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## The Practice of Policy About Corporate Environmental Information Disclosure in China: Data From A-Share Listed Companies of Heavy Polluting Industries

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### Abstract

Corporate environmental disclosure policy is a system tool to solve the environmental information asymmetry problem, it has an extremely important significance to improve public participation in environmental activities, and promote the improvement of corporate environmental performance. However, there is less literature about the direct corporate environmental information disclosure policy, and these studies are mostly qualitative or small sample studies, reliability is low. In this paper, all the listed companies of A shares heavily polluting industries are studied as a large sample to research the health of corporate environmental information disclosure system, in order to find out that the system operation runs low performance, the quality of environmental information disclosure is not good enough, revealing the main reason lies in the system is unreasonable design, the poor independence of the regulatory authorities, and then, put forward some specific proposals.

**Objective:** To investigate the practice of corporate environmental information disclosure policy, reveal its cause.

**Results:** around seventy percent of heavily polluting industries listed companies have disclosed environmental information; the disclosure of the information mostly described in text or data; majority of environmental information disclosed in the Report of the Board of Directors or Accounting Statements; the disclosure of the mainly contents of environmental management and environmental governance; large gap between inter-industry enterprises in the quality and quantity of environmental information disclosure.

**Research limitations and significance of research:** This article examines only the data of corporate environmental disclosure policy operation of 2010, is a cross-sectional study. Follow-up longitudinal studies should be carried out to study the changes in corporate environmental disclosure before and after the implementation of the policy, empirical test whether the policy has a substantial impact on corporate environmental disclosure.

**Practical significance:** this article summarizes the problems of corporate environmental disclosure, reveals its cause, and puts forward a reasonable proposal, which has an important reference value for government decision-making.

**Innovation and value:** select all the listed companies of heavily polluting industries of 2010 as study sample firstly, to reflect the most important aspects of corporate environmental information disclosure policy runs.

**Key words:** Corporate environment information; Disclosure policy; Implementing problems; Cause analysis

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## INTRODUCTION

Environmental issues affect the survival and development of mankind, while the businesses activities are the important reason for the environmental issues. Environmental information disclosure can be effective in reducing the enterprise environment of information asymmetry in the stock market (Cormier, Ledoux, & Magnan, 2011). Environmental information disclosure reflects the corporate environmental performance improvement, and environmental information disclosure report is a progress of accounting report (Perry & Sheng, 1999). Therefore, corporate environmental disclosure is one of the monitors of national sustainable development. Corporate environmental information disclosure policy (*ab*.CEIDP) is an important system tools to reduce environmental pressure which is caused by human activities. There are different CEIDP in different countries, so the practice effect is quiet different. After Australia's mandatory disclosure of environmental information guidelines were taken into practice, the quantity and quality of company disclosure of environmental information increased significantly (Frost, 1997). But Australian corporate environmental reporting lags behind some developed countries (Carol, 2001). Spain carried out a reform of the system of environmental accounting, it proves that CEIDP can increase enterprises' ability of environmental responsibility (Larrinaga, Carrasco, Correa, Llena, & Moneva, 2002). The Libyan social responsibility information disclosure is in a lower level, which is significantly different with western developed countries (Pratten & Mashat, 2009). Most Indian companies have begun to disclose environmental information, and environmental information in its WEB site is significantly more than the environmental information in the annual report, but India is no mandatory requirements of corporate environmental disclosure (Chatterjee & Mir, 2008). However, India inter-industry environmental information disclosure is in large difference and not normative (Sen & Kuhali Mukherjee, 2011). The level of Indonesia's environmental information disclosure of listed companies is not high, and the disclosure policy needs to be perfected (Mirfazli, 2008). Based on Parts of 1987-2005' Norwegian companies, the CEIDP has an important and immediate impact on corporate environmental information disclosure (Fallan & Fallan, 2009). In Swaziland of Africa, most companies did not disclose social and environmental information, but disclosed in the period 2007-2008, the company showed an increasing trend (Kabir & David, 2012). Other literatures also show that the environment-related policies or systems have a substantial impact on corporate environmental information disclosure (Barth, 1997; Hughes, 2001; Lyon, 2010).

As a developing country, China has assumed an important task in reducing pollutant emissions, energy consumption and carbon emissions. To this end, the Chinese government has formulated a positive environmental policies and systems. China has carried out environmental information disclosure policy in May 2008, which enforces heavy polluting corporate to disclose environmental information. How many Chinese heavy polluting enterprises abided CEIDP? Did CEIDP be strictly carried out by these enterprises? These issues reflected the level of corporate environmental disclosure, and reflects environmental responsibility assumed by the enterprise. Wang (2007) listed 144 Corporation as an example, and found that under the existing system, the vast majority of companies only disclose in the "Report of the Board of Directors "and" important matters " in text expression, and there is no disclosure of the impact of environmental activities; Wan (2008) consider that corporate environmental information disclosure system is not only of fragmented content, but also non-system and nonstandard, defective design of environmental information disclosure system is a main reason leading environmental information disclosure in a low level; Tian, Liu, and Yu (2009) pointed out that China has not established environmental information disclosure system covering all polluting enterprises, the content and method of the environmental information disclosure are not perfect and unified; Lu and Li (2010) listed 2007-2008 Shanghai A shares manufacturing companies for example, studying the effect of the of environmental information disclosure system, the results showed that after the introduction of the system, the content and strength of environmental information disclosure of listed companies have a significant improvement.

In summary, the current domestic and international researches are mainly in corporate environmental disclosure (Rockness, 1985; Al-Tuwaijri, 2004; Alciatore, Dee, Freedman, & Bikki, 2006) and corporate environmental performance (Verfaillie & Bidwell, 2000; Ren, 2000; Clarkson, Li, Richardson, & Vasvari, 2008), environmental information disclosure impact factors (Landgraf & Riahi-Belkaoui, 2003; Boesso & Kumar, 2007; Al Arussi, Selamat, & Hanefah, 2009), and research on corporate environmental disclosure policies and the effect is less, existing studies are mostly qualitative research or statistical studies of the small sample, and less systematic research and large sample studies. Therefore, all heavily polluting industries of China's A-share listed companies have been taken as research samples in this article, to examine corporate disclosure system operating conditions in these companies, to analyze the main problems in the run, reveal the reason and then put forward specific recommendations for improvement.

## 1. THE OPERATING STATUS OF ENTERPRISE ENVIRONMENT INFORMATION DISCLOSURE SYSTEM IN CHINA

### 1.1 Related Definition and Data Source Description

#### 1.1.1 Study Sample Selection

The root causes of environmental information disclosure system is the problem of environmental pollution, “China Corporate Citizenship Report (2009)” Blue Book noted that a major source of environmental pollution in China is the industrial enterprises, accounting for about 70% of the proportion of the total pollution. Among them, heavily polluting enterprises of industrial enterprises are main body of pollution emissions. Therefore, China’s environmental information disclosure system should focus on heavily polluting enterprises, especially on heavy pollution listed companies, and mandatory for these companies to disclose environmental information. To do this, select the heavily polluting industries listed companies for the study sample.

#### 1.1.2 Definition of the Study Time and the System

At this stage, the legally binding to heavily polluting industries listed companies of corporate environmental information disclosure system has been implemented in May 2008, released by the State Environmental Protection Administration, the Environmental Information Disclosure (Trial) file. It should be noted that the practices by China, the annual report of listed companies disclosed data for the previous year, as of December 31, 2011, and listed companies carrier disclosed environmental information in 2010. Because our data collection time lasts from July 2011 to December 2011, during this period, the 2011 annual corporate environmental information and data is not yet released, in order to examine the situation of the years of operation of the system we defined the study time as 2010.

#### 1.1.3 Definition of Heavily Polluting Industries

Domestic official documents and literature on the range of heavily polluting industries identified include: the Ministry of Environmental Protection in 2003 “environmental inspection of listed company industry classification management List (Environment and Development (2003) 101), heavily polluting industries are divided into 13 categories of industries. In 2007, National environmental protection system survey of pollution sources working meeting identified 11 industries for the industrial source census heavily polluting industries, including paper and paper products industry, agro-food processing industry, chemical raw materials and chemical products manufacturing and so on. Ministry of Environmental Protection in 2008 released “environmental inspection of listed companies Industry Classification

