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Research on the Market Effect and Cultivation Path of Comprehensive Utilization of by Products from the Perspective of Ecological Chain

Yuying Wang*, Yi Sun, and Ruoyun Pang

School of Management, Liaoning University of International Business and Economics, Dalian, 116045, China

*Corresponding Author

Abstract

The comprehensive utilization of by-products is an important way to realize the efficient recycling of resources and promote the sustainable development of the economy, and has significant economic, social and ecological values. However, at present, there are many problems in the comprehensive utilization of by-products, including technical bottlenecks, backward concepts and imperfect market mechanisms, which seriously restrict the development and utilization of by-product resources. Combined with the above predicament, the corresponding cultivation path is proposed, and it is suggested to promote the healthy development of the comprehensive utilization market of by-products by strengthening technology research and development, optimizing the policy environment and improving the market mechanism, so as to achieve the efficient use of resources and the sustainable protection of the environment. This initiative helps to improve the utilization efficiency of by-product resources, reduce resource waste, reduce environmental pollution, provide scientific basis and practical guidance for achieving the Sustainable Development Goals, and help promote the green development of the regional economy.

Keywords

Ecological Chain; Comprehensive Utilization of By-Products; Nurturing Paths.

1. Introduction

With the increasing pressure on global resources and environment, how to achieve efficient and sustainable use of resources has become an important issue to be solved urgently by all countries in the world. In this macro context, the comprehensive utilization of resources is not only of great significance to the sustainability of economic development, but also a key link to achieve the coordinated development of ecological environmental protection and economic and social development.

In the long-term development process, it has accumulated abundant resources of agriculture, forestry and industrial by-products. These by-product resources not only provide support for local economic development, but also have huge potential comprehensive utilization value [1]. However, for a long time, due to various factors such as the limitation of technological level, the constraints of traditional concepts, and the imperfection of market mechanisms, by-product resources have not been fully and effectively utilized, resulting in a large number of resources being idle or wasted [2]. This not only brings losses to the local economy, but also puts serious pressure on the environment.

However, it is necessary to solve the problems of technical bottlenecks, backward concepts and imperfect market mechanisms in the comprehensive utilization of by-products. These problems are the key obstacles restricting the efficient use of resources and sustainable

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development, and through this study, we hope to provide scientific basis and policy recommendations for governments and enterprises, and promote the healthy development of the comprehensive utilization market of by-products, so as to achieve a win-win situation of economic benefits and environmental protection. This is not only a necessary measure for sustainable development, but also an important demonstration of the efficient use of resources at the national and global levels.

2. The Value Implication of Comprehensive Utilization of By-Products from the Perspective of Ecological Chain

2.1. Political Value: Promote Regional Economic Prosperity and Build the Cornerstone of a Harmonious Society

Through the comprehensive utilization of by-product resources, the industrial chain can be extended, the added value of the industry can be enhanced, and the coordinated development of related industries can be promoted. It is conducive to the sustainable use of resources and meets the requirements of the national sustainable development strategy. From the perspective of ecological chain, the research on the market effect and cultivation path of comprehensive utilization of by-products is helpful to promote the high-quality development of regional economy.

2.2. Economic Value: Realize the Efficient Use of Resources and Coordinate the Development of Industrial Economy

Through the rational design and optimization of the ecological chain, the by-product resources can be utilized at multiple levels and links, so as to maximize the utilization efficiency of resources and reduce the waste of resources. In the ecological chain, different industries can achieve coordinated development through resource sharing, technical exchanges and market cooperation, so as to improve the added value and economic benefits of the industry.

2.3. Ecological Value: Maintain the Balance of the Ecosystem and Promote the Rise of the Green Economy

Through the rational use of by-product resources, the overexploitation and destruction of natural resources can be reduced, and the pressure on ecosystems can be reduced [3]. The green economy emphasizes the coordination and integration of economic development and environmental protection, and achieves sustainable economic development through the development of green industries, the promotion of green technologies, and the promotion of green consumption [4].

2.4. Social Value: Ensure Sustainable Development and Create a Green Future for the Economy and Society

By improving the efficiency of resource utilization, reducing environmental pollution and protecting the ecosystem, it can provide long-term resource security and a good ecological environment for the economic and social development of the region. Realizing the sustainable use of resources and the sustainable protection of the environment can ensure the coordinated development of the economy, resources and environment.

3. The Practical Dilemma of Comprehensive Utilization of By-Products

3.1. Technology Research and Development Lags Behind

The production mode of the by-product processing industry is relatively backward [5], most of them are workshop-type small batch production, and there are fewer enterprises that carry out intensive processing and comprehensive utilization of by-products, the processing technology

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lacks standardization, and the level of automation equipment is low. Most of the products of domestic comprehensive utilization are low-end products, and there is a big gap between them and the international comprehensive utilization technology level and economic benefits.

3.2. Poor Market Information

Producers do not have a deep understanding of market demand, and it is difficult to accurately grasp the changing trend of the market, resulting in the by-products produced may not meet the actual demand of the market. Consumers' limited knowledge of information about the characteristics, quality and use of by-products affects their purchase intentions and choices. Information may be distorted or delayed in the process of dissemination.

3.3. Lack of Industrial Planning

Due to the lack of scientific industrial planning, the connection between different links is not close enough, and the industrial chain is not complete, which affects the coordinated development of the entire industry. As a result, the prediction and grasp of market demand are not accurate enough, resulting in unreasonable product structure, unable to meet the diversified needs of the market, and affecting the market competitiveness and sustainable development ability of the industry.

