


## Article

# Opportunism Motivation of Environmental Protection Activism and Corporate Governance: An Empirical Study from China

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**Abstract:** In the study of environmental protection issues for more than forty years, research on the impact of financial performance on environmental protection has been one of the important branches. In the framework of principal-agent theory, this paper explores the opportunism motives in a company's environmental protection activism and the moderating role of corporate governance using the data of Chinese listed companies from 2005 to 2016. The study finds that: (1) the company's environmental protection activism is driven by the opportunist motives of policymakers who want to mask their inability; and (2) environmental protection activism does not enhance the company's future performance and value creation capability. Further studies find that corporate governance mechanisms play different moderating roles. Fund Shareholders play a positive governance role and reduce the correlation between financial performance and environmental protection activism. However, independence of the board of directors intensifies the opportunist motives. This paper provides new theoretical explanations for environmental protection decision-making, provides novel enlightenment for the protection of environmental protection policies in developing countries and regions.

**Keywords:** environmental protection activism; value creation; financial performance; inability disguise; corporate governance

## 1. Introduction

The contradiction between the environmental protection and economic development is a prominent issue in the implementation of sustainable development strategies. In this context, the Chinese government has made many mandatory regulations for the company's environmental protection activities. What's more, companies have also begun to use environmental protection as a strategic tool to gain competitive advantage [1]. Scholars generally believe that government coercive power [2], stakeholder pressure [3], suppliers, consumers, and competitors [4] are the main driving forces for companies to invest in environmental protection. The external factors of the enterprise are the leading factors that cause the company to invest in environmental protection. It is difficult for companies to invest voluntarily in environmental protection, because the internalization of external costs and investments in pollution governance will divert financial resources from efficient investments without compensation [5].

However, investment in environmental protection by enterprises is not only a defensive mechanism that complies with laws and regulations and external pressure, but also a vision for the sustainable development of the organization, and even a prerequisite for the survival of the company [6]. Lin and Ho (2011) [7] pointed out that the driving factors of corporate green management actions gradually shift from external factors to internal factors, and the internal factors such as the support of organizations and the quality of human resources have a positive impact on corporate environmental protection practices. Therefore, based on the balance between external pressure and internal factors, scholars have conducted extensive research on the company's environmental protection decision-making, but the conclusions are inconsistent. There are many reasons for this inconsistency, such as sample selection, variable measurement, endogeneity treatments and regression methods [8]. At the same time, it is even more noteworthy that studies have neglected the impact of agency problems in the environmental decision-making process. The influence of the agency issues within the company on the decision-making relating to environmental protection is not yet apparent, which leads to visible defects in the research on the motivation of environmental protection decision-making.

China has become a vast global production base and has established an enormous consumer market. However, environmental issues such as air pollution, energy waste, and water pollution have become increasingly prominent. Under the background of strict government environmental regulation, Chinese companies have performed quite differently in environmental protection. Some companies have become just passive responders to rules and pressures. However, some companies are active in environmental protection. They not only formulate policies to protect the environment but also set up specific environmental protection departments. We call this proactive environmental protection behavior the environmental protection activism. Sharma (2000) [9] believes that the choice of corporate environmental management is to a certain extent affected by the availability of disposable resources. So, if an enterprise's financial performance is better, will its environmental investment be greater? There is no consistent conclusion of this study at present. Some scholars believe that high-performing companies have more disposable funds, are more likely to obtain external financing, and are more optimistic about their expectations in the future, and therefore have relatively more environmental protection inputs [10]. Murovec, Erker and Prodan (2012) [10] found that the company's performance is positively related to the environmental protection investment. But based on a sample of European SMEs Hitchens et al. (2003) [11] concluded that corporate financial performance has no significant impact on environmental protection investment.

Different countries have distinctive cultures, values, and institutional backgrounds. This difference leads to conclusions that the research on Chinese companies' environmental protection investment may be different from that in the West. The Chinese economy is in a transitional period. Subject to government regulations, public supervision, and the constraints of the market mechanism, the factors and economic consequences of corporate environmental protection activism are even more complicated. So, for Chinese companies, what impact will financial performance have on the company's environmental protection activism? What is the motivation behind this? The research in this paper shows that companies with poorer financial performance have a higher level of enthusiasm for environmental protection. From the perspective of economic efficiency, companies should be more inclined to spend money on direct profitable projects to obtain more economic benefits and market value. Why are companies with poor financial performance willing to adopt non-economic plans such as environmental protection? What is the motivation behind it? Is it a kind of value-creation strategy, or is it using the "green" image to "mask" management inability?

Also, the behavior is personified, which is the observable response of the subject to a given goal in a given situation. The decision-making behavior cannot be separated from the behavior subject. Senior executives make the company's environmental investment decisions under the principal-agent conflict. The existing research lacks the motivation research on the company's adoption of different strategies of environmental protection from the perspective of behavioral motives, thus obstructing

the understanding of the company's environmental protection activism to some extent. After 40 years of reform and opening up in China, enterprises have changed continuously from production centers under planned economic systems to economic entities that pursue profits. The profitability of a listed company not only affects the company's pricing, reputation, and following financing capabilities in the stock market but also affects the compensation and promotion of listed company executives. Therefore, facing unsatisfactory corporate financial performance, the company's executives are under tremendous pressure. They have a strong incentive to divert the attention of the public and shareholders or gloss over their operating capabilities. So, is environmental protection activism the right way for executives to conceal their inability with a "green" reputation? What kind of corporate governance factors will inhibit (or amplify) the manager's motivation in environmental protection activism? These issues are worth studying in depth.

