

# Environmental Information Disclosure, Reputation Capital and Performance of Enterprises under the Development Mode of Ecological Economy

Zhengxuan Zhao<sup>1</sup>

Corresponding author: zzzzx1998@163.com\*

Shanghai Maritime University, China<sup>1</sup>

**Abstract:** Over the past decades, the rapid development of economy has deepened environmental pollution. This paper investigates whether companies with high level of environmental information disclosure enjoy higher corporate performance under the development mode of ecological economy, and how reputation capital affects this relationship. To test this hypothesis, this study uses a sample of 161 Chinese listed pharmaceutical companies from 2015 to 2019. Strong evidence has been found that the disclosure of environmental information will hinder corporate performance, and the increase of environmental information disclosure will reduce corporate performance. In addition, through factor analysis of reputation capital, this study finds that good reputation capital can improve corporate performance, and reputation capital has a negative impact on environmental information disclosure and corporate performance. These results resolve, to some extent, the existing divergence of interests of enterprises with respect to environmental activities and ecological economy.

**Keywords-**Environmental information disclosure, Reputation capital, Enterprise performance

## 1. INTRODUCTION

The rapid economic development has greatly deepened the environmental pollution in China. To maintain the sustainable development of the ecological environment, China is committed to building an ecological economic development model and accelerating the “construction of ecological civilization”. While the goal of most firms is to maximize profit and value. Environmental information disclosure not only increases the debt cost of enterprises, but also brings some business risks. Thus, the study of the impact of environmental information disclosure on enterprise performance is not only related to the effective protection of the ecological environment and the maintenance of ecological balance, but also related to the long-term development of enterprises. Based on this, this paper discusses the motivation and

achievement of environmental information disclosure, and the governance effect of reputation capital to get beneficial enlightenment on the level of environmental information disclosure and corporate performance.

Good environmental information disclosure can not only maintain the ecological balance, but also bring high-quality reputation for enterprises, and expand the popularity and brand influence of enterprises. In this regard, this paper uses a sample of 161 pharmaceutical listed companies as research sources, innovatively introduces reputation capital as intermediary variable, uses factor analysis to measure reputation capital, and empirically analyses the relationship between environmental information disclosure, reputation capital and enterprise performance to optimize the level of environmental information disclosure, enhance the competitiveness of enterprises, and promote the stability and development of ecological economy.

## **2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **2.1 Environmental information disclosure and firm performance**

Environmental information disclosure can reduce the cost of equity capital (S. Marshall et al., 2009) <sup>[1]</sup>. Listed companies in heavy pollution industries generally consume too much non-renewable energy, and the quality of environmental information disclosure is generally low (R.J. Li, X. Zhai, 2018)<sup>[2]</sup>and uneven (L. Wang, 2020)<sup>[3]</sup>. Many factors affect the quality of environmental information disclosure, including the degree of marketization (L.P. Wang et al., 2020)<sup>[4]</sup>, senior management education (J.Z. Li et al., 2018) <sup>[5]</sup>, Government supervision (L.P. Su et al., 2020) <sup>[6]</sup>, institutional restraint policies and incentive policies (Z.Q. Liu et al., 2020) <sup>[7]</sup>, etc. Most studies found that the quality of environmental accounting disclosure has a significantly positive coefficient on corporate performance (M. Plumlee et al., 2015) <sup>[8]</sup>, among which the enterprises that can achieve energy efficient use and reduce energy loss are more prominent.

While many scholars have found that there is a negative coefficient on environmental disclosure and corporate performance (P.B. Shane et al., 1983) <sup>[9]</sup>. The possibility of independent disclosure of corporate social responsibility is related to the higher cost of equity capital in the previous year (D.S. Dhaliwal et al., 2011) <sup>[10]</sup>. Undertaking social disclosure responsibility not only cannot provide economic advantages, but also can increase the environmental cost of enterprises (P.K. Williams et al., 2004) <sup>[11]</sup>. Due to the high economic pursuit and low environmental illegal cost, China's environmental information disclosure policy is basically invalid in the financial market (Y. Fang et al., 2018) <sup>[12]</sup>. Environmental punishment does not reduce the absolute pollution reduction level of firms, and increases the debt cost and market risk of enterprises (Y.K. Xu et al., 2020) <sup>[13]</sup>. The public consider the disclosure of environmental information will damage the ecological environment, thus causing adverse effects on the corporate reputation and hindering the promotion of corporate value (J.L. Gao et al., 2019) <sup>[14]</sup>.

