
Analysis on the Transformation of Chinese State-owned Forest Industry Enterprises from the Ecological Perspective

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Abstract

At present, China's state-owned logging enterprises is in the critical period of transformation, the transformation of state-owned logging enterprises is subversive, how to protect the ecological system under the premise of making reasonable transformation strategy is vital for the development of state-owned forest industries, so this article from the ecological perspective analysis of the theoretical basis of China's state-owned logging enterprises transformation, on this basis, the paper introduced the development of state-owned forest industries transformation, to reveal the real reasons of state-owned logging enterprises transformation, summarizes the development goal of the current state-owned logging enterprises transformation, for China's state-owned logging enterprises transformation provides realistic significance.

Keywords: ecological perspective, enterprise transformation, the state-owned forest regions

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INTRODUCTION

With the rapid development of the social economy, forest resources have been severely damaged, and environmental pollution problems have become increasingly serious. Thus, people have gradually realized that sustainable development plays an important role in economic development (Feng 2016). In the new era, General Secretary Xi emphasized that the Chinese economy should strive to change from a high-speed growth stage to a high-quality development stage, during which the ecological environment is an important factor that cannot be ignored. In the current market environment, the traditional state-owned forestry enterprise's business model can no longer guarantee that the company has a sustainable competitive advantage, and the transformation of state-owned forestry enterprises has become an inevitable trend. In the transformation of enterprises, the protection of the ecological environment is an ecological red line that cannot be touched by the transformation and transformation of enterprises. Based on this, this paper explores the transformation of state-owned forestry enterprises from an ecological perspective. It not only takes into account the ecological attributes of state-owned forestry enterprises, but also promotes the market-oriented development of enterprises, thus providing inspiration and reference for

the transformation and development of state-owned forestry enterprises.

LITERATURE REVIEW AND SUMMARY

Ecological Theory

Ecosystem theory, by taking the ecosystem as the research object, studies its structure, components and functions as well as development and expansion. Besides, it also studies the influence of its human factors and the ecological science of the ecosystem's own regulation mechanism.

In 1935, the famous plant community scientist A. G. Tansley first proposed the term Ecosystem. In essence, ecosystems are a collection of biome concepts and abiotic environmental factors such as sunlight, temperature, soil, humidity, and a variety of organic or inorganic materials. The two main theories in ecological theory are ecological factor theory and niche theory (Dai et al. 2005).

Ecological factor theory

Ecological factors mainly refer to environmental factors that have direct or indirect effects on the growth, development, reproduction and distribution of organisms in ecological environments. These factors are ecological factors such as food, oxygen, carbon dioxide, temperature, humidity and other related organisms (Shang 2002, Wang et al. 2006).

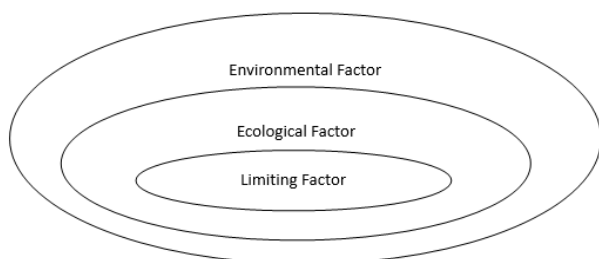


Fig. 1. Relationship diagram of environmental factor, ecological factor and limiting factor

In general, factors can be divided into three types: environmental factors, ecological factors, and limiting factors. An environmental factor is the sum of all the elements associated with it around a biological organism. Ecological factors mainly refer to ecological factors that can significantly affect biological organisms in all environmental factors (Lundet al. 2002), such as light factors, soil factors, water factors, related biological factors, atmospheric factors, topographic factors, and so on. The limiting factor refers to any factor that prevents the growth, reproduction or spread of a living being among all ecological factors. And the factor that approaches or exceeds the tolerance limit of the organism is the limiting factor, as shown in **Fig. 1**.

