
<tr>
<td>RM</td>
<td>0.990</td>
<td>3.80</td>
<td>320</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.807</td>
<td>4.32</td>
<td>320</td>
</tr>
<tr>
<td>LEV</td>
<td>0.803</td>
<td>4.25</td>
<td>320</td>
</tr>
</tbody>
</table>

In order to further test the variables in the model, the reliability of these variables is tested by reference to the standard of Cronbach’s alpha coefficient. According to the test results, it can be seen that the above variables are within the standard of Cronbach’s alpha coefficient and suitable for related research. Meanwhile, the relevant degree of fitting between the models is analyzed by the method for test of validity. The test results show that the relevant fitting index in the model is NFI = 0.986, IFI = 0.957, PNFI = 0.963, RFI = 0.982, TTU = 0.875, which meets the standard requirements of validity test. It indicates that the overall fitting of the above model is up to standard and all the variables have good adaptability, which is suitable for further analysis.
3.4 Result analysis

In the paper, the regression analysis method is mainly used to analyze the results of the above model. Table 3 shows the specific results of regression.

Table 3 Result of Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>DA</th>
<th>Ab-PROD</th>
<th>RM</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR</td>
<td>0.0988</td>
<td>-0.0542</td>
<td>-0.1544</td>
</tr>
<tr>
<td></td>
<td>2.59***</td>
<td>-3.21***</td>
<td>-5.45***</td>
</tr>
<tr>
<td>DA</td>
<td>-</td>
<td>0.0524</td>
<td>0.2131</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.35***</td>
<td>8.52***</td>
</tr>
<tr>
<td>RM</td>
<td>0.4231</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>8.51***</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.0213</td>
<td>0.0160</td>
<td>0.0195</td>
</tr>
<tr>
<td></td>
<td>-1.20</td>
<td>2.11**</td>
<td>1.66*</td>
</tr>
<tr>
<td>LEV</td>
<td>0.0059</td>
<td>0.0482</td>
<td>-0.0254</td>
</tr>
<tr>
<td></td>
<td>0.11</td>
<td>1.63*</td>
<td>-0.055</td>
</tr>
</tbody>
</table>

Note: *: Significant at the level of 10%; **: Significant at the level of 5%; ***: Significant at the level of 1%

According to Table 3, the overall result of regression analysis is relatively low, mainly due to the following two points. Firstly, the accrued earnings management is mainly derived by the modified regression model. Secondly, the data in Table 3 mainly comes from the changes of data in the group, which generally shows the lower characteristics in the results. However, the result demonstration is not based on the data size when the empirical analysis is conducted. Therefore, based on the above data, the research results are summarized in two aspects as follows.

On the one hand, it is assumed that H1 is correct, namely, there is a positive correlation between corporate social responsibility and accrued earnings management. This shows that the leaders of enterprises will control the accrued profits to a certain degree in order to better fulfill their social responsibilities and cover up their behaviors damaged to the rights and interests of stakeholders. This conclusion further illustrates that the motivation of corporate social responsibility is mainly due to opportunism. The main reason for this phenomenon is that the leader of the enterprise undertakes the corresponding social responsibility in the course of business operation by the behavior of “opportunism” to promote the increase in corporate investment cost, which is not conducive to maximization of the interests of investors and more difficult to reflect social value of the enterprises.

On the other hand, it is assumed that the above hypothesis H2 is correct, namely, there is a negative correlation between corporate social responsibility and real earnings management. This shows that positive attitude of enterprises effectively inhibits their real earnings management in the performance of corporate social responsibility. This conclusion mainly supports the moral behavior of motivation of corporate social responsibility, thus making corporate managers randomly change corporate earnings in the performance of social responsibility according to the hypotheses of avoiding short sight, which reduces the intended target of the enterprises and is not conducive to their long-term development.

4. CONCLUSION

In conclusion, through analysis of the motivation of corporate social responsibility based on the relationship between social responsibility and earnings management, it is found that the motivation of corporate social responsibility comes from both opportunistic and moral behavior, and enterprises must attach importance to corporate earnings management for better fulfilling their social responsibilities. Therefore, the strategic system audit oriented by the corporate responsibility risk should be implemented and internal information disclosure organization should be established to effectively solve the problems existing in the enterprises when they assume the social responsibility, and maximize their ability to assume social responsibility, thus promoting the overall economic efficiency of enterprises.
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