In the framework of principal-agent theory, this paper explores the correlation between Chinese corporate financial performance and environmental protection activism and the moderating effect of corporate governance. The contributions of this work are presented as follows. Firstly, the perspective of corporate environmental protection research has been changed from the analysis of traditional company motivation to the motivation of corporate environmental management decision-makers, thus deepening the understanding of environmental protection decision-making processes and mechanisms. It provides a new explanation for environmental protection behavior in the transition economy. Secondly, it reveals that the corporate governance factors of Chinese companies are important moderating effects for executives to use environmental protection activism as the strategy of masking their inability. This enriches the study of corporate environmental protection from the perspective of corporate governance. The conclusions of this paper provide new theoretical explanations for environmental protection decision-making in enterprises, providing novel enlightenment for the protection of environmental protection policies in developing countries and regions and the supervision of industrial environmental protection investment by enterprises.

## 2. Literature Review

The academic research on factors driving the company's environmental protection policies can be summarized into three aspects: legitimacy perspective, imitation pressure, and shaping competitive advantage.

### 2.1. Legitimacy Perspective

The environmental protection investment of enterprises is not only difficult to bring direct cash flow to enterprises, but also requires companies to spend a lot of money to purchase environmental protection facilities and carry out environmental protection technological innovations, which leads enterprises to have no enthusiasm for protecting the environment [12]. DiMaggio (1998) [13] believes that the business decision-making is not merely a reflection of the economic rationality of executives, but also influenced by non-economic factors such as external pressure of the organization and social expectations. Among them, the government's environmental regulation policy is not only the institutional arrangement from the government to restrict and control the company's pollution emissions, but also the most important factor affecting the environmental protection investment decision-making process of the enterprise. Maxwell and Decker (2006) [14] believe that even if some companies voluntarily invest in environmental protection, it is often for the purpose of reducing the cost of compliance with environmental regulation requirements. Some studies also believe that government supervision not only brings pressure on companies to invest in environmental protection, but also can be a driving force for companies to improve environmental protection and can help companies win first-mover advantage by selling new technologies and production methods to other companies that is the "win-win hypothesis" of Porter and Van der Linde (1995) [15]. Government regulation may make environmental protection a factor to consider when making decisions in the company, thereby changing the prior trade-off between economic and environmental benefits [16].

In addition to government regulation, Sharma and Vredenburg (1998) [17] studied the social pressures that companies face from the media and environmental groups to promote the environmental protection decisions of enterprises. They believe that companies should establish good relationships with local communities, environmental organizations, governments, and other non-economic stakeholders through active environmental protection. Customers can exert pressure on companies to implement environmental protection measures through buying or resisting behaviors and suppliers can stress by stopping the supply of raw materials or requiring companies to use raw materials that are more environmentally friendly [18]. The public can approve or oppose corporate management behavior through public opinion [19]. In order to obtain the legitimacy necessary for survival and development, enterprises need to pay attention to and meet the stakeholders' desire and requirements for environmental protection.

## 2.2. Imitation Pressure

The organization theory provides a new perspective for the study of corporate environmental protection behavior. This theory holds that social systems and economic laws simultaneously affect the organizational system. Since all organizations are deeply embedded in social and political environments, organizations tend to imitate the behavior of other members of the network [20]. DiMaggio and Powell (2000) [21] believe that organizations tend to mimic those organizations that appear to be more successful or more legitimate in their field. Relevant empirical studies mostly support this view. For example, Lieberman and Asaba (2006) [22] summarized the existing research on imitative behavior and considered that larger, more successful or prestigious enterprises are more likely to be the target of imitation.

Research by Aerts, Cormier, and Magnan (2006) [23] shows that corporate environmental reports have mimicking behaviors. The empirical study by Zhu (2007) indicates that the market's normative pressure and the government's mandatory pressure will prompt enterprises to improve environmental performance, but at the same time, it will weaken the economic performance of the company. However, the practice of imitating competitors' environmental protection measures will improve the financial performance of the company. Jennings and Zandbergen (1995) [2] believe that the environmental protection activities implemented by companies driven by similar systems tend to be consistent.

## 2.3. Creating a Competitive Advantage

Environmental management can also be seen as a strategic measure for companies to assume social responsibility and gain public trust. However, the benefits derived from the implementation of environmental protection measures are ultimately the driving force for companies to adopt and continue environmental protection investment. Banerjee (2002) [24] believes that corporate environmental protection has risen to become a corporate responsibility in the natural eco-environment, becoming part of the company's strategy and integrating it into the company's daily production operations.

Hart (1995) [25] proposed the Natural Resource-Based View (NRBV) by integrating the constraints and opportunities that the natural environment resources can bring to the company. According to NRBV, the green management of enterprises will encourage enterprises to form unique and scarce resources and capabilities that cannot be imitated and gain competitive advantages. The company will adopt a proactive environmental strategy that transcends government regulation and redesigns its products and technologies to protect the environment [26].

The formation of this competitive advantage may stem from the following approach. First, the development of environmental-related capabilities and the direct reduction in the costs associated with the more efficient use of natural resources may enhance financial performance [27]. If the environmental strategy is supported by corporate capabilities, this new capability becomes an intangible asset of the company, and it is valuable, rare, inimitable, and irreplaceable [28]. Second, the corporate reputation can be enhanced by fulfilling corporate social responsibility [29] and its environmental obligations [30].