A small number of scholars have conducted research from the perspective of developed and developing countries (P. Clarkson et al., 2010)<sup>[15]</sup>, and believe that the level of environmental information disclosure has no significant relationship with enterprise performance (D. Cormier

et al., 2007) <sup>[16]</sup>. Through media attention, environmental information disclosure can affect enterprise performance (H.Y. Li et al., 2016) <sup>[17]</sup>. This leads to the following hypothesis:

**H1:** Under the development mode of ecological economy, the level of environmental information disclosure has a positive correlation with corporate performance.

**H2:** Environmental information disclosure has a time lag effect on enterprise performance.

## **2.2 Reputation capital and firm performance**

Reputation is a valuable investment in production and a social form of capital, and reputation depends on the beliefs and opinions of others in society (M.O. Jackson, 2020) <sup>[18]</sup>. Under the development mode of ecological economy, firms with less energy consumption have fewer impact on the ecological environment and can build a higher quality reputation. Reputation is a potential source of value and reputation capital can create value for enterprises (E. Rosamond, 2020) <sup>[19]</sup>. Some studies show that there is no significant coefficient on corporate responsibility and financial performance, but the mediator effect of reputation capital can reduce business conflict (G. Heal, 2005) <sup>[20]</sup>. Some studies also show that reputation capital can positively affect the concept of enterprise disclosure, but when enterprises are in crisis, the high reputation quality established before the crisis cannot positively affect consumers' views on the severity of the problem (G. Grunwald et al., 2010) <sup>[21]</sup>. Positive reputation capital can increase the information transparency of enterprises, win more talents and investment for firms and improve the performance of enterprises (H. Zou et al., 2018) <sup>[22]</sup>. Good environmental information disclosure and positive reputation capital can enhance the confidence of investors, establish the green ecological brand image of enterprises in the public, and promote enterprise performance (F.G. Xiang et al., 2020) <sup>[23]</sup>. This leads to the following hypothesis:

**H3A:** Under the development mode of ecological economy, high quality reputation capital helps to improve the level of environmental information disclosure.

**H3B:** the higher the reputation capital, the more significant the positive moderating relationship between the level of environmental information disclosure and corporate performance.

## **3. RESEARCH DESIGN**

### **3.1 Sample selection**

This paper includes Chinese listed firms drawn from pharmaceutical industries as research samples, mainly for two reasons: (1) Chemical industry and other industries are paid more attention in heavy pollution industries, while the related research on the pharmaceutical industry is less. (2) Pharmaceutical industry is closely related to people's daily life, which is of great significance to the study of intermediary variable reputation capital.

This paper uses a sample of 161 Chinese listed pharmaceutical companies from 2015 to 2019. To ensure the reliability of the selected samples, the data are processed as follows: (1) To ensure the stability of the data, the extreme values are excluded, and the companies with ST and \*ST marks are excluded; (2) to ensure the integrity and comprehensiveness of data, companies with missing data are eliminated. A total of 161 sample companies were selected. This paper studies

the financial data mainly from CSMAR. Excel 2016, stata15 and spss23 were used to sort out and analyse the data.

### 3.2 Variable measurement

#### 3.2.1 Dependent variable

Enterprise performance. The enterprise performance studied in this paper mainly refers to the profitability of the enterprise. Most of the existing studies use Return on equity to describe it. Therefore, this paper continues to use this method to measure the enterprise performance, which is recorded as ROE.

#### 3.2.2 Independent variable

The level of environmental information disclosure. Under the development mode of ecological economy, reducing the consumption of ecological resources, especially the consumption of no-renewable energy, and reducing the emission of waste gas and waste water is an important measure for enterprises to maintain the ecological environment. The main research method for the level of environmental information disclosure is content analysis (G.Q. Yang et al., 2020) [24] at present. The selected environmental disclosure standards are studied by assigning values and scoring. This paper divide the environmental disclosure indicators into five indicators: environmental management disclosure, disclosure carrier ,environmental liability disclosure, environmental governance disclosure, environmental regulation disclosure and environmental protection input. These indicators are set to obtain the total score. The specific evaluation indexes are shown in Table 1.

