

# A STUDY OF DEVELOPMENT ON ENVIRONMENTAL RESPONSIBILITY ACCOUNTING IN CHINA<sup>1</sup>

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## ABSTRACT

Increasing major environmental pollution incidents in China have turned public attention to corporate social responsibility and environmental accountability. Pollution has been a major problem in China. The lack of corporate environmental responsibility has not only had negative impacts on the corporate image and its sustainable development, but has also hindered the government's stated social goals of promoting sustainable ecological development and building a "beautiful China". This paper will briefly review the development of contemporary environmental responsibility accounting in China. It will provide an analysis of the accounting system and provide possible solutions for enhancing application of environmental accountability in China.

**Keywords:** Environmental Responsibility Accounting; Social Responsibility; China

## INTRODUCTION

Increasing industrialization has resulted in pollution that threatens the sustainability of the environment in China. Wastage of resources, environmental pollution and ecological deterioration have seriously impacted on sustainable human development. "2012 China Environmental Bulletin"(MEP 2013) shows that as industrialization , urbanization and agricultural modernization progresses, pollution in China has reached a near-catastrophic level. The Bulletin focuses on mining pollution aggravation, domestic pollution deterioration and rural local livestock pollution. These increasing environmental issues challenge modern corporate social responsibility. Enterprises should pay for the loss caused to the environment, undertaking appropriate environmental responsibility. According to modern corporate theory, enterprise value should be not only to maximize the economic benefits, but also, more importantly, taking into account social and environmental impacts and social benefits.

18th CPC National Congress emphasized the importance of ecological civilization construction which was included as part of the main goal of "Completing the building of a moderately prosperous society in all respects and deepening reform and opening up in an all-around way"(Hu Jintao 2012). Chinese government clearly and vigorously promotes the construction of ecological civilization. It emphasizes the importance of correctly handling the relationship between economic development and ecological and environmental protection. The government intends to promote green, recycle, low-carbon development, and strives to build a beautiful China in order to improve Chinese people's welfare.

Since the beginning of the Chinese economic reform, many foreign companies have taken advantage of the loopholes in the accounting system in China and introduced high energy

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<sup>1</sup>The author wishes to thank Dr Alvin Cheng and Bill Oldfield for their valuable contributions and useful comments.

consumption, high pollution industries to the country. Many Chinese companies also discharge pollutants unscrupulously because of the lack of consciousness of environmental protection. As a result, the country's natural resources and ecosystem have been greatly damaged. In order to improve the sustainability of the Chinese market and economy, it is important for the policy setters to develop a framework for environmental responsibility accounting and promote corporate social responsibility.

Environmental responsibility accounting takes account of integrated environmental factors, and this enables businesses to provide better disclosure on a broader, more comprehensive perspective of their performance. Companies will be governed by the environmental responsibility accounting framework which will influence the management's strategic decision making on allocation of resource and setting corporate goals. This means that the strategy of the businesses will gradually change from adopting a high consumption, low output strategy to a low consumption, high-yield one.

In China, the idea of environmental responsibility accounting is still emerging as the topic involves ecology, economics and accounting. By incorporating environmental data into the decision making process, managers can make a comprehensive assessment of their corporate performance and analyze the impacts of the environmental activities on the enterprise's operating results.

## **DEVELOPMENT OF ENVIRONMENTAL RESPONSIBILITY ACCOUNTING THEORIES**

Environmental responsibility accounting is a branch of accounting as its theories are mainly derived from traditional accounting theories. According to Environmental accounting Guidelines (ME, Japan 2002), environmental responsibility accounting aims at achieving sustainable development, maintaining a favorable relationship with the community, and pursuing effective and efficient environmental conservation activities. These accounting procedures allow a company to identify the cost of environmental conservation during the normal course of business, identify benefit gained from such activities, provide the best possible means of quantitative measurement (in monetary value or physical units) and support the communication of its results. Herein, environmental conservation is defined as the prevention, reduction, and/or avoidance of environmental impact, removal of such impact, restoration following the occurrence of a disaster, and other activities. The environmental impacts are the burden on the environment from business operations or other human activities and potential obstacles which may hinder the preservation of a favorable environment.

