COOPERATION BETWEEN CHINA AND SMALL ECONOMICES IN TECHNOLOGICAL INNOVATION IN THE CONTEXT OF DIGITAL ECONOMY

Ye Yuhu

Belarusian State University,
4 Nezavisimosti Ave., 220030, Minsk, Belarus, yohoyeh@qq.com

Starting from the development prospects of the digital economy, this paper analyzes the benefits of developing the digital economy in small economic countries and the problems that need attention, and analyzes the significance of collaboration and innovation between China and small economic countries in the context of the digital economy from these aspects.

Key words: digital economy; small economies; digital technology innovation; Chinese innovation.

СОТРУДНИЧЕСТВО КИТАЯ И МАЛЫХ ЭКОНОМИК В ОБЛАСТИ ТЕХНОЛОГИЧЕСКИХ ИННОВАЦИЙ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

Е Юйху

Белорусский государственный университет,
пр. Независимости, 4, 220030, г. Минск, Беларусь

Начиная с перспектив развития цифровой экономики, в этой статье анализируются преимущества развития цифровой экономики в малых экономических странах и проблемы, требующие внимания, а также анализируется значение сотрудничества и инноваций между Китаем и малыми экономическими странами в контексте цифровая экономика с этих сторон.

Ключевые слова: цифровая экономика; малая экономика; инновации в области цифровых технологий; китайская инновация.

The development of digital technology is one of the main directions of scientific and technological development in the world today, and countries around the world are also actively using digital technology as a basis to develop the digital economy. Digital technologies such as 5G, big data and artificial intelligence have been widely used in the economic development plans of various major economies, especially in the field of innovation and development, the combination of a new generation of information and communication technology and the development of the real economy is constantly being used. It has subverted the production and sales model of the traditional manufacturing in-

dustry, which forces the traditional manufacturing industry to continuously use digital technology to upgrade and transform. This transformation is not only limited to the field of production, but also profoundly affects the organization of production, warehousing and logistics, and marketing models. In all aspects, this is an important development opportunity for developed countries with strong technological and economic strength, and it will be both an opportunity and a challenge for countries with small economies.

The advantages of the digital economy seem obvious at the moment, especially in the consumer sector, where e-commerce platforms such as Alibaba and Tencent in China and Amazon in the United States have developed swiftly using digital technology. Digital companies account for 70% of the top 10 companies by market capitalization in the world. According to the calculations of UNCTAD, the proportion of online retail sales in the total retail sales of consumer goods in major economies will increase substantially in 2020. For example, China and the United States increased by 4.2 percentage points and 3 percentage points respectively, a bigger increase than in 2019. Among the main online shoppers, the proportion of cross-border online shoppers is about 25% and continues to rise [1].

Digital technology is not only widely used in the field of consumption, but also widely used in production enterprises to facilitate the circulation of raw materials and products between upstream and downstream enterprises to save production costs. For example, ZTE has built a 5G fully-connected digital factory in the «Binjiang» factory in Nanjing city, realizing the unmanned operation of the material turnover scene in the entire factory area. The site deployment cost is reduced by 80%, the turnover manpower is saved by 100%, and the labor cost is saved by more than 2 million yuan per year [2]. For countries with small economies, such technology is very promising, particularly for countries with insufficient labor resources, it is very important to conserve labor resources to reduce production costs. The digital economy can not only help these countries realize the transformation of industrialization as soon as possible, but also make up for the insufficient supply of goods in the domestic market caused by insufficient domestic manufacturing production capacity. It is conducive to ensuring the stable supply of materials needed for domestic production and life, stabilize market prices, decrease the domestic market's dependence on foreign goods.

Although the development of the digital economy will bring many benefits, it will inevitably confront huge challenges for countries with small economies. According to the statistics of UNCATD, 41 of the world's 100 large digital platform companies are located in the America, the corresponding market value accounted for 67%. While these platform companies provide digital services to consumers in various countries, they still gain most of the benefits of the global data value chain. This situation is very unfavorable for countries with small

economies. Under the influence of digital globalization, the development of digital economy in many countries will have to rely on the technology of those large digital service platform companies, which will make the information and data security of small economies face certain risks. Large service platforms can utilize their own technological advantages to obtain various big data resources of Small Economies International through agreements. Formerly, it was worried that the absolute advantage of US companies in digital technology would pose a threat to the EU's information security, The European Union introduced the General Data Protection Regulation on May 25, 2018. For countries with small economies, the ability to negotiate with the United States on information security is comparatively weak, and it will be more difficult to safeguard their own rights, which is also very unfavorable.

In 2017, on the eve of the 11th WTO Ministerial Conference in Buenos Aires, the proposal to include the free flow of cross-border data into the WTO regime was opposed by some developing country members. These members expressed concerns that binding rules on cross-border data flows would limit the policy space for those countries to adopt data and digital policies that could help their economies achieve industrialization and technological development. The African Group, for example, argued that «it is perplexing that some members are advocating for new multilateral rules on e-commerce" and that «the multilateral rules as they are, are constraining our domestic policy space and ability to industrialize». The communication by the African Group underlined its strong opposition to new multilateral rules on data issues, particularly the free flow of data and a ban on data localization requirements. In addition to issues around policy space and digital industrial policy, some countries also expressed fears that a commitment to the free flow of data would provide free market access to digitally delivered goods and services, which would deprive developing economies of substantial tariff revenues as more goods are traded online, and threaten their domestic services industry as more services are traded online [3]. Accordingly, for countries with small economies, they should fully consider the supervision of national information security in formulating the development policy of the digital economy, and at the same time, they should formulate corresponding supervision methods for the supervision of market regulation and taxation. Although these measures will increase the complexity and difficulty of the country's administrative management, they are very necessary for countries with small economies. But fundamentally speaking, only by actively innovating on the basis of other countries' digital technologies and developing their own digital technology capabilities is the fundamental guