

# *Empirical Study on the Impact of Environmental Regulation on Enterprise Environmental Investment*

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**Abstract:** Environmental regulation effect on enterprise investment is of great importance to environmental protection, the different types of environmental regulation on enterprise environmental protection investment is to play A different use for 2009 data a-share listed companies in China in 2018 as sample, empirical study on the two categories of environmental regulation on the influence of the environmental protection investment, namely the explicit and implicit environmental regulation impact on enterprise environmental protection investment respectively the research results show that the dominant environmental regulation in the command control the intensity of environmental regulation and enterprise presents inverted u-shaped relationship between the scale of investment in environmental protection, There is a U-shaped relationship between the intensity of market-oriented environmental regulation and the scale of enterprises' environmental investment. The recessive environmental regulation is positively correlated with the scale of enterprises' environmental investment. The conclusion of this study reveals the effects of different types of environmental regulations on enterprises' environmental protection investment and provides a reference basis for governments to promote enterprises' environmental protection investment by combining various types of environmental regulations.

## **1. Introduction**

With the rapid economic growth, the problem of environmental pollution becomes increasingly serious. As for the environmental problems caused by economic development, all parties in the society attach great importance to the government's efforts to change the economic development mode at the cost of environmental pollution. To develop green economy, environment and economy coordinated sustainable development, thus have issued a series of environmental protection laws and regulations, such as a total of the People's Republic and the environmental protection law of the People's Republic of China on environmental impact assessment act and the environmental protection of the People's Republic of China tax law and so on with legal method were applied to environmental regulation rules to regulate the behavior of enterprise environment has an important impact, but only by the laws and regulations to regulate corporate behavior is not enough, because enterprise's environmental behavior in addition to the affected by the law also is affected by many factors, such as the government's subsidies and enterprises such as the attention of the society from all walks of

life More often worry about the intensity of environmental regulation will lead to rising production costs, lead to their own interests is damaged to guide and standardize the enterprise environment behavior not only depends on the intensity of environmental regulation, also depends on the type of environmental regulation, therefore, this article will study the different types of environmental regulation on enterprise ring to confirm the influence of all kinds of insurance investment environmental regulation how to ring investment enterprises respectively, and how to match various environmental regulation means to realize win-win situation of environmental quality improvement and economic development.

## **2. Literature Review**

### **2.1. Concept and Classification of Environmental Control**

Environmental regulation refers to the government in order to make environmental internalization of negative externalities, adopt measures to get specification of the production and business operation activities of the state-owned enterprises, to promote environmental protection enterprises production, achieve balanced and sustainable development of environment and economy about the definition of environmental regulation after correction for many times, from the narrow sense that environmental regulation refers to the government in the form of direct intervention, utilizing the means such as ban in a market approach to the specification of the environmental behavior of the state-owned enterprises, then slowly the environmental tax refund the deposit of subsidies, such as economic incentives are also included in the definition of environmental regulation, to the end with the citizen's environmental protection consciousness gradually enhanced, society With the increasing attention paid to environmental protection, the environmental demands of citizens and the attention and supervision of all sectors of society are also included in the definition of environmental control. With the gradual improvement of the concept of environmental regulation, its classification also tends to be diversified. Wu, Haitao et al. [1] divided environmental regulation into explicit environmental regulation and invisible environmental regulation in its form of existence. Cui, Jingbo and Moschini, GianCarlo [2] studied the relationship between environmental control and trade in terms of the different application scope of environmental control, and divided it into environmental control in exporting country and environmental control in importing country and multilateral environmental control. Zhang, Guoxing and Liu, Wei [3] divided environmental regulation into command-based environmental regulation, market-driven environmental regulation and implicit environmental regulation according to the differences of dominant players and regulatory flexibility.

