

# Industrial Transformation Models and Strategies in Industry Research in the New Era

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**Abstract.** In the context of the new era, the transformation and upgrading of China's industry are important contents to accelerate the supply-side reform and meet the construction of modern economic system. In concrete practice, innovation should be used as a driving force to adapt to economic growth in the shortest possible time, leading to a gradual increase in Economic Value Added (EVA). However, affected by objective factors, because of the laggard strategic thinking of enterprises, the lack of composite talents, insufficient protection of intellectual property rights and other problems still exist, which is why China is still facing many problems in promoting the transformation of the industry towards high-end, service-oriented and brand-oriented development. To accelerate the transformation and upgrading of the industries should be based on the actual development situation and build a level playing field. While focusing on improving the transformation and development capacity of enterprises, it should also break the constraints on talents, which is important for promoting the sustainable healthy development of the industry.

**Keywords:** New Era; Industry Research; Industrial Transformation.

## 1. Industry Transformation Model of Industry Research in the New Era

### 1.1. Technology innovation-driven model

In the new era, the technology innovation-driven model is one of the industrial transformation models in industry research, which is emphasizing the importance of scientific and technological innovation in industrial transformation. Technological innovation-driven mode realizes industrial upgrading and economic development by promoting technological innovation and improving the technological content and core competitiveness of industries, which is not only able to improve the technological content and performance of the products through technological innovation, enhance the core competitiveness of enterprises, so as to make them more competitive in the market, but also able to promote industrial upgrading that of the industry in the direction of high-end, intelligent, and green, and to improve the overall level of industries, which make meet the market demand better. By utilizing the case study method to conduct an in-depth analysis of enterprises or industries that have successfully achieved innovation-driven transformation and upgrading, we can identify the key technologies and methods they have used and summarize the successes and failures to provide lessons for other enterprises. Over time, these enterprises that have learned from the experiences and lessons of others will also be able to improve their technological level and product quality, enhance their core competitiveness, and promote industrial upgrading and economic development.

### 1.2. Digital transformation models

The digital transformation model refers to the modernization of traditional industries through the introduction and application of digital technology to achieve modernization and transformation within the industry, with the aim of improving production efficiency, reducing costs, optimizing user experience, etc. Combined with the requirements of the established development, the use of digital transformation mode can achieve the automation and intelligence of the production process, reduce manual intervention, improve production efficiency, realize refined management, reduce the operating costs of the enterprise, but also can reduce the cost of decision-making through data analysis and prediction, to achieve real-time interaction with the user, a better understanding of user needs, to provide better services and products for them, and to enhance the experience. In the daily work,

questionnaires can be used to understand the problems and difficulties encountered by enterprises in the process of implementing digital transformation as well as to understand the impact of digital transformation on enterprises, so as to provide policy recommendations and guidance to the relevant departments. The use of the target management method can manage the enterprise according to the goals of digital transformation, which is conducive to the participation of all employees of the enterprise and the formation of a common culture of innovation. The use of digital technology for the comprehensive, systematic and far-reaching digital upgrading and transformation of traditional industries has improved the productivity and management efficiency of companies and promoted industrial modernization and economic development.

### **1.3. Green development model**

The green development model of industrial transformation is concerned with strengthening environmental protection and resource utilization efficiency in economic development in order to achieve sustainable development.

The core idea of this model is to build a green, low-carbon and recycling development production system by integrating the concept of green development into all aspects of industry, agriculture and services, and aims are energy conservation, emission reduction and efficiency improvement. These require vigorously promoting technological innovation, model innovation and standard innovation, and comprehensively upgrading the greenization level of traditional industries. The application in specific work is reflected in the elimination of high energy consumption, high pollution, low efficiency industries. And develop new low-carbon, environmentally friendly and efficient industries. To promote the upgrading of industrial structure. By combining the needs of development to improve resource utilization efficiency, reduce energy consumption and environmental pollution, and achieve optimal allocation of resources. After a long period of practice, the research and development and application of green technologies have been strengthened, and renewable energy and energy-saving and environmental protection technologies have been popularized, so that the technological and environmental protection levels of industries have been improved. Under the change of the era, strategic emerging industries have become an important engine of economic development, and green industries are also booming. In order to accelerate the green transformation of the development mode, it has become particularly important to vigorously develop green industries and cultivate new kinetic energy for green development.

