Analysis of the Exploration Path of Digital Economy and High Quality Industrial Development

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Abstract: In the digital economy, data as the main production factor, accompanied by continuous improvement of digital infrastructure, has gradually become the main driving force for promoting the development of China's manufacturing industry and promoting high-quality economic development. Firstly, starting from the meaning of "high quality", the relationship between "high quality" and "high quality" was analyzed,; Establish Digital transformation, new technology and new mode; Under the theoretical framework of the new business model, a deep analysis was conducted on the mechanism of digital economy promoting the high-quality development of manufacturing industry clusters, thus proposing corresponding strategies to break through the barriers of digital economy development and achieve overall digital economy development.

Keywords: Digital Economy; Industrial Clustering; High Quality Development

1. Introduction

With the rapid development of China's economy, the digital economy supported by 5G communication, artificial intelligence and big data has broken the shackles of "productivity relations of production" and has gradually become the main driving force for China's manufacturing industry cluster and high-quality development. China has paid more and more attention to the digital economy, and proposed to accelerate China's Digital transformation under new development opportunities.

2. Literature review

How to use the digital economy to promote high-quality development in China has long been a hot topic of academic research. How to better promote the healthy development of the economy and society has become a major issue of common concern for both academia and practitioners. The article takes China as an example and explores the many problems faced by China in the process of economic and social development from three levels: "micro", "meso", and "macro". From a macro perspective, we should build an accurate matching mechanism between "economies of scope" and "scale economy". From a macro perspective, inter enterprise relationships, enterprise innovation, and enterprise organization are the main factors that affect enterprise performance. On this basis, this project aims to explore the mechanism for Chinese manufacturing enterprises to utilize foreign direct investment for enterprise transformation and upgrading from three perspectives: improving the efficiency of domestic production factor allocation, promoting enterprise technological innovation, and technology spillover. Taking "industrial digitization" and "digital industrialization" as the core, "artificial intelligence", "big data" and "Internet of Things" as the core, and "artificial intelligence" and the Internet of Things as the core, to achieve continuous development and improvement of the industry. On this basis, this project will further promote the digital development of China's service industry, agriculture and other industries, thereby enhancing the digital level of China's manufacturing industry, optimizing China's industrial structure, and alleviating China's excessive dependence on digital technology (Liu Shuchun, 2019). The academic community mainly focuses on the following issues regarding the research on the industrial development mechanism in the region. Some scholars believe that in the digital economy environment, enterprises can effectively overcome the "bottleneck" problem in technology development and promote technological development. Only in this way can we maximize benefits.

Looking at the existing literature, we can see that in the context of the digital economy, there is still a significant lack of theory and practice on the high-quality development of industrial clusters. Therefore, this project will take the digital economy as the entry point to explore its role and mechanism in the high-quality development of China's manufacturing industry, and use this as the entry point to explore the path of high-quality development of China's manufacturing industry. On this basis, this article explores how to achieve high-quality development in China's manufacturing industry based on the actual situation.

3. Definition and main characteristics of the concept of digital economy

3.1 Definition of the Digital Economy

The term 'digital economy' was first coined by Don Tapscott in 'Economics in the Data Age'. However, there is no internationally recognized definition of the digital economy, and many scholars have defined it from different perspectives. Li Changjiang defines the digital economy from the perspective of the use of production factors, believing that digital technology is the main mode of production and the economic form formed by the combination of digital technology and various industries [3] (Li Changjiang, 2017). Kang Tiexiang analyzes the digital economy based on its nature, and defines the digital economy from the aspects of virtuality, high additivity, high permeability, value appreciation, marginal cost decline, and external economy.

4. The internal mechanism of high-quality development of manufacturing clusters driven by the digital economy

4.1 Industrial cluster

Industrial cluster is an emerging economic organization that lies between the market and hierarchical system (Zhang Hui, 2003). It is an organization with strong competition and division of labor within a certain range. The second part studies the issues related to the high-quality development of China's manufacturing industry. In terms of high-quality development, the academic community has proposed the overall development of enterprises led by innovation, starting from the optimal choice of product structure. Innovate production processes and links, improve the production efficiency of enterprise products and the return on asset investment. Improve business methods, enhance the effectiveness of personnel communication, and reduce operating expenses. Innovate in cooperative relationships with relevant enterprises, reduce transaction costs, and ultimately achieve high-quality development for each enterprise. From the perspective of development philosophy, high-quality development refers to the development that meets the growing needs of the people for a better life. It is a combination of innovation, coordination, and green. The new development concept is openness and sharing.

