

Comparative Study on Environmental Accounting Information Disclosure between Chinese and Japanese Household Appliance Industry--Take Haier and Panasonic as examples

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Abstract: With the rapid economic growth and the continuous creation of wealth value, social problems such as environmental pollution, ecological imbalance, and resource waste have emerged in all walks of life. From the perspective of accounting, environmental accounting examines the dialectical relationship between corporate production activities and ecological environmental governance, and has become an important tool for measuring the win-win situation of the economy and the environment. In this paper, we have studied the background significance, theoretical basis and system differences of environmental accounting information disclosure in Chinese and Japanese household appliance industry. Compared the environmental accounting information of Panasonic in Japan and Haier in Qingdao, fundamental reasons for differences between China and Japan in the information disclosure of household appliance industry were summarized. Finally, based on the above analysis, we put forward a series of suggestions for the development of environmental accounting in China.

1. Introduction

With the acceleration of globalization, people's demands on the quality and quantity of industrial industries are also expanding. In the long-lasting process of large quantities of output and consumption, the environment on which people live has been severely damaged. Environmental degradation and various ecological problems are becoming increasingly prominent. While extracting various resources from the natural environment through kinds of channels, industries are also discharging a variety of environmentally harmful substances such as waste residue, greenhouse gases, and wastewater to the external environment. With the increasingly prominent environmental issues, achieving a win-win situation between environmental protection and economic benefits has prompted economies and industries around the world to realize the necessity of environmental accounting information disclosure. At present, the establishment and application of Japan's environmental information disclosure system are in a leading position in the world. Therefore, we selected Panasonic of Japan and our Haier in Qingdao as research samples. A detailed comparative analysis of environmental accounting information disclosure of those two industries has been carried out to find out deficiencies of information disclosure in China's household appliance industry and reasons for these differences, aiming at putting forward strategies that our country can learn from.

At the present stage, there is no complete and unified environmental accounting system in China, and the relevant theories and research literature with a substantial increase in quantity can serve as the theoretical basis for our country's environmental accounting information disclosure. For a longer-term economic growth and environmental development, the academic community should further improve the basic information description of environmental accounting, and the industry

should also promote the development of a relatively mature environmental accounting system. Therefore, we choose the household appliance industry, one of the polluting industries that has not been studied in detail before, striving to improve environmental accounting information disclosure in our country.

1.1 Research Status at Home and Abroad

Represented by the United States and Japan, the research on environmental accounting information disclosure in developed countries is divided into five parts: environmental policy, environmental planning, environment-related financial services, environmental accounting information disclosure, environmental protection activities and sustainable management constraints. Environmental accounting researcher Katsuhiko Kokubu found that information disclosure should focus on the measurement of environmental costs, but there is no more detailed classification of environmental costs [1, 2]. In the "Environmental Accounting Standards" promulgated by the Japanese Ministry of the Environment in 2002, the environmental accounting information disclosed by industries is clearly divided into three aspects: environmental protection costs, environmental protection effects, and environmental economic effects. On this basis, environmental protection costs are further divided into six categories, namely business scope costs, upstream and downstream costs, environmental management activity costs, research and development costs, social activity costs and environmental damage response costs.

In contrast, Chinese researchers Chu Jiao, Guo Jinhua, Liu Fuqiang and others published an independent environmental accounting report [3], and proposed two options: statistical form and descriptive form. The future development trend and direction of the transformation from independent environmental report to comprehensive environmental report are also predicted by referring to foreign coping strategies. In 1999, China put forward the concept of "environmental performance" for the first time, and gathered domestic scholars to carry out research, in which financial activity information and environmental performance information are classified according to three classifications, namely, value information, material quantity information and enterprise environment information. In terms of financial information and descriptive text information, Ju Qiuyun, Gao Lianke et al. put forward innovative description indicators such as carbon concept, carbon elements and carbon emissions, so as to enrich and make more specific disclosure of environmental accounting information from the perspective of developing low-carbon economy and reducing corporate carbon emissions [4].

2. Background Comparison of Environmental Accounting Information Disclosure Systems in China and Japan

The purpose of environmental accounting information disclosure is to make clear accounting and accurate reporting of environmental costs, clearly classify environmental costs, rationally measure the results of environmental protection expenditures, disclose the environmental costs and social responsibilities of enterprises to the society, and make environmental information disclosure more authentic and reasonable.

