

# ***Study on the Quality of Environmental Accounting Information Disclosure of Alibaba Group***

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**Abstract:** This paper aims to study and analyze the quality of environmental accounting information disclosure of Alibaba Group, a leading global integrated business giant. Since its establishment in 1999, Alibaba has not only achieved tremendous success in the business field but also shown a positive attitude towards environmental protection and social responsibility. This study examines Alibaba's ESG reports to explore its practices and disclosures concerning environmental responsibility and sustainable development. Using content quality analysis, an evaluation system comprising adequacy, significance, and quantification dimensions was developed to systematically assess Alibaba's environmental accounting information disclosure. Results indicate that while there have been improvements in the adequacy and significance of the information disclosed, significant gaps remain in quantification. Based on the findings, this paper proposes several recommendations aimed at further enhancing the quality of Alibaba's environmental accounting information disclosure, thereby boosting corporate transparency and fulfilling social responsibilities to foster sustainable development. This research not only offers strategies for improving Alibaba Group's environmental accounting information disclosure but also provides practical guidance for other corporations in terms of environmental protection and social responsibility fulfillment. Through an in-depth analysis of the quality of environmental accounting information disclosure, this study hopes to encourage corporations to better recognize the importance of environmental responsibilities and adopt effective measures to jointly propel the global sustainable development process.

**Keywords:** Environmental accounting information disclosure, Environmental responsibility, Sustainable development, Content quality analysis

## **1. Introduction**

With the rapid development of the global economy, environmental issues have become increasingly prominent. Companies, while pursuing economic benefits, also face the dual challenges of environmental protection and social responsibility. Environmental accounting information disclosure serves as a crucial means for companies to fulfill their social responsibilities, affecting not only the sustainable development of the company but also a key indicator for investors, consumers, and regulatory bodies to evaluate corporate performance. Against this backdrop, this study selects Alibaba Group, a globally renowned integrated business giant, as a case study to delve deeply into the quality

of its environmental accounting information disclosure, analyze its performance in environmental protection, and offer corresponding improvement suggestions.

Since its establishment in 1999, Alibaba Group has not only achieved significant success in the business arena but has also actively engaged in environmental protection and social responsibility. From green supply chain management to eco-friendly actions on e-commerce platforms, from energy saving and emission reduction to environmental public welfare projects, Alibaba has been promoting the concept of sustainable development on multiple fronts. However, despite Alibaba's efforts in environmental conservation, there remain certain deficiencies in the quality of its environmental accounting information disclosure that may affect the accurate assessment of the company's environmental performance by external stakeholders.

This study analyzes Alibaba Group's ESG reports and comprehensively evaluates the quality of its environmental accounting information disclosure. Furthermore, by constructing an evaluation system encompassing the dimensions of adequacy, significance, and quantification, this study provides a detailed analysis of Alibaba's environmental information disclosure from 2018 to 2023.

## **2. Introduction to Alibaba**

Since its establishment in 1999, Alibaba Group has evolved into a leading global integrated business giant. While pursuing commercial development, Alibaba actively fulfills its social responsibilities, particularly making significant efforts in environmental protection:

1. **Green Supply Chain Management:** Alibaba promotes the implementation of environmental protection concepts in the production process to reduce environmental pollution and resource wastage.
2. **Environmental Actions on E-commerce Platforms:** It advocates for eco-friendly products and services, encourages green consumption, and sets up "green channels" to guide consumers towards environmentally friendly habits.
3. **Energy Conservation, Emission Reduction, and Renewable Energy:** Alibaba adopts technologies such as high-efficiency servers and solar photovoltaic power generation to reduce energy consumption, demonstrating its commitment to environmental protection.
4. **Environmental Public Welfare Projects:** It participates in and initiates various environmental projects, such as "Ant Forest," promoting the integration of public participation and environmental action.

In summary, Alibaba integrates environmental protection efforts across multiple levels including the supply chain, e-commerce platforms, and public welfare activities, promoting sustainable development and setting an example in environmental conservation.