## **2. Status of industrial transformation in industry research in the new era**

### **2.1. Constraints on innovation-driven development capacity**

In the new era of industry research, the ability of industrial transformation and Innovation-driven development is constrained by a variety of factors. As shown in Figure 1 data, the manufacturing industry is at the middle and lower end of the global economic value chain, the lack of technological innovation capability, the backwardness of the management system and business model, and the shortage of talents.

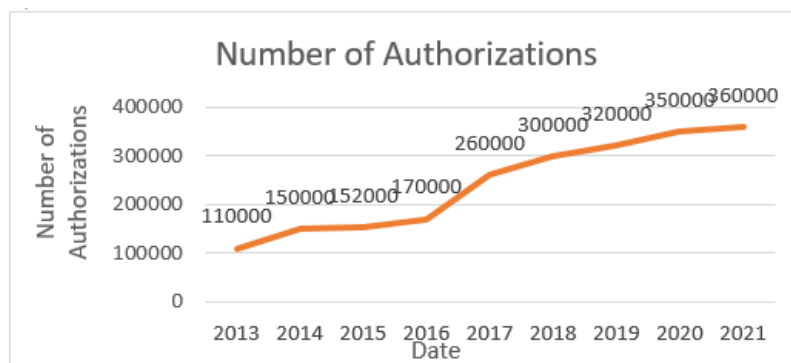
1) Manufacturing is at the middle and lower end of the global economic value chain: Currently, manufacturing is at the middle and lower end of the global economic value chain and there have been no breakthroughs in core technologies, and although the number of patents granted has significantly improved, the intrinsic driving ability still needs to be improved.

2) The lack of technological innovation capability: Although technological innovation is an important driving force to promote industrial transformation and upgrading, some enterprises and industries have not invested enough in technological research and development and innovation, resulting in a lack of core technology and innovation capability, which restricts the enhancement of their transformation and development capability.

3) The backwardness of the management system and business model: The management systems and business models of some enterprises and industries are backward and lack scientific management

methods and market awareness, resulting in their inability to adapt to market changes and competitive challenges, which restricts the enhancement of their transformation and development capabilities.

4) The shortage of talents: Industrial transformation and upgrading require a large number of high-quality talents as support, but the current transformation and development capacity of some enterprises and industries is constrained by the shortage of talents, especially the lack of high-end talents and skilled talents.



**Figure 1.** Number of patent authorizations in China from 2013 to 2021.

## 2.2. Poor synergy between industry and urbanization

In the course of the development of the industrial structure and the transformation and upgrading of industries, the predominant industry should develop from secondary industry to tertiary industry. Subsequently, with the development of the urbanization process, the urbanization rate has steadily increased, which is far surpassing the proportion of the secondary industry that is a progress in the development of urbanization. Industrial transformation and upgrading is a complex process, which is influenced by various factors such as market demand, technological progress, policy support, resource environment and so on. In this process, industrial and urbanization synergies can play a driving role, but are not a decisive factor. The driving force for industrial transformation and upgrading mainly comes from market demand and technological innovation. With the changes in market demand, enterprises need to continuously adjust their production methods and product structures to adapt to the changes in market demand. At the same time, technological innovation is also an important factor in promoting industrial change and modernization: the emergence of new technologies and processes can lead to improvements in production efficiency and product quality, which in turn can promote industrial modernization and development. However, industrial transformation and upgrading need to be coordinated with the urbanization process. If industrial transformation and upgrading is too rapid and the urbanization process fails to keep pace, it may lead to insufficient supply of urban infrastructure and services, affecting the quality and efficiency of industrial development.

## 3. Strategies for Industrial Transformation in Industry Research in the New Era

### 3.1. Building a sound innovation system

In the new era, industry research in the industry to build a sound innovation system is an important aspect of promoting industrial upgrading and economic development. Innovation system refers to the composition of enterprises, research institutions, higher education institutions, intermediary organizations, etc. It is a system that realizes industrial innovation and upgrading through technological innovation, model innovation, organizational innovation, etc., and promotes the upgrading of industries in the direction of high-end, intelligent, and greening, and improves the overall level of the industry by improving the innovation system. In addition, innovation is an important driver and source of economic development. Improving the innovation system can facilitate technology transfer and transformation of results and promote economic development and growth.