3.4. Talent Introduction Shortage

The shortage of professional scientific research personnel has led to the hindrance of the research and development process of new technologies and the lack of innovation ability. The lack of management talents with professional knowledge and experience affects the operational efficiency and management level of enterprises. The shortage of professional marketing talents makes it difficult for enterprises to accurately grasp market demand and trends, hindering the large-scale development of the industry.

4. Exploration of the Cultivation Path of Comprehensive Utilization of By-Products from the Perspective of Ecological Chain

4.1. Promote Technological Innovation, Achieve Efficient Utilization and Integration, and Inject Strong Impetus into Sustainable Economic Development and Industrial Upgrading

Promoting technological innovation can promote the transformation and upgrading of the economic structure by optimizing the allocation of resources and rational use of resources, giving birth to new products and new industries. The first is to strengthen the leadership of scientific and technological innovation and promote industrial upgrading. Establish an industry-university-research cooperation mechanism, strengthen the research on key technologies [6], actively introduce foreign advanced technology, and carry out localized transformation. The second is to cultivate innovative subjects and promote the transformation and upgrading of enterprises. Set up a special scientific research fund to cultivate new innovative subjects that adapt to the direction of market development, and implement "point-to-point" precise guidance according to the actual needs of enterprises. The third is to improve the innovation system and mechanism and create a good environment for innovation. Strengthen the protection of intellectual property rights, improve the scientific and technological innovation policy system, establish a scientific and technological innovation service platform, and provide a good policy environment for enterprise innovation.

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4.2. Build an Information Platform to Achieve Accurate Management and Optimization, and Provide Strong Support for the Efficient Allocation of Resources and Industry Progress

The construction of an information platform can realize the sharing and circulation of data through the integration of various data resources, so as to improve the efficiency of resource utilization. The first is to build an information architecture and lay the foundation for precise management. Using advanced information technology, establish a unified information release platform to provide market information and policy trends to enterprises and relevant stakeholders in a timely manner. The second is to drive decision-making data to achieve management optimization goals. The use of big data analysis technology to carry out in-depth mining of the collected data to provide a scientific basis for production decision-making, product development and market expansion of enterprises. The third is to optimize the functions of the platform and improve the efficiency of precise management. Strengthen the promotion and application of the information platform, establish an information feedback mechanism, improve the awareness and use of the platform by market participants, and enhance market transparency and resource allocation efficiency.

4.3. Lead Industrial Planning, Achieve Coordinated Development and Upgrading, and Lay a Solid Foundation for the Overall Improvement and Long-Term Development of the Economy

Leading industrial planning can promote deep industrial integration, optimize resource allocation, enhance regional economic competitiveness, and promote economic structure optimization. The first is to plan the industrial layout and promote the process of coordinated development. Rational layout of industries, the formation of industrial agglomeration effect, according to market changes and industrial development needs, timely adjustment of industrial planning. The second is to guide industrial upgrading and build a coordinated development model. Clarify the direction of industrial positioning and upgrading, each region can determine characteristic industries according to its own advantages, and strengthen the docking and integration of the coordinated development strategy with Beijing-Tianjin-Hebei. The third is to promote industrial integration and achieve the goal of coordinated development. Promote the deep integration of production, education and research, encourage enterprises to participate in the recycling and reuse of by-products, form synergies between the upstream and downstream of the industrial chain, and gradually build a new industrial development model with efficient and collaborative development.

4.4. Cultivate and Introduce Talents, Realize Professional Ability Improvement and Innovation, and Inject Intellectual Engine into Long-Term Development and Core Competition

Cultivating and introducing talents can bring new knowledge, skills and innovative thinking to enterprises and industries, and enhance core competitiveness. The first is to strengthen personnel training and build a solid foundation for professional ability. Strengthen cooperation with colleges and universities, vocational colleges, establish talent training bases, open relevant professional courses, and cultivate professionals to meet the needs of industrial development. The second is to actively introduce talents and stimulate the source of innovation vitality. Formulate attractive talent introduction policies, including providing competitive salary and benefits, housing subsidies, children's education support, etc., to attract more high-end talents to settle down. The third is to promote talent development and achieve the goal of continuous innovation. Establish a flexible training system, cooperate with universities and scientific research institutions, and regularly hold professional skills training and innovation workshops to enhance the professional ability and innovation ability of talents.

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5. Conclusion

To sum up, through the in-depth study of the comprehensive utilization of by-products from the perspective of ecological chain, we can clearly see the key issues and potential values in this field. There are technical bottlenecks, lagging concepts and imperfect market mechanisms in the comprehensive utilization of by-products, which seriously affect the effective use of resources and the sustainable protection of the environment. It is urgent to take effective measures to solve the problem, including technological innovation-driven, information platform construction, industrial planning and guidance, and talent training and introduction. Solving these problems can not only significantly improve the efficiency of resource utilization and reduce the burden on the environment, but also bring new economic growth points and promote high-quality economic and social development. By strengthening technology research and development, optimizing the policy environment and improving the market mechanism, we can effectively promote the healthy development of the comprehensive utilization market of by-products. Although this study puts forward some suggestions and paths, it is still necessary to further improve the relevant policies and technical support systems and strengthen the construction of market mechanisms in the future. Through in-depth analysis of problems and exploration of cultivation paths, it is expected to achieve the optimal allocation and sustainable utilization of resources, inject new vitality into economic and social development, and realize the benign interaction between ecological environmental protection and economic development.

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