Legal Drivers for Environmental Governance Capacity Building and Corporate Ecological Investment Decisions in Shaanxi Province

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Abstract: *Corporate ecological investment decisions should be in line with the law, and the degree of environmental governance capacity building in a particular area will directly affect how well this legal rule is implemented. Shaanxi Province will be taken as the case study in this paper, and we will examine the jurisprudential basis of environmental governance capacity, its legal drivers, and the actual features of the regional legal environment. Incentive compatibility is used to provide a theoretical basis for the governance capacity in this paper, and the components of the normative part, the generative mechanisms of the legal rule system, and the configuration logic of legal instruments will be examined. Therefore, we will study how changes in the scope of legal liability, division of legal obligations and legal certainty affect a company's decision to invest in ecological facilities. Given that the resource-intensive industries in Shaanxi Province have some special legal and regulatory attributes, this paper will study the governance capacity gap of the local regulatory system and the distribution of legal risks. Collaborative Paths Driven by the Rule of Law are put forward to address how to increase the marginal benefits of legal incentive mechanisms, how to deal with legal uncertainty, and a collaborative evolution model for governance capacity and drivers of the rule of law. Research will be carried out to study the effect of legal rules on the green investment choices of listed companies in terms of liability and incentives, and some theoretical support for promoting the rule of law at the regional level will be provided.*

Keywords: *Environmental Governance Capacity, Ecological Investment Decisions, Rule-of-Law Drivers, Legal Certainty, Shaanxi Province*

Introduction

Corporate Ecological Investment Decisions are related to the legal system of regional environmental governance. The scale and direction of investment fall under the category of legal liability, the form of obligation allocation and the stability of legal rules. Most of the previous studies have paid some attention to the economic incentive factor but have not yet examined how legal rules promote good governance and affect investment decisions. Shaanxi Province has many resources and is relatively rich in them, so there are some local characteristics in the legal environment for ecological investment by enterprises in this area. Identify the legal and regulatory attributes, deficiencies in the governance and distribution of legal risks in this area, and examine the company's operation under the rule of law. Build upon the foundation of jurisprudence to establish a logical link between the system of legal rules and corporate ecological investment decisions, investigate how to increase the marginal benefits of legal incentives and uncertainty reduction mechanisms, and put forward a collaborative evolution framework for governance capacity and rule-of-law drivers to address the research gap in the interaction mechanism of rule-of-law drivers and corporate investment behavior at the regional level.

1. Jurisprudential Basis and Components of Capacity in Environmental Governance

1.1 Normative Constituent Elements of Environmental Governance Capacity

The Normative Foundation for the capacity of environmental governance is a mandatory code of conduct and liability rules in the legal system. The form of power is an administrative order, but it is also a system of rules that have been established through statutory rights, obligations and procedures. Among them, the hierarchy of legal effect for environmental standards, the statutory conditions for pollutant discharge permits, and the contractual arrangement of ecological compensation are the main normative parts of governance capacity. The above provisions specify the conduct that all parties should have in accordance with the legal documents and establish institutions to manage the division and use of environmental resources.

There are a large number of normative factors in total for the legal environment of corporate ecological investment decisions in the area of Shaanxi Province. Prohibitory clauses and clauses granting permission are used together in the law to distribute the distribution of environmental risks. The strength of the governance capacity is the internal consistency and enforceability of the above factors. If there are any contradictions or omissions in the normative provisions, the legality judgment of corporate ecological investments will be unclear, and long-term investment will be deterred. Therefore, the whole set of norms directly determines the actual level of governance capacity[1].

1.2 The Mechanism of Governance Capacity Generation in the Legal Rules System

Over the years, the legal system has issued some general rules on environmental protection to regulate people's behaviour and specified what should be done in case of violations. At present, the first goal of the generation mechanism is to provide preventive constraints; that is to reduce the occurrence of ecological damage by giving early approval and quota control. Secondly, some corrective measures will be taken to deal with the problems of the environment by means of rules on civil liability for damage and restoration. Hierarchy in the rule system, such as the relationship between superior and subordinate laws and that among special and general laws, also determines the scope of application and the degree of legal effect for governance capacity.

The beginning of the rule system for corporate ecological investment in Shaanxi Province can be traced back to how the structure of legal liability allocation affects the choice of corporate behaviour. For example, if the rules of environmental tort liability are in the form of strict liability, enterprises will increase their investment in prevention and ecology to avoid the risk of compensation liability. Procedural norms in the rule system are also links in the chain of governance capacity; otherwise, due to a lack of transparency and certainty in the procedures themselves, we would not know the legal consequences for enterprises. The more consistent the logic of the rule system is, the more stable and effective the development of governance capacity will be.