As can be seen from **Fig. 1**, the relationship between the three is an inclusion relationship, and the environmental factors are the largest, and all factors including subjective and objective can be environmental factors. Thus, environmental factors include ecological factors, and ecological factors contain limiting factors.

Niche theory

The niche refers to the specific time and spatial location of a species in the ecosystem and other species in the biome and its function and status. The niche theory is mainly focused on the two attributes of “state” and “potential”.

The idea of niche theory is that biological units have two attributes, namely “state” and “potential”. “State” refers to the state of biological units (biomass, number of individuals, energy, resource possession, level of technological development, adaptability, level of economic development, level of intelligence, etc.). It is the result of the accumulation of biological units in the process of their growth and development, learning, and socio-economic development and environmental interactions. “Potential” refers to the dominance of the biological unit to the environment or its influence on the reality, such as the rate of exchange of energy and matter, economic growth rate, biological value-added

rate, and the ability to occupy a new environment. Because it describes the status and role of the formation of an organism unit and environment in a particular ecosystem (Zhang and Xie 1997).

Corporate Transition Theory

The Transition Theory originates from a practical theoretical study closely related to the reform of the state system. For example, Eastern European economists (Bruce, Lange, Sikh, etc.) formed the initial thought of transformation theory through deep exploration and reflection on the socialist planned economic system, which appeared during the transition from the planned economic system to the market economic system. A series of questions have promoted the further development of the transformation theory. However, transformation is not an independent economic event. As Roland puts it, “it is purely its own field. Transformation research is difficult to develop successfully, and transformation research must be further developed in interaction with other fields of economics”. There are cross-disciplines between transformation theory and new institutional economics, comparative economics, development economics, and behavioral economics. The breadth and depth of cross-disciplinary research content exceeds other disciplines, as shown in **Fig. 2**. With the deepening and expansion of the research on transformation theory, the research perspective has also diversified. The research object of this theory has already exceeded the scope of system transformation and social reconstruction. The key points have been placed on many aspects of economic development and enterprise transformation practice. The connotation and expansion are also increasingly rich.

Through the combing of relevant literatures at home and abroad, according to the differences between research focus and application fields of transformation theory, the main objects of this theoretical research are divided into three levels: the first level is the institutional transformation at the macro level, the second level is the industrial transformation at the meso level, and the third level is the key micro-enterprise level of this paper. The transformation of China’s state-owned forestry enterprises belongs to the third micro level of research and is representative to a certain extent.

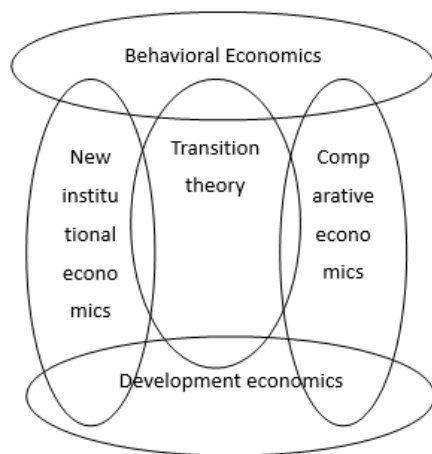


Fig. 2. The theory of transformation multidiscipline intersected

Application of Enterprise Transformation from the Perspective of Ecology

Ecological theory has been widely used in economic research, especially in micro-enterprises. Qi Yali (Qi 2006) puts forward the theory of financial ecology by applying ecological theory and focusing on the research on the problems and contradictions in China's finance. Chen (2002) used the ecosystem theory to study the operational mechanism of high-tech enterprises; Xu (2006) used the ecosystem theory in the process of researching the ecological mechanism and ecological strategy of the harmonious society; On the basis of the research on niche theory, Yan (2006) studied the evaluation and matching of enterprises and core employees; Feng (2004) studied the adaptability of enterprise development and applied ecological theory in the research process; In terms of project management, enterprise and industrial development theory research, ecological theory has also achieved some results. From the perspective of organizational ecology, based on the basic theory of organizational group ecology of construction projects, Liu (2007) analyzed and explained the ecological phenomena of specific types of organizational groups. He reveals the laws and mechanisms of the interaction between these groups, and between groups and the environment.

