

Ecological Economy and Green Marketing From the Perspective of Natural Environment Protection

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Keywords: Ecological Economy, Green Marketing, Environmental Protection, Sustainable Development

Abstract: With the increasing environmental crisis of natural environment pollution, it has become a consensus of global economic integration to insist on ecological priority and green development, and global environmental problems are increasingly concerned by consumers. green marketing(GM) has become a necessary way to achieve the goal of sustainable development(SD) and ecological civilization. How to promote the rapid development of GM has become one of the important directions for the country to adjust the economic structure and change the development mode. Taking M province as an example, this paper analyzes the current situation of environmental protection and ecological economy(EE) development in this province, and finds that the industrial production in this province has a great impact on the ecological environment, but the increase of the tertiary industry has also promoted the promotion of green economy. Combined with the concept of GM, industrial departments need to use green materials in production, provide green technology support, coordinate the balance between EE and environmental protection, and achieve SD of economy and environment.

1. Introduction

The construction of ecological civilization is related to the well-being of the people. In the new era, it is particularly important to handle the relationship between the natural environment, EE and society. It can better provide people with a livable ecological environment, rich material wealth and spiritual wealth, improve people's well-being and enhance people's happiness, and achieve real green SD. The coordinated development of the three is also the key to achieving regional green development [1].

In the research on the interaction between ecological economic growth and environmental protection, it is clearly pointed out that EE and environment can develop in harmony. The origin of

the theory of coordinated development of ecology and economy is that scholars gradually realized that in the process of economic and social development, the continuous consumption of non renewable natural resources and human production and living activities caused great damage to the ecological environment far beyond the self repair ability of the ecological environment system, resulting in the gradual imbalance of the ecological environment system, which led to the adverse consequences of restricting economic and social development. Therefore, economic and social development and ecological environment protection are closely linked [2, 3]. Affected by the economic and social development, the cost of ecological environment protection and the awareness of ecological environment protection will affect the level of ecological economic productivity. These changes in economic and social development will have a significant impact on ecological economic productivity [4]. The level of scientific and technological innovation has increased rapidly, the utilization efficiency of natural resources in the ecological environment has increased significantly, and the dependence has decreased significantly, thus realizing the transformation of ecological environment protection and economic and social development mode, improving the level of productivity, and improving the awareness of ecological environment protection [5]. In general, the improvement of the level of eco economic productivity is affected by many factors. Solving the contradiction between the limited carrying capacity of the ecological environment and the rapid development of the economy and society driven by human unlimited desire has become the key to improve the eco economic productivity.

This paper first explains the concept of GM, and puts forward the relationship between EE and GM; Then analyze the current situation of ecological and economic development and environmental pollution in M province, and fully apply the concept of SD to the industrial production of M province, so as to realize green production and marketing of products with the support of green technology.

2. Basic Overview

2.1. Contents of GM

GM, from the perspective of environmental protection, carries out more reasonable marketing, reflecting the cultural value of green. The premise is to meet consumer demand, minimize environmental pollution, and maximize the sales process of enterprise development planning [6]. GM is a management process, which can identify, anticipate and meet the social needs of consumption, and can bring profits and sustainable operation [7].

The development of GM is to combine the interests of society and enterprises. When formulating strategies for green product strategies, we must consider the economic benefits of products, the long-term interests of society and health, so that products can remain circulating in the economic market [8]. GM awakens people's awareness of environmental protection, which makes consumers not only consider their own needs, but also the surrounding environment when consuming. Ecological balance is also included in the influence of purchase factors. Enterprises that damage the environment should be condemned. Consumers, enterprises and the government should have green awareness and take action to resist goods that have adverse effects on the environment, so that GM can develop [9, 10].

2.2. Relationship between EE and GM

In the process of pursuing self survival and SD, the enterprise must combine the macro economic environment, social environment and natural ecological environment to formulate a practical and feasible enterprise marketing ecological strategy and goal that is consistent with and suitable for the

development of the enterprise. The enterprise's ecological development strategy and goal play an important role in the implementation of the enterprise's ecological marketing strategy, and are the general rules and guidelines for the enterprise to implement the ecological marketing strategy [11, 12].