List (Environmental Office File [2008] No. 373), put the thermal power, iron and steel, cement, electrolytic aluminum, metallurgy, chemical, petrochemical, building materials, paper, brewing, pharmaceutical, fermentation, textile, leather and mining industries and so on, as the 16 industries identified as scope of environmental verification, “listed companies Environmental information disclosure guidelines” (draft) released by the Ministry of Environmental Protection in 2010 turn these industries into heavily polluting industries. Xiao Shufang and Hu Wei (2005) identified paper, printing, petroleum and other 19 industries as heavily polluting industries. Huang Jun and Zhou (2012) identified the extractive industries, food, beverage, and other industry categories as 21 heavily polluting industries. It can be seen the definition of the scope of the domestic heavily polluting industries differences in China. Together the literature and official documents, our research team set electricity, brewing, cement, photographic materials, chemical fiber, chemical, textile, glass, iron and steel, building materials, pesticides and fertilizers, bio-pharmaceuticals, petroleum, plastics manufacturing, clothing and footwear, water, gas, coal, printed packaging, food, non-ferrous metals and other heavily polluting industries identified as 20 heavily polluting industries, it covers the range of heavily polluting industries released by the Ministry of Environmental Protection in 2003 and 2008.

#### 1.1.4 Description of Data Sources

It is noted that, it’s difficult to obtain direct corporate information disclosure of the data of the human, material and financial resources in the system running, however, corporate environmental disclosure is publicly available data, environmental information disclosure status reflects the effect of the implementation of the system, therefore, this paper base on system effects to analysis problems in corporate environmental information disclosure system running. The research group put official website of the Shanghai Stock Exchange, Shenzhen Stock Exchange official website, Phoenix Financial Network GTA database and public resources network as data source, the type of data includes the annual report of the A-share listed companies heavily polluting industries, sustainable development report, social responsibility report and daily environmental information disclosure of information, in order to get environmental disclosure data of heavily polluting industries listed company.

### 1.2 Overall Situation of Corporate Environmental Information Disclosure System Operation

#### 1.2.1 Around Seventy Percent of Heavily Polluting Industries Listed Companies Disclose Environmental Information

The statistics show that heavily polluting industries in China’s A-share listed companies disclose environmental information of a total of 568, undisclosed corporate 279, the disclosure rate is 67.06%, it shows that most of the

heavy pollution of listed companies have implemented the “Measures for the Disclosure of environmental information 2008 (Trial)”. Take the view from the Exchange, the Shanghai A-share listed companies has 369 of heavily polluting industries, the disclosure of environmental information for 282, 87 companies did not disclose, the disclosure rate is 76.42%. There are 478 heavily polluting industries in Shenzhen A-share listed companies, and 252 companies disclose environmental information, 226 companies did not disclose, the disclosure rate is 52.72%.

### **1.2.2 Disclosure of Information Described in Text or Data Described in the Main**

Set the form of environmental information disclosure as classification standard, corporate environment can be divided into the type of text description, data description type (physically measured) and currency type (measured by currency). Since many of the environmental information currency is difficult to quantify, there is no fully literature disclosing environmental information measured by currency, so disclosure currency information are mixed, that combination of data description monetary description, or the combination of text descriptions and monetary describe. Therefore, corporate environmental information is divided into type of text description, data description and mixed. By the sight of the form of information disclosure of Shanghai and Shenzhen A-share heavily polluting listed companies in 2010, 197 companies using a simple text description to describe the environmental information, accounting for 34.68% of the total number of disclosure; 103 companies using data descriptive disclosure of environmental information, accounting for 18.13%; 268 companies using a combination of mixed data and text, or currency and text disclosure form, accounting for 47.18%.

### **1.2.3 Majority of Environmental Information Disclosed in the Report of the Board of Directors or Affiliated Notes to the Accounting Statements**

In 2010, part of the A-share listed companies heavily polluting industries disclose environmental information by 2 or 3 kinds of carriers, but mostly through only one carrier to disclose environmental information. In which: 396 enterprises disclosed environmental information in the report of the Board, accounting for 69.72% of the total; there are 226 companies disclosed environmental information in the affiliated notes to the accounting statements, accounting for 39.79 %; 15 enterprises disclosed environmental information in important matters, accounting for 2.64%; 140 companies take the form of independent reports to disclose the environmental information, accounting for 24.65%. The above data show that the majority of listed companies disclose environmental information in the Report of the Board of Directors or affiliated notes to the accounting statements, the form of a independent report accounted

for two percent, and there is a low proportion disclosed in important matters.