Increased R&D investment is also essential, which can encourage enterprises to strengthen technological research and development, and promote the transformation and application of scientific and technological achievements. In the industry research, the industry to build a perfect innovation system is an important way to promote industrial upgrading and economic development. By strengthening policy support, promoting cooperation between industry, academia and research, cultivating innovative enterprises, strengthening the construction of intermediary service organizations, and creating a culture of innovation, we can continue to improve the innovation system, enhance industrial innovation capacity, strengthen international competitiveness, and promote economic development.

### **3.2. Optimizing the business environment continuously**

A good business environment can attract more investment and quality enterprises, which in turn can promote the development and upgrading of industries. A favorable business environment can attract more investment, which can promote industrial development, encourage enterprises to increase investment in technological innovation, improve the overall innovation capacity of industries, promote China's industries to develop in the direction of high-end, intelligent and green, improve the international competitiveness of Chinese industries, promote the research, development application of new technologies, and promote industrial upgrading and economic development. The following are several important aspects of industrial construction to optimize the business environment. First, the government can take a series of measures: for example, reducing the number of approval links, simplifying the approval materials and optimizing the approval process. These will improve the efficiency and quality of services and provide companies with a more convenient, efficient and high-quality business environment. Second, introduce relevant policies: such as tax incentives, financial subsidies, loan support and so on. Encourage enterprises to increase investment and innovation to improve their competitiveness and market share. Formulate talent policies, such as talent introduction, training and incentives, to attract more talents to the industrial field and promote industrial upgrading and development.

### **3.3. Enhance the ability of developmental transformation**

In the new era, it is very important for industry construction to enhance transformation and development capabilities in industry research. Transformation development capability refers to the ability of companies or industries to realize transformation, modernization and sustainable development by adapting their own structures and methods in the face of market changes and competitive challenges. First, innovation is an important driving force for industrial transformation and upgrading. Enterprises or industries need to strengthen their capacity for technological innovation, product innovation, and model innovation and so on, so as to improve their core competitiveness and enable them to cope with market competition and market changes on their own. Secondly, enterprises or industries need to strengthen internal management, optimize business processes and improve operational efficiency and management. At the same time, it also needs to focus on talent cultivation and introduction to improve the quality and capability of its employees. At the same time, it also needs to focus on talent cultivation and introduction, as well as improving the quality and ability of employees. Thirdly, brand is an important asset and image representative of enterprises or industries. There is a need to strengthen brand publicity, branding and brand maintenance to increase brand awareness and reputation, thereby enhancing market competitiveness. Fourthly, enterprises or industries need to strengthen cooperation and communication with other enterprises, research institutions, financial institutions, etc., so as to realize resource sharing and complementary advantages, and promote synergistic development of industries. Through the efforts of many parties, they can continuously improve their capabilities of transformation and development capabilities, adapt to market demands and changes, and realize sustainable development. After multi-party efforts, enterprises or industries continue to improve their ability to transform and develop, adapt to market demands and changes, and realize sustainable development.

### 3.4. Developing Vocational Education Vigorously

It is very important to build the capacity of industry to enhance transformational development in industry research. Transformation and development capability refers to the ability of companies or industries to realize transformation, modernization and sustainable development by adapting their own structure and way of working in the face of market changes and competitive challenges. First of all, the government and enterprises need to strengthen the construction of the vocational education system, improve the level and type of vocational education, and establish a talent training model that meets market demand and industrial development. At the same time, there is also a need to focus on the quality and effectiveness of vocational education and to improve its social recognition and impact. Secondly, the teaching force is the core strength of vocational education. There is a need to strengthen the development of the faculty and improve teachers' professionalism and teaching ability, while focusing on their practical experience and industry background. Furthermore, practical teaching is an important part of vocational education. Vocational education needs to strengthen practical teaching, establish training bases and internship systems, and improve students' practical abilities and skills. Finally, the Government needs to introduce relevant policies, increase investment in and support for vocational education, encourage enterprises and social forces to participate in vocational education, and promote the diversified development of vocational education. By training more highly qualified specialists, it meets the requirements of market demand and industrial development and promotes the sustainable development of the economy and society.

## 4. Conclusion

In summary, to accelerate high-quality economic development, industrial transformation and upgrading play a crucial role, In-depth research into the impact of industrial transformation and upgrading on high-quality economic development is crucial for meeting the continuous development needs of our country. Therefore, enterprises should formulate appropriate industrial transformation modes and strategies according to their own development characteristics and market demands, so as to realize the sustainable development.

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