At the same time, mutual trust and cooperation with stakeholders can reduce the explicit and implicit costs of negotiations, significantly reduce the possibility of managers taking opportunistic behavior, and urge them to make a long-term orientation [31,32]. This view helps the company's decision-makers regard environmental protection as a long-term, important strategy for the company.

### 3. Institutional Background and Hypothesis Development

#### 3.1. Institutional Background

In the late 1980s, a series of critical laws and regulations established after China implemented the reform and opening up policy included the Environmental Protection Law. However, the original environmental protection law only emphasized the basic government principles and policies in environmental protection and did not involve the responsibilities and obligations of citizens and organizations in environmental protection. Since the 1990s, with the rapid economic development, the environmental pressure China is facing has been increasing. The government has introduced a series of environmental laws, regulations, and policies to strengthen the company's responsibility in environmental protection continuously. For example, the "Water and Soil Protection Law" promulgated in 1991, the "Noise Pollution Prevention Law" promulgated in 1996, the "Cleaner Production Promotion Law" promulgated in 2003, and the "Energy Conservation Law" promulgated in 2007 and the "Solid Waste Environmental Pollution Prevention and Control Law" promulgated in 2016 stipulate the environmental protection responsibilities that the organization should undertake in its production and operation processes. These laws above are enacted by the Ministry of Ecology of the People's Republic of China.

To guide social capital to invest in green and environmental protection industries, the Ministry of Ecological Environment Protection has also promulgated a series of regulations and principal to conduct the capital market to provide preferential policies to companies with environmental protection behaviors in the process of the company's listing and financing. For example, in accordance with the "Notice on Checking the Environmental Protection of Listed Companies" issued in 2001 and the "Provisions on Environmental Protection Verification for companies applying to list and refinancing" issued in 2003, the company must submit its measures and results in environmental protection to the approval department during the listing and refinancing.

At the same time, the China Securities Regulatory Commission and the China Banking Regulatory Commission had issued relevant policies on corporate environmental information disclosure and bank green loans in order to supervise the listed companies to strictly implement the national environmental laws and regulations, to avoid the market risks caused by the environmental pollution caused by lagging behind in environmental protection work or unreasonable raised funds. The "Environmental Information Disclosure Approach" promulgated in 2008 more specifically stipulates the requirements for companies to disclose environmental information. This rule is the beginning of a more comprehensive phase of environmental information disclosure in China. The "Guidance on the Disclosure of Environmental Information by Listed Companies" issued in 2010 requires listed companies of 16 heavy pollution industries to issue annual environmental reports. In 2012, the China Banking Regulatory Commission formulated and promulgated the "Green Credit Guidelines," requiring commercial banks to adjust the credit evaluation structure and develop green credit and increase loan support for enterprises engaged in the green economy, low-carbon economy.

Nevertheless, the enthusiasm of Chinese companies in environmental protection still presents a considerable difference. Some companies are only satisfied with the requirements of legitimacy and become passive actors in environmental protection; however, some enterprises have become environmental protection activists with the goal of sustainable development or other motives. Environmental protection activism here refers to the company's voluntary environmental protection activities based on the organizational vision of sustainable development or the utilitarian goals of the company's decision makers. It is an environmental protection activity implemented voluntarily by enterprises that exceeds the mandatory environmental protection requirements of laws and



regulations. China's unique managerial behavior and corporate governance characteristics in the transitional economic context provide an unique opportunity to study the motivation of environmental protection activism.

### 3.2. Hypothesis Development

The theory of competitiveness and organization theory hold that the green management capability and the degree of resource redundancy have an essential influence on the company's environmental protection strategy. Sharma (2000) [9] and Hart (1995) [25] proceed from the resource-based theory and believe that the choice of environmental protection strategy will be influenced by the disposable capital of the company. Clarkson et al. (2011) [30] analyzed data from four major polluting industries in the paper industry, chemical industry, metal smelting, and oil and gas in the United States from 1990 to 2003. The research shows that, although the environmental strategy can improve the future economic benefits of the company, it does not mean that all companies can implement an environment-friendly strategy. Only companies with high financial resources and management skills can implement active environmental protection strategies.

However, previous studies have neglected the opportunist motivation of decision-makers with principal-agent conflict. When financial performance is not good, the negative nature of poor performance will not only affect the capital market performance but also affect suspicion of the ability of executives. Therefore, to reduce the negative impact of such bad performance on investors and other stakeholders, senior management may have the initiative to adopt some strategies to make up for it. Environmental protection activities are one of the strategies that can meet this need. Executives with low levels of financial performance may use active environmental protection to achieve the goal of guiding stakeholders to focus on issues other than financial performance [33,34]. By participating in conspicuous social programs to reduce the negative impact of disappointing financial performance [34], it helps prove that the executives are competent.

The strategy of environmental protection activism has two typical characteristics. First of all, the input-output ratio of environmental protection is high. For example, it won't cost a lot for companies to formulate some policies on environmental protection, arrange specialized personnel, and even establish a particular department to take charge of the company's environmental protection work. However, the concrete actions for publicizing these environmental protection activations will immediately gain the recognition and appraisal of company stakeholders and have an immediate effect on output. Second, it is difficult to scientifically evaluate the economic results and social impact of environmental protection activism. Because the differences in products and processes have caused different levels of pollution in different companies, this difference has created difficulties in determining the effectiveness of environmental protection policies among different companies.