The accounting objects of environmental accounting [5] are divided into two categories: corporate environmental activities and environmental-related economic activities, which are significantly different from traditional financial accounting. Environmental accounting standards, environmental information disclosure standards for listed companies and other systems are used to define whether environmental accounting information disclosure theory conforms to environmental laws and other regulations, and systems such as the Circular Economy Promotion Law further affect environmental accounting information disclosure by affecting environmental accounting objects. Thus, this article focus on the analysis of environmental laws, circular economy systems and environmental accounting standards in China and Japan (see Table 1).

Table 1. Background Comparison of Environmental Accounting Information Disclosure Systems in China and Japan [6].

	Japan		China	
	Earliest release time	Main content and evaluation	Earliest release time	Main content and evaluation
"Environmental Protection Law"	1992	Under the mandatory requirements and constraints of the "Basic Environmental Law of Japan", companies are asked to incorporate the prevention and control of resource pollution and environmental issues caused by other economic activities into the scope of environmental accounting disclosure.	1989	The old "Environmental Protection Law" prior to 2005 focused on economic construction rather than environmental protection. For a long time, companies lacked a full understanding of environmental value. Its binding force on environmental accounting has yet to be verified, regulated and adjusted continuously.
"Circular Economy Promotion Law"	2000	Laws related to the household appliance industry in the Circular Economy Promotion Law include "Promoting Effective Utilization of Resources Law", "Solid Waste Management Law", and "Promoting the Separation and Recycling of Containers and Packaging Law", which aim at building a low-cost circular economy society.	2008	Laws related to the household appliance industry include "Circular Economy Promotion Law" and "Renewable Energy Law". They are relatively new, with only 27 relevant laws, which did not cause companies to pay attention to resource recovery and recycling.
"Environmental Accounting Guide"	2005	Japan's "Environmental Accounting Guidelines" regulates the definition, accounting and disclosure of the three basic elements of environmental accounting: "environmental protection cost", "environmental protection effect" and "environmental economic effect". And the environmental protection cost is broken down into business scope cost, upstream and downstream cost, environmental management activity cost, etc.	2010	Our country has promulgated the "Guidelines for Environmental Information Disclosure by Listed Companies" and "Guidelines for Compiling Chinese Corporate Social Responsibility Reports", which regulate 16 types of heavy pollution industries. However, it is still in the stage of soliciting papers and does not have the same mandatory binding force as the law. The implementation effect needs to be further verified.

According to Table 1, differences in the background of environmental accounting information disclosure between China and Japan can be presented in two aspects: the time of issuance and the main content. The establishment of China's circular economy system and the promulgation of environmental accounting standards were both later than Japan's. In the early stage, it also imitated developed countries in terms of content, which resulted in weak binding force for policy adjustments in accordance with China's basic national conditions. Specific implementation needs to be further improved [7].

3. Comparative Analysis of Haier and Panasonic in Environmental Accounting Information Disclosure

This section focused on the comparative analysis of Haier and Panasonic's environmental accounting information disclosure. Basic information (Table 2), environmental protection costs (Table 3 and 4), environmental protection benefits (Table 5 and Table 6) and environmental and economic effects (Table 7) were compared in detail. Reasons for differences between China and Japan in environmental accounting information disclosure were also discovered.

Table 2. Basic Information Comparison of Haier and Panasonic's environmental accounting information disclosure [9].

	Haier	Panasonic
Disclosure form	Environmental Report	Sustainability Report
Time of first disclosure	2002	2006
Annual disclosure time	Every June	Every March
Writing basis	Ministry of Environmental Protection "Guidelines for Compiling Enterprise Environmental Reports" and "Compiling Guidelines for Enterprise Environmental Reports in Shandong Province"	Global Reporting Initiative "Sustainability Reporting Guidelines", Japan's Ministry of Environment "Environmental Reporting Guidelines" and "Environmental Accounting Guidelines"
Time range	12 months	14 months
Space range	Haier headquarters (Qingdao)	Panasonic and its domestic and foreign affiliates
Way of presentation	Currency form, supplemented by graphs and text	Non-monetary forms, supplemented by diagrams and textual expressions
Location distribution	Independent and centralized environmental accounting module	Scattered in all parts of the report
Specific content	Environmental management, environmental goals (environmental goals, environmental accounting, material flow analysis), environmental protection measures and performance (environmental performance, reduction of environmental load, environmentally friendly products), stakeholders	Environmental policy, environmental management (material balance, environmental accounting), product research and development, product manufacturing, logistics recycling, biodiversity protection
Key points	Environmental protection strategy, environmental cost and benefit information	Environmental protection goals and policies