**TABLE I.** ENVIRONMENTAL INFORMATION DISCLOSURE INDICATORS.

First indicators	Secondary indicators
1.ENV management disclosure (disclosure is 1, otherwise 0)	ENV protection concept, aims (0, 1,2)
	ENV management system (0,1)
	ENV education (0, 1)
	ENV honor or award (0,1)
	ENV emergency response mechanism (0, 1)
2.Disclosure carrier (disclosure is 1, otherwise 0)	Annual report (0, 1)
	Social responsibility report (0,1)
	ENV responsibility report (0, 1)
3. ENV liabilities disclosure (0 for no description, 1 for qualitative description and 2 for quantitative description)	Discharge of waste water (0,1,2,4)
	Discharge of waste gas (0,1,2,4)
	Emission of smoke and dust (0,1,2)
	Output of industrial solid waste (0,1,2)
4.ENV governance disclosure (0 for no description, 1 for qualitative description and 2 for quantitative description)	waste gas, waste water control (0, 1, 2, 4)
	Dust and smoke control (0, 1, 2)
	Disposal of solid waste (0,1,2)
	Noise, light pollution and radiation control (0,1,2)

5.ENV regulation disclosure (disclosure is 1, otherwise 0)	Implementation of cleaner production (0,1,2) Passed ISO14001 certification (0,1) Passed ISO9001 certification (0,1) Key pollution monitoring units (0,1) Pollutant discharge up to standard (0, 1)
6. ENV protection input (input is 1, otherwise it is 0)	ENV protection investment (0, 1)

---

Summarize the obtained environmental information disclosure scores, and find the optimal disclosure score (the optimal disclosure score in this paper is 39). Use the environmental information disclosure level index EDI to measure the environmental information disclosure status of enterprises, and the environmental information disclosure level index is between 0-1. The higher the index of environmental information disclosure, the better the level of environmental information disclosure.

$$EDI = \text{total score} / \text{optimal disclosure score}$$

### 3.2.3 Mediator variable

Reputation capital. Firms that maintain ecological economy and increase the development and utilization of renewable energy and alternative energy are more likely to gain good reputation. Some domestic scholars use the *FORTUNE* ranking to measure corporate reputation capital, while *FORTUNE* is less involved in Chinese enterprises, it is difficult to have a comprehensive study on reputation capital. Thus, to evaluate reputation capital, this paper refers to the method adopted by X.H. Tian et al. (2021) [25], establishes a reputation evaluation system, selects appropriate indicators for factor analysis, and uses spss23 to get the comprehensive score of reputation capital. Specific indicators are shown in Table 2.

**TABLE II.** REPUTATION CAPITAL INDICATORS.

Stakeholders	Evaluating indicator
Shareholder	Return on total assets
	Earnings per share
	Four major international auditors
Creditor	Debt asset ratio
	Current ratio
	Long-term liability rate
Consumers and suppliers	Main income growth rate
Staff	Executive compensation
Government	Sustainable growth rate
Community	Board size
	Proportion of independent directors

### 3.2.4 Control variables

Table 3 provides a description of the main variables. To ensure the stability and accuracy of the empirical results, this paper selects the following seven control variables: enterprise size, ownership concentration, audit opinion type, net assets per share, size of board of supervisors, equity multiplier, shareholding ratio of institutional investors.

