

Countermeasures for the Integration and Development of Digital Economy and Real Economy in Hunan Province

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Abstract—The digital economy is becoming an important driving force for the transformation of the quality and efficiency of economic development. The integration of the digital economy and the real economy has become a new power for high-quality economic development in the new era. The digital economy in Hunan province has a good industrial foundation, development situation and environment, but it also faces many problems such as low integration level, imperfect digital infrastructure and shortage of digital talents. The development of digital infrastructure and smart government services should be strengthened, the "Internet Plus" should be speeded up to promote the digital transformation of industries and the development of digital industrialization, play the leading role of government, and improve the policy support system for digital economic development. It is an important way to promote the integration of digital economy and real economy in Hunan province.

Keywords—*digital economy; real economy; digital infrastructure development; integrated development*

I. INTRODUCTION

With the rapid development of the new generation of information technology represented by artificial intelligence, big data and cloud computing and its cross-integration with traditional manufacturing and service industries, the new economy represented by the digital economy is becoming the main driving force leading innovation in the global economy. It's an important measure to accelerate the integration of the digital economy and the real economy for promoting industrial transformation and upgrading, reconstructing the economic development model, and creating new economic power under the new normal of China's economy. [1] General Secretary Xi Jinping made it clear in his congratulatory letter to the first China International Smart Industry Expo that is a common task for all countries to promote the integration of the digital economy and the real economy, accelerate the continuous transformation of old and new development power, and create new industries and new business. It is at a critical stage for the transformation of old and new kinetic energy in Hunan province. It will be necessary to accelerate the development of a new generation of information technology, promote digital construction, and

promote the integration of the digital economy and the real economy, will play a positive effect for Hunan province in cultivating new power and transforming old power using digital economy. [2]

II. DIGITAL ECONOMY AND REAL ECONOMY

INTEGRATION DEVELOPMENT IS A NEW MOTIVATION FOR HIGH-QUALITY ECONOMIC DEVELOPMENT IN THE NEW AGE

A. *Digital Economy and Real Economy Integration and Development Is an Important Engine to Promote Optimization and Upgrade of Economic Structure*

The development model of small steps and rapid iteration of the digital economy is conducive to the rapid improvement of production efficiency of real enterprises, smart products, smart production, and smart services can be achieved to improve the agility of production, promote the high degree of integration of various links in the manufacturing industry chain, and realize the transformation and upgrading of the real economy. The powerful and accurate data analysis ability of digital economy is conducive to the high matching of market supply and demand, helping the real economy to integrate resources and improve the efficiency of resource utilization; It is also conducive to realizing efficient digital information interaction between businesses and users, significantly increasing the efficiency and depth of transactions between enterprises and customers, promoting the real economy to accurately meet the needs of mass consumption and achieve a rapid response to product optimization. The advantages of breaking the time and space constraints of the digital economy also provide an opportunity for the real economy to open up a fast, open and cooperative business model. Good information and knowledge sharing of digital economy is conducive to promoting the division of labor in the real economy and improving transaction efficiency, optimization of interregional division of labor structure and transformation and upgrading of economic structure.

*B. Digital Economy and Real Economy Integration
Development Is the Power Source of Economic Growth
in the New Age*

The growth model has shifted from factor driven and investment driven to innovation driven against the backdrop of a slowdown in global economic growth; it needs innovation development of new generation information technology and digital transformation of real economy. The report of the Party's 19th National Congress proposed that promote the deep integration of the Internet, big data, artificial intelligence and the real economy, to cultivate new growth points and form new energy. Digital knowledge and information and technological advances brought about by modern information network technologies, not only provide modern high-end technologies needed for social production such as the big data, cloud computing, artificial intelligence, but also provide data support for enterprise production and management and supply chain management, moreover, it promote the emergence of new industries, new forms of business and new models, which become a new engine of economic development and bring new growth dividends to China's high-quality economic development. [3]

C. The Integration of the Digital Economy and the Real Economy Is Conducive to the Emergence of New Business Models and High-quality Economic Development

China's economy is changing from a stage of rapid growth to a stage of high-quality development, and it is urgently needed to change our business model and profit model. The characteristics of the digital economy such as good coverage, permeability, cross-border integration, and intelligent sharing are having a disruptive effect on traditional industries, giving rise to new forms of business and business models, and driving the integration of the digital economy and the real economy. In the digital economy, enterprises can tap new commercial values from large-scale and diversified data, accurately capture potential customer demand, and optimize production and marketing processes based on data information, improve the efficiency of their operations, broaden revenue channels, and create a new profit model.