### **1.2.4 The Contents of Disclosure Are Environmental Management and Environmental Governance for the Most Part**

China’s “Disclosure of Environmental Information (Trial)” system encourages enterprises to disclose environmental information voluntary about environmental management, environmental governance, environmental investment, environmental costs and environmental liabilities, and force heavily polluting enterprises to disclose environmental information for environmental costs and environmental liabilities. From the implementation of view, in 2010, 354 heavily polluting industries listed A-share companies disclose environmental management, accounting for 41.79% of the total; 410 companies disclose environmental investments, accounting for 48.41%, 424 companies disclose the results of environmental governance, accounting for 50.06%; 79 companies disclose environmental costs, accounting for 9.33%; and 94 companies disclose environmental liabilities, accounting for 11.10% of the total. Statistics show that about half of the A-share listed companies of heavily polluting industries disclose environmental information for environmental management, environmental investment and environmental governance, and the disclosure rate of environmental costs and environmental liabilities is about 10%.

## **1.3 The Operation of Corporate Environmental Information Disclosure System in Various Industries**

### **1.3.1 Structure of Disclosure Rates and Disclosure Form**

In 2010, the disclosure rate of the top 5 heavily polluting industries are iron and steel, non-ferrous metals, plastics, pesticides and fertilizers, and coal, the disclosure rate is over 80%. Ranked last five heavily polluting industries are petroleum, building materials, printing and packaging, clothing, footwear and photosensitive materials, the disclosure rate is less than 50%, Specific, such as is shown in Table 1. From the view of disclosure form, cement, textiles, bio-pharmaceutical, chemical and brewing rank in the top five industries of text description type accounted for a percentage of the total number of samples of the industry, and disclosure rate is over 30%. Ranked last five industries are photosensitive materials, glass, nonferrous metals, plastics manufacturing and clothing and footwear, the disclosure rate is less than 15%. Compared with the textual description, type of data description and mixed are more specific, and more practical on the environmental information, the non-ferrous metals, plastics, glass, chemical fiber and steel rank in the top five industries of account the percentage of the total number of samples of all in these two types, and last five are printing and packaging, clothing and footwear, photographic materials, building materials, and wine.

**Table 1**  
**Statistics of Disclosure Form of Heavy Pollution Listing Corporation In Various Industries of 2010** (Unit: Number of Companies)

Industry	Total sample	Data description	Text description	Mixed	Disclosure rate
Iron and Steel	48	11	8	26	93.75%
Non-ferrous metals	63	20	2	35	90.48%
Plastic Manufacturing	25	14	1	7	88.00%
Pesticides and fertilizers	40	0	17	18	87.50%
Coal	33	1	10	17	84.85%
Glass	17	5	0	9	82.35%
Chemical fiber	28	4	5	14	82.14%
Biopharmaceutical	133	21	43	38	76.69%
Water, gas	21	1	6	8	71.43%
Food	39	14	5	8	69.23%
Cement	23	0	9	6	65.22%
Chemical industry	116	11	36	28	64.66%
Power	51	0	6	25	60.78%
Spinning	40	0	14	8	55.00%
Brewing	29	0	9	6	51.72%
Oil	19	0	4	5	47.37%
Building Materials	57	0	14	9	40.35%
Printing and Packaging	15	0	3	0	20.00%
Clothing and footwear	40	0	5	1	15.00%
Photosensitive materials	10	1	0	0	10.00%

### 1.3.2 Structure of Disclosure Carrier

According to Table 2, we can see that the general situation of the 2010 heavily polluting industries listed companies' disclosure carrier structure and distribution, obviously, most industries take independent reports or directors' report as disclosure carrier, the disclosure carrier of important and notes are only selected by a small number of listed companies, still, there are some listed companies with a variety of carriers to disclose environmental information. Statistics show that in 2010 independent report disclosed the carrier's share of the percentage of the industry's top five industries are iron and steel, petroleum, coal, electricity and cement, were greater than 20%, the industry came in the last five printing and packaging, plastic manufacturing, clothing and footwear, food and pesticides and fertilizers, the disclosure rate is less than 8%, among these, in printing and packaging, plastics manufacturing industry there is no listed company to the disclose environmental information with an independent report. Coal, pesticides and fertilizers, bio-

pharmaceuticals, iron and steel and water gas supply are of top five industries using Directors' Report to in 2010, last five industries are plastic manufacturing, building materials, printing and packaging, clothing and footwear and photosensitive materials. In addition to the individual listed companies disclose environmental information in the accounting report important matters in coal, bio-pharmaceutical, chemical fiber, chemical and cement industry, and other heavily polluting industries listed companies didn't disclose in important matters. Part of the listed company disclosure of environmental information in the Accounting Statements from pesticides and fertilizers, bio-pharmaceutical, water, gas, chemical fiber, chemicals, non-ferrous metals, glass, food and plastics manufacturing industries, and other listed companies did not disclose environmental information in the Accounting Statements, among them, environmental information disclosed in the notes to the share of the highest percentage of the top five industries are the manufacture of non-ferrous metals, plastics, glass, food and chemical fiber.