1.3 The Logic of Legal Instrument Configuration from the Perspective of Incentive Compatibility

According to the idea of incentive compatibility, the design of legal tools should motivate enterprises to voluntarily achieve the goal of ecological protection out of self-interest. Legal tools should be added to the foundation of corporate decision-making to address the problem of ecological costs for enterprises through the allocation of property rights, adjustment of taxes and fees, tradable permits, etc., rather than depending solely on external pressure. When the legal instruments increase the cost of not investing in the environment relatively more than the cost of investment, enterprises will be motivated to make green investments in line with the rule of law.

Given the economic structure of Shaanxi Province, which is resource-intensive and dominated by traditional industries, the Design Logic of legal instruments should give more weight to marginal incentive effects. For example, changes in the rate of the environmental tax, alterations to the first-quota allocation mode of emission trading, and redesign of joint and several liability for ecological restoration obligations will all affect the expected rate of return on corporate ecological investment. If there is an overlap of compulsions or offset incentives in the legal instruments, then adverse selection will occur. A reasonable Design of the control system should meet the actual needs of risk management and help the company achieve its goals; therefore, do not add superfluous controls. All kinds of legal acts can be used to build a system of environmental liability insurance and guarantees, and thus enterprises will be motivated to incorporate ecological investment into their daily operations voluntarily.

2. Legal Driving Mechanisms for Corporate Ecological Investment Decisions

2.1 Delimitation of Legal Liability Boundaries in Ecological Investment Decisions

The first legal problem of ecological investment decisions is the lack of division of responsibilities. The Boundary of legal liability is determined by the constituent elements of tort liability, the types of rules for attribution of liability and the scope of exceptions. If the rules for proving causation in environmental torts are changed to reverse the burden of proof, enterprises will be more likely to bear the consequences of ecological damage and will thus be motivated to make proactive preventive investments at the investment decision stage. At the same time, if there is no clear limit of liability and the pollution is the result of many factors acting together to produce one effect, the enterprise will likely underestimate the actual legal costs and reduce its ecological investment[2].

In the special case of a company's ecological investment in Shaanxi Province, the division of liability will directly affect the screening conditions for the investment plan. The joint and several liability clause for watershed pollution liability, the provision for retroactive application of soil remediation obligations, and the division of liability in the third-party governance model are all representative cases of boundary delimitation. The closer the liability threshold is to that of "direct correspondence between behaviour and consequences", the more likely it is that enterprises will take source-control ecological investment measures rather than end-of-pipe treatment. If the uncertainty premium of the liability boundary is too large, the company will need to take out short-term loans for compliance and operate inefficiently.

2.2 Shaping the Paths of Corporate Investment Preferences through Allocation of Legal Obligations

Gradually, the spread of legal obligations has taken the form of investment preferences for the corporate ecological system and set behaviour norms and procedural rules for enterprises. First of all, the mandatory obligations must be met; that is to say, the emission standards should be met and the monitoring results need to be reported. Second, the goal of the company will be to increase investment in areas favourable to the law, such as ultra-low emission vehicles. The Density and Gradient of Obligation Allocation will affect the Distribution Pattern of corporate investment preferences; unitary and rigid obligations are likely to result in a behaviour model of "stopping at compliance", and a hierarchical and progressive obligation system can promote a proactive attitude towards ecological investment.

The types of industries in the enterprises of Shaanxi Province are very different, so the efficiency of legal obligation shaping for investment will also vary. According to the law, energy and chemical enterprises are subject to different frequencies of hazardous waste disposal and record-keeping, so they need to upgrade pollution control equipment at various times. Manufacturers will change the direction of investment in the raw material substitution plan according to the new technical changes in the clean production audit obligations. If the division of responsibilities is equal to the marginal reduction cost of the company, then investment will be directed towards the long-term development of ecological assets automatically and will not need to be driven externally[3].

2.3 The Moderating Effect of Legal Certainty on the Ecological Investment Return Cycle

Legal certainty refers to the publicity and stability of the content of legal rules, the uniformity of their application and the predictability of changes. Generally speaking, the ecological investment has a long payback period; for example, the depreciation life of pollution-control facilities is usually more than 10 years. Therefore, the first problem is to determine the legal certainty of the investment payback period. If the frequency of revising the environmental standards is too high, or if there is retroactive application of the rules on liability traceability, enterprises will reduce the present value assessment of long-term ecological investment and choose short-cycle, low-sunk-cost compliance measures. A stable legal system will increase the maximum pay-back period of a company and thus promote the construction of large-scale, capital-intensive ecological investment projects.