### **2.2. Environmental Regulation and Corporate Environmental Investment**

About the study of relationship between environmental regulation and environmental protection investment firms, with a total of four different conclusion, namely environmental regulation and environmental protection investment firms there is a positive correlation relationship between negative correlation between the u-shaped relationship and inverted u-shaped clearance is Jaffe etc. Wang, Jiayi and Lei Ping [4] think environment protection on innovation based on market and push the broad ideal may have a significant positive impact on energy conservation and emissions reduction technology; Yu, Binbin and Shen Chen [5] believe that the proper management of the environment by the government will stimulate enterprises to break the inherent production and business model and product structure, and put pressure on enterprises to consider environmental problems. In order to avoid the punishment caused by non-compliance with environmental laws and regulations, enterprises will be forced to take certain measures to save energy, reduce emissions and clean production. Taking China's A-share heavy pollution industry listed companies in 2008 and 2013 as research samples, and

measuring environmental regulation by the comprehensive index of regional environmental regulation intensity, it is found that the relationship between the two is inverted U-shaped.

### 2.3. Influencing Factors of Enterprises' Environmental Investment

There are many factors affecting enterprises' environmental investment. Current studies have involved environmental regulation, industrial attribute, equity structure, property right, institutional environment, etc. Delmas believes that differences in institutional environment will lead to significant differences in the treatment of the same environmental protection system. Lee believes that for listed enterprises, Shareholders and ownership structure can affect enterprises to carry out environmental protection investment to a great extent Tang Guo peace lelong found that listed companies' environmental protection investment enthusiasm is generally low, mainly because of the executives of listed companies did not attach enough importance to environmental protection investment, and environmental protection investment has obvious difference between the listed company bing from the market factors and regulations attributes and their attitude towards enterprise strategy analysis of driving factors of enterprise environmental protection investment, and through a large amount of data in check, get enterprise environmental protection investment reason regularity summary.

To review and summarize the above literature found: firstly, the existing literature to a class of more environmental regulation to measure environmental regulation, few studies not same category of the relationship between environmental regulation and environmental protection investment firms, and the relationship between environmental regulation and enterprise environmental protection investment existing four conclusions, explain the whole body of the relationship between environmental regulation and environmental protection investment firms have uncertainty; Second, the research on enterprise environmental protection investment, at the micro level while the many factors that can influence, but does not relate to different categories of environmental control of research, summarized the whole environmental regulation based on command and control mode, and not enough comprehensive based on this, this article environmental regulation can be divided into two categories, explicit and implicit environmental regulation, according to the situation of our country further selected two classes of dominant environmental regulation and a kind of recessive environmental regulation, respectively study the with the relationship between the environmental protection investment enterprises.

### 3. Research Hypothesis

Yu-min zhao in combination with the related theory of classification of environmental regulation, the reference and de-ning cheng and WeiJinHui research, based on the mode of existence of environmental regulation as the breakthrough point, can be divided into explicit and implicit environmental regulation on the basis of combining the characteristics of flexibility, the dominant environmental regulation subdivided into two types of command control and market incentives, comprehensive study of three kinds of environmental regulation how to influence enterprise environmental protection investment in these three kinds of environmental regulation on the mechanism of action of enterprise environmental protection investment as shown in Table 1.

Table 1 Mechanisms of action of different environmental controls

Type of Environmental Control	Environmental Control Instruments	Mechanism of Action of Environmental Control
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Command and control environmental control	Environmental laws, regulations, policies and systems	By establishing that enterprises must comply with environmental laws and regulations, enterprises have to comply with the regulations and regulations, and have to produce environmentally friendly products. The hand segment is too rigid, and the environmental improvement effect is significant in a short time
Market-driven environmental regulation	Environmental taxes and fees government environmental subsidies and product subsidies, etc	The market-based incentive system has a certain flexibility to encourage enterprises to make environmental investment. Enterprises have a choice, but the effect of environmental improvement is limited when the market mechanism for environmental investment is not perfect
Implicit environmental regulation	Citizens' environmental complaints and other concerns	The attention of all parties in the society has created a good atmosphere for enterprises' environmental protection production, leaving more room for enterprises, facilitating enterprises to independently choose the way and scale of environmental protection investment, the most flexible, stable effect of environmental improvement

Combined with the mechanism of environmental regulation on enterprises' environmental investment, it can be found that different types of environmental regulation have different impacts on enterprises' environmental investment. One of the biggest differences in the implementation process of the three types of environmental regulation is flexibility. Command execution has significant rigid controlling environmental regulation, for all enterprises to adopt the same standard, forcing enterprises environmental production in the short term to avoid pollution of the environment by penalty, to set up the good enterprise image can choose add environmental protection investment, the environmental regulation may have close links with enterprise's environmental protection investment was positively but with the passage of time, the enterprise will be more willing to for their own short-term interest maximization, choose to pay fines of illegal production, the sacrifice of environmental protection investment, the high intensity of environmental regulation may reverse influence on enterprise environmental protection investment based on this, puts forward the assumption.

Hypothesis 1: Under the premise of controlling other factors, there is an inverted U-shaped relationship between the intensity of command-and-control environmental regulation and the scale of enterprises' environmental investment.

Market incentive environmental regulation, mainly to encourage investment in way to guide enterprises to carry out environmental protection, by means of discharge environmental tax and fees

depending on the environmental protection investment companies, according to the circumstance to give subsidies to encourage environmental protection products enterprises in environmental protection investment in environmental protection investment market mechanism is imperfect, the face to get discharge or environmental tax as the main market incentive environmental regulation, the enterprise will be in addition to the operations of some of the money used to pay the fees, but are produced environmental protection investment funds diverted with environmental protection investment market mechanism of the good, the market incentive model of environmental regulation means also more and more rich, at this time In combination with sewage charges and environmental taxes, the government sets up special subsidies for different kinds of environmental pollution, accurately grants special environmental protection subsidies to enterprises, and encourages enterprises to conduct environmental protection production. Based on this, the following hypothesis is put forward.

Hypothesis 2: On the premise of controlling other factors, there is a U-shaped relationship between the intensity of market-driven environmental regulation and the scale of enterprises' environmental investment.

The intensity of hidden environmental control depends on the enhanced awareness of environmental protection and responsibility of all parties in the society. On the one hand, the enhanced awareness of environmental protection of the whole society helps to form a good environment for environmental protection and encourage enterprises to invest in environmental protection. On the other hand, the enhancement of citizens' awareness of environmental protection makes them more inclined to green consumption, indirectly pushing enterprises to carry out green production and increase the investment in environmental protection. Therefore, the following hypothesis is proposed.

Hypothesis 3: On the premise of controlling other factors, the intensity of recessive environmental regulation is positively correlated with the scale of enterprises' environmental investment.

## 4. Research Design

### 4.1. Sample Selection and Data Sources

In this paper, companies that disclosed their environmental investment in a-share listed companies in 2009 and 2018 were selected as samples. The following parts were excluded in the selection process :(1) listed companies in financial securities and insurance; (2) \*ST and ST Sample Company; (3) Companies with abnormal financial data; (4) listed companies in Tibet (due to the lack of data on sewage charges and government subsidies in Tibet) finally got 606 samples. The data in this paper are mainly derived from the following sources :(1) the data of enterprises' environmental protection investment are mainly derived from enterprises' environmental and coordinated and sustainable development projects disclosed in their social responsibility reports. (2) Type command control environmental regulation used type the number of environmental cases accepted by the market incentive environmental regulation and discharge data used in the hidden environmental regulation used citizens have environmental data from 2010 the China environment yearbook 2019, market incentives used by the government environmental protection type environmental regulation making data and control variable data used in this paper mainly from the taian number according to the library, to be healthy, based on the regression test with Stata12.0 for continuous variables were 1% and 99% quantile tail and standardization.

