

Analysis of the Management and Development Mode of Plastic Enterprises under the Background of Technological Innovation

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Abstract: With the continuous change of social production methods, technological innovation has gradually become the key to the sustainable development of enterprises. In the context of technological innovation in the new era, China's plastic enterprises are facing problems such as imbalance in the supply and demand industrial chain, insufficient innovation ability and irregular internal management. Based on this, according to the current development status of the plastic products industry, in view of the existing problems, the corresponding solution strategies are proposed, aiming to improve the refined management level of plastic enterprises in China and provide suggestions for the stable development of plastic enterprises.

1. Introduction

Since the reform and opening up, China has relied on the crude development model to achieve high GDP growth and create abundant material wealth for the new China. As the pillar industry of China's national economy, the manufacturing industry has accumulated a large amount of social wealth while also facing the challenges of energy consumption and environmental pollution. In recent years, the consumption of plastics has surpassed that of steel, and the plastics industry as a kind of manufacturing has become the first pillar of industry in China[1]. However, with the accelerated pace of ecological civilization construction, the traditional development model of plastics enterprises has been unable to meet the contemporary concept of sustainable development, therefore, adhere to technological innovation to lead, focus on green and high-quality development, and promote the transformation of the development model of plastics enterprises has become an urgent task[2].

2. Plastic Products Industry Development Status

2.1 High Market Demand and Rapid Industry Development

Plastic products are widely used in different industries for many years due to their light weight, obvious sound and vibration dampening effects and good chemical stability, and play a pivotal role in many fields such as transportation, construction, packaging and biological medicine in China. After decades of rapid development, China's plastic products industry has leaped to become the

world's largest producer and seller of plastics, with plastic production and consumption ranking first in the world [3]. According to statistics, in the past five years, the number of enterprises related to plastic products in China registered a rapid growth from 231,000 in 2016 to 1,107,500, with a compound annual growth rate of 36.82%, the industry competition intensified at the same time, the market concentration further improved. 2021, China's plastic products production reached 80.04 million tons, an increase of 400.8 tons compared to 2020, a year-on-year Growth of 5.27%, plastic products market demand, the industry to maintain rapid development trend[4].

2.2 Industry Cluster Development Characteristics are Obvious

From the regional distribution of the plastic products industry, East China is the highest production of plastic products in China, accounting for 46.2% of the total national output in 2021, while Southwest China accounts for only 10.9%. This shows that the plastic products industry in East China has a high degree of industrial concentration, forming a number of industrial clusters with greater influence. The development mode characterized by industrial clusters is conducive to plastic enterprises to reduce costs, enhance industrial scale efficiency, and thus improve their market competitiveness [5]. In recent years, under the guidance of relevant government policies, the construction of plastic products industry clusters has slowly shifted from single processing to a whole industry chain model with high added value, thus promoting the plastic products industry to follow the development trend and further realize the high-quality development of plastic products industry clusters.

2.3 Upgrading Industrial Structure and Industrial Transfer Coexist

The "14th Five-Year Plan" points out that we should continue to adhere to the core position of innovation in the overall situation of China's modernization. As a polluting industry in the manufacturing industry, plastic products industry to accelerate the transformation of production methods to achieve green development of plastic enterprises has become an inevitable requirement to promote the upgrading of industrial structure[6]. At present, China's plastic products industry cluster has ushered in a development stage driven by technological elements, reducing the production pollution of plastic enterprises and enhancing the product innovation ability of plastic enterprises have become the main objectives of this stage. Currently, East China, South China and Central China are still responsible for most of the production of plastic products industry in China, while the comparative cost advantage of the central and western regions makes the trend of plastic products industry transfer to the central and western regions inevitable, but it still takes a long time to fully realize the industrial transfer of the whole plastic industry.

3. Problems in the Management of Plastic Enterprises

3.1 Imbalance between Supply and Demand Chain of Plastic Enterprises

At present, in the face of the complex and changing external environment, the slow recovery of the domestic economy, coupled with the global epidemic is still evolving, China's plastic products industry supply and demand industrial chain imbalance of the problem is becoming more serious, the industrial chain is not stable, not good and not strong problem is more prominent. In this context, the profit link of the plastic products industry migrates upstream, which restricts the raw material trading pattern and limits the circulation of finished products of plastic enterprises, making the transaction cost of plastic products higher and reducing the transaction efficiency. Some domestic regions and enterprise chains also have a closed development trend, which may lead to

market fragmentation and other problems, the world is now in a critical moment of unprecedented changes, international competition is intensifying, but also exposed some of the risks of the plastics industry chain: traditional exports encountered trade friction, shortages in the supply of important raw materials and international cooperation space is squeezed, etc., these problems are that China's plastics enterprises supply and demand industrial chain there is a "short board".