Literature Review

Through the above theoretical review and literature review, it can be concluded that ecological theory and enterprise transformation are closely related. On the one hand, corporate transformation as an enterprise activity plays an increasingly important role in the sustainable development of enterprises. The transformation of the new era must be proactive and forward-looking. Proactive enterprise transformation

activities can keep the company alive, enable the company to better transform and develop a transformation strategy that is more suitable for its own development; On the other hand, research from an ecological perspective emphasizes the transformation and development of state-owned forestry enterprises without prejudice to the ecological environment, and a strong transformation strategy must be developed. Based on the above cognition, this paper believes that the transformation behavior of state-owned forestry enterprises is a continuous and dynamic process. Business transformation can be defined as a response to a company's development when it is about to emerge or has a dilemma. The manner of corporate behavior involved in the implementation of these response plans mainly emphasizes the actions taken after the transformation of the enterprise, such as ecological environmental protection behaviors, decision-making behaviors, investment behaviors, etc., and finally transformed into the current ecological environment. The competitive advantage of the company focuses on the transformation of the enterprise from an ecological perspective.

FOUNDATION FOR THE TRANSFORMATION AND DEVELOPMENT OF CHINA'S STATE-OWNED FORESTRY ENTERPRISES

From the macro forestry policy and the micro-level Chinese state-owned forestry enterprises, it analyzes the foundation of the transformation and development of state-owned forestry enterprises. In terms of macroeconomic policy, it mainly expounds the impact of forestry policies on the development of state-owned forestry enterprises; from the micro-sector enterprise, this paper mainly starts from the newly established China Longjiang Forest Industry Group Co., Ltd. Since Longjiang Forest Industry Group is the largest state-owned forestry enterprise in China, this paper mainly analyzes economic benefits and ecological benefits.

Policy Foundation

Since the reform and opening up, forestry has developed rapidly. With the continuous increase of production, environmental problems and lack of resources have gradually become the focus of attention; at the same time, the long-standing resource dependence of state-owned forestry enterprises, low industrial concentration, and poor technological innovation capabilities are becoming more prominent. In order to cope with these problems, the state has successively issued the "Key Points of Forestry Industry

Table 1. The list of epilithic algae in Ondokuz Mayıs University Pond I

Time	Policy	Main Contents
January 2000	Implementation Regulations of the Forest Law of the People's Republic of China	Formulate regulations to protect forest resources.
May 2001	"Measures for the Management of Natural Forest Resources Protection Projects" and "Measures for the Verification and Acceptance of Natural Forest Resources Protection Projects"	Ensure the smooth realization of the objectives of the Tianbao project
June 2003	"The Decision of the Central Committee of the Communist Party of China and the State Council on Accelerating Forestry Development"	Determine the direction of forestry development based on ecological construction.
July 2006	"National Forestry Nature Reserve Development Plan (2006-2030)"	Determine the development plan of the national forestry nature reserve from 2006 to 2030.
June 2008	"Opinions of the Central Committee of the Communist Party of China and the State Council on Comprehensively Promoting the Reform of the Collective Forest Tenure System"	Comprehensively promote the reform of collective forest rights system
December 2010	"Science Protection and Economic Transformation Planning of the Greater Xing'an Mountains Forest Region (2010-2020)"	The plan proposes to vigorously develop traditional advantageous industries such as green food industry, forest deep processing industry, forestry trade service industry, and actively cultivate three emerging industries such as eco-culture tourism, northern medicine industry and clean energy industry.
July 2012	"Guiding Opinions on the Preparation and Implementation of Forest Management Plan for State-owned Forest Farms"	Promote the sustainable management of forests in state-owned forest farms and give full play to the demonstration of state-owned forest farms.
April 2014	"Completely Stop Commercial Harvesting of Natural Forests"	The key state-owned forest areas in Heilongjiang have stopped commercial logging of natural forests and promoted the transformation and development of forestry enterprises.
February 2015	"State-owned Forest Farm Reform Plan" and "Guidelines for Reform of State-owned Forest Areas"	Separate and pay attention to people's livelihood issues in the forest area
January 2018	"Guiding Opinions on Strengthening Forestry Brand Construction"	Enhance the competitiveness of forestry industry
June 2018	Established China Longjiang Forest Industry Group Co., Ltd.	Full market operation management