Uniformity in the local environmental capacity accounting method, the secondary market trading rules for emission rights, and the ecological restoration acceptance standards in the regional legal environment of Shaanxi Province are all special kinds of legal certainty. When the company is choosing an ecological investment, it has been adjusting the discount rate of the return period based on how likely it is that laws and judicial interpretations will change. For each increase in the degree of legal certainty, the acceptable fixed payback period for enterprises can be extended by about one or two years. Moderation will be relatively stronger in the event that there is a "stability commitment" clause in the legal provisions, such as a statement that no significant changes will be made in the next five years; therefore, the company will be less concerned about future compliance costs under such circumstances.

3. Analysis of the Regional Legal Environment for Corporate Ecological Investment Decisions in Shaanxi Province

3.1 Legal Regulatory Features of Regionally Resource-Dependent Industries

The main parts of the industrial structure in Shaanxi Province are the energy and chemical industries, non-ferrous metal mining and beneficiation, and coal production. The Legal Regulations for Resource-Dependent Industries are not the same. Obligations for ecological restoration in the exercise of mining rights, responsibilities for the safety management of tailings ponds, and statutory standards for soil and water conservation in mining areas are all provided for in the legal texts and form the foundation of the regulatory system. The vertical chain of regulatory attributes is: "strict access at the source, close process supervision, high exit requirements". The first obstacle to the development of natural resources is now the requirement for an environmental protection plan in the mining permit.

The second regulatory attribute of resource-intensive industries is the rule of cumulative liability in law. Exploitation of resources will affect the surface vegetation, the level of the groundwater table and soil structure; it has hysteresis and superposition characteristics, so the relevant legal provisions will generally be in the form of a full life-cycle liability model. The provisions of the Mineral Resources Law on ecological restoration obligations after mine closure will not change due to a change in the corporate legal person or transfer of mining rights. Add the restoration expenses that will occur many years from now to the company's current capital investment in this item; otherwise, the parameters of the traditional resource development economic model cannot be used.

3.2 Identification of Governance Capacity Gaps in the Local Regulatory System

There are capacity deficiencies at all levels of the local regulatory system in Shaanxi Province and among different regions in the construction of environmental governance capacity. There are inconsistencies in the definitions of legal terms and differences in the standards for attributing liability in the provincial ecological protection regulations and the implementing rules of cities and districts. The specific operating rules for emission trading in the provincial regulations are difficult to implement in some counties and cities because there are no supporting technical guidelines. The reason is that the degree of detail in the implementation process of converting general norms into locally applicable provisions of law varies[4].

Another indication of the governance capacity gap is that the management rules in different areas vary. Although the revision frequency of the local regulations on air pollution prevention and control in Shaanxi Province is relatively high, the update of supporting rules for water environment and soil environment has been slow; thus, there is a time lag in the compliance requirements for enterprises at the same plant site. For the reasons mentioned above, the enterprises will focus on the parts of the regulations that have been recently amended and are subject to clear legal liability, thus engaging in selective compliance. The problems above can help us understand why enterprises in Shaanxi Province are so different in all aspects of ecological investment.

3.3 Distribution of Legal Risk and Structure of Rights and Liabilities for Corporate Ecological Investment

Legal Risks of Corporate Ecological Investment in Shaanxi Province are Distributed Geographically and by Sector. Most of the enterprises in the Guanzhong urban agglomeration are located in areas where the air pollutant emission standards will be changed, and those in the energy base of northern Shaanxi cannot be directly attributed to ecological damage compensation claims in mining areas. First, there is a break in the chain of liability for the cross-regional transfer of hazardous waste among chemical enterprises at the industrial level, and second, amendments will be made to the compliance standards for mining land reclamation obligations in the extractive industry. The Distribution of risk is generally associated with the ecological environment, the concentration of industries in a particular area and law enforcement resources.

The Structure of Rights and Obligations for the Allocation of Legal Risks is becoming more complicated. The group of people with the right and obligation to make ecological investment decisions has been extended to include site providers, technical service providers and financing institutions. The third-party governance model for pollution in some industrial parks in Shaanxi Province has changed the type of the environmental liability clause from binary to ternary. The proportion of liability in the legal documents will determine how much each party is willing to invest in ecological protection. When there is a clear division of rights and responsibilities and reasonable distribution of risks, more people will be willing to invest in ecology.

