Zhang Feilong

Belarusian State University of Economics, Minsk, Belarus, zhangfeilong1991@gmail.com

PRESENT SITUATION, PROBLEMS AND SOLUTIONS IN THE DEVELOPMENT OF THE DIGITAL ECONOMY IN CHINA

This article analyzes the current situation of China's digital economy from three aspects: the contribution of the digital economy to China's economic growth, the development of digital industries, and the scale of the digital economy in provinces of China. The author found that the main problem facing digital transformation development is uneven development. In view of this, the author proposes solutions from the perspective of government, business environment and development model of the digital economy.

Keywords: digital economy, regional differences, business environment, development models

Чжан Фэйлун

Белорусский государственный экономический университет, Минск, Беларусь, zhangfeilong1991@gmail.com

СОВРЕМЕННОЕ СОСТОЯНИЕ, ПРОБЛЕМЫ И РЕШЕНИЯ В РАЗВИТИИ ЦИФРОВОЙ ЭКОНОМИКИ В КИТАЕ

В данной статье анализируется современное состояние цифровой экономики Китая в трех аспектах: с точки зрения вклада цифровой экономики в обеспечение экономического роста Китая, развития цифровых индустрий и развития цифровой экономики в провинциях Китая. Автор установил, что основной проблемой, стоящей перед развитием цифровой трансформации в Китае, является неравномерное развитие. В связи с этим автор предлагает решения с точки зрения совершенствования государственного регулирования, бизнес-среды и модели развития цифровой экономики.

Ключевые слова: цифровая экономика, региональные различия, бизнес-среда, модели развития

As an economic concept, digital economy is an economic form in which human beings can identify, select, filter, store and use digital knowledge and information to guide and realize the rapid optimal allocation and regeneration of resources and achieve high-quality economic development [1]. In the 21st century, as «data» has become a new factor of production, it has formed a new economic paradigm together with labor, capital, technology, and land. China has entered the era of digital economy from the era of industrial economy.

Present situation of the digital economy in China. In 2020, the COVID-19 epidemic swept the world, and the Chinese economy also caused a huge impact. Under the severe international economic environment, China's digital economy still maintains strong growth and has become the main means to cope with the economic downturn under the epidemic. From the perspective of the contribution of the digital economy to China's economic growth. Data over the years shows that the scale of the digital economy in China has expanded from \$317 billion to \$5683 billion during years 2005–2020. In the same period, China's nominal GDP increased from \$2286 billion to \$14 720 billion. The proportion of the scale of the digital economy in GDP has increased from 13.9 % to 38.6 %year by year. There is no doubt that the digital economy has become one of the core growth poles of the national economy (Table) [2].

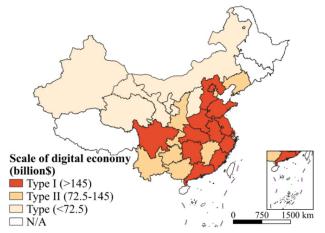
From an industrial perspective, the rapid development of the digital industry is an important reason for the rise of China's digital economy.

The scale of China's digital economy

	Years							
	2005	2008	2011	2014	2017	2018	2019	2020
Digital Economy, billion \$	317	691	1471	2637	4029	4730	5190	5683
GDP of China, billion \$	2 286	4 594	7 552	10 480	12 310	13 890	14 280	14 720
%	13.9	15.0	19.5	25.2	32.7	34.1	36.3	38.6

The digital industry refers to the process of digital upgrading, transformation and reconstruction of the upstream and downstream in the industrial chain under the support and guidance of a new generation of digital technology. It takes data as the key element, value release as the core, and data empowerment as the main line [3]. At present, the relatively mature digital industries in China are mainly concentrated in the tertiary industry, including: electronic information industry, software and information technology service industry, telecommunications industry, and Internet plus (i. e model «Internet + traditional industries»). In general, the revenue of Internet enterprises above designated size in China in 2020 was \$188.4 billion. While the digital industry is the most widely used in the service industry, especially the rapid development of E-commerce, sharing economy and so on, which has made a huge contribution to the growth of the digital economy. Statistics show that in the year of 2020, the added value of the digital economy in the service industry accounted for 40.7 %, which was significantly higher than the industry-wide average. The online retail sales of physical goods reached \$ 141.46 billion, accounted for 24.9 % of the total retail sales of consumer goods in the whole society in China [4].