Source: Organized in accordance with relevant laws and central documents

Policy", "Revitalization Plan for Forestry Industry", "Twelfth Five-Year Plan for Forestry Development", "Comprehensive Stopping Commercial Forest Harvesting", and "National Forest Farm Reform Plan" and macro forestry policies such as "Guiding Opinions on Reform of State-owned Forest Areas". These point out the direction for the development of state-owned forestry enterprises from a macro policy perspective. By summarizing and reviewing the previous macro policies, it can provide an effective historical reference for the transformation of state-owned forestry enterprises. See **Table 1** for details.

As can be seen from **Table 1**, after 2000, a series of plans for the protection of forest resources and forestry development were formulated. Until the 2014 comprehensive shutdown policy and the introduction of the state-owned forest farms and state-owned forest reforms in 2015, the state-owned forestry enterprises in Heilongjiang were forced to undergo subversive transformation and reform, and fully implement market-oriented operations. On June 30, 2018, China Longjiang Forest Industry Group Co., Ltd. was officially established, marking the transformation of state-owned forestry enterprises into a new stage of development.

Foundation for the Transformation and Development of State-owned Forestry Enterprises

State-owned forestry enterprises are an important pillar of the development of forestry industry. The analysis of the development status of Heilongjiang state-owned forestry enterprises can reflect the development level of Heilongjiang state-owned forestry enterprises. Generally speaking, the status quo of enterprise development is mainly analyzed from two aspects: economic level and social development. Therefore, this chapter mainly analyzes the economic development level and social development of state-owned forestry enterprises in Heilongjiang Province, and then analyzes the micro-foundation of the transformation and development of Heilongjiang state-owned forestry enterprises.

Economic benefits of state-owned forest industry enterprises

Through reviewing the data of the "China Forestry Juice Yearbook" in the past five years, the economic output of Heilongjiang state-owned forestry enterprises was analyzed in terms of total output value and analysis of output value of various industries.

Table 2. Total Output of Longjiang Group's Forestry Industry

Year	Total Output	1 st Industry	2 nd Industry	3 rd Industry
2012	4414494	1687435	1675562	1051497
2013	4952635	1840136	1844846	1267635
2014	4781827	1884022	1514217	1383588
2015	5013894	1948797	1498675	1566422
2016	5337101	1993696	1472148	1871251

By consulting the "China Forestry Statistical Yearbook", this paper selects the total output value of the forestry industry of Heilongjiang Longjiang Group as an economic indicator, reflecting the economic development of Heilongjiang state-owned forestry enterprises, as shown in **Table 2**, the unit is 10,000 yuan.

As can be seen from **Table 2**, in recent years, Longjiang Group has achieved great results in economic development. The total output value of the forestry industry increased from 4,414,494,000 yuan in 2012 to 533,710,10,000 yuan in 2016. In terms of industrial distribution, the growth rate of the tertiary industry is increasing year by year, and the growth rate of the secondary industry is declining. The primary industry is relatively stable.