## **3. Alibaba's Environmental Accounting Information Disclosure Quality Analysis**

### **3.1. Analysis of Alibaba's ESG Reports**

Alibaba's official ESG website features three reports from the years 2018, 2022, and 2023; however, reports from 2019 to 2021 are unavailable. Notably, the 2018 report is only available in English, which may pose a barrier for some Chinese readers. The 2018 ESG report is relatively brief, consisting of only 54 pages and covers a limited range of information. Over time, the reports have become more detailed: the 2022 report expanded to 110 pages, and the 2023 report further increased to 219 pages—a 306% growth compared to 2018.

Despite the increase in size and detail of Alibaba's ESG reports, they have not been rated top-tier by major institutions. This is attributed to the reports containing a wealth of textual information but lacking sufficient monetized data for in-depth analysis. Consequently, this paper conducts a

comprehensive dissection and interpretation of the environmental accounting information disclosed by Alibaba in 2018, 2022, and 2023[1].

### 3.2. Content Quality Analysis

Drawing upon Zi Yu Wang's content quality analysis paper on CATL's ESG report, the following criteria were used for scoring:

**Adequacy (A):** This concerns the relevance of information and is a key factor in assessing whether environmental disclosures are timely and reliable. Based on the volume of information covered, scores are assigned as follows: 3 points if environmental information covers all 18 items listed in Table 1; 2 points if 12 or fewer items are disclosed; 1 point if 6 or fewer items are disclosed.

**Significance (E):** This reflects the positioning of environmental disclosures and the company's environmental attitude. It is assessed based on disclosures in corporate announcements, special sections, financial reports, and independent reports. Independent reports, due to their distinct disclosure form, are considered the most significant, thus scoring 3 points; disclosures in special sections or financial reports are deemed fairly significant, scoring 2 points; and those merely in corporate announcements are seen as less significant, scoring 1 point.

**Quantification (Q):** This pertains to whether the environmental information is easy for users to compare directly. If the disclosed information is primarily monetized, highly quantifiable, and allows for both horizontal and vertical comparisons, it scores 3 points; if the content primarily consists of charts or other quantifiable information, it scores 2 points; if the information is disclosed in textual form without quantifiability, it scores 1 point [2].

Table 1: Classification Table of Environmental Accounting Information Disclosure.

Target Layer	Standard Layer	Substandard Layer	Scheme Layer
Quality of Environmental Accounting Information Disclosure	Adequacy (A) Significance (E) Quantification (Q)	Environmental Management Information C1	Environmental protection strategies, concepts, policies, and countermeasures
			Environmental management personnel development
			Environmental risk and contingency plans
		Environmental Responsibility Information C2	Resource consumption
			Pollutant emissions
			Status of waste recycling and utilization (batteries)
		Environmental Performance Information C3	Energy conservation and emissions reduction
			Optimization of environmental protection equipment
			Operation status of environmental protection equipment
		Environmental Financial Information C4	Environmental investment
			Environmental expenditure

Table 1: (continued).

			Taxes, fees, and government subsidies related to the environment
		Environmental Quality Information C5	Environmental technology innovation
			Carbon emission accounting
			Internal environmental audits
		Environmental Regulatory Information C6	Major environmental incidents
			Inspections, penalties, and commendations by enforcement agencies
			Third-party environmental audits and supervision by the China Securities Regulatory Commission and stock exchanges

Table 2: Quality of Environmental Information Disclosure for Alibaba in 2023[3], 2022[4], and 2018[5].

	2023			2022			2018			Average		
	A	E	Q	A	E	Q	A	E	Q	A	E	Q
C1	3.00	3.00	1.33	2.33	2.67	1.33	1.67	2.00	1.00	2.33	2.56	1.22
C2	3.00	3.00	1.33	3.00	3.00	1.67	2.33	2.33	1.67	2.78	2.40	1.56
C3	3.00	3.00	2.33	3.00	3.00	2.00	2.33	2.33	2.33	2.78	2.78	2.22
C4	1.00	1.00	2.33	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.33	1.44
C5	3.00	3.00	1.33	2.33	2.67	1.67	1.67	1.67	1.33	2.33	2.45	1.44
C6	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.00
Average	2.50	2.50	1.61	1.83	2.17	1.45	1.67	1.72	1.39	2.09	2.14	1.48