Therefore, in times of poor financial performance, company executives may strategically use environmental protection to manage stakeholder perceptions of themselves and the company. Environmental protection activism at this time was taken as a pure look ("cheap talk"). We call this strategy of the company as "the disguise of executive's inability theory". That is, when the company's financial performance is poor, environmental protection activism may be used by the company as a strategy to undermine the negative impact of the low financial performance. Based on this argument, we propose the following hypothesis:

**Hypothesis 1.** *There is a negative correlation between corporate performance and environmental protection activism.*

Whether or not environmental protection activism can create value for the company depends to a certain extent on the motive of the company to adopt environmental protection activism. Fujii, Iwata and Kaneko, et al. (2013) [35] believe that differences in strategies for treating environmental problems can lead to different results from negative to positive corporate financial performance. Companies that adopt passive, reactive environmental strategies may face more costs than benefits.

However, companies that adopt an active environmental strategy may receive higher-than-cost benefits. Therefore, although studies have shown that company environmental behaviors have a “value effect”, this depends on the company strategy of using environmental protection as part of its strategy to increase the company competitive advantage, not just to satisfy regulatory compliance, or due to opportunistic behaviors. Studies by some scholars [26,30,35,36] have shown that if companies that only respond to compliance requirements and use end-of-pipe keeping to reduce pollution pursue a reactive environment strategy, this will only incur additional costs and negatively affect company performance.

Decision-makers’ opportunistic motives will ultimately harm the company’s value [34]. When the company’s performance is not good, to alleviate the concerns of stakeholders about the management incapability, the executive will adopt environmental protection activism policies and even set up a special department to promote the company’s environmental protection. Managers expect to use a good corporate social responsibility image to ease the stakeholder’s criticism of the company’s low performance. In fact, using this kind of opportunistic environmental protection is difficult to enhance the competitiveness of enterprises truly. It will increase the company’s investment in environmental protection, thereby reducing the value of the enterprise. King and Lenox (2002) [36] pointed out that the environmental protection activism of voluntarily reducing environmental impacts conflicts with the company’s main goal of maximizing shareholder value. The consideration of environmental factors in corporate decision-making will weaken the company’s financial performance because the economic benefits of environmental activities are lower than their costs [34]. Friedman’s trade-off theory points out that increasing the environmental protection of the company may transfer resources from the core business of the company, and therefore it will have a relative disadvantage compared with competitors who do not have environmental responsibility. Moore (2001) [33] also believes that the company’s environmental protection activism strategy may distract the company from the “main business” and lead to reduced financial performance in subsequent periods. Environmental protection behaviors motivated by opportunism are likely to be transformed into cost expenditures. If the impact of such expenditures on the company’s core business is considered, it will have greater damage to the future value of the company. Based on the above analysis, this paper proposes the following assumptions:

**Hypothesis 2.** *Chinese companies’ environmental protection activism will significantly reduce the company’s future value.*

The main function of the company’s board of directors is to guide and supervise senior management and ensure that they make decisions on behalf of shareholders and other stakeholders [37]. Independent directors will not only focus on financial performance but will also be concerned with broader non-financial performance [38]. An independent board of directors can more effectively supervise management. This is mainly because independent directors do not participate in the day-to-day operations of the company [39], and the independent director’s occupation does not depend on the CEO, so the CEO has less power over independent directors [40]. Therefore, the higher the proportion of independent directors, the more likely the board of directors will challenge the top management and the higher the level of effective supervision of the board of directors. Besides, independent directors and internal directors have different incentives, values, and time horizon [41]. Independent directors often have a longer-term perspective and are more likely to pursue sustainable development [42]. Independent directors have fewer financial interests in the company and are more likely to interfere with opportunistic behaviors of managers [43].

For the company’s environmental protection activism decisions, when the company’s performance is not good, independent directors can restrict the tendency of managers to use environmental protection activism to decorate poor financial performance and urge executives to adopt effective strategies to improve the company financial performance. For example, to strengthen scientific and technological innovation, promote compensation management policies, to enhance the effectiveness of

strategic implementation, and even adjust the company's strategy to achieve the goal of improving company performance. Therefore, we propose the following research hypothesis.

**Hypothesis 3.** *Board independence can reduce the negative correlation between financial performance and environmental activism.*

Institutional investors are important players in the security market. With its professional advantages, information advantages, and relatively high shareholdings, institutional investors will influence management motivation [44]. However, there have been different views on the impact of institutional investors on environmental protection.

First, institutional investors will encourage companies to invest in environmental protection, because companies with good social performance can bring better returns to institutional investors. For example, Cox, Brammer and Millington (2004) [45] found that institutional investors would choose to invest in companies with excellent social achievements and avoid investing in companies with poor social performance in UK. Mahoney and Roberts (2007) [46] found that the company's social rating has a significant impact on the number of institutional investors for its international activities and product quality in Canada. Saleh, Zulkifli and Muhamad (2010) [47] found that listed companies in Malaysia can attract and maintain institutional investors through participation in social activities.

Second, environmental protection investment will obviously impact the company's short-term financial performance; so institutional investors do not recommend that companies invest in this type of investment. Institutional investors tend to choose investment strategies to promote business growth (such as international diversification or access to new technologies) rather than the internal development of new products and R&D expenditures (which may ultimately affect product quality) because the latter will take longer to achieve benefits [48]. The primary goal of mutual fund managers is short-term high returns because their reward system emphasizes quarterly performance [49]. Some scholars have found that more than 91% of the agency contests and shareholder amendments are initiated by pension funds [42], but their focus is often on governance and performance issues rather than on social and environmental problems. The pursuit of short-term profits by investment funds may lead to projects that prefer short-term high returns. Given the above pressures on profit, institutional investors may not encourage the company to invest time or corporate resources in environmental protection.