**TABLE III.** VARIABLE DESCRIPTIONS.

<b>Variables properties</b>	<b>Variable name</b>	<b>Variable symbol</b>	<b>Variable description</b>
Explained variable	Enterprise performance	ROE	Measurement of return on equity
Explaining variable	ENV information disclosure level	EDI	Total score / optimal disclosure score
Mediator variable	Reputation capital	REP	Factor analysis was used to calculate the comprehensive score of 11 indexes
Control variables	Enterprise scale	SIZE	Logarithm of total assets at the end of the year
	Ownership concentration	HERF	Shareholding ratio of the largest shareholder
	Types of audit opinions	AUDIT	Unqualified opinion is 1, otherwise it is 0
	Net asset per share	BVPS	Total shareholders' equity / total shares numbers
	Board of supervisors size	SUPSIZE	Number of supervisors at the end of the year
	Equity multiplier	EM	Total assets / total shareholders' equity
	Shareholding ratio of institutional investors	INST	Shares held by all institutional investors / total shares of the enterprise

### 3.3 Regression model

To test H1, this paper employs regression models (1) with enterprise performance:

$$ROE = \alpha_0 + \alpha_1 EDI + \alpha_2 X + \varepsilon_1 \quad (1)$$

X contains seven control variables selected in this paper.

Our second regression model was constructed to test H2:

$$ROE = \alpha_0 + \alpha_1 EDI_{t-3} + \alpha_2 X + \varepsilon_1 \quad (2)$$

$EDI_{i,t-3}$  represents the indicator that the environmental information disclosure index lags behind for three years.

This paper constructs regression model (3) (4) to test H3A and H3B:

$$ROE = \beta_0 + \beta_1 EDI + \beta_2 REP + \beta_3 X + \varepsilon_2 \quad (3)$$

$$ROE = \gamma_0 + \gamma_1 EDI + \gamma_2 REP + \gamma_3 EDI * REP + \gamma_4 X + \varepsilon_3 \quad (4)$$

## 4. EMPIRICAL ANALYSIS

### 4.1 Descriptive statistics

Table 4 provides descriptive statistics for the entire sample and by industry. It provides statistics that the maximum ROE of listed pharmaceutical companies from 2015 to 2019 is 0.67, and the minimum is -6.58, indicating that there is a large difference in performance among pharmaceutical companies in China. Under the development mode of ecological economy, the average EDI is 0.30, the standard deviation is 0.21, the minimum is 0.03, and the maximum is 1, indicating that the overall EDI in China is low, and there is a large difference in the level of disclosure among enterprises, which indicates that there are still many defects in the incomplete information of Chinese listed companies. The average reputation capital of intermediary variable is 0.0001, which indicates that the reputation of Chinese enterprises is generally low, and that the standard deviation is 35.15. The minimum value is -144.49, while the maximum value is 226.67, indicating that the reputation of Chinese firms is uneven, and that the reputation difference is large.

TABLE IV. DESCRIPTIVE STATISTICS.

Symbol	Average	S.D.	Min	Max
ROE	0.0645	0.3265	-6.5799	0.6656
EDI	0.3011	0.2117	0.0286	1
REP	0.00001	35.1458	-144.49	226.67
SIZE	22.1577	0.8995	19.8849	25.0556
HERF	32.6344	13.3597	6.25	69.16
AUDIT	0.9799	0.1405	0	1
BVPS	5.4599	4.2165	0.1534	43.5243
SUPSIZE	3.4252	0.9215	1	7
EM	1.5949	0.7123	0.3574	8.7587
INST	43.2381	23.2395	0.0478	91.4555

## 4.2 Correlation analysis

Table 5 presents Spearman correlations for the primary variables included in our study. The correlation coefficients in this paper are less than 0.5, indicating that there is no multicollinearity among variables.

TABLE V. SPEARMAN CORRELATION STATISTICS.

	ROE	EDI	REP	SIZE	HERF	AUDIT	BVPS	SUPSIZE	EM	INST
ROE	1.000									
EDI	0.006	1.000								
REP	<b>0.385</b>	<b>0.222</b>	1.000							
SIZE	<b>0.080</b>	<b>0.377</b>	<b>0.473</b>	1.000						
HERF	<b>0.116</b>	<b>0.144</b>	<b>0.109</b>	<b>0.171</b>	1.000					
AUDIT	<b>0.126</b>	<b>0.055</b>	<b>0.119</b>	<b>0.075</b>	<b>0.111</b>	1.000				
BVPS	<b>0.142</b>	<b>0.122</b>	<b>0.343</b>	<b>0.417</b>	<b>0.134</b>	0.041	1.000			
SUPSIZE	0.042	<b>0.180</b>	<b>0.252</b>	<b>0.256</b>	<b>0.121</b>	0.027	<b>0.133</b>	1.000		