**Table 2**  
**Statistics of Disclosure Carrier of Heavy Pollution Listing Corporation In Various Industries of 2010 (Unit: number of companies)**

Industry	Total sample	Independent report	Directors' Report	Important	Notes
Power	51	14	17	0	0
Brewing	29	4	11	0	0
Cement	23	5	10	1	0
Photosensitive materials	10	1	0	0	0
Chemical fiber	28	6	15	1	11
Chemical industry	116	21	57	6	4
Spinning	40	5	21	0	0
Glass	17	3	6	0	6
Iron and Steel	48	18	29	0	0
Building Materials	57	9	15	0	0
Pesticides and fertilizers	40	3	32	0	4
Biopharmaceutical	133	18	92	5	2
Oil	19	6	8	0	0
Plastic Manufacturing	25	0	8	0	21
Clothing and footwear	40	1	5	0	0
Water, gas	21	3	12	0	3
Coal	33	10	27	2	0
Printing and Packaging	15	0	3	0	0
Food	39	1	13	0	22
Non-ferrous metals	63	12	27	0	53

**Table 3**  
**Statistics of Disclosure Content of Heavy Pollution Listing Corporation in Various Industries of 2010 (Unit: Number of Companies)**

Industry	Total sample	Environmental costs	Environmental liabilities	Environmental Management	Environmental investments	Environmental governance
Power	51	11	16	29	20	30
Brewing	29	5	3	14	12	15
Cement	23	4	7	14	11	15
Photosensitive materials	10	1	0	1	1	1
Chemical fiber	28	5	7	13	21	18
Chemical industry	116	3	12	55	36	64
Spinning	40	0	0	15	21	12
Glass	17	2	0	9	9	5
Iron and Steel	48	3	8	34	31	35
Building Materials	57	4	1	17	21	12
Pesticides and fertilizers	40	11	4	35	28	32
Biopharmaceutical	133	8	7	28	59	79
Oil	19	5	5	8	7	7
Plastic Manufacturing	25	0	0	10	21	16
Clothing and footwear	40	1	1	5	4	5
Water, gas	21	0	6	11	10	13
Coal	33	10	10	13	17	27
Printing and Packaging	15	0	0	0	1	3
Food	39	2	1	14	26	10
Non-ferrous metals	63	4	6	29	54	25

### 1.3.2 Structure of Disclosure Content

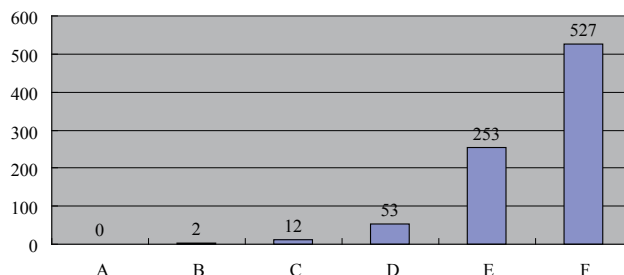
According to Table 3, it can be seen that in 2010, there is a few of heavily polluting industries disclose environmental costs and environmental liability information, in textiles, plastics manufacturing, printing and packaging industry there is no company disclose information of environmental costs and environmental liabilities, however there is a relatively large number of company disclosure of environmental management, environmental investment and environmental governance. Of course, a lot of companies not only disclose the information of the environmental costs and environmental liabilities, but also disclose the information of environmental management, environmental investment and environmental governance information. Specifically, disclosure of environmental cost information for the top five industries are coal, pesticides, fertilizers, petroleum, electric power, chemical fiber, Ranked last five industries were clothing and footwear, textiles, plastics, water supply, gas supply, printing and packaging, ranked last five industries are clothing and footwear, textiles, plastics, water supply, gas supply, printing and packaging; disclosure of environmental liabilities information on the top five industries are electricity, cement, coal, water, gas and oil, no listed company of glass, photographic materials, textile, plastic manufacturing, printing and packaging industry disclose environmental liabilities information; disclosure of environmental management information on the top five industries are pesticides and fertilizers, iron and steel, cement, electricity and glass; the information in the disclosure of environmental investments ranked in the top five industries are the manufacture of non-ferrous metals, plastics, chemical fiber, pesticides and fertilizers, food; in the disclosure of environmental governance, the top five industries are coal, pesticides, fertilizers, iron and steel, cement, chemical fiber.