4. Collaborative Paths for Governance Capacity and Investment Decisions Under the Rule of Law

4.1 Strategies for Enhancing the Marginal Benefits of Legal Incentive Mechanisms

The main problem of the legal incentive mechanism for ecological investment is that there is a law of diminishing marginal returns to the incentive effect. As long as the government issues new policies to encourage enterprises to voluntarily pay environmental taxes and reduce emissions, the amount of voluntary participation will not change. To enhance the marginal effect of the incentive, one can increase the tier of legal preferential treatment for the additional part of a company's ecological inputs. This Design will still motivate more investment when people have invested a small amount, and it will not reduce the incentive after a large initial investment.

Given the industrial characteristics of enterprises in Shaanxi Province, all kinds of incentives can be combined to achieve some extra benefits. Bundled configurations of responsibility-relief clauses and procedure-simplification clauses are also available; for instance, ultra-low-emission enterprises may be given some leniency under the law by reducing the frequency of supervision and extending the grace period for corrective action. Generally speaking, the marginal benefit of joint incentives is higher than that of a single instrument because many areas will be reduced at the same time under the law. The more new and practical the incentive tools are, the higher the increase in ecological investment per unit of legal preference.

4.2 Mechanisms to Reduce Legal Uncertainty in Ecological Investment Decisions

The main reasons for legal uncertainty are changes in the rules, differences in interpretation and time, etc. One of the reasons for this is that there is a provision for a legal stability anchor clause, that is to say, a commitment period for the legal effect of the rules has been specified in specific legal documents. Ecological investments made by enterprises in accordance with the law at that time will not be subject to changes in the rules after that time through retroactive application. Therefore, the discount rate set by the company will be lower, and the investment planning period will be extended.

Organise the joint issuance of the uniform implementation plan for cross-cutting regulations in a different manner. Laws in Shaanxi Province on ecological investment cover all aspects, including the protection of the environment and resources, corporate liability, etc. Conflict at the department level and poor communication among the departments are the reasons for the uncertainty. Clarify the hierarchy and interdependencies of all the rules in the guidance documents on legal application to reduce the burden of legal interpretation for enterprises at the investment evaluation stage. When the company knows in advance what the general results of a particular ecological investment under different legal rules will be, then the uncertainty premium in its decision-making will be lower.

4.3 Construction of a Collaborative Evolution Model for Governance Capacity and Rule-of-Law Drivers

The link between the capacity for governance and the drivers of the rule of law is not unidirectional; rather, it is a case of joint development and mutual influence. Drivers of the rule of law reduce the transaction costs of corporate ecological investment by providing a stable legal environment; thus, changes in corporate investment behaviour can be considered the application effects of legal rules and rule optimisation at the market level. The first stage of this model is mainly caused by the supply of legal rules, and then the degree of corporate investment response acts as an input signal for rule adjustment. The closer the feedback loops of the two are, the faster the cooperation will improve.

Given the different industries in the area of Shaanxi Province, the model of cooperative development will need to be adjusted. The scope of the impact of the same laws on enterprises in different sectors will be different, so the improvement in governance ability will not be uniform. The three parts of the model are the response sensitivity coefficient of legal rules, the adjustment lag of corporate investment decisions, and the legal allocation efficiency of regional environmental capacity. When the above factors are in harmony during their development, the governance capacity and drivers of the rule of law will form a virtuous cycle of mutual promotion and do not need external correction.

Conclusion

Generally speaking, the rules of law for corporate ecological investment decisions are that liability limits need to be set, types of obligations should be designed, and deterministic expectations should be provided. Although the legal regulations for resource-intensive industries in Shaanxi Province have full life-cycle liability and cumulative liability, there is a lack of terminological and temporal coordination in the management rules for different types of the environment. The legal risks of corporate ecological investment vary in different areas and have been changing as a result of introducing third-party governance models; thus, the structure of rights and obligations has become increasingly complicated. According to the rule of law, the marginal benefit of legal incentive mechanisms can be increased by setting different intensities for differentiation and cross-combination of instruments, and to solve problems of legal uncertainty, stability anchor clauses and coordination procedures for cross-rule consistency should be introduced. Governance capacity and the drivers of the rule of law have developed together and have had a two-way effect; thus, in the collaborative model for regional dynamic analysis, legal rules serve as the response sensitivity, investment decisions as the adjustment lag, and the main variable is the allocation efficiency of environmental capacity. In the future, we will quantify the time-lag effect of changes in legal rules, compare the marginal incentives of different combinations of legal tools, and study the threshold intervals and optimal matching conditions for the variables in the collaborative model.

Fund Projects

Research on the Relationship Between Environmental Legislation and Corporate Ecological Investment Decisions in Shaanxi Province,2026QN0575

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