3.1 Basic information comparison of Haier and Panasonic in environmental accounting information disclosure

Basic information of Haier and Panasonic including disclosure time and form, writing basis, time and space scope, specific content, and focus spots are shown in Table 2. It can be concluded from Table 2 that compared with Panasonic of Japan, Haier's first disclosure time in Qingdao is earlier, but panasonic's annual disclosure time is earlier than Haier's, and panasonic's sustainability report can be used for a longer time span. Secondly, it has been analyzed in the previous background that there is a large gap between the number of laws and regulations related to environmental protection designated and promulgated by China and Japan. The compilation of environmental reports of Enterprises in China is limited to the "Guidelines for the Preparation of Environmental Reports for Provincial Enterprises" issued by Shandong province where Haier is headquartered. While, Japan's Panasonic referred to the "Guidelines for Sustainability Reporting" developed by the Global Reporting Initiative. Thirdly, both environmental reports include corporate environmental management, environmental products and information disclosure, but Panasonic has added waste recycling and biodiversity protection modules, which Haier lacks. Finally, from the perspective of space, Panasonic pays more attention to the implementation of globalization strategy and expansion of international vision. That is, Panasonic and all its subsidiaries at home and abroad have carried out environmental accounting information disclosure; Haier is only limited to the environmental accounting information disclosure of its headquarters in Qingdao [8].

3.2 Environmental accounting information disclosure -environmental protection costs

"Environmental Accounting Standards" in Japan divides environmental protection costs into environmental investment and environmental expenses. Environmental investment is used to account for the financial input and expenditure of environmental activities and other activities arising from environmental activities, and environmental expenses are used to calculate the specific amount of special environmental protection funds allocated by industries each year. The disclosure of environmental protection costs of those two companies is shown in Table 3 and Table 4. The difference is that Haier has subdivided environmental protection cost into environmental management, pollution prevention, and energy saving. It can also be seen in Table 3 that Haier has also invested more in pollution prevention and energy saving in accordance with the requirements of laws and regulations. For example, air pollution prevention and control costs 30 million yuan, water pollution prevention and control costs 10 million yuan, improving technology costs 20 million yuan, and the total accounts for 95% of environmental protection cost.

Table 3. Disclosure of Panasonic's Environmental Protection Costs [9].

Environmental protection cost				
Project		Main content	Cost (Millions of yen)	Cost ^{*1} (Ten thousand yuan)
Regional business	Prevention and control of public hazards	Prevent air pollution and water turbidity	465	3101
	Protection of the earth's environment	Prevent the earth's greenhouse effect and save energy	1419	9462
	Resource cycle	Waste treatment, effective use of resources	741	4941
Upstream and downstream management activities		Recycling and reuse	105	700
		Configuration and operation of environmental management systems	138	920
Research and develop		Research and development of environmentally friendly products	1116	7441
Social activity		Donation to the environmental team	6	40
Countermeasures for environmental damage		Treatment of groundwater and soil pollution	0	0
Total			3990	26605

Note: *¹ The cost (million yen) is converted into RMB (ten thousand yuan) for comparison with Table 4.

Table 4. Disclosure of Haier's Environmental Protection Costs [9].

Classification	Project	Input cost (Ten thousand yuan)	Content
Environmental management	Environmental protection management	50	Regularly participate in environmental protection training organized by government departments at all levels to grasp the latest environmental protection policies and environmental protection trends; hire experts to train employees of the company's internal environmental protection system and strengthen employee testing techniques; supervise employees to learn policies, regulations and international advanced environmental protection technologies to improve employees' environmental awareness and environmental management capabilities. In accordance with the requirements of the State Environmental Protection Agency, the sewage outlets of the 13 parks of the whole group were standardized and transformed.
	Testing technology training	50	
	Participation in various environmental protection trainings organized by external organizations	30	
	Promotion for environmental protection	50	
Pollution prevention and control	Air pollution control	3000	The discarded process line body is transformed and replaced with environmentally friendly raw materials.
	Water pollution prevention	1000	Update pollution prevention facilities and online monitoring facilities
	Ensure the operation of sewage treatment facilities	400	All 13 park sewage stations of the whole group are operated by qualified operators
	Daily environmental testing	50	The Group has 188 abandoned discharge points, 66 waste water discharge points, and 51 noise monitoring points, globally commissioned to ensure that the discharge meets the standards.
	Operation of water reuse facilities	40	Reclaimed water facilities, pump maintenance, operating costs
Saving energy and reducing consumption	Improve process and equipment, increase production efficiency, reduce energy consumption and material consumption	2000	Energy saving project investment
	Promotion for energy saving and consumption reduction	50	Carry out energy conservation and improve employees' awareness of energy conservation.
Total		6720	