## 2. THE PROBLEMS OF CHINA'S CORPORATE ENVIRONMENTAL INFORMATION DISCLOSURE SYSTEM (CONCLUSION)

### 2.1 The Low Level of Performance of the System Running

Although after the system implemented, the disclosure rate and disclosure quality of heavily polluting enterprises have improved significantly, however, according to the research group's evaluation of heavily polluting industries listed companies performance, vast majority of listed companies performance stay at a low level, it shows that the system has not been seriously implemented in most heavily polluting companies and the asymmetric information problems of enterprise environment have not been significantly improved. Equivalent comprehensive

performance of 2010 into percentage system, the grading criteria are: A ( $\geq 80$ ), B ( $70 \leq B < 80$ ), C ( $60 \leq C < 70$ ), D ( $40 \leq D < 60$ ), E ( $20 \leq E < 40$ ), F ( $< 20$ ), the results are shown in Figure 1. As can be seen, there are only 14 companies over pass grade ("B" 2 and "C" 12), accounting for 1.65% of the total sample of 847, the vast majority can not reach pass grade, ratio of 98.35%, among them, 253 companies get E, accounting for 29.87%, and 527 companies get F (Containing undisclosed corporate), accounting for 62.22%, indicating that the combined effect is poor in the most heavily polluting industries on environmental information disclosure system.

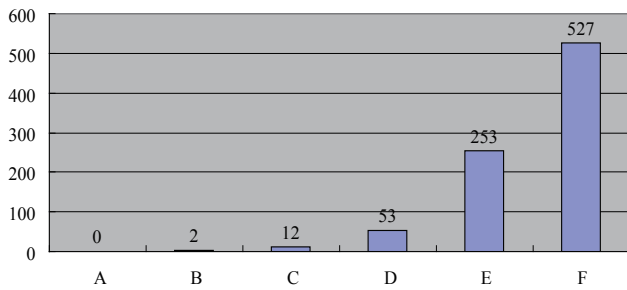


**Figure 1**  
Heavily Polluting Listed Companies Performance Level Statistics of 2010 (Unit: Number of Companies)

### 2.2 The Most Heavily Polluting Listed Companies Are Not in High Quality of Information Disclosure After Running of the System

Research group examine the quality of corporate environmental disclosure from four aspects as disclosure form, disclosure carrier, disclosure level and independence. From disclosure mode, 197 heavily polluting listed companies simply use text describing the environmental information in 2010, representing 34.68% of the listed companies disclosing environmental information heavily polluting behavior, indicating that still accounts for a large proportion of the textual description of environmental information, the text description is of fuzziness, reflects that environmental information disclosure level needs to be improved in heavily polluting industries listed companies in China. The disclosure vector is the external form to reflect the quality of environmental information; independent environmental report's quality is often higher than other disclosure forms. According to Figure 2, it can be seen that since the system is running, more and more heavily polluting listed companies disclose environmental information by independent reports, but it's a very low percentage of the overall, the number of listed companies in the form of non-independent report in 2010 was 3.05 times the number of independent reporting format, shows the most heavily polluting enterprises are still using the external form of a lower level of non-independent report disclosed carrier. The level of detail is an important indicator to reflect the intrinsic quality of environmental information, From the statistic, the detailed disclosure of listed companies in 2010 is 14, brief

disclosure of listed companies is 554, detailed disclosure of the number of companies accounted for only 2.46% of the enterprise has disclosed, reflect a inherent lower quality of listed company environment information in the current. Only 5 of the 2010 heavily polluting listed companies' environmental information have been audited, accounting for only 0.88% of the heavily polluting disclosed listed companies, shows that heavily polluting industries have been poor disclosure of environmental information independence.