3.2 Insufficient Innovation Capacity of Plastic Enterprises

At present, China's economy has shifted from the stage of high-speed growth to the stage of high-quality development, in the stage of high-quality development innovation is the first driving force of industrial transformation and upgrading, and enterprises are one of the most important subjects of innovation. Compared with the advanced manufacturing industry, China's plastics enterprises in the capital, the scale of the obvious lack of strength, most enterprises have weak R & D capabilities, often stuck in a fixed mode of production, innovation capacity to be improved. In addition to a few head enterprises, most plastics enterprises are concentrated in the middle and low-end market competition, the overall core competitiveness needs to be strengthened. In addition to the lag of innovation output, the lack of innovation effect of plastic enterprises is mainly related to the limited innovation ability, insufficient innovation motivation and low risk tolerance ability of enterprises, most of plastic enterprises lack original innovation, the core key technology is restricted by others, leading to the plight of high cost, high input, low level and low income, which will aggravate the failure rate of plastic enterprises to invest in innovation.

3.3 Internal Management of Plastic Enterprises is not Standardized

Today's external environment is changing rapidly, some plastic enterprises in this context appeared in the phenomenon of management irregularities, because the threshold for the establishment of plastic enterprises is not high, some small and medium-sized plastic enterprises in the establishment of the lack of sufficient and sustainable capital, production lines are relatively single and backward technology, so the development of the starting point is low, and thus ignore the importance of internal management. The management of enterprises lacks systematic strategic management consciousness, does not take long-term stable development of enterprises as a long-term goal, and pays too much attention to periodic economic benefits, thus unable to make timely adjustments and changes in accordance with changes in social and economic conditions, thus seriously limiting the healthy and orderly development of plastic enterprises in China in the new era.

4. Analysis of the Future Development mode of Plastic Enterprises

4.1 Improve the Industrial Chain of Plastic Enterprises and Promote the Transformation of Enterprise Development Mode

The government can increase policy support, cultivate a number of ecology as the leading force of the "chain master" enterprises, highlight the main position of enterprises, improve the long-term cooperation mechanism of plastic enterprise suppliers - dealers, establish long-term collaborative relationship of the enterprise industry chain, optimize the development layout of the whole industry chain of plastic products. Firstly, it can give full play to the characteristics of China's vast territory and different regional advantages, focus on the differences of different regions, and fully explore the spatial potential of the industrial structure of the plastic products industry; secondly, the government can, through effective financial and technical support, guide enterprises to form a

reasonable industrial chain mechanism according to their actual needs, create a number of advanced industrial chain clusters, shorten the distance of the supply chain, and promote the transformation of the development of plastic enterprises; finally, it can give full play to the leading role of leading enterprises, drive the integration of related industrial chains, lead the efficient development of upstream and downstream enterprises, and enhance the toughness of the industrial chain development of plastic enterprises.

4.2 Enhance the Innovation Capacity of Plastic Enterprises and Improve the Mechanism of Collaborative Innovation

Pay full attention to the core position of innovation in the long-term development of enterprises, and continue to adhere to the financial investment in innovation to achieve high-end development of plastics enterprises. According to the relevant data, the current level of innovation in China's plastics enterprises in the overall technological innovation is still in the general level, so accelerate to enhance the productivity and innovation of the plastics industry can not be delayed, giving plastics enterprises more innovation autonomy, and then in the market to obtain a certain degree of competitiveness. Plastics companies should continue to pay attention to the positive impact of digitalization and intellectualization on their own, generally apply advanced technologies to innovate industrial patterns, improve the conversion rate of innovative inputs, thus optimizing their production lines, saving production costs, and injecting vitality into their sustainable green development. In addition, plastics companies can also focus on training and introducing high-quality talents, completing the construction of management, application and design talent echelons, enhancing the role of talent in the development of enterprises, creating specialized teams, promoting their development and growth, and further improving the collaborative innovation mechanism.

4.3 Standardize the Internal Management System of Plastic Enterprises and Develop Strategic Management Awareness

A complete and standardized enterprise management system is crucial to the long-term stable development of enterprises. First of all, enterprises should clarify their own development direction, formulate a set of strategic development system for development goals, take intelligent transformation as an opportunity to lead enterprises to achieve core values according to external market changes; secondly, China's plastics enterprises should take the basic situation as the criterion when standardizing management system, accurately assess the current development situation, implement relevant development policies, and make corresponding adjustments and change; finally, should pay attention to the ability of enterprise management, develop a scientific and reasonable performance evaluation system, refine the talent training program, fundamentally mobilize enterprise management, build a fair and reasonable strategic management system, and further enhance the overall interests of the enterprise. In addition, it should also clarify the enterprise supervision and inspection mechanism, through supervision and management, efficient and quality completion of the goals set by the enterprise, to eliminate the phenomenon of cutting corners, and timely tracking of the implementation of the policies, and then specific adjustment of the implemented programs to improve the efficiency of enterprise management and achieve the long-term development goals of the enterprise.

In summary, in the context of technological innovation as the core, the structure of China's plastics industry has undergone tremendous changes, mastering innovation is to master the lifeline of long-term development of enterprises. Therefore, plastic enterprises must put independent innovation in a key position, improve innovation capabilities, improve market competitiveness, and

further explore competitive advantages. In addition, plastics enterprises should also pay attention to internal management, from top to bottom to form a set of supporting systems for the long-term development of the enterprise, and continue to promote the scientific, digital, intelligent and collaborative development to ensure that China's plastics enterprises can be stable and healthy development in today's complex and changing environment.

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