

Research on the Impact of Digital Economy on the Upgrading of Industrial Structure

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Abstract: The pace of high-speed economic growth in China has slowed down. At present, it has entered a critical period of high-quality development and transformation. Digital economy and optimization and upgrading of industrial structure play a vital role in this process. Therefore, it is of great significance to explore the path through which the digital economy affects the upgrading of industrial structure. Firstly, this paper introduces the development background and current situation of digital economy and industrial structure in China. Secondly, it combs out the effect path of digital economy on the upgrading of industrial structure. Finally, according to its mechanism of action, this paper puts forward some countermeasures and suggestions on strengthening the application of digital technology, promoting industrial integration and formulating different policies for different regions.

Keywords: Digital Industrialization; Digitization of Industry; Digital Economy; Industrial Structure Upgrade

1. Introduction

1.1 Research Background And Significance

The digital economy derived from the rapid development of digital technology is leading the world to a new revolution in technology and industry. With the continuous improvement of digital economy's industry penetration and economic contribution to China, it has become a strong driving force for China's economic development, and its importance is self-evident. Grasping the opportunities brought by the development of digital economy has become the key to drive the transformation and upgrading of the industrial structure. Digital economy can not only bring direct impact to the transformation of industrial structure, but also indirectly drive the upgrading of industrial structure through technological innovation, financial development, residents' consumption, etc. Therefore, clarifying the action mechanism of digital economy on the upgrading of industrial structure can provide reference for policy making and create new economic development ideas. This is of great practical significance to the high-quality and healthy development of China's economy.

1.2 Status of Upgrading of Industrial Structure

Compared with developed countries, China's industrial structure has the following problems: the internal structure of the primary industry needs to be optimized; the secondary industry, especially the industry, is "big" but not "strong"; the product structure is unreasonable; it is at the bottom of the global value chain; the development of the tertiary industry lags behind; and the proportion of high-tech industries is low, which all restrict the optimization and upgrading of the industrial structure.

2. Analysis of the mechanism of digital economy's role in industrial structure upgrading

2.1 Digital Industrialization

Digital industrialization refers to industries represented by new technologies such as big data, cloud computing, artificial intelligence and internet of things. These industries have high productivity and gradually developed into leading industries in social economy. Through digital industrialization, data elements optimize traditional factors of production, such as capital, labor, land, etc. At the same time, data, information and knowledge replace traditional factors of production of natural resources. Based on digital technology, resources in the industrial chain are effectively integrated, not only achieving high output with low input, improving the efficiency of industrial integration and development, but also giving birth to new products, new services, new formats and new models. With the strengthening of digital industrialization, the industrial boundary has been broken, and a large number of innovative digital technology industries have emerged, which has improved

the level of technological innovation in industrial development, made the industrial production system more complete, and thus increased the position of China's industries in the global industrial chain.

2.2 Industrial integration

Before the vigorous development of digital technology, information asymmetry hindered the development of the industry. Leading enterprises with more information and resources could gain more advantages, which was not conducive to the construction of an active industrial chain. However, with the development of digital technologies such as the Internet, big data, artificial intelligence and cloud computing, the borderless and barrier-free nature of digital technologies can strengthen the relationship between technologies and industries, thus reducing the information asymmetry between different industrial sectors and enabling different industrial sectors to achieve integrated development with the participation of digital technologies. First, fundamentally speaking, the most obvious change brought about by digital technology is to reduce the search and transaction costs of the industrial chain and narrow the distance between producers and consumers. Second, the development of digital technology has formed a new industrial form, which has led to profound changes in the traditional production methods and industrial structure. Third, the development of the digital economy itself is to radiate the single-line module to the multi-line module in the economic development, and to strengthen the communication and communication among each other by blurring the boundaries among industries, three industries, emerging industries and traditional industries, so as to realize the upgrading of the industrial structure. To sum up, data "as a factor of production has made outstanding contributions to industrial integration, whether it is the development of integration between industries or the integration of new and old industries.

2.3 Industry Digitalization

Industry digitalization helps traditional industries to integrate resources, break the original industrial pattern and restructure the industrial chain by infiltrating digital technology, digital information and digital services into all aspects of production, operation and sales of traditional industries. First of all, the emergence of new digital models such as e-commerce and shared economy has continuously improved the traditional process of agricultural production, operation and sales. The digital development of agriculture has helped its practitioners to reduce production and sales costs, and at the same time has broadened its trading market, improved the efficiency of resource utilization and realized the modern development of agriculture. Secondly, digital technology provides strong technical support for the development of industrial production. Industrial digitalization enables industry to obtain information in a more timely and effective manner in the aspects of procurement, research and development, production, transportation, sales, etc. It enables enterprises to accelerate their development towards an intelligent, green and efficient direction, and realizes the transformation and upgrading of the secondary industry. Finally, the development of digital service industry realizes the efficient response of the service industry supply side to the market demand side, so that the service can better meet the real needs of customers. The service of digital technology increases the technological content of the service industry, enriches the content of the service industry, and further promotes the transformation and upgrading of the service industry.

3. Policy Advice

3.1 Strengthening the Application of Digital Technology

First, it is necessary to intensify the construction of digital infrastructure, accelerate the construction of inter-industry cooperation platform for the application of digital technology, and lay a technical foundation for the optimization of the industrial structure of digital technology, so as to maximize the positive effect of digital economy in promoting the upgrading of industrial structure. Second, increase the application of digital technology at all ends of the industrial chain, so that the demand from the consumer end can be fed back to the production end in a timely manner, thus helping enterprises to adjust production, promoting efficient and green production in the industry, and ultimately promoting the development of the industry to a higher level. To sum up, by continuously improving the digital technology infrastructure in traditional industries and backward regions, and strengthening the digital technology in new industries and developed regions, the digital technology can be widely applied, thus promoting the industrial upgrading of China as a whole.

3.2 Promoting Digital Industry Convergence

The digital economy promotes the upgrading of industrial structure through the technological empowerment of industries. Therefore, it is necessary to formulate a long-term plan for the integration and development of multiple industries, establish a consultation mechanism for the cooperation and development of multiple industries, actively coordinate and solve the new problems encountered in the integration and development of the digital industry and other industries, and avoid the poor integration of the digital industry and other industries. At the same time, each industry should create a digital industry cluster and a digital creative industry cluster based on its own characteristics and its own industry positioning, which will bring new momentum to the upgrading of industrial structure.

3.3 Developing targeted policies

The impact of digital economy on the upgrading of industrial structure has regional heterogeneity. According to the different degree of digital development in different regions, targeted differentiation policies are adopted. For regions with both high levels of digital economic development and industrial structure, it is necessary to continue to maintain and build a digital technology innovation center with global influence in order to obtain higher marginal utility of digital economic development dividend. For regions with low levels of digital economic development and industrial structure upgrading, relevant policies need to be formulated to improve the level of digital industrialization and industry digitalization. It is possible to vigorously introduce high-end digital leaders, increase investment in innovation, complement the short board of development, give full play to the advantages of latecomers, and realize overtaking in corners.

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