3.3 Environmental accounting information disclosure-environmental protection benefits

When Panasonic disclosed the benefits of environmental protection, it is divided into four parts: carbon dioxide emissions in production activities, environmental impact degree, final disposal

amount of waste, and water usage. Table 5 describes in detail the emission suppression and environmental load of Panasonic's environmental protection benefits in 2016 and 2017 for the above classification. When Haier discloses environmental protection benefits, it is divided into six parts: energy consumption per unit output value, carbon dioxide emissions per unit output value, water consumption per unit output value, wastewater generation per unit output value, chemical oxygen demand per unit output value, and sulfur dioxide emissions per unit output value. The quarter-on-quarter decline in the 2018 Environmental Report is calculated based on indicators for 2017. Table 6 details the absolute amount and percentage change of Haier's environmental performance in 2018.

Table 5. Disclosure of Panasonic's Environmental Protection Benefits [9].

Classification	Discharge inhibition	Reference index: Environmental load	
		2016	2017
CO₂ emissions from production activities	20,000 tons	2.3 million tons	2.28 million tons
Environmental impact	4 thousand	526 thousand	522 thousand
Final disposal volume of waste	0.00 million tons	0.31 million tons	0.31 million tons
Water consumption	1.48 million/cubic meter	27.32 million/cubic meter	25.84 million/cubic meter

Table 6. Disclosure of Haier's Environmental Protection Benefits in 2018 [9].

Performance indicators	Absolute amount per unit (/ten thousand yuan)	Year-on-year decline per unit ^{*1}
Energy consumption	7.45 kg	10.51%
Carbon dioxide emissions	9.3 kg	8.02%
Water consumption	0.171 cubic meters	6.2%
Wastewater production	0.0911 cubic meters	5.02%
Chemical oxygen demand	3.068g	7.28%
Sulfur dioxide emissions	0g ^{*2}	100%

Note: ^{*1} The year-on-year decline per unit is relative to 2017, ^{*2} Currently Haier has no equipment to emit sulfur dioxide

According to the data available in Table 5, Japan's Panasonic divides its environmental performance into four categories to disclose emission suppression and environmental load. According to the data available in Table 6, Qingdao Haier divides its environmental performance into six categories to disclose the absolute unit amount and the percentage change from the previous year. Haier's sulfur dioxide emission per unit output is zero, compared with Panasonic's non-disclosure.

3.4 Environmental accounting information disclosure-environmental economic effects

After disclosure of the absolute amount and percentage change of environmental protection benefits in 2018, Haier did not disclose the corresponding environmental economic effects of various environmental protection activities. In contrast, Panasonic presented its quantitative economic benefits in the past three years (2016, 2017, and 2018) in a tabular format, fully disclosed the environmental effects and clearly compared the results with previous years. Table 7 shows the detailed disclosure data of Panasonic's environmental economic effects in 2018.

Table 7. Disclosure of Panasonic's environmental economic effects [9]

Classification	Index	Unit	2016	2017	2018
Environmental performance	Total environmental protection investment	100 million yuan	1.33	0.37	0.28
	Total energy consumption	Tons of standard coal	244186	257119	273566
	CO ₂ emissions	Ten thousand tons	63.49	66.85	71.13
	Emissions of greenhouse gases other than CO ₂	Ten thousand tons	3.72	3.54	3.60
	CO ₂ reduction contribution of energy-saving products	Ten thousand tons	656	834	840
	Waste recycling rate	%	99.42	99.15	99.04
	Amount of waste and valuables generated	Ten thousand tons	7.13	7.50	7.47
	Amount of waste recycling	Ten thousand tons	6.86	7.22	7.19
	Final disposal volume of waste	Ten thousand tons	0.040	0.062	0.070
	Nitrogen oxide emissions per unit of industrial added value	Kg/ten thousand yuan	0.06	0.05	0.03
	Ammonia nitrogen emissions per unit of industrial added value	Kg/ten thousand yuan	0.02	0.02	0.01
	Chemical oxygen demand emissions per unit of industrial added value	Kg/ten thousand yuan	0.16	0.15	0.11
	Discharge and transfer of chemical substances	Ten thousand tons	0.1167	0.1669	0.1427
	Impact of chemical substances on people and the environment	Thousand points	107	111	113
	Water consumption	Ten thousand cubic meters	491	475	475
	Wastewater discharge	Ten thousand cubic meters	332	327	320