According to the scoring data in Table 2, the average scores for adequacy, significance, and quantification of information quality are 2.09, 2.14, and 1.48, respectively. These results indicate that the company prioritizes significance in maintaining its corporate image, while its information disclosure tends to rely more on textual descriptions and horizontally comparable data rather than monetized data. From 2018 to 2023, Alibaba has shown significant improvement in adequacy, significance, and quantification, reflecting the company's significant progress in environmental research and innovation, as well as its increasing awareness of environmental accounting information disclosure.

#### 4. Issues with Alibaba's Environmental Accounting Information Disclosure

After a thorough analysis of its ESG reports, we have identified several deficiencies and challenges in Alibaba's environmental information disclosure:

##### 1. Inadequate Adequacy of Information Disclosure

Despite the increasing richness of Alibaba's ESG reports over the years, environmental-related disclosures remain somewhat incomplete. For instance, the absence of reports from 2019 to 2021 makes it difficult to maintain continuity and comparability. This lack of coherence may impede stakeholders such as investors, consumers, and regulatory agencies from fully understanding Alibaba's efforts and achievements in environmental protection.

##### 2. Lack of Monetized Data

Although Alibaba's ESG reports contain extensive textual information on environmental protection, specific monetized data is lacking. Monetized data not only facilitates a more intuitive understanding of the economic impacts of environmental activities but also provides a basis for deeper analysis for investors and stakeholders. The absence of such data makes it challenging for readers to objectively assess Alibaba's environmental performance.

##### 3. Need to Enhance Significance of Information

While Alibaba provides environmental information in its ESG reports, the presentation and positioning of this information within corporate announcements, special sections, financial reports, and independent reports may not be sufficiently prominent. This results in many readers potentially overlooking these critical details, thereby affecting the visibility and importance of the information.

##### 4. Insufficient Quantification

Environmental information disclosures primarily consist of textual descriptions and charts, lacking highly quantified data. This hinders the ability to conduct comparative analyses horizontally and vertically. Providing specific quantified data, particularly for key indicators such as energy consumption and carbon emissions, would enhance readers' understanding of Alibaba's environmental performance.

##### 5. Consistency and Comparability Issues in Information Disclosure

Variations in report formats and content over time may raise consistency and comparability concerns. This makes it challenging for stakeholders to track and evaluate the company's performance and progress in environmental responsibility. To enhance the quality of information disclosure, Alibaba needs to maintain consistency in report formats and content and adhere to internationally recognized environmental information disclosure standards.

##### 6. Refinement and Transparency of Environmental Accounting Information

Alibaba's ESG reports may not provide sufficient detail to showcase the company's specific practices in environmental accounting. Environmental accounting, as a crucial tool for measuring corporate environmental performance, requires detailed disclosures of information such as the allocation of environmental costs, recognition of environmental liabilities, and assessment of environmental assets. This would help readers gain a more comprehensive understanding of Alibaba's actual environmental management practices.

##### 7. Alignment with International Standards

To enhance the international comparability and recognition of its environmental information disclosure, Alibaba needs to further align with international environmental accounting and reporting standards. By adhering to internationally recognized environmental information disclosure guidelines, Alibaba can better demonstrate its efforts and achievements in environmental protection, attracting more international investors and partners.

##### 8. Disclosure of Environmental Risk Management and Response Measures

Faced with increasingly severe environmental risks, companies need to develop effective response strategies. However, Alibaba's ESG reports may not adequately disclose how the company identifies, assesses, and manages environmental risks, as well as its response strategies in the face of environmental changes. This makes it difficult for external stakeholders to understand Alibaba's actual situation and preparedness in environmental risk management.

In summary, Alibaba still faces certain deficiencies and challenges in environmental information disclosure. To enhance transparency and recognition in environmental protection, Alibaba needs to continually improve the content and format of its ESG reports and adhere to internationally recognized environmental information disclosure standards. Additionally, Alibaba should strengthen the practice and transparency of environmental accounting to better showcase its efforts and achievements in environmental protection.