Table 5(continued)

	ROE	EDI	REP	SIZE	HERF	AUDIT	BVPS	SUPSIZE	EM	INST
EM	<b>-0.472</b>	0.019	<b>0.216</b>	<b>0.236</b>	<b>-0.069</b>	-0.037	<b>-0.120</b>	<b>0.239</b>	1.000	
INST	<b>0.115</b>	<b>0.146</b>	<b>0.260</b>	<b>0.393</b>	<b>0.485</b>	0.044	<b>0.282</b>	<b>0.250</b>	0.014	1.000

All variables are defined in Tables 3. Correlations significant at <0.05 are bolded.

## 4.3 Empirical results

Table 5 shows the regression results of model (1) (2) (3) (4). Model (1) represents the significantly negative coefficient on EDI and ROE at the level of 1%, which is inconsistent with the original hypothesis. It documents that the improvement of enterprise environmental information disclosure level does not increase enterprise value necessarily under the development mode of ecological economy, but will reduce the financial performance of enterprises. There are the following reasons:

- 1.Environmental information disclosure is lack of standardization and integrity. Although China has issued some environmental laws and regulations, these regulations are relatively broad, and there is no strict and unified provisions. The decision-making reference range of external information users does not include the lack of effective environmental information, resulting the level of environmental information disclosure has no impact on enterprise performance.
2. Environmental information disclosure has lag effects. This lag may be delayed for many years. Thus, the corporate image of actively fulfilling social responsibility will not improve corporate performance in the short term.
3. Environmental information is untrue. Due to the relevant regulations, Chinese firms have to disclose environmental information. But firms are likely to issue false environmental information, which has the opposite effects with the financial performance of enterprises.

Model (2) indicates that there is a positive correlation between ROE and  $EDI_{t-3}$ . Although there is no significant coefficient, it has changed from a significant negative coefficient to a positive



coefficient, indicating that environmental information disclosure may have a certain lag effect on enterprise performance. If the lag is more than three years, the impact of enterprise environmental information disclosure will not be in the current output. It has a certain time delay effect.

Model (3) represents that there is a significant positive correlation between REP and ROE at the level of 1%, this result is consistent with our expectation and prior research. Higher quality positive disclosures are positively associated with reputation capital. Model (4) represents the significantly negative coefficient on EDI \* REP and ROE at the level of 1%, which indicates that reputation capital plays a reverse mediating role in the improvement of enterprise performance, inconsistent with the original hypothesis. This paper documents that the negative reputation may affect the performance of the enterprise. The information disclosed by enterprises includes not only the environmental protection honors and awards obtained by enterprises, but also the environmental protection violations of enterprises. Stakeholders are more sensitive to the negative information of enterprises. Negative reputation will reduce the trust of stakeholders to the enterprise, and the performance of the firm.

**TABLE VI.** REGRESSION MODEL RESULTS.

Variable	Model(1)	Model(2)	Model(3)	Model(4)
	ROE(1)	ROE(2)	ROE(3)	ROE(4)
EDI	-0.1423*** (-2.80)		-0.1951*** (-4.58)	-0.1571*** (-3.60)
EDIt-3		0.0283 (0.19)		
REP			0.0051*** (18.33)	0.0061*** (15.30)
EDI*REP				-0.0031*** (-3.48)
SIZE	0.0749*** (5.24)	0.0091*** (7.83)	0.0203 (1.64)	0.0259** (2.10)
HERF	0.0007 (0.82)	-0.0054** (-2.19)	0.0009 (1.28)	0.0011 (1.61)
AUDIT	0.2065*** (2.93)	-0.0522 (-1.48)	0.0928 (1.56)	0.0823 (1.40)
BVPS	-0.0021 (-0.79)	0.0043** (2.23)	-0.011*** (-4.80)	-0.0107*** (-4.71)
SUPSIZE	0.0465*** (4.04)	0.1555 (1.09)	0.0291*** (3.01)	0.028*** (2.91)
EM	-0.2515*** (-16.60)	-0.0029 (-0.47)	-0.2906*** (-22.60)	-0.2947*** (-22.98)
INST	0.0002 (0.31)	-0.0284 (-1.02)	-0.0003 (-0.75)	-0.0005 (-1.08)
CONS	-1.5315*** (-5.13)	1.0281 (1.35)	-0.0086 (-0.03)	-0.1214 (-0.46)
R <sup>2</sup>	0.2924	0.249	0.5045	0.5121

\*, \*\*and\*\*\* significance at 10, 5, and 1 %, respectively.