Ecological benefits of the development of state-owned forestry enterprises

With June 30, 2018, China Longjiang Forest Industry Group Co., Ltd. was formally established, marking the transformation of Heilongjiang state-owned forestry enterprises into a key stage. Among them, the ecological environment has been effectively restored. By the end of 2017, the forest area of the forestry forest area reached 8,585,500 hectares, an increase of 5 million hectares; The forest coverage rate reached 85.14%, an increase of 0.04 percentage points; the total standing stock reached 947 million cubic meters, an increase of 30 million cubic meters. In the past 30 years, the average hectare accumulation of forest land reached 104 cubic meters for the first time, and the ecological resources were further restored. A total of 576,200 mu of afforestation was completed, the forest was raised to 9.24 million mu, the seedling production was 13,600 mu, and the number of trees planted was 6.84 million; 3,077.62 hectares of reclaimed forest land; 3,000 mu of returning farmland to wetland.

China Longjiang Forest Industry Group undertakes the mission of the key state-owned forest area Tianbao project and shoulders the historical responsibility of protecting the ecological environment. This is also an important manifestation of the public welfare attribute of Longjiang Forest Industry Group. The Group comprehensively implemented the new development

concept of "Green Water Mountains are mountains of gold and silver, so are Ice and Snow Mountains", vigorously develops green ecological industry, and steadily promotes the pace of green transformation and development of enterprise groups.

THE REALISTIC REASONS FOR THE TRANSFORMATION OF CHINA'S STATE-OWNED FOREST INDUSTRY ENTERPRISES

From the current overall situation of Heilongjiang state-owned forestry enterprises, there are two main reasons for determining the practical reasons for the state-owned forestry enterprises to start market-oriented transformation: First, due to the particularity of the state-owned forestry enterprises, the initial state of any of the state-owned forestry enterprises is not organized and designed according to the principle of marketization; Second, the comprehensive halting policy and the development dilemma of state-owned forest areas directly led to the state-owned forestry enterprises having to transform their enterprises as soon as possible, fundamentally solving problems within the state-owned forestry enterprise system and strengthening market positioning.

The Initial State Design without Market-oriented Mode is the Premise of the Market-oriented Transformation of State-owned Forestry Enterprises

First of all, this is determined by the historical responsibility of the state-owned forestry enterprise construction. Due to the particularity of the industry, it is necessary to take into account the protection function of ecological benefits and the sustainable development of forestry enterprises. In addition, the return on investment of the forest industry enterprises is relatively long, which directly affects the development of the forestry industry, and it is difficult to attract sufficient attractiveness to private capital. Therefore, the development of state-owned forestry enterprises has become the responsibility of the local government. However, the local government has full property rights to the forest industry enterprises, which determines that such enterprises must design a business development model that meets the requirements of "trust and agency".

Secondly, state-owned forestry enterprises built with the government as the main body of responsibility must first complete the government's main responsibility target, namely the ecological protection function. Obviously, the government's responsibility target is significantly different from that of the general market-oriented enterprises. Its core goal is to realize the public welfare nature of ecological environmental protection, which is very different from the goal of the general enterprise to pursue economic profit maximization to satisfy its own interests.

Thirdly, in the design of the internal system of the group enterprise, the supervision department will be emphasized, and the scientific design of the operation department will be neglected, the investment in the technological innovation of the R&D department and the internal system design of the enterprise will be reduced, and the opportunity to develop new economic growth points will be missed. For example, in order to restore the ecological environment in a short period of time, state-owned forestry enterprises will have to give up commercial development activities for some investors, and from the perspective of enterprise development, it will have an adverse impact on the subsequent market-oriented operations.

The above three reasons determine that the marketization of state-owned forestry enterprises must undergo a multi-stage, and even many stages of continuous transformation and development practice can be realized.