Ecological investment rate (EIR): refers to the percentage of total ecological investment in GDP in a certain period (year). The higher the ecological investment rate, the higher the ecological degree of the enterprise, and the more conducive to the implementation of GM [13].

$$EIR = TEI / TP \times 100\% \quad (1)$$

TEI stands for total annual ecological investment, and TP stands for gross annual product.

Ecological production environment refers to the ecological degree of the ecological environment and conditions of enterprises' ecological products. The higher the ecological level of production environment, the more conducive to the implementation of GM.

Ecological technology input ratio (ETIR): refers to the percentage of ecological technology input and total technology input in a certain period. The larger the index is, the higher the level of GM is [14].

$$ETIR = TETI / TTI \times 100\% \quad (2)$$

TETI refers to the total annual investment in ecological technology, and TTI refers to the total annual investment in all technologies.

3. Natural Environment and Ecological Economic Development in M Province

3.1. Ecological Environment Status

(1) Ecological foundation

The ecological basis is the basis of human production and life, which mainly refers to the rational development and utilization of water and soil resources and provides essential material support for economic and social development. Therefore, this paper selects per capita water resources, per capita cultivated land area and per capita green land area to analyze the ecological basis.

Table 1. Ecological foundation of m province

	Water resources per capita / 100 million cubic meters	Per capita cultivated area/hectare	Per capita green space/square meters
2015	0.149	0.313	14.62
2016	0.153	0.318	17.33
2017	0.174	0.320	19.24
2018	0.165	0.316	22.57
2019	0.186	0.367	23.46
2020	0.184	0.368	24.07
2021	0.177	0.368	24.83

It can be seen from Table 1 that the per capita water supply in M Province will increase from 14.9 million cubic meters in 2015 to 17.7 million cubic meters in 2021, with a small increase and basically within the range of 15-20 million cubic meters throughout the year. However, M Province has a vast territory, rich and diverse terrain, and there is a serious uneven distribution of water resources between the east and the west, which restricts the coordinated development of the region.

The per capita cultivated land area in M Province has increased from 0.313 hectares in 2015 to 0.368 hectares in 2021, which has basically remained at about 0.36 hectares in recent years. The growth rate in 2019 is particularly high, increasing by 0.051 hectares compared with 2018. The per capita green space area of M Province has increased from 14.62 square meters in 2015 to 24.83 square meters in 2021, an increase of 10.21 square meters, indicating that A Province has made continuous efforts to build a better home.

(2) Environmental pollution

Table 2. Discharge of industrial "three wastes" (100 million tons)

	Industrial waste water	Industrial waste gas	Industrial solid waste
2015	4.67	2.33	1.98
2016	5.32	2.67	3.64
2017	5.88	3.42	3.25
2018	6.21	3.97	4.76
2019	6.45	4.38	3.83
2020	6.59	4.25	5.61
2021	6.65	4.68	6.84

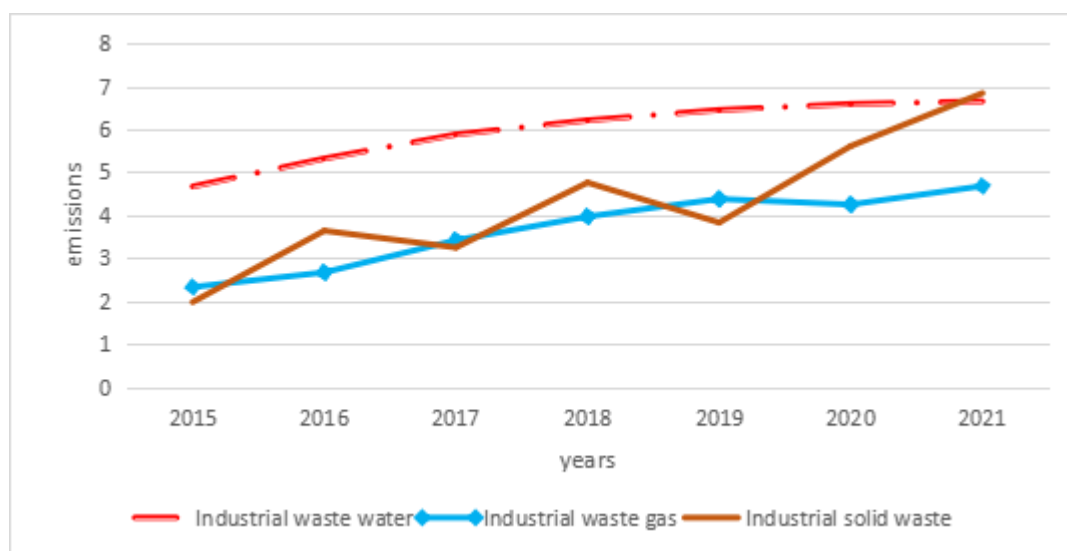


Figure 1. Discharge of industrial wastewater, waste gas and solid waste in province a from 2015 to 2021