When the company's performance is poor, the company should prioritize the allocation of resources to activities that improve business performance. When the company's performance has been enhanced, the executive will consider more of the interest of other stakeholders, such as increasing the degree of environmental protection in the production process. The fund shareholders, as strategic investors, are more consistent with the interests of the company and can form active supervision over the company's strategic decisions. In the case of poor corporate performance, if the company's production operations have met the legal requirements for environmental protection, it may not be in favor of the company investing more resources and energy in environmental protection. Therefore, the fund shareholders can restrict the tendency of managers to use environmental protection activism to cover their inadequacies in financial performance and play a similar role as independent directors. Therefore, we propose the following research hypothesis.

**Hypothesis 4.** *Institutional investors can weaken the negative correlation between corporate financial performance and environmental activism.*

## 4. Research Design

### 4.1. Sample

This article selects listed companies in the Shanghai and Shenzhen Stock Market in 2005–2016 as research samples. The company's economic value added (EVA) data, financial performance, and



corporate governance data were obtained from the CSMAR Database and verified with Wind Database. For inconsistent data, we determine the exact value by reading the annual report or related announcements.

The data on environmental protection activism comes from the database of the China Academy of Corporate Governance at Nankai University. This data was collected manually from company annual reports, social responsibility reports and related announcements. In order to ensure the accuracy of data collection, each company's data is collected by two research assistants, and then the information is compared. For companies with inconsistent data, the research assistant will reread the relevant report to confirm or correct it.

## 4.2. Variables

### 4.2.1. Dependent Variable

The environmental protection activism proposed in this research refers to the company's voluntary environmental protection activities based on the vision of sustainable development or the utilitarian objectives of the company's decision makers. It is an environmental protection activity voluntarily implemented by enterprises that exceeds the mandatory environmental protection requirements of laws and regulations. Trumpp et al. (2015) [50] followed ISO 14001 and ISO 14031 to construct a corporate environmental management performance indicator consisting of the following five sub-dimensions: environmental policy, environmental goals, environmental processes, organizational structure, and environmental monitoring. Based on the research results of Trumpp et al. (2015) [50], this paper selects the two dimensions (environmental policies and organizational structures) that can reflect the differences in the enthusiasm toward environmental protection among enterprises to measure environmental protection activism. Environmental policy is a company-wide commitment to the responsibility for protecting the environment and the organization's philosophy of protecting the environment [51]. Comparing to companies that do not have such a policy, companies that promulgate environmental protection policies will have higher enthusiasm for environmental protection. Organizational structure refers to the formal management structure established to achieve environmental goals [51]. Compared with the environmental protection enthusiasm in companies that only promulgate environmental protection policies, the enthusiasm embodied in companies that set up specialized environmental protection departments is naturally better.

Specifically, in order to measure the differences in the company's environmental protection activism, five levels were used to evaluate the company's enthusiasm and initiative in environmental protection. If the company has a dedicated environmental protection department or agency, or gains the qualification of the ISO14000, Activism has a value of 4. If the company has specific environmental protection measures and expenditures, such as environmental investment, environmental technology development, and development of an environmental management system, Activism has a value of 3. If the company shows a sense of environmental protection through such as the company's education and training in environmental protection, Activism has a value of 2. If the company does not disclose any policies and measures in environmental protection, Activism assigns a value of 1. If the company has environmental pollution problems or accidents, Activism has a value of 0.

### 4.2.2. Independent Variables

Researchers have used a wide range of financial performance indicators, such as return on assets, return on equity, return on sales, and scale. Some studies use market-based performance indicators such as market returns or price/income (P/E) ratios. McGuire, Sundgren and Schneeweis (1988) [52] found that accounting-based measures, especially asset returns, are predictors of corporate social responsibility rather than market measures. However, using a variety of financial performance factors will help provide a complete understanding [33]. Therefore, in this study, return on total assets (ROA), return on equity (ROE) and the economic value added (EVA, standardized by total assets), which can more accurately reflect the value creation ability, are adopted.

#### 4.2.3. Moderating Variables

The moderating variables for this study are two dimensions of corporate governance. They are the ratio of independent directors to the total number of directors (Independence) and the share of fund shareholders in the company (Fund Share).

#### 4.2.4. Controlling Variables

Referring to studies [53–55], this paper controls the impact of corporate-level characteristics such as company size (LnAsset), cash flow (CFO), debt (Leverage), the ratio of shares held by the largest shareholder (Sh1), the separation between the cash rights and controlling rights of largest shareholder (Separation), the total number of management (Executive number), number of workers (Workers number) and listed years (Year listed) and executive characteristics such as the share held by CEO (CEO share), CEO age (CEO age), and CEO's education background (CEO education.) Also, we control the fixed influence of between years (Year) and industries (Industry) by adding the dummy variables.