**Figure 2**  
**Statistics of Dependent and Independent Report of Heavily Polluting Listed Companies in 2010**  
 Unit: number of companies

**2.3 After the System Is Running, the Most of Heavily Polluting Listed Companies Do Not Disclose or Less Disclosure of Adverse Environmental Information**

From the environmental costs of information disclosure, the statistical results that the number of listed companies of heavily polluting industries undisclosed 2008-2010 Yuan GDP energy consumption information is 626, 681 and 792, each accounted for 96.16%, 97.99%, and 93.51% of the total number of samples, the number of listed companies, which undisclosed of the total consumption of water pollution heavy industry during 2008-2010, accounted for

the total sample were 97.39%, 87.91%, 97.87%, 2008-2010 undisclosed information of standard coal in total number of listed companies of heavily polluting industries accounted for 98.16%, 96.98%, and 96.10%, respectively. Obviously, during 2008-2010, more than 85% of the heavily polluting industries listed companies did not disclose the environmental cost information, leading information users can not understand environmental responsibility of these enterprises should bear. As can be seen from Table 4, 2008-2010 undisclosed proportion of the various indicators of environmental liabilities are more than 85%, Show that after the system implemented, heavily polluting industry listed companies do not disclose or less disclosure of environmental liabilities.

**2.4 After the System Running, More Heavily Polluting Listed Companies Still Do not Attach Importance to Improve Environmental Performance**

Corporate environmental management and environmental investment is the premise and guarantee to improve corporate environmental performance, environmental governance is a concrete manifestation of corporate environmental performance improvement. The statistics show that the proportion of the total sample were 79.26%, 61.72%, 58.21% of heavy pollution listed companies for environmental management in 2008-2010; in 2008-2010, heavily polluting listed companies who did carry out environmental investments were 425, 394 and 437, each accounted for a percentage of the total number of samples were 65.28%, 56.69%, 51.59%; in 2010, 50% of heavily polluting industries listed companies is not effective in environmental governance. Therefore, can be sure that after the system works, quite a number of heavily polluting listed companies are not substantive in environmental performance improvement activities.

**Table 4**  
**The Number of Heavily Polluting Listed Companies Who Do not Disclose Environmental Liabilities Information During 2008-2010** (Unit: number of companies)

Years	Total sample	Undisclosed of total wastewater discharge (%)	Undisclosed of SO <sub>2</sub> emissions (%)	Undisclosed of CO <sub>2</sub> emissions (%)	Undisclosed of smoke and dust emissions (%)	Undisclosed of industrial solid waste emissions (%)
2008	651	574(88.17%)	618(94.93%)	627(96.31%)	604(92.78%)	624(95.85%)
2009	695	631(90.79%)	679(97.70%)	688(98.99%)	688(98.99%)	688(98.99%)
2010	847	812(95.87%)	799(94.33%)	814(96.10%)	812(95.87%)	806(95.16%)

**2.5 Lack of Supervision and Low Social Acceptance of the System**

Although China has set up environmental protection departments at all levels, but the independence is poor, more impact due to local interests and other factors, leading to inadequate supervision of corporate environmental information disclosure system. Specific performance: governmental environmental regulatory authorities on corporate environmental information

disclosure regulation is not enough active, even in the presence of abiding by the law, lax law enforcement, impunity phenomenon. From the view of the disclosure of the "three simultaneous" system, the number was 15, 30 and 39 of the heavily polluting listed companies who didn't execute the system in 2008-2010, reflected the supervision of the Government of the system is not in place to some extent. Information disclosure of environmental certification and reward reflects the social



recognition for corporate environmental performance, is also an important basis for decision making of the public to participate in environmental protection activities. In 2010, for example, the number of heavily polluting listed companies which didn't achieve the environmental certification and awards is 3.65 times of the number of listed companies who achieved, reflects the most heavily polluting listed company environmental performance's social evaluation is not high, and the social effect is poor.