## 5. ROBUSTNESS TEST

Under the development mode of ecological economy, firms need a lot of expenditure to fulfill their environmental responsibilities and disclose environmental information, which hinders business performance. In other words, the low level of environmental information disclosure may be the cause and result of the poor performance of enterprises. Referring to the method of G.Q. Yang (2020)<sup>[26]</sup>, this paper uses the method of replacing core variables to test the empirical results: (1) Use the return on assets to measure enterprise performance; (2) the score of each environmental information disclosure index is used to measure the level of enterprise environmental information disclosure. In the case of replacing the core variables, the coefficient symbols of different models, the significance of each core variable and the relationship between the goodness of fit  $R^2$  did not change significantly, which confirmed the robustness of this conclusion.

## 6. CONCLUSIONS

This paper summarizes the development mode of ecological economy, and selects ROE as the indicator of enterprise performance, EDI as the indicator of environmental information disclosure. Analysis method has been used to score the reputation index, and 161 pharmaceutical listed companies have been taken as research samples to study the relationship among environmental information disclosure, reputation capital and enterprise performance. The conclusions are as follows: under the development mode of ecological economy, the level of environmental information disclosure in the pharmaceutical industry is low, the content and standard of environmental information disclosure in China are lack of unity. There is a negative coefficient on the level of environmental information disclosure and corporate performance. The disclosure of environmental accounting information of listed companies cannot improve corporate performance, but increases the operating costs of firms, which has a negative impact on corporate performance. The impact of environmental information disclosure on enterprise performance is likely to have a lag effect, but this effect lasts too long. Reputation capital has a positive coefficient on firm performance, good reputation capital can enhance firm value. Reputation capital plays a reverse role in regulating the relationship between environmental information disclosure and performance. This may be due to excessive environmental pollution and excessive energy consumption in corporate disclosure, which has a negative impact on corporate reputation.

To speed up the construction of "ecological civilization", this paper proposes solutions to improve the current level of disclosure and gives full play to the positive effect of information disclosure on enterprise performance. From the government level, first, the government should standardize and rigorous environmental information disclosure rules, establish a set of scientific evaluation methods. Second, the government should strengthen supervision and audit of environmental information. Third, the government should combine kindness with prestige, for example, she can commend the firms with good performance in disclosing environmental information, criticize and punish firms with poor information disclosure. For enterprises, first, enterprises should strengthen the attention of management and establish an effective performance evaluation system. Second, the use of media and public opinion to vigorously establish a green ecological brand image.

The data in this paper are limited to the short-term data from 2015 to 2019. We hope to carry out further research on the long-term impact of environmental information disclosure on enterprise performance for more than ten years.