From the perspective of the regional distribution of the scale of the digital economy in 2020, it can be roughly divided into three types of regions: type I regions, the digital economy scale exceeds 145 billion US dollars. Including: provinces of Guangdong, Jiangsu, Shandong, Zhejiang, Fujian, Hubei, Sichuan, Henan, Hebei, Hunan, Anhui, and cities of Beijing, Shanghai. It is worth noting that the scale of the digital economy in Beijing and Shanghai has accounted for more than 50 % of the local GRP [5]. Type II regions, the digital economy scale exceeds 72.5 billion US dollars, but less than 145 billion US dollars, these regions include: provinces Liaoning, Jiangxi, Shanxi, Guangxi, Yunnan, Guizhou, and cities of Chongqing, Tianjin. Type III regions are other remaining regions, with a scale of digital economy less than \$72.5 billion. The statistical results show that the regions with a large scale of digital economy are mainly located on the eastern coast of China. While the central and western regions are relatively few. That is to say, regions with larger scales of digital generally have higher levels of economic development (see figure).



Regional distribution by the scale of digital economy in 2020

Source: author's developed.

Problems in the development of digital economy. (1) The development of digital economy among industries is unbalanced. With 39 major industrial categories, 191 medium categories and 525 sub-categories, China is the only country in the world that has all the industrial categories in the United Nations Industrial Classification. However, in the digital transformation of industries, the level of coordinated development of the digital economy among various industries is relatively low. In the tertiary industry, the application of the digital economy exceeds the traditional industry by 40 % (2020), while only 8.9 % in the primary industry and 21.0 % in the secondary industry [6]. In this sense, the structure of digital industry in China needs to be further optimized.

- (2) The development of the digital economy has irrational competition among regions, which leads to uneven distribution of production factors among regions. Such as the Yangtze River Delta urban agglomeration, the Greater Bay Area, Beijing-Tianjin-Hebei, these highly developed urban agglomerations rely on their own advantages to attract a large number of information technology talents and production factors to flow into the region. However, the development of the digital economy in the surrounding areas cannot be guaranteed. As a result, in economically developed regions, the scale of the digital economy is getting bigger and bigger. In economically backward regions, the scale of the digital economy is getting smaller and smaller. This phenomenon is called the Matthew effect. However, the phenomenon of uneven development between regions due to competition for production factors does not only exist in China. Such as the Tokyo urban agglomeration, the Boston–Washington corridor also has this problem.
- (3) The development of the digital economy in the consumption and production fields is uneven. At present, the development of China's digital economy is still concentrated in the consumer fields. However, the technological investment and resource investment of the digital economy in the field of production are insufficient. Especially China's digital industry lacks substantial changes in core links such as innovation, design, and production. The US sanctions against ZTE and Huawei from 2016 to 2018 reminded us that the control of core technologies, equipment and standards by others is the biggest hidden danger in the process of development. Therefore, for production-oriented enterprises, the core issue of the digital economy is to master the core technologies, equipment and standards in this field.

In response to the above problems, the author believes that solutions can be proposed from the following perspectives:

- 1. The central government should coordinate various regions and industrial sectors. At the national level, formulate a master plan for the transformation and development of the digital economy that is suitable for China's national conditions. The author suggests that the following aspects can be considered: constructing the «innovation system», «talent training system», «industrial system», «market system», «governance system», and «monitoring and evaluation system» of the digital economy. The plan should focus on cutting-edge technology and increase the introduction of talents and welfare benefits. At the same time, the plan should reflect specific measures to promote the coordinated development of the digital economy between industries and regions. It is also necessary to carefully address the benign interaction and deep integration of the digital industry and the market. Finally, relevant government functional departments need to provide timely and effective feedback on the supervision and regulation of the digital economy.
- 2. Governments at all levels should optimize the business environment for the digital economy. First of all, it is necessary to speed up the construction of a long-term mechanism for the development of the digital economy that is in line with China's national conditions. Secondly, it is necessary to optimize the business environment of the digital economy into the system of «Reforms to delegate power, streamline administration and optimize government services». In particular, optimizing market access conditions. Finally, the digital economy is a new perspective of economic growth in recent

years. In the face of unknown new business formats, the government should carefully handle the relationship between the market and functional departments. Governments need to avoid «too much interference» or «insufficient regulation» of the market.

3. Implement a differentiated digital economy development model. The non-competitive and non-exclusive digital industry should be led by the government, with state-owned enterprises participating in the construction and operation. For example, areas that have a greater impact on the national economy and national security: high-end chips, secure communications, and military industries. Relying on substantial national investment to drive digital transformation in these areas. While, for ordinary digital industries, the government should fully mobilize the enthusiasm of the market and increase the participation of various enterprises. Such as telemedicine, mobile payment, software design and development, virtual reality, etc.

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