## 4.2. Variable Definition and Measurement

### 4.2.1. Explanatory Variable

Command control environmental regulation market incentive environmental regulation and implicit reference Huang Qinghuang environmental control and the research of brilliant, combining with the availability of data, command control type environmental regulation (REG) in the provinces to accept the environmental administrative punishment cases, measured by the number of market shock excitation type environmental regulation (ERS) to choose the natural logarithm of discharge of all provinces, Invisible Environmental Control (ERI) selects the total amount of environmental protection online complaints per capita of each province to measure. Since the data of sewage charges reaches the end of 2017, the data of online complaints can only be checked until the end of 2015. Therefore, based on the obtained data, this paper uses its linear trend to supplement the data by the end of 2018.

### 4.2.2. Explained Variable

The scale of enterprise environmental investment (EPI). In previous literature, there are mainly four methods to measure enterprise environmental investment. Due to the large number of enterprises and large differences in environmental protection investment, this paper chose a logarithmic treatment of enterprises' environmental protection investment to reflect the scale of enterprises' environmental protection investment.

### 4.2.3. Control Variable

In the selection of control variables in this paper, such as the introduction of enterprise value (TobinQ) nature of the property (State) return on equity (Roe) assets ratio (Lev) operating income (Inc) total assets growth rate (Agr) net operating Cash flow (Ocash) Cash holdings (Cash) agency costs (Cost) enterprise scale (Size) and Year (Year), and other variables, The variable definitions are shown in Table 2.

Table 2 Variable definition

Types of Variables	Variable Name	Variable Symbol	Variable Definition
Explained variable	Corporate investment in environmental protection	EPI	The natural log of an enterprise's total annual environmental investment
Explanatory variable	Command and control environmental control	REG	The number of environmental administrative penalty cases accepted by each province
	Market - driven environmental regulation	ERS	The natural log of sewage charges in each province
	Implicit environmental regulation	ERI	Total number of environmental protection online complaints per capita in each province

Control variable	Nature of property right	State	If the enterprise is a state-owned enterprise, take 1; if it is a non-state-owned enterprise, take 0
	Financial leverage	Lev	asset-liability ratio= Ending total liabilities/ Ending total assets
	Profitability	Roe	ROE= net margin /ROAE
	Corporation value	To binQ	(Equity market value + book value of liabilities)/ Total book value of assets
	Firm size	Size	LN ASSET
	Operation revenue	Inc	The operating income recognized in the operation of an enterprise
	Development ability	Agr	Total Assets Growth Rate=( Ending total assets- Total assets at the beginning)/ Total assets at the beginning
	Agent cost	Cost	Operating Expense Ratio= operating expenses/ prime operating revenue
	cash holdings	Cash	Average monetary fund/ Current average total assets
	Net operating cash flow	Ocash	Net operating cash flow/ Current average total assets
	a particular year	Year	Dummy variables, 10 years of data set a total of nine dummy variables

### 4.3. Model Design

In order to verify hypothesis 1, i.e., whether there is an inverted U-shaped relationship between command-and-control environmental regulation and enterprise environmental protection investment, model 1 is constructed in this paper.

$$EPI = \beta_0 + \beta_1 ERG^2 + \beta_2 REG + \sum Controls + \varepsilon \quad (1)$$

In order to verify hypothesis 2, namely, whether there is a U-shaped relationship between market-oriented environmental regulation and enterprises' environmental investment, model 2 is constructed in this paper.

$$EPI = \beta_0 + \beta_1 ERS^2 + \beta_2 RES + \sum Controls + \varepsilon \quad \square \square \square (2)$$

To test hypothesis 3, namely, whether there is a positive correlation between implicit environmental regulation and enterprises' environmental investment, model 3 is constructed in this paper.

$$EPI = \beta_0 + \beta_1 ERI^2 + \sum Controls + \varepsilon \quad \square \square \square (3)$$