The Comprehensive Shutdown Policy and the Development Dilemma of State-owned Forest Areas are the Direct Causes of the Market-oriented Transformation of State-owned Forestry Enterprises

Because of the unique economic attributes of the forestry industry, the formation and operation of state-owned forestry enterprises are different from those of ordinary enterprises. Due to the need for ecological protection, the comprehensive shutdown policy issued on April 1, 2014 is a major blow to the Heilongjiang state-owned forestry enterprises that are mainly engaged in the timber industry. In the short term, there is an urgent need to find alternative industries to maintain the economic development of state-owned forest areas. Under this circumstance, as the main body of the forestry industry, the forest industry enterprise is in an awkward business environment: as the main body of the enterprise, it is necessary to expand various income sources and reduce the operating costs of

enterprises, so as to realize the sustainable development of forestry enterprises and maximize profits; as a provider of social welfare products, it has to play the role of a social welfare person and is subject to various policies.

GOAL FOR THE TRANSFORMATION OF CHINA'S STATE-OWNED FORESTRY INDUSTRY

Different from the general enterprises, the particularity of state-owned forestry enterprises determines the duality of their market-oriented transformation goals. Products with ecological attributes of state-owned forestry enterprises (that is, providing good ecological environment) (ecological services based on ecological protection) have strong positive externalities. The particularity of the industry makes it possible for the forestry enterprises that provide such products or services to achieve sufficient profitability to meet the profit motives of the enterprises and to provide ecological services that meet the needs of the people according to the government's requirements for ecological protection. Improve and optimize enterprise functions. The state-owned forest industry enterprises aiming at this can be regarded as the expansion of the government's environmental protection function to some extent. Judging from the current situation of the transformation and development of state-owned forestry enterprises in Heilongjiang, the newly formed and operated group companies have a "trust-and-agent" relationship with the government in environmental protection. This means that the government will impose strict ecological control on state-owned forestry enterprises. Under this premise, the state-owned forestry enterprises with market transformation will inevitably have a dual market-oriented transformation goal, that is, the rational profitability of enterprises and the realization of ecological welfare coexist.

The goal of transformation based on state-owned forestry enterprises is to achieve market-oriented profitability of enterprises, while not touching the ecological red line. Combined with the reality mentioned above, it can be seen that if the government's financial support and government-guaranteed bank loans are relied on, the state-owned forestry enterprises will not touch the ecological red line, but the independent development of enterprises will be greatly restricted; If the government relies solely on the operating income of state-owned forestry enterprises, the government does not monitor and control it. It is difficult to ensure that enterprises will not touch the

ecological red line in pursuit of profits, resulting in the destruction of the ecological environment. Therefore, it is necessary to find a balance between the two to balance the vested interests of all parties and promote the sustainable development of the transformation of state-owned forestry enterprises.

CONCLUSION

In the increasingly fierce market competition environment, exploring the source of the transformation of China's state-owned forestry enterprises from an ecological perspective is the most concerned issue for enterprise development. This paper takes China Longjiang Forest Industry Group as the object, based on the ecological theory and the development goal of enterprise transformation, discusses the transformation of China's state-owned forestry enterprises from the ecological perspective. The main conclusions are as follows:

As environmental issues become more prominent, China has gradually increased its emphasis on building and improving ecosystems. As the most important

micro-main body to restore the ecosystem, the success or failure of China's state-owned forestry enterprises has a huge impact on the protection of China's ecosystem and even the quality of China's environment. Therefore, the construction of a green eco-industrial system is the biggest advantage of the development of the forest industry group. It is the most urgent task facing the forest industry to turn the forest industry into a new economic growth sector. Based on the resource endowment, ecological advantages and supply advantages of the state-owned forest areas, the supply-side structural reform is the main line, and the domestic leading ecological industry is the goal. Adhere to the industrialization layout, large-scale development, market-oriented, and group operations, and accelerate the construction of a modern forestry industry system based on green ecology. It is necessary to transform resource advantages and ecological advantages into economic advantages, development advantages and competitive advantages, and to develop a green transformation and development road that takes advantage of resources and environment.

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