III. DEVELOPMENT OF DIGITAL ECONOMY AND REAL ECONOMY IN HUNAN PROVINCE

In recent years, Hunan has implemented the strategy of innovation leading and open rise, vigorously promoted the real economic development and supply-side structural reforms, the economy grew faster. In 2018, Hunan ranked eighth in the country for the first time with a total GDP of 3.64 trillion yuan, and achieved the second "upgrade" in Hunan's economic growth in nearly four years. The favorable conditions of digital economy and the favorable momentum of development have laid a good foundation for Hunan's economic transformation and development. According to the China Internet Plus Digital Economy Index released at the 2017 China Internet Plus Digital Economy Summit, Hunan ranks among the top 10 among the 31 provinces, autonomous regions and municipalities. Changsha ranked the

11th in the report on the level of digital economic development in 351 cities across the country. In terms of industry application, Changsha's digital medical industry performed best and entered the top ten in the country. [4]

A. The Integration of Digital Economy and Real Economy in Hunan Have a Good Industrial Foundation and Development Trend

In the context of sluggish global growth, the digital economy is often seen as an accelerator for economic change, efficiency change, dynamic transformation, and a new lever for economic development. In recent years, the outbreak of a new round of information technology revolution has brought digital butterfly changes to Hunan's manufacturing and consumption fields, and the scale effect of the digital economy has begun to show. According to statistics from the Hunan Provincial Bureau of Industry and Information Technology, the mobile internet industry in Hunan province continued to maintain rapid growth in 2018, and the number of mobile internet industry operating income reached 106 billion yuan, get an increase of 25% year-on-year. At the same time, the Hunan mobile internet industry focuses on the subdivision area, Various industrial clusters such as e-commerce, new media, mobile life, industrial internet, big data, network security and other industrial clusters have their own characteristics, [5] and they provide new samples for the innovation development of Hunan digital economy. Xingsha block chain industrial park settled in Xingsha industrial base as the first block chain industrial park in the central area, implement policies such as building platforms, creating brands, attracting enterprises, and providing excellent services, focus on research and development and scene application of the technology at the bottom of the block chain, for more than half a year, it has attracted 28 block chain leaders with strong technology and financial resources. It has created block chain innovation and application heights, and the scale effect and agglomeration effect have been further enhanced. In the next three years, the Xingsha industrial base will cultivate and build a digital economic industrial cluster with an output value of more than 100 billion yuan, and strive to build an influential and nationally leading block chain industrial cluster. [6]

B. The Government's Attention and Academic Attention Has Created a Favorable Development Environment for the Integration of Digital Economy and Real Economy in Hunan

When Du Jiahao, Secretary of Hunan Provincial Party Committee, presided over the meeting of the Standing Committee of the Provincial Party Committee, pointed out that it is necessary to actively develop a digital economy with data as a key element, improve the development environment and information infrastructure network of big data policies, and promote the centralization of large data industries development, project implementation, market-oriented operation, this provides a guideline for the development of digital economy in our province. 2018 Academician Xiao-Xiang Sub-Forum "Digital Economy and Smart City Construction", and Digital Economy Industry

Alliance Inaugural Conference and First Forum were successfully held in Changsha, they provide good ideas and measures for the integration of digital economy and real economy in Hunan province.

C. There Are Still Gaps in Integrated Development of Digital Economy and Real Economy in Hunan

Although Hunan's digital economy has made good progress, there are still some outstanding problems.

First, data development integration is at a lower level. Most industry companies lack subjective understanding and objective conditions for data sharing, which restricts the integration and sharing of data information across regions, levels, industries, and businesses. A large number of data resources are idle. The number and scale of leading enterprises in the digital economy are small, the demonstration drive is weak, and the cooperation between the upper and lower reaches of the data industry chain is not smooth, the utilization rate of data development needs to be improved.

Second, the basic conditions of hardware and software for digital economic development are not perfect. There are scarcity of human resources in new areas such as artificial intelligence, big data, and internet. Professional teams and supporting infrastructure in project consulting, technology research and development, investment and financing services are unable to meet the needs of digital economic development. The foundation for technological innovation and development is still relatively weak, and the level of industrialization and informatization are still low. The financing mechanism is not smooth, and the digital economic development faces the large-scale financing gap.