The pollution status is mainly analyzed from the total emission of industrial waste gas, total emission of industrial waste water, and production of general industrial solid waste. According to Table 2 and Figure 1, from 2015 to 2020, the industrial "three wastes" showed an overall growth trend. Industrial wastewater will increase from 467 million tons in 2015 to 665 million tons in 2021. Although the discharge of industrial wastewater will increase year by year, the growth rate will slow down. Industrial waste gas increased from 233 million tons in 2015 to 468 million tons in 2020, a 2.01 fold increase. The discharge of industrial solid waste will increase in a fluctuating manner, with 684 million tons discharged by 2021. In 2018, the rising trend of "three wastes" emissions slowed down and tended to be stable, which shows that M Province began to pay more attention to the "three wastes" emissions in 2018, and has taken governance measures, which has played a

significant role in the governance of the ecological environment. However, the economic development mode adopted by individual regions in M Province, especially the industrial cities, is still relatively extensive.

3.2. Current Situation of EE Development

(1) Investment strength and vitality of EE

Table 3. Ecological economic investment

	Gross Regional Product	Fixed Asset Investment	Public Budget Revenue	Public Budget Expenditure
2015	7215.8	4682.7	536.2	946.5
2016	7894.5	5344.6	672.4	1257.2
2017	8926.7	6913.5	823.4	1563.7
2018	10674.6	8207.4	941.8	1921.5
2019	13451.3	9633.5	1325.5	2394.8
2020	14972.5	11025.8	1178.6	2517.3
2021	16580.4	13541.6	1264.7	2834.6

In recent years, the EE of M Province has generally shown a good development trend. It can be seen from Table 3 that during the seven years from 2015 to 2021, the GDP of M Province has increased from 72.158 million yuan to 165.804 million yuan, an increase of 93.646 million yuan; The fixed asset investment of the whole society increased from 46.827 million yuan to 135.416 million yuan. Increased by 88.589 million yuan; The general public budget revenue increased from 5.362 million yuan to 12.647 million yuan, an increase of 7.285 million yuan; The general public budget expenditure increased from 9.465 million yuan to 28.346 million yuan, an increase of 18.881 million yuan. To sum up, the EE of M province is affected by the medium and high speed development of domestic economy. The overall ecological economic strength of the whole region is gradually increasing, and the public budget expenditure is increasing year by year. The quality of the ecological environment of people's lives is continuously improved, and there is still a large potential space for the development of EE.