### **3. CAUSE ANALYSIS OF CORPORATE ENVIRONMENTAL INFORMATION DISCLOSURE SYSTEM PROBLEMS**

#### **3.1 The Unreasonable of System Design**

Currently, China take the combined approach of mandatory disclosure and voluntary disclosure of corporate environmental information disclosure system, plan to gradually promote the environmental information disclosure, but voluntary disclosure essence embodies the principle of self-regulation of the management, because of the poor overall environmental awareness and social responsibility of Chinese enterprises, therefore, the approach and the reality does not match, the inevitable result of voluntary disclosure is not disclosed or less disclosure. As for mandatory disclosure of corporate, although provides the scope of the disclosure, but lack of specific disclosure guidelines and specifications, and there is no reference to the disclosure template, result in the significant differences in the form of environmental information disclosure of listed companies, disclosure contents and disclosure methods, and the comparability of environmental information of listed companies is poor, there is little value in decision making. In addition, the design of the system does not consider environmental audits, and greatly reduce the independence of the corporate environmental information.

#### **3.2 The Independence of the Regulatory Authorities**

As enterprises and local government in the close ties of interests, some local governments in order to pursue short-term interests and political results, and given the green light to the enterprise environmental issues and environmental information disclosure issues, environment department of human, material and financial resources do not match the local environmental regulatory work, government regulation of corporate environmental disclosure is not in place. Environmental departments depends primarily on personnel, financial and other government departments, the environment sector regulatory and law enforcement work by the great intervention and constraints, the Independence is poor, lead to environmental regulatory authorities generally do not verify the authenticity of the corporate disclosure of environmental information.

#### **3.3 Lack of Power of Corporate Environmental Information Supply**

Corporate environmental information in the case of other conditions remain unchanged, the greater the supply costs, the smaller the power of corporate disclosure of environmental information. Currently, users of environmental information are increasingly demanding high quality of the information, requires enterprise provide very detailed environmental information in terms of quantity, composition, time and scope, provide detailed environmental information requires advanced environmental monitoring equipment and highly qualified staff, led to the high cost of supply of corporate environmental information, and the Government has not this subsidy, businesses can gain no more revenues through the market, thus, there is a the lack of economic power to provide environmental information.

#### **3.4 Poor Value of Corporate Environmental Decision-Making Reference**

Currently, corporate environmental disclosure to the kind of information-based and lack of monetization information, lead to information users can not determine corporate environmental responsibility. More importantly, in an independent environmental report, environmental costs, environmental liabilities, environmental management, environmental policy, environmental information are often declared, and don't carry out comprehensive evaluation and grade appraisal, the public can not judge the merits of corporate environmental protection and governance, and there is no corresponding information about market products, making the public is difficult to achieve through market purchase decision to participate in an enterprise environment activity.

#### **3.5 Low Violation Cost of Corporate Environmental Disclosure, and There is a Lack of Fair Competitive Environment**

At present, the punishment is not enough about the behavior that enterprise did not disclose environmental information truthfully, leading to information disclosure violation would cost less, most companies only disclosed the favorable information of environmental governance, environmental investment and environmental management, and not or less disclose negative information of environmental costs and environmental liabilities in result. In this case, for polluting enterprises truthfully disclose environmental information is extremely unfair, they not only spend more on environmental information supply costs, and provide the community with information about the negative aspects of the environmental costs and environmental liabilities, resulting in damage to the corporate image, to enable enterprises to compete in a disadvantageous situation. On the contrary, if polluting enterprises did not truthfully disclose environmental information, their financial and corporate image is not damaged, and the enterprise will be in a strong competitive position.

#### 4. SPECIFIC RECOMMENDATIONS TO IMPROVE OUR CORPORATE ENVIRONMENTAL INFORMATION DISCLOSURE SYSTEM IMPLEMENTATION EFFECT (SUGGESTIONS)

In response to these problems, the main recommendations are: 1. Development of corporate environmental information disclosure system implementation details or specific application guide in the industry point of view of the heavy pollution and light pollution, to provide specific, detailed specifications for corporate environmental disclosure, rather than a programmatic document, to improve the normative and comparability of corporate environmental information; 2. strengthen government supervision of corporate environmental disclosure, the punishment should increase for undisclosed or not in accordance with the disclosure requirements polluting enterprises; at the same time, to achieve the environmental protection department should be completely independent of the local government, in order to avoid the level of administrative intervention in law enforcement; 3. implementation of corporate environmental evaluation grade market access system, the selling products should indicate the official or recognized organization recognized environmental performance and environmental information disclosure level, to provide necessary means for the public to participate in environmental activities, and encourage enterprises to improve environmental performance; 4. enforce environmental audit system, to improve the authenticity of the report of the environmental information disclosure, 5. strengthen environmental accounting education and training to improve the level of corporate officers of environmental accounting.

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