Third, the integrated development and management of digital economy and real economy involves a large number of departments and a wide range of areas, lack of unified professional management departments and professional teams, it is difficult to follow up on standardized and efficient management methods to solve problems such as standard security. [7]

IV. COUNTERMEASURES TO PROMOTE THE INTEGRATION OF DIGITAL ECONOMY AND REAL ECONOMY IN HUNAN PROVINCE

The digital economy is the most active area of economic development in Hunan in recent years, and it is also a new impetus for the rapid economic growth of Hunan. The development of the digital economy will reshape the core competitiveness of various industries. In the current and future period, efforts should be made to clarify the development of digital economy, identify the focus of digital economic development, and promote the integration of Hunan's digital economy and the real economy.

A. Strengthening Digital Infrastructure and Smart Government Services to Strengthen the Foundation for Integrating Digital Economy with Real Economy

In the construction of digital infrastructure, Hunan should speed up the construction of high-speed broadband network, strengthen the construction and sharing of information infrastructure such as communication pipelines, base stations, etc. [2] Accelerate the construction of logistics public information platform and realize the sharing of logistics public information resources. Accelerate the construction of logistics public information platform, focusing on the digitalization of key industry sectors and the R&D of common key technology, and create a number of digital innovation platform carriers. Accelerates the popularization of industrial Internet applications for small and medium-sized enterprises, develops application innovations for different industries and scenarios, and build a platform support system for digital economic development.

In the field of smart government affairs, Hunan should accelerate the digital transformation of public services, build a smart social governance integrated wisdom center integrating public security, fire protection, urban management, political and legal, water management and community management, and promote the digital transformation of society, government affairs and people's livelihood. Building a block chain application standard system, taking financial and public service as a breakthrough, promoting the typical application of the block chain in the financial fields such as cross-border payment, insurance claims, securities trading, bill management, and public services such as government services and public resource transactions.[2]

B. Accelerating the Development of the "Internet Plus" Industry and Promoting Its Digital Transformation and Digital Industrialization

"Internet plus" is an important means of digital economic development. It not only changes the way of interaction between enterprises and users, but also spawns new business models, it brings about efficiency improvement through the interaction of information. Hunan should work hard on the breadth and depth of "Internet plus" to promote the digital transformation of the industry and the development of digital industrialization. On the one hand, it is necessary to carry out digital transformation of the existing industry in an all-round and full-chain, vigorously develop intelligent manufacturing and digital products, deepen the innovative application of digital technology in the manufacturing industry, promote the development of intelligent manufacturing, and create a group of industry intelligent manufacturing benchmark enterprises. On the other hand, it is necessary to vigorously introduce and cultivate the digital industry, and strengthen the layout of leading industries such as big data, block chain, artificial intelligence, digital security and network security, IoT and IC design, cloud computing, etc., promote the accumulation of digital industry resources and the development of industrial clusters.

C. Giving Full Play to the Leading Role of the Government in Improving Policy Guarantees for the Integrated Development of Digital Economy and Real Economy

The integration of digital economy and real economy involves many departments and a wide range of fields. It requires the government to make top-level planning and overall coordination in advance, formulate a road map and schedule for the integration of digital economy and real economy, improve the construction of supporting capacity such as policies, talents and system, promote the integration of the digital economy and the real economy through the government.

First, the government must formulate relevant policies and regulations to adapt to the new technologies, new applications, new formats, and new industries of the digital economy, promote the transformation of digital infrastructure, platform economy, and organizational model, and create a sound policy environment for integrated development.

Second, it is necessary to speed up the formulation of relevant systems, laws and regulations on data resource determination, circulation, transaction, sharing, etc., guide the orderly circulation of data and the sharing of information resources, standardize the application of digital intellectual property rights, and improve the system support system for digital economic development.

Third, it is of great significance to strengthen the construction of the digital economy talent team, in line with the integration of resources, sharing experience, and efficient training, increase the training of digital talents and skills certification training, and provide talent support for the development of digital economy. The government should build a public service platform for digital economic talents, and attract digital economic talents from all over the country and even the world to contribute to the integration of digital economy and real economy through crowdsourcing or online cooperation.

V. CONCLUSION

The integration of digital economy and real economy has become an important way to optimize and upgrade economic structure, accelerate the transformation of new and old development kinetic energy, promote new business models, and achieve high-quality economic development. Vigorously promoting the development of digital industrialization and industrial digital transformation are the two key things to promoting the integration and development of digital economy and real economy. Strengthening the construction of digital infrastructure and digital talents are the basic guarantees for promoting the integration and development of digital economy and real economy. Hunan Province should seize the important opportunity of big data development, give full play to the leading role of the government in the integration of digital economy and real economy, make top-level design, clarify development ideas, identify potential points, strengthen policy support and guarantee, and vigorously promote better integration and development of Hunan's digital economy and real economy.

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