## **5. Recommendations for Enhancing Alibaba's Environmental Accounting Information Disclosure**

In order to comprehensively address the issues Alibaba faces in environmental protection, we propose the following detailed improvement measures:

### **1. Thorough Environmental Data Collection and Analysis**

In the current digital and big data era, data is crucial for decision-making. Alibaba needs to actively strengthen its collection of environmental-related data, ensuring both the breadth and accuracy of the data collected. Furthermore, robust data analysis is essential. The company should utilize advanced data analysis tools and methods to thoroughly analyze the collected environmental data, providing more comprehensive, specific, and monetized environmental information.

### **2. Clear and Formal Environmental Information Disclosure**

To ensure that all stakeholders have a clear understanding of Alibaba's efforts and achievements in environmental protection, the company should disclose environmental information prominently and formally in its annual reports, official website, and other important platforms. An independent environmental report is also indispensable, enabling the company to detail and systematically showcase its environmental strategies, measures, and effectiveness.

### **3. Standardized and Quantified Environmental Performance Reporting**

To accurately assess Alibaba's environmental performance, the company needs to increase the quantification of its data. This entails providing more quantitative data in addition to qualitative information. Additionally, adopting internationally or industry recognized standardized indicators and frameworks for reporting environmental performance can ensure the comparability and credibility of the data.

### **4. Consistency and Coherence in Reporting Format and Content**

To facilitate cross-period comparison and analysis by stakeholders, Alibaba needs to maintain consistency and coherence in the format and content of its environmental reports. This means that each year's report should follow the same structure and format, ensuring the continuity and traceability of important information.

### **5. Enhanced Transparency and Detailed Environmental Risk Management**

Transparency is key to building trust and gaining support from stakeholders. Therefore, Alibaba needs to further enhance its transparency in environmental protection. Specifically, the company should provide detailed disclosures of its environmental accounting practices, including how environmental costs, revenues, and liabilities are measured and recorded. Additionally, detailed environmental risk management measures are necessary to demonstrate how the company identifies, assesses, and manages environmental risks. [6]

### **6. Alignment with International Standards**



To ensure the global comparability and recognition of its environmental reports, Alibaba needs to actively align with international standards. This can not only enhance the company's image and reputation on the international stage but also attract more international investors and partners. By adhering to international standards, the company can better showcase its efforts and achievements in environmental protection, thereby promoting sustainable development.

## 6. Conclusion

This study conducted a comprehensive analysis and evaluation of the environmental accounting information disclosure quality of Alibaba Group, aiming to reveal the current status of the company's environmental protection and social responsibility efforts, and provide targeted improvement suggestions. Through an in-depth analysis of the ESG reports from 2018 to 2023, it was found that Alibaba has room for improvement in the adequacy, significance, and quantifiability of environmental information disclosure. Despite the company's active efforts in environmental protection, there are still shortcomings in the consistency, coherence, and provision of monetized data in information disclosure.

In response to the issues identified in the analysis, this paper proposes a series of specific improvement suggestions, including strengthening the systematic collection and analysis of environmental data, clear and formal environmental information disclosure, enhancing the standardization and quantification of environmental performance reporting, maintaining the consistency and coherence of reports, enhancing transparency and detailed environmental risk management, as well as aligning with international standards. The implementation of these suggestions will help Alibaba Group further improve the quality of its environmental accounting information disclosure, enhance transparency and recognition in environmental protection, and promote sustainable development.

The significance of this study lies in providing improvement directions for Alibaba Group and other enterprises in environmental accounting information disclosure, emphasizing the importance of corporate environmental protection and social responsibility. Against the backdrop of global sustainable development, enterprises should recognize the importance of environmental responsibility and take practical and effective measures to achieve a win-win situation between economic benefits and environmental protection. In the future, with the continuous improvement of environmental accounting information disclosure standards and deepening international cooperation, we look forward to seeing more companies joining the ranks of promoting global sustainable development and contributing to the future of the planet.

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