## 5. Empirical Analysis and Results

### 5.1. Descriptive Statistics of Variables

Descriptive statistical results such as shown in Table 3, the logarithmic average value of the total amount of investment of environmental protection of enterprise 3.269 227, the maximum value of 5.460 898, minimum value is 0.712 649, show that the environmental protection investment differences between different provinces company is big, and the median is less than average, explain the research samples of ring investment at a lower level second, type the command control environment control of the mean value of 3.647 284, more than one digit, command type environmental regulation intensity is small, the maximum value of 5.038 485, minimum value is 2.330414, there is a big difference between the two, indicating that there is a serious regional difference when enterprises are faced with weak command-and-control environmental control intensity; The average value of market-driven environmental regulation is 4.675925, less than the median, indicating that the intensity of market-driven environmental regulation is relatively high, but the gap between the minimum value and the maximum value is obvious, indicating that there are regional differences when enterprises are faced with strong market-driven environmental regulation. The difference between the minimum value and the maximum value of the implicit environmental control is the largest, indicating that there is a large gap between the environmental awareness of citizens in different regions, and the average value of different impacts on the property rights of enterprises is 0.794 871, indicating that state-owned enterprises account for the majority in the sample, and the descriptive statistics of the remaining control variables are shown in Table 3.

Table 3 descriptive statistics

Variable Name	Sample Size	Mean	Standard Deviation	Median	Minimum	Maximum
EPI	500	3.269 227	1.014 939	3.261 086	0.712 649	5.460 898
REG	500	3.647 284	0.570 548	3.530 392	2.330 414	5.038 485
ERS	500	4.675 925	0.453 382	4.781 657	3.517 956	5.303 175
ERI	500	36.640 06	32.212 47	29.539 02	3.482 693	224.181 2
State	500	0.794 871	0.404 119	1	0	1
TobinQ	500	2.330 292	1.002 351	2.010 427	1.055 926	6.545 176
Lev	500	0.422 180	0.195 048	0.414 140	0.012 394	0.844 403
Size	500	6.217 569	0.657 495	6.145 746	5.060 847	7.916 901
Roe	500	0.075 677	0.125 955	0.078 752	-0.460 995	0.462 185
Inc	500	411.708 2	1 060.354	86.052 87	0.966 985	6 899.449
Cash	500	0.144 636	0.097 585	0.120 325	0.020 322	0.505 499



Ocash	500	0.055 403	0.065 362	0.050 015	-0.107 966	0.250 381
Agr	500	0.131 650	0.236 434	0.079 601	-0.205 498	1.446 402
Cost	500	1.604 642	9.049 084	0.070 811	0.006 782	79.129 52

## 6. Regression Analysis

In order to avoid multicollinearity caused by endogeneity problems between variables, the square and primary terms of command control and market incentive environmental regulation are included in the regression model, Therefore, the two types of environmental controls were standardized, and the regression results showed that the variance inflation factor VIF value was less than 10, indicating that there was no multicollinearity problem in the constructed model. The first term and the square term of the two types of environmental controls in Table 4 were the data after standardized processing.

Table 4 Regression result

Variable Name	Model 1	Model 2	Model 3
REG	-0.978*** (-2.75)		
REG	0.922*** (2.62)		
ERS2		1.356** (2.36)	
ERS		-1.370** (-2.38)	
ERI			0.067* (1.69)
State	0.030 (0.34)	0.027 (0.30)	0.263*** (2.71)
Lev	0.131 (0.60)	0.208 (0.95)	0.559*** (2.64)
Roe	-0.388 (-1.22)	-0.420 (-1.33)	0.108 (0.31)
TobinQ	-0.043 (-1.15)	-0.055 (-1.45)	-0.064* (-1.69)
Size	0.851*** (10.71)	0.802*** (10.02)	0.768*** (12.47)
Inc	0.001 (-1.39)	0.001** (-2.08)	-0.001 (-1.83)
Agr	0.137 (0.86)	0.190 (1.18)	0.078 (0.46)
Cost	-0.001 (-0.15)	-0.001 (-0.30)	0.001 (0.15)
Cash	-1.697*** (-4.67)	-1.683*** (-4.62)	-2.193*** (-5.36)