In addition to costs and benefits, Panasonic's various environmental protection activities also contribute to the subsequent disclosure of corporate profits by disclosing direct or indirect economic benefits. "Environmental Accounting Guidelines" in Japan divides the economic performance of environmental protection into substantial effect and constructive effect, and Panasonic (Table 7) discloses the substantial effect of economy.

4. Reasons for Differences between China and Japan in Environmental Accounting Information Disclosure of Household Appliance Industries

Compared the basic information and content of environmental accounting information disclosure in China and Japan, the deficiency in China can be summarized as insufficient establishment basis and insufficient disclosure content. Firstly, China's disclosure is based on guidelines for the preparation of corporate environmental reports issued by provinces and municipalities, while

Japan's disclosure is based on guidelines for the preparation of sustainable development reports. Secondly, although China's disclosure content has the basic content required by law, it lacks the disclosure of environmental protection economic effects corresponding to various environmental activities, and does not explain its impact on corporate profits. The deficiencies of environmental accounting information disclosure in China's household appliance industry summarized above can be attributed to different laws and regulations, different demands of interest groups and different levels of national attention to environmental accounting information disclosure.

4.1 Differences in relevant laws, regulations and standards

Whether the laws and regulations system is perfect has a direct impact on the corporate behavior of environmental accounting information disclosure. More than 700 laws, regulations, and decrees in Japan mentioned above have laid a legal foundation for Japan to develop circular economy and emphasize environmental accounting. After 1999, the Japanese government successively formulated a series of laws and regulations related to environmental activities and environmental accounting in accordance with the "Circular Economy Law", which provided compulsory protection for the establishment of a complete environmental accounting and environmental information disclosure system. In contrast, although the "Environmental Protection Law of the People's Republic of China", "Environmental Pollution Law" and other laws and regulations promulgated by China have a certain binding force on environmental activities, they have not yet formed a complete legal system. Meanwhile, industries have not established a complete environmental activity control system. Compared with developed countries, especially Japan, the corporate accounting standards and specific accounting standards also mention the concepts of environmental greening, environmental assets and waste discharge, but the relevant legal system of environmental accounting in China is not perfect, which has no clear quantitative reference indicators for environmental pollution, pollution levels and pollutant discharge, and no specific operational requirements for environmental accounting information disclosure of listed companies.

4.2 Different demands of interest groups

With different market environments, interest groups have different influences on companies, which leads to different performance of companies in environmental accounting information disclosure. Japan is a capital market. In such a perfect capital market, in addition to the adjustment and control of the daily business activities by the corporate managers, stakeholders in the market (such as investors and creditors) can exert external influences on the operation and management of companies by virtue of their investment activities. Our country's capital market is still in the exploratory stage. Investors and creditors have little influence on the daily production and operation activities of companies. Meanwhile, corporate financing is often accompanied by political overtones and administrative intervention. Therefore, to a certain extent, financial institutions do not pay much attention to corporate environmental information disclosure. In addition, the openness and transparency of environmental information by our country's news media and environmental supervision agencies is not enough. Only when the company's environmental pollution is serious, company's environmental information disclosure and other issues are concerned.

4.3 Different levels of national attention to environmental accounting information disclosure

The difference in the degree to which Chinese and Japanese companies attach importance to environmental accounting information disclosure can be analyzed from both objective and subjective aspects. On the objective side, only by disclosing environmental issues such as waste recycling and resource recycling economy can Japanese companies fundamentally meet the need for environmental accounting information disclosure. Subjectively, under the influence of the government and public opinion, the Japanese public attaches great importance to the environment and related activities caused by the environment. In contrast, from an objective level, China's "Environmental Information Guide for Listed Companies" does not classify the household appliance industry as a heavy pollution industry, and the household appliance industry's information

disclosure of environmental accounting is also voluntary and encouraging. From a subjective level, to complete the accounting and disclosure of environmental costs, it not only requires the company to invest in environmental protection, but also need to introduce indicator testing equipment and deploy relevant specialists in the statistical calculation of data, which undoubtedly consume manpower and material resources for the company. Therefore, in order to reduce environmental costs and maximize profits, the disclosure of environmental accounting is superficial [10].