## REFERENCES

- [1] S. Marshall, D. Brown, M. Plumlee, *Academy of Management Annual Meeting Proceedings, The Impact of Voluntary Environmental Disclosure Quality on Firm Value*[C]. (2009)
- [2] R.J. Li, X. Zhai, *Friends of accounting, Public pressure and environmental information disclosure: Empirical Evidence from Listed Companies in heavy pollution industry.* 23,76-83 (2018)
- [3] L. Wang, *Accounting news, The quality evaluation of environmental information disclosure of listed companies based on poset theory.* 13, 120-123+160 (2020)
- [4] L.P. Wang, S.Q. Li, C. Li, *Resources and environment in the Yangtze River Basin, Research on the impact of environmental information disclosure quality on Enterprise Value:Based on the perspective of marketization.* 29 (05),1110-1118 (2020)
- [5] J.Z. Li, Z.Q. Liang, *Friends of accounting, The impact of management governance on the quality of Environmental Information Disclosure: Taking China's textile industry as an example.* 18,62-66 (2018)
- [6] L.P. Su, H.M. Zhang, *Friends of accounting, Government regulation, quality of environmental information disclosure and cost of equity financing.* 23, 80-87 (2020)
- [7] Z.Q. Liu, L.S. Zhang, *Economic and management research, Institutional constraints, incentive policies and corporate environmental information disclosure.* 41(04),32-48 (2020)
- [8] M. Plumlee, D. Brown, R.M. Hayes, R. S. Marshall, *Journal of Account and Public Policy, Voluntary environmental disclosure quality and firm value: Further evidence*[J]. 34(4), 336-361 (2015)
- [9] P.B. Shane, B.H. Spicer, *Accounting Review, Market response to environmental information produced outside the firm* [J]. 58(3), 521-538 (1983)
- [10] D.S. Dhaliwal, Q.Z. Li, A. Tsang, Y.G. Yang, *The Accounting Review, Voluntary nonfinancial disclosure and the cost of equity capital: the of initiation corporate social responsibility reporting* [J]. 86,59-100 (2011)
- [11] P.K. Williams, M.R. Siegel, *Business Horizons, Does it pay to be good? Social responsibility and financial performance*[J]. 46,34-40 (2004)
- [12] Y. Fang, J.J. Guo, *Economic research, Whether China's environmental information disclosure policy is effective: a study based on the response of capital market.* 53(10),158-174 (2018)
- [13] Y.K. Xu, M. Qi, P.F. Song, *Journal of China University of Geosciences, Environmental penalties, corporate performance and emission reduction incentives: Empirical Evidence from China's industrial listed companies.* 20(04),72-89 (2020)
- [14] J.L. Gao, Y.Y. Wang, *Ecological economy, Research on the impact of environmental information disclosure index on enterprise value.* 35(06),157-161 (2019)
- [15] E. Eljido -Ten, L. Kloot, P. Clarkson, *Auditing and Accountability Journal, Extending the application of stakeholder influence strategies to environmental disclosures* [J]. 8,1032-1059 (2010)
- [16] D. Cormier, M. Magnan, *Ecological economics, The revisited contribution of environmental reporting to investors valuation of a firms earnings: An international perspective* [J]. 62,613-626 (2007)

- [17] H.Y. Li, S.Y. Fu, P. Gao, Statistical research, Media attention, carbon information disclosure and enterprise value. 33(09),63-69 (2016)
- [18] M. O. Jackson, Matthew O. Jackson, A Typology of Social Capital and Associated Network Measures[J]. 54(2), 311-336(2020)
- [19] E. Rosamond, Theory Culture & Society, From Reputation Capital to Reputation Warfare: Online Ratings, Trolling, and the Logic of Volatility. 37(2), 105-129 (2020)
- [20] G. Heal, The Geneva Papers, Corporate social responsibility: an economic and financial framework[J]. 30, 387-409 (2005)
- [21] G. Grunwald, H. Bernd, Corporate Reputation Review, Impacts of Reputation for Quality on Perceptions of Company Responsibility and Product-related Dangers in times of Product-recall and Public Complaints Crises: Results from an Empirical Investigation[J]. 13(4), 264-283 (2010)
- [22] H. Zou, M. Deng, Accounting news, Reputation capital, innovation level and financial performance. 06,56-59 (2018)
- [23] F.G. Xiang, T.T. Chi, Friends of accounting, Environmental information disclosure, reputation capital and economic performance. 17,33-38(2020)
- [24] G.Q. Yang, Y.F. Du, Y.Z. Liu, Business research, The impact of environmental information disclosure on corporate value of listed companies: does organizational visibility play a mediating role. 02,120-130(2020)
- [25] S.J. Nie, X.H. Tian, X. Zhang, Journal of Nanjing Audit University, Corporate reputation and hidden defects of internal control: inhibition or protection. 18(03),21-31(2021)
- [26] G.Q. Yang, Y.F. Du, Y.Z. Liu, Economic management, Business performance, media attention and environmental information disclosure. 42(03),55-72(2020)