Ocash	2.091*** (3.60)	2.274*** (3.89)	2.046*** (3.21)
Year	control	control	control
N	500	500	500
R2-adj	0.315 0	0.311 3	0.312 3
F-values	24.18***	23.79***	17.39
R2-adj	0.315 0	0.311 3	0.312 3

As can be seen from the regression results in Table 4, in Model 1, the series number of REG2 is -0.978 and the coefficient of REG is 0.922, both of which are significant at the 1% level, Can be seen from the regression results in Table 4, model 1 REG2 department number is 0.978, REG coefficient is 0.922, the two coefficients at 1% significance level, suggesting that command controlling environmental regulation and enterprise investment is not linear relationship between environmental protection, the inverted u-shaped relationship, type the command control environmental regulation effect on the environmental protection investment is a turning point of environmental regulation pressure passive environmental investment has the efficiency of the short-term and life at this time for controlling environmental regulation and the enterprise has a positive relationship between environmental protection investment; After reaching the inflection point, the intensity of environmental regulation increases, but enterprises instinctively choose to pursue the maximization of profits at the expense of environmental protection investment. In this case, the intensity of environmental regulation is negatively correlated with the enterprise's environmental protection investment. Therefore, hypothesis 1 is verified.

Can be seen from model 2, ERS2 coefficient is 1.356, ERS coefficient is 1.370, the two coefficients at 5% significance level, the said Ming type market incentives between environmental regulation and environmental protection investment firms are U relations, namely type market incentive environmental regulation impact on enterprise environmental protection investment for a turning point in the environmental protection investment market mechanism is not yet perfect, environmental regulation by gradually strengthen, but the enterprise has the choice, fully focused on production by the camp instead of reduced environmental protection investment; When the inflection point is reached, environmental regulation means are abundant and enterprises are rewarded for environmental protection, and enterprises will increase their investment in environmental protection when they are encouraged. At this time, environmental regulation has a positive impact on enterprises' investment in environmental protection, which verifies Hypothesis 2.

Can be seen from model 3, ERI coefficient is 0.067, the 10% significance level, suggesting that the hidden relationship between environmental regulation and environmental protection investment was a positive correlation between firms, which along with the social citizen's environmental protection consciousness enhancement, the ring of investment will be more and more enterprises, social and environmental atmosphere to the enterprise is of great importance to environmental protection investment is positive influence based on this, hypothesis 3 was verified.

## 7. Research Conclusions and Policy Recommendations

### 7.1. Research Conclusions

Based on China's a-share listed companies in the disclosure of enterprise environmental protection investment companies as samples, from the Angle of regional environment control, studied the influence of different types of environmental regulation on enterprise environmental protection investment, it is concluded that the following main conclusion: first, our country enterprise widespread lower environmental protection investment scale, enterprise's environmental protection investment differences between regions in the second place, command and control the environment control and

enterprise i. Mandatory environmental regulation in the face of the enterprise will be passive to environmental protection investment, but is eventually would rather accept punishment in order to realize the maximization of short-term interests, all the funds for the production of the third, environmental regulation and enterprise market incentives ring present u-shaped relationship between investment and the enterprise scale of investment in environmental protection type as the market incentive environmental regulation intensity after first decreased with the increase in environmental protection market mechanism is imperfect, companies would rather pay blowdown as investment in environmental protection, Also is unwilling to part of the funds for environmental protection investment of production, but with the improvement of the market mechanism of environmental protection, can be obtained through environmental protection investment companies take the initiative to special government subsidies, the environmental protection enterprises are more willing to expand the scale of investment in environmental protection in the fourth, the hidden relationship between environmental regulation and environmental protection investment was a positive correlation between firms, the stealth environmental regulation will help expand the scale of enterprise environmental protection investment along with the social parties unceasing enhancement in environmental consciousness, virtually can form an environmental atmosphere, On the one hand, it has formed supervision over the production of enterprises; on the other hand, social consumption tends to be green, and enterprises are pushed backward to produce environment-friendly green products. Under the influence of such atmosphere, enterprises will also expand the scale of environmental protection investment.