5. Suggestions for the Development of Environmental Accounting in China

Based on the comparative statement and reason analysis on the basic information and main content of environmental accounting information disclosure by Haier and Panasonic, the representative household appliance industries of China and Japan, the development of Environmental accounting in Japan is of great significance to China. Countermeasures for China's future development are put forward from the aspects of laws and regulations, supervision mechanisms, environmental protection awareness, system application, environmental protection publicity, and awareness-raising.

5.1 Strengthen the construction of laws and regulations and improve the supervision mechanism

The development of environmental accounting in Japan is inseparable from the Japanese government's great emphasis on environmental protection and various laws and regulations promulgated by the Ministry of Environment. While learning from Japan's completed environmental accounting information disclosure system, China should formulate specific environmental accounting implementation standards and strict disclosure indicators based on our country's unique national conditions. At the same time, through the formulation of standards and implementation rules, the disclosure of environmental accounting information is refined into multiple modules such as environmental protection costs, protection benefits, and economic benefits. After the relevant legislation is completed, the corresponding supervision mechanism should be developed soundly. On the one hand, we can learn from the environmental accounting supervision mechanism established by Japan and establish a special environmental protection information supervision department to check whether the information disclosed by companies has the basic elements such as authenticity, accuracy and comprehensiveness. On the other hand, an independent third-party organization is introduced to audit and identify corporate environmental reports, and to supervise the authenticity and completeness of corporate environmental information disclosure through independent external control [11].

5.2 Unify environmental protection awareness and standardize system applications

According to the analysis of the difference between Haier and Panasonic in the adequacy of information disclosure, the disclosure of environmental accounting information by Chinese companies only stays at the traditional environmental prevention and control level because of the huge material costs, labor costs and environmental costs consumed. However, the household appliance industry should clearly recognize that energy conservation, environmental protection, and low-carbon emission reduction are the mainstream of the future development of circular economy. A correct view of environmental protection costs is the only way for companies to develop in the long term. Whether it can win a larger consumer market, in addition to paying attention to price and quality factors, the company's green environmental image also has a synergistic effect. Therefore, while the environmental protection system is becoming more and more stringent in our country, it is necessary to make companies realize the importance of environmental investment through gradual guidance, gradually unify environmental protection awareness, and regulate the application of the system [12, 13].

5.3 Promote environmental protection and raise public awareness

The emphasis on environmental protection comes not only from the government's compulsory supervision, but also from the perspective of society and citizens. Therefore, our country needs to give full play to all aspects of society, mobilize the people to participate in environmental protection and other activities, and jointly improve environmental protection. Relevant departments and communities can strengthen the publicity and education of environmental protection knowledge, so that the masses can have a deep understanding of environmental accounting, which further lays the ideological foundation for the comprehensive implementation of the environmental accounting system. Meanwhile, relevant administrative departments should also formulate incentive policies to encourage citizens to actively participate in environmental protection. Increased environmental awareness of citizens have a positive impact on environmental information disclosure, which reduces the difficulty to implement environmental protection activities and the cost to disclose environmental information for companies. Finally, the supervision power of citizens together with the government, companies and society promotes the development of China's environmental protection and jointly maintains the public environment on which we depend for survival [14, 15].

6. Conclusion

Environmental issues are not only pollution prevention and control issues, nor are they the responsibility of heavily polluting companies and listed companies. Taking Panasonic in Japan and Qingdao Haier in China as examples, this paper conducts a comparative analysis of environmental accounting information disclosure in the household appliance industry, explores the reasons for different disclosures in China and Japan, and puts forward suggestions for improvement based on our country's national conditions. Through the analysis of this article, it is hoped that people have a more comprehensive understanding of environmental problems brought by companies and disclosure of environmental accounting information. Besides, extend the pollution problem from the one-sided understanding of heavy pollution industries to social issues such as environmental policy formulation and environmental protection publicity.

There also exists some limitations in this paper. For examples, when comparing the disclosed background, due to the deviations in the requirements for corporate information disclosure between China and Japan, there is a lack of rigorous demonstrations for the laws, regulations and provisions mentioned. In the comparison of disclosed contents, the data used is somewhat one-sided for only the sustainable development report of Panasonic in Japan and the environmental report of Haier in China are taken as the main analysis objects.

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