#### 4.3. Empirical Test Model

##### (1) Corporate performance and environmental protection activism

In this paper, the model (I) is designed referring to Hambrick and Quigley (2014) [56]. The independent variable is the one-year lagged company performance; the explanatory variable is environmental protection activism. The one-year lagged explanatory variable is employed to reduce the possible reverse influence of environment protection activism on finance performance. Hypothesis 1 was tested using the ordered Logic regression method.

$$\text{Activism} = \alpha_0 + \alpha_1 \text{L.Perf} + \sum_{j=1}^m \beta_j \text{Control} + \varepsilon \quad (\text{Model I})$$

In the model above, Activism represents environmental protection activism. Perf represents company performance, which is the economic value added (EVA), return on total assets (ROA) and return on equity (ROE). Control is the control variable, *Year* and *Industry* are dummy variables for year and industry.  $\varepsilon$  is the residual.

##### (2) Economic consequences of environmental protection activism

To alleviate the endogenous impact between environmental protection activism and company performance, we test Hypothesis 2 on the economic consequences of environmental protection activism according to model (II) below.

$$\Delta \text{Perf} = \alpha_0 + \alpha_1 \Delta \text{Activism} + \sum_{j=1}^m \beta_j \text{Control} + \varepsilon \quad (\text{Model II})$$

$\Delta \text{Perf}$  is an indicator of company performance changes during the last one year.  $\Delta \text{Activism}$  is a change in corporate environmental protection activism during the last one year. The other variables are the same as above.

##### (3) Moderating effects of corporate governance

We use the following model (III) to test the moderating effect of corporate governance mechanisms, independent directors and institutional investor.

$$\text{Activism} = \alpha_0 + \alpha_1 \text{Perf} + \alpha_2 \text{Gov} + \alpha_3 \text{Perf} * \text{Gov} + \sum_{j=1}^m \beta_j \text{Control} + \varepsilon \quad (\text{Model III})$$

In the model above, Gov represents corporate governance variables, which are the independence of the board of directors and the fund shareholding. Perf \* Gov is an interaction item of company performance and corporate governance variables. The other variables are the same as above.

## 5. Empirical Results

### 5.1. Descriptive Statistical Analysis

Table 1 shows the descriptive statistical analysis results of the sample. The average level of environmental protection activism was 1.901, and the standard deviation was 0.925. There were significant differences among the companies. The average value of the economic value added (EVA) created per thousand yuan of total assets is 1 yuan, the maximum is 178 yuan, and the minimum is 279 yuan. There is a big difference in the value creation capability. The company's total return on assets (ROA) was 3.6%, with the highest yield of 21.8% and the lowest loss of 27.8%. The maximum value of the independence index of the board of directors is 0.714, and the minimum value is 0.429. This is in line with the regulations of the China Securities Regulatory Commission. The number of independent directors of listed companies must exceed one-third of the board members according to the regulation from government. The average ratio of the fund shares is 4.99%; the highest is 32.83%. The fund shareholders are important stakeholders for the governance of listed companies, but the data shows that the proportion of fund shares in Chinese listed companies is generally relatively small. See Table 2 for the results of other control variables.

The average debt of the sample is 47%. The highest is 150.4%, and the lowest is 24.6%. There are also vast differences between different companies. The average number of company executives is 14.51, with the fewest being 8 and the most being 27. The average age of the CEO is 43.31, and the maximum CEO age is 63. The average value of CEO's shareholding was 3.7%, with the highest ratio being 49.9%, but the median was 0. The average time the sample company has been listed is 9.691 years, the longest is 23 years.

**Table 1.** Descriptive statistical analysis of major variables.

Variables	Mean	SD	Min	Max
Activism	1.901	0.925	0.000	4.000
EVA	0.001	0.064	−0.279	0.178
ROA	0.036	0.066	−0.278	0.218
ROE	0.036	0.066	−0.278	0.218
Independence	0.632	0.052	0.429	0.714
Fund share	4.985	6.766	0.001	32.830
LnAsset	21.770	1.315	18.760	25.710
CFO	0.044	0.079	−0.214	0.267
Leverage	0.470	0.246	0.048	1.504
Sh1	35.090	15.430	7.800	74.780
Separation	5.647	8.015	0.000	29.480
Executive number	14.510	3.805	8.000	27.000
CEO share	0.037	0.099	0.000	0.499
CEO age	43.310	15.500	0.000	63.000
CEO education	1.808	1.837	1.000	5.000
Workers number	7.454	1.368	3.367	10.940
Years listed	9.691	6.271	0.000	23.000

### 5.2. Multiple Regression Analysis

Table 2 lists the regression results of environmental protection activism on corporate performance. The explanatory variable in model (1) is economic value added (EVA), and the explanatory variables in model (2) and model (3) are return of total assets (ROA) and return of net assets (ROE). We can find that all of EVA, ROA and ROE are negative correlated with environmental protection activism. The coefficients of EVA and ROE are statistical significant. Hypothesis 1 is verified. In other words,

when the company's performance is not good, the company will have greater motivation to formulate policies related to environmental activism, such as taking environmental protection measures, and even establishing a dedicated department or agency responsible for environmental protection.