However because of its high degree of uncertainty and the complexity of the research objects, environmental responsibility accounting was modified from traditional accounting: Accounting assumptions added an assumption of sustainable development.(Yan Jun and Xiao Zhirun 2006) In the context of building Beautiful China, enterprises should be based on the concept of sustainable development to regulate the production and operation of enterprises and accounting. The pursuit of the enterprise's own economic interest should be based on the premise of sustainable social and economic development. Accounting principles take into account the social policies and regulations, flexibility, full disclosure, and the principles of economic and

environmental benefits. Environmental responsibility accounting elements were divided into environmental assets, environmental liabilities, environmental costs, environmental losses and environmental income, thus further refining the traditional accounting elements.

Another theoretical basis of environmental responsibility accounting is ecological economics. It uses the principles of ecology and economics, combining ecological and economic laws to the study of the relationship between human economic activity and the natural ecological environment. It provides a theoretical basis and guidance to construct environmental responsibility accounting theory. (Li Guangxu 2009)

## **A REVIEW OF THE LITERATURE OF ENVIRONMENTAL RESPONSIBILITY ACCOUNTING**

Beams, F.A.'(1971) article in *Journal of Accountancy* entitled *Social Cost Of Pollution Control Convert Research* and Marlin, J.T.(1973) article in *Journal of Accountancy* entitled *Accounting for Pollution* are the two earliest internationally influential researches on environmental responsibility accounting.

The American environmental responsibility accounting system put together theoretical research and practical experience, and then developed and grouped the theories into three categories: natural resource reserves accounting, material and energy flow accounting and environmental responsibility accounting. Theoretically, it explains the significance of environmental responsibility accounting, environmental responsibility accounting concepts. In practice, it analyses how to use environmental responsibility accounting for cost allocation, capital budgeting, process or product design.

The handbook for Integrated Environmental and Economic Accounting (SEEA 2003) describes four main types of environmental accounts: 1. Physical flow accounts including hybrid (NAMEA) accounts; 2. Economic information on the environment (economic activities and products related to the environment and other environmentally related transactions); 3. Natural resource asset accounts. 4. Valuation of non-market flows and environmentally adjusted aggregates (adjusted for depletion, degradation and defensive expenditures).

Environmental responsibility accounting in Japan is defined as a branch of accounting for sustainable development of society and maintenance of good relations between companies and society. The enterprises should recognize and measure environmental costs and benefits of their own operating activities and provide such information to the public. (ME 2002)

China is slow in implementing environmental responsibility accounting compared to other countries. The first major research was written by Ge Jiashu in 1992(Ge Jiashu, Li Ruoshan 1992). The article entitled *Environmental responsibility accounting Theory and Practice Study* (Xu Han 1998) is a systematic research on environmental responsibility accounting in China. In this publication, the basic framework for environmental responsibility accounting, basic assumptions, research objects and elements, as well as other basic theory of measurement methods were summarized. It proposed the basic accounting model for environmental assets, environmental expenses, and environmental costs. A framework of environmental responsibility

accounting practices was established. Based on the construction of environment-friendly society policy, both theory and practice of environmental responsibility accounting in China has made considerable progress in the last 10 years.

## **PROBLEMS IN THE DEVELOPMENT OF ENVIRONMENTAL RESPONSIBILITY ACCOUNTING IN CHINA**

More attention has been placed by the Chinese government to address environmental issues. There is also growing public awareness of the serious health implications on pollution. However, compared to the research in other countries, environmental responsibility accounting in China is still in the exploratory stage. There are still many problems in China in regard to developing environmental responsibility accounting.

### *Degree Of Attention Paid By Enterprises To Environmental Responsibility Accounting Issues Needs To Be Improved*

Corporate environmental responsibility and moral philosophy are not common in China. In the enterprise development process, economic development and social responsibility might be in conflict. If there are no relevant laws and mandatory regulations, most companies will sacrifice environmental responsibility and not give up their own economic interests. Coupled with no strong ready-made, operational environment accounting standards to conduct rigid norms, and no effective restraint on corporate business, this is leading to less than needed attention to environmental responsibility and corporate environmental responsibility accounting from the enterprises. (Wu Qianqian 2008)

### *Weak Accounting Standards On Environmental Responsibility Accounting*

In China's environmental responsibility accounting practices, neither accounting objects nor disclosure of the relevant accounting information have uniform guidelines. First, the operability of existing environmental regulations on accounting matters is not strong. For example, although environmental factors are considered in Accounting Standards (2006), it is only reflected in incorporating present values of disposal cost into the cost of related fixed assets. Secondly, with lack of mandatory standards, most enterprises are unwilling to voluntarily disclose environmental information and hence this hinders conducting environmentally responsible accounting practices.