Based on the above analysis, a high-quality development strategy for China's manufacturing industry cluster is proposed. Firstly, technological progress within the industrial cluster has been achieved through independent intellectual property rights, thereby promoting the high-quality development of the industrial cluster. The traditional way of relying solely on mass production to gain competitive advantage is no longer suitable for the rapidly developing digital economy. To achieve high-quality development of the industry, it is urgent for enterprises within the cluster to carry out high-quality innovation (Zhang Junzeng et al., 2019). Companies from different production departments innovate their production processes and processes, thereby improving the efficiency of each production link in the production process. In terms of design and development, the company needs to reform the original development method, connecting development with users, so as to provide users with the most suitable products for their needs. From a "product" driven business model to a "goods+services" transformation, in short, the high-quality development of manufacturing clusters is closely related to four digital economic factors, namely, Digital transformation, new technologies, new models, and new formats.

4.2 The Four Factor Model of Digital Economy

Driving the High Quality Development Mechanism of Manufacturing Industry ClustersBased on the characteristics of manufacturing agglomeration and core elements of economic growth, a four factor model is constructed around the high-quality development of manufacturing clusters

4.2.1 Manufacturing cluster Digital transformation

Cluster digital innovation includes the following two aspects:

Firstly, digital technology innovation and cluster platforms. With the development of the digital economy, digital technology innovation in various enterprises is becoming increasingly frequent, and the construction of manufacturing cluster platforms is of greater significance. Building a manufacturing cluster platform promotes the sharing of proprietary assets and knowledge technology, improves the production efficiency of cluster enterprises, and promotes the overall digital technology innovation capability of the cluster.

Secondly, the integration of digital technology innovation and manufacturing processes. Improving the digital innovation capability of cluster enterprises and the application capability of integrating the technical knowledge acquired by the cluster platform into the manufacturing process play an important role in promoting the service-oriented, information-based and intelligent production process of cluster enterprises, improving the production efficiency of cluster enterprises, and accelerating the overall Digital transformation of manufacturing clusters [10] (Ni Kejin et al., 2021).

4.2.2 New technologies

New technologies are also an important foundation for digital innovation in manufacturing clusters [11] (Yu Jiang et al., 2017), which act on digital technology innovation, production process innovation, and production process innovation in manufacturing clusters. Therefore, it can be considered that new technologies are essential key technological support for the high-quality development of manufacturing industry clusters.

4.2.3 New formats

The definition of new formats is broad, but mainly includes new development formats such as the joint development of manufacturing clusters and various industries, and the establishment of manufacturing cluster platforms. Various industries exist in traditional isolated forms, and seeking independent development will face enormous risks and competition in the digital age. The joint development of various industries will become a new trend. Therefore, close cooperation between manufacturing clusters and various industries will reduce uncertainty risks and transaction costs, forming a new business format. Building a manufacturing cluster platform, such as a manufacturing cluster resource sharing platform, will accelerate the flow of innovative digital technologies among cluster enterprises, promote the high-quality development of manufacturing cluster enterprises and the overall cluster, and form another new business form.

5. Conclusion

5.1 From the perspective of the government,

The government and enterprises are two indispensable roles in solving this difficulty. Only by building a stable platform for the development of the digital economy and actively promoting the application of the digital economy can we further promote the structural optimization and upgrading of manufacturing clusters, and drive the high-quality development of industrial clusters.

5.2 From the perspective of enterprises, valuing the innovation of digital technology

Firstly, enterprises should focus on investing in research and development in the digital field. Increasing the research and development intensity of digital technology can help enterprises deepen their grasp of digital technology, promote the application of digital technology in the production process of enterprises, and stimulate the digital innovation activities of enterprise entities. Secondly, enterprises should establish a sound innovation reward system. The digital innovation incentive measures for enterprise employees will further stimulate their innovation, improve the production efficiency of the enterprise, and create greater value for the enterprise. In the digital era, all enterprises should actively embrace digital technology, and use the new generation of digital technology to accelerate industrial Digital transformation. Firstly, enterprises need to focus on the application of new technologies, injecting digital technology into the product production process, reducing production costs, increasing product added value, promoting the informatization and intelligence of the production process, and obtaining sustained competitive advantages, providing their own driving force for the development of the digital economy. Secondly, enterprises actively participate in industrial clusters and utilize the digital technology diffusion effect of shared cluster platforms to create favorable conditions for enterprises to absorb new technologies and accelerate their digitalization.

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