**Table 2.** Regression results of environmental protection activism on company performance.

	Model (1)	Model (2)	Model (3)
L.EVA	−1.110 *** (−3.115)		
L.ROA		−0.843 ** (−2.305)	
L.ROE			−0.355 *** (−2.618)
LnAsset	0.204 *** (9.335)	0.199 *** (9.181)	0.200 *** (9.226)
CFO	0.680 *** (2.871)	0.687 *** (2.903)	0.647 *** (2.752)
Leverage	−0.295 *** (−2.970)	−0.305 *** (−2.963)	−0.260 *** (−2.670)
Sh1	−0.001 (−0.504)	−0.001 (−0.604)	−0.001 (−0.674)
Separation	0.001 (0.455)	0.001 (0.372)	0.001 (0.357)
Executive number	0.015 *** (3.115)	0.015 *** (3.128)	0.015 *** (3.157)
CEO share	0.102 (0.462)	0.103 (0.472)	0.095 (0.433)
CEO age	0.007 ** (2.469)	0.007 ** (2.388)	0.007 ** (2.387)
CEO education	−0.018 * (−1.868)	−0.018 * (−1.862)	−0.018* (−1.888)
Workers number	0.165 *** (9.276)	0.165 *** (9.299)	0.165*** (9.269)
Years listed	0.003 (1.014)	0.004 (1.192)	0.004 (1.255)
Year Dummy	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes
N	9652	9652	9652
Chi2	633.216	631.238	632.931

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively; the value in brackets is the result of the Z test.

If the company uses environmental protection activism as an inexpensive dialogue to win reputation, will it have a significant impact on the company's future performance? Table 3 shows the regression results of changes of environmental protection activism on firm performance changes. According to the results of the Hausman test on the regression results of OLS, fixed effects, and random effects, the fixed effect model is selected finally. According to the regression results, there is a significant negative correlation between changes in environmental protection activism and changes in EVA in the model (1). This shows that the promotion of the company's environmental protection activism not only did not bring about the improvement of the company's performance but also worsened the company's performance. Hypothesis 2 is verified. This is consistent with the findings of Moore (2001) [33].

**Table 3.** Economic consequences of environmental activism.

	Performance Changes during 1 Year		Average Performance Changes during 2 Years	
	Model (1)	Model (2)	Model (3)	Model (4)
	$\Delta$ EVA	$\Delta$ ROA	$\Delta$ EVA	$\Delta$ ROA
$\Delta$ Environmental Activism	−0.006 * (−1.711)	−0.001 (−0.302)	−0.001 ** (−2.087)	0.001 (0.323)
LnAsset	0.006 (0.415)	0.019 *** (2.696)	0.002 * (1.669)	−0.005 (−0.539)
CFO	0.030 (0.522)	−0.051 ** (−2.481)	0.017 *** (4.059)	−0.203 *** (−5.567)
Leverage	−0.064 (−1.298)	0.039 * (1.937)	0.000 *** (3.576)	0.006 *** (6.724)
Sh1	−0.000 (−0.134)	−0.000 (−0.933)	−0.000 * (−1.909)	−0.002 ** (−2.019)
Separation	−0.001 (−1.233)	−0.001 (−1.364)	0.000 * (1.923)	0.001 (1.316)
Executive number	0.004 ** (2.273)	0.002 * (1.777)	0.027 * (1.780)	0.035 (0.270)
CEO share	0.150 (0.403)	−0.118 (−0.597)	0.000 ** (2.101)	−0.001 (−0.560)
CEO age	−0.000 (−0.143)	−0.000 (−0.165)	0.030 (0.636)	−0.299 (−0.754)
CEO education	0.000 (0.045)	−0.000 (−0.061)	−0.000 (−1.343)	0.000 (0.278)
Workers number	−0.003 (−0.318)	0.013 *** (2.679)	−0.001 ** (−2.123)	−0.016 *** (−3.191)
Years listed	−0.003 (−1.062)	−0.003 ** (−2.222)	0.001 *** (2.774)	−0.004 (−1.416)
Constant	−0.026 (−0.097)	−0.400 *** (−2.987)	0.197 *** (6.277)	−1.620 *** (−6.058)
Year Dummy	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
N	7268	7309	7393	7391
R2	0.116	0.644	0.131	0.082

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively; the value in brackets is the result of the *t*-test.

It cannot be overlooked that the company's efforts in environmental protection may take a long time to bring financial benefits to the company. In the following section we analyze the impact of changes in environmental protection activism on the average performance change over the next two years to further examine the effect of environmental protection activism on company performance over a longer period. The models (3) and (4) in Table 3 are the regression results on the impact of environmental protection activism changes on average performance changes over next two years. The results are similar to model (1) and model (2). This shows that the high level of the company's environmental protection activism has not improved the company's performance for a long time. Hypothesis 2 is further confirmed.

So why is this happening? Palmer, Oates and Portney (1995) [57], in contrast to Porter's view, believe that companies' environmental behavior is costly and that allocating resources to environmental management will sacrifice the company's economic benefits. Kim and Lyon (2014) [58] pointed out that the entire environmental regulatory paradigm is based on the concept that companies must be forced to improve the environment. Otherwise, companies will give up their responsibility for environmental protection because of their high cost or unprofitability. Also, the company's previous environmental protection activities will limit the company's future productivity growth [59]. Therefore, when the



company's financial performance is not good, executives trying to shift the attention of stakeholders through "cheap talks" or "green washing" strategies such as environmental activism will further exacerbate the scarcity of resources and thus hurt the company's future performance.

Table 4 shows the empirical test results of whether an independent director can influence the company's environmental protection activism decisions. Model (1) tests the impact of the relationship between the economic value added (EVA) and environmental protection activism. Models (2) and (3) test the impact on the relationship between returns (ROA and ROE) and environmental protection activism. From these results, we can see that the regression coefficients of the interaction terms of the independence of the board of directors and the company performance in the three models are both negative and are significant at the 5% level except for the model (3). This shows that the higher the independence of the board of directors, the higher the likelihood that companies with poor performance will adopt an environmental protection activism strategy. Independent directors did not play a corrective role in the strategy of environmental protection activism for companies with poor performance. Instead, they strengthened the company's opportunism tendency of environmental protection activism. Hypothesis 3 is not verified.

**Table 4.** Regression results of the moderating effect of independence of director board.

	Model (1)	Model (2)	Model (3)
Independence	−0.813 * (−1.776)	−0.154 (−0.265)	−0.970 ** (−2.112)
EVA	9.449 * (1.729)		
Independence × EVA	−19.668 ** (−2.305)		
ROA		11.805 ** (2.012)	
Independence × ROA		−21.752 ** (−2.379)	
ROE			−0.353 (−0.577)
Independence × ROE			0.589 (0.623)
N	10,141	10,141	10,141
chi2	407.493	292.643	363.652

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively; the value in brackets is the result of the Z test; the regression results of the control variables are not displayed for ease of reading.

This phenomenon may be due to the following reasons. First, independent directors in Chinese listed companies receive basic fixed subsidies, which are hardly linked to the company's performance. Therefore, changes in the financial performance of the company have little effect on their remuneration. Second, environmentalism can enhance the reputation of independent directors. The better the performance of the incumbent company, the better the reputation of the independent director. This not only benefits the independent director in the labor market but also adds luster to its job. When the company's financial performance is not good, the independent directors who are insiders of the company are naturally well aware. To maintain its reputation, the independent directors would consider some remedial measures. Under the social background of increasing attention to environmental protection and corporate social responsibility, environmental protection will naturally be favored by independent directors. Third, the independence of independent directors is limited in China. Although China Securities Regulatory Commission has made strict and detailed regulations on the qualifications of independent directors, it even requires independent directors to issue detailed

performance announcements each year. However, the equity structure of listed companies in China is highly concentrated, and most companies have a controlling shareholder. The controlling shareholders have a significant influence on the nomination, appointment, and assessment of independent directors. Therefore, independent directors are often reluctant to express independent and objective opinions on the company's decision-making.

The results of the regression of fund shareholders on the moderate effect on the relationship between company performance and environmental protection activism are shown in Table 5. Model (1) tests the moderating effect on the relationship between EVA and environmental protection activism. Models (2) and (3) test the moderating influence on the relationship between returns and environmental protection activism. It can be seen that the interaction items of fund shareholders and company performance are statistically significant and positive for the model (1) to model (3). Hypothesis 4 is verified. This shows that the fund shareholders as important institutional investors of listed companies in China, with its professional advantages, information advantages and relatively high proportion of shares, have been able to have a meaningful impact on the company's decision-making, can inhibit the executives' opportunism motive in environmental protection activism decision-making.

**Table 5.** Regression results of the moderating effect of Fund Shareholders.

	<b>Model (1)</b>	<b>Model (2)</b>	<b>Model (3)</b>
Fund share	−0.010 *** (−3.302)	−0.007 * (−1.947)	−0.010 *** (−2.924)
EVA	−1.866 *** (−5.008)		
Fund share × EVA	0.036 ** (2.253)		
ROA		−0.046 (−0.209)	
Fund share × ROA		0.106 *** (2.716)	
ROE			−0.008 (0.246)
Fund share × ROE			0.043 ** (2.535)
N	11,945	10,141	11,945
chi2	664.084	486.525	631.557

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively; the value in brackets is the result of the Z test; the regression results of the control variables are not listed for ease of reading.

## 6. Conclusions

The relationship between environmental protection and corporate performance has received the attention of many scholars. A detailed study of the motives of companies engaged in environmental protection has been conducted. Among them, some scholars have found a negative correlation between company performance and corporate environmental behavior, but there is still a lack of research on the causes of this phenomenon. We discussed the opportunistic motives of Chinese companies for environmental protection activism and the moderating role of corporate governance.

Based on the empirical tests of Chinese listed companies from 2005 to 2016, we find that: (1) the company's environmental protection activism is driven by the opportunist motives of policymakers who want to mask their inability; and (2) environmental protection activism hasn't improved the financial performance or economic value added in the future and even damage the company's future financial performance. Further studies have found that corporate governance mechanisms play different roles in disguising motivations in environmental protection activism. Fund Shareholders

play an active governance role and reduce the negative correlation between financial performance and environmental protection activism. But the independence of the board has intensified the opportunist motives in environmental protection activism.

Under the framework of principal-agent theory, this study demonstrates the opportunism motive of Chinese listed companies' active environmentalism from the behavior perspective. Through research, we find that there is a significant negative correlation between financial performance and environmental protection activism among listed companies in China. Corporate environmental protection activism meets the "inability disguise hypothesis." In other words, among companies with poor financial performance, the more apparent environmental protection activism is manifested, the more likely the company is to promulgate policies related to environmental protection, and even set up particular environmental protection departments.

This research provides a new perspective to understand the environmental behaviors, expands the theoretical research on environmental protection, and offers new ideas and warnings for evaluating executives' performance. The environmental protection decision of the company is not only influenced by the regulation of the government and other external stakeholders, but also the proactive strategy for sustainable development. However, it cannot be ignored that environmental protection is a strategy that policymakers may use to mask their poor financial performance. Besides, the corporate governance can also exert a significant impact on the decision of environmental protection activism beyond the government's mandatory requirements for companies to adopt environmental protection measures through regulation. These research conclusions bring new insights into the effectiveness of corporate governance in emerging market. Of course, the company's environmental protection activism may also be able to bring good financial performance to the company in a longer period. Follow-up studies can explore these issues.

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