## 7.2. Policy Suggestion

According to the research, the conclusion is drawn: the scale of enterprises' environmental protection investment is small and there are regional differences; There is an inverted U-shaped relationship between command and control environmental regulation and enterprise environmental investment. There is a U-shaped relationship between market - driven environmental regulation and enterprise environmental investment. There is a positive correlation between recessive environmental regulation and enterprises' environmental investment. Therefore, under the circumstance that the scale of enterprises' environmental investment is relatively low and the regional difference is large, the government should make comprehensive use of different types of environmental regulation. Combination and collocation are the key points to solve the problem of enterprises' small scale of environmental investment.

First, at the beginning of the environmental management, the government should be to type commands to control the environment regulation as main means, and promoting environmental protection first, the establishment of the market mechanism on the basis of the established environmental protection laws and regulations system we will continue to improve the mechanism of local environmental protection laws and regulations according to the different environmental protection standard of area results in different Settings, do the environmental protection in the law, fundamentally strong chemical environmental management in the initial stage of form a complete environmental management system under the rule of law, on the one hand, will give enterprise environmental pressure, cause enough attention to environmental protection enterprise; On the other hand helps to lay a solid foundation for future environmental management, can guarantee the effect of short term environmental regulation second, the government can introduce the market mechanism in environmental management, the use of environmental policy guide structure was built under the market economy of the environmental management system, such as the implementation of pollution charge policy, etc., make up for the defect of command controlling environmental regulation is too rigid, achieve attuned, maximize the effect of environmental regulation.

Second, in the medium term of environmental management, the government should focus on market-oriented environmental control and promote the improvement of environmental protection market mechanism. First, it should enrich the means of market-oriented environmental control. In terms of emission reduction policies, the emission charge should be upgraded to environmental protection tax. In terms of green finance, green credit and green bonds should be developed. On government subsidies, special subsidies to carry out the environmental and green color through the rich market incentives, such as production subsidies means of environmental regulation, for environmental protection market mechanism perfect second, should also do a good job in environmental protection evaluation of market mechanism, and on a regular basis for all kinds of market incentives to evaluate environmental regulation means, choose the optimal combination, so as to improve the efficiency of the market incentives type environmental regulation, maximize arouse the enthusiasm of enterprise environmental protection investment.

Third, late in environmental management, to maximize the role of the hidden environmental regulation, use the attention of the society to promote the enterprise expand the scale of investment of environmental protection on the one hand, need the government to strengthen environmental propaganda, improve the citizen's environmental protection consciousness of citizens' environmental awareness enhancement will affect their consumption conception, its consumer preference towards green products, and backward enterprises to expand the scale of investment in environmental protection and to promote green products, on the other hand, media attention to the environmental events and reports will be applied to the enterprise environmental protection pressure force, positive events have been reported to help in environmental protection enterprises set up in good shape For example, reporting negative events will attract more attention and force companies to invest in environmental protection.

Fourth, in addition to comprehensive utilization of by government environmental regulation means, expand the scale of investment in environmental protection also needs the transition of the enterprise itself for the enterprise, not only to form the concept of environmental protection, more environmental protection throughout the enterprise production of each link to first of all, in different period, enterprises should cooperate with the government's early means all kinds of environmental regulation, accept the punishment of the environmental pollution, try to change the structure of production, to reduce the pay fines.

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