### *Inconsistent Disclosure Requirement On Environmental Responsibility Accounting*

In the chain of Chinese enterprise's interests, mainly government agencies, especially the environmental protection departments, require companies to conduct environmental information disclosure. Whereas demand to disclose corporate environmental responsibility accounting information is not strong from corporate stakeholders, such as investors, financial institutions, consumers, employees, etc. This shows that accounting information disclosure is only to fulfill the need from national macro-environment management. This partly resulted in overlooking the need of these stakeholders when disclosing corporate environmental information. Timely, complete and adequate environmental responsibility information is even harder.

### Lack Of Environmental Specialists

Environmental responsibility accounting is an emerging frontier multidisciplinary subject crossing ecology, economics, and accounting. But the current financial staff mostly have only a financial background. People with background from environmental responsibility, social responsibility, business ethics and other areas are very scarce. This creates great obstacles for environmental responsibility accounting work. Therefore, environmental responsibility accounting personnel training is an important issue that must be solved.

## **HOW TO IMPROVE THE ENVIRONMENTAL RESPONSIBILITY ACCOUNTING IN CHINA**

In order to achieve business continuity and long term sustainable development, a sound accounting system needs to be established as soon as possible. Relationship between business and environmental resources needs to be coordinated as well.

### Increase Corporate Awareness On Environmental Responsibility

Compared with developed countries, the public overall social outreach for environmental knowledge is low in China. Businesses and the general public lack an awareness of the need for environmental protection. Accounting education should be guided by the sustainable development principle. Public awareness of environmental importance and urgency based on advanced outreach methods and techniques of relevant theories should be learned from other countries.

### Enhance The Role Of The Chinese Government In The Development Of Environmental Responsibility Accounting

As an environmental resource manager, the government of China should become an advocate for the development of environmental responsibility accounting. Firstly, government needs to be responsible for improving environmental responsibility accounting related laws and regulations, such as the *Environmental Protection Law, Accounting Law, Tax Law*, etc. The status of environmental responsibility accounting could be emphasized in the legal form and this would also make it legitimate for the broader application of environmental responsibility accounting. Secondly, the pace of establishing environmental responsibility accounting principles guiding the implementation of corporate environmental responsibility accounting needs to be accelerated. Finally, an environmental auditing system needs to be established in China. Based on observation of the principles of whether investment is in compliance with national environmental policies, whether investment projects will cause potential environmental impacts or whether it helps to improve the quality of the environment, the environmental audit system will play a very important role in the sustainable development of China.

### Improve Information Disclosure Quality On Environmental Responsibility

In order to enhance external pressure and motivation of corporate environmental responsibility

accounting information disclosure , the government can use laws and regulations to enforce corporate disclosure of environmental information. Government can also urge enterprises to implement environmental responsibility accounting and supply more reliable and adequate environmental information. At the same time, guide the public in "green consumption". Consumer preference for "green products" will directly enhance the environmental responsibility accounting development momentum of corporates.

Enterprises should establish a suitable environmental responsibility accounting information disclosure system. This not only can avoid the introduction of production projects that will cause pollution, destruction and plunder of natural resources, it can also strictly regulate the environmental responsibility accounting disclosure process in every operating procedure. Corporates need to be recommended to use a combination of quantitative and qualitative methods in accounting practices. In order to ensure integrity of corporate accounting information disclosure, appropriate verbal descriptions are required whenever currency measure units can't be used.

#### *Better Training Of Environmental Responsibility Accounting Personnel*

Environmental responsibility accounting construction is a systematic project. A talent pool is an important part of environmental responsibility accounting. On one side, enterprises need to conduct environmental and environmental- related knowledge training for existing accounting staff. This training will update their knowledge of the system structure and allow them to better adapt to the requirements of environmental responsibility accounting and participate in environmental responsibility accounting management. On the other hand, environmental responsibility accounting talent reserves need to be strengthened. Large enterprises should participate in higher accounting education programs. Qualified institutions can open their own environment accounting major and train environmental responsibility accounting professionals for enterprises.

### **CONCLUSION**

Sustainable development strategy is to realize the coordinated development of the economy, society and the ecological environment, so the implementation of an environmental responsibility accounting system is necessary in Chinese enterprises. As a combination of ecology, economics and accounting, environmental responsibility accounting encourages enterprises to change their development strategies, undertake the responsibility of environmental protection, so as to realize economic benefit, ecological benefit, social benefit, coordinated development and the sustainable growth of the economy in China.

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