(2) Industrial structure

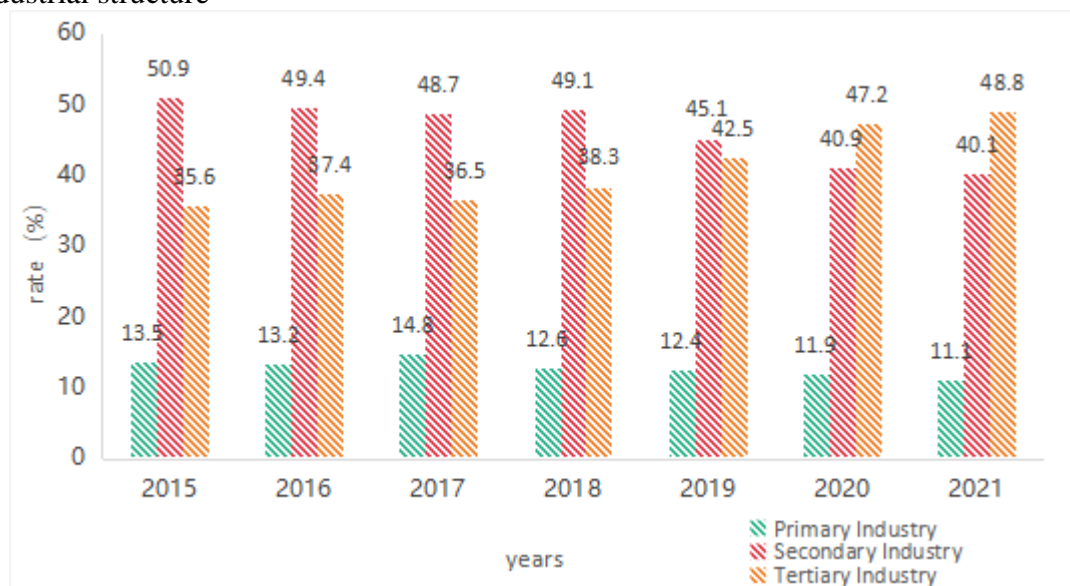


Figure 2. Proportion of three industries (%)

Economic development and industrial structure are mutually restricted and developed in a long-term interactive relationship. A reasonable industrial structure will help economic growth. Similarly, economic development will also improve the transformation speed of industrial structure. The change of industrial structure has a decisive impact on economic development. The economic structure of M province has been constantly adjusted and optimized, and the manufacturing industry has gradually transformed into the service industry as the main force of economic development. The proportion of the three industries has changed from 13.5:50.9:35.6 in 2015 to 11.1:40.1:48.8 in 2021. It can be seen from Figure 2 that the proportion of the primary industry and the secondary industry decreased by 2.4% and 10.8% respectively during 2015-2021, while the proportion of the tertiary industry increased by 13.2%. The tertiary industry has the least pressure on the environment, and the increase of the tertiary industry is conducive to the development of green economy in M Province.

4. GM Channels in Environmental Protection and Ecological Economic Development

4.1. Use of Green Materials

Green materials refer to materials with low toxicity during production. The degree to which materials can be recycled and easily scrapped, the long-term impact of materials on the environment and how much energy is consumed in the production process [15]. For the selection of green materials, non-toxic, harmless and degradable production materials are encouraged to be used, and the service life of products is extended, so that they can be reused and treated after use. Green production aims to reduce energy consumption and reduce pollution discharge. The production process should be controlled by green means. It is essentially the same as cleaner production. Therefore, such production process can also develop green products in accordance with the principle of ecological environment protection, so as to meet people's consumption [16].

4.2. Provide Green Technical Support

While industrialization and manufacturing have brought modern lifestyles to people, they have also brought unprecedented damage to the ecological balance of the earth. In this context, green design has emerged with the tide. Green technology is the first productive force in green production activities. It is a scientific and technological activity to balance the ecological environment and protect human health and develop sustainable economy [17]. In industrial production, its process needs to reduce environmental pollution through green technology to form environmentally healthy industrial products. The embodiment of green technology in green concept not only includes its "hardware". Such as cleaner production technology, reverse channel recycling equipment, etc., and its "software" facilities [18]. Such as the operation method of green technology, activities and operations of green technology, etc. Many suppliers and middlemen have a strong desire to improve green production technology, but they are limited by many aspects, which requires them to provide strong and powerful support for channel success.

4.3. Establish Channel Incentive Mechanism

The improvement of the effect of GM channels and the business model of SD is a process of lasting war, which involves the complexity of cost input and process re-engineering. Therefore, enterprises need to set appropriate incentive mechanisms for different marketing effects presented by channel members. For members with strong environmental awareness and good channel effect, give priority to resource sharing, increase the number of orders, jointly develop cooperative projects

and other incentives. Analyze the members with poor channel effects and formulate improvement plans.

5. Conclusion

Green development is the harmonious coexistence of human society and the natural environment. The development of human society is inseparable from the material and energy provided by the natural environment and a good living environment. At the same time, natural resources and ecological environment are also constraints of economic development, so if we want to realize the transformation of economic growth from rapid growth to high-quality growth, we must adhere to the new green development theory. In the process of the development of the ecological economic system, we should rationally use and allocate various resources. Do not plunder the material and energy of the natural environment system too much. Similarly, the impact of the EE on the natural environment should be controlled within the bearing capacity of the natural environment system, so that the ecological 1 economic growth and the environment can develop harmoniously and maintain a virtuous circle.

Funding

This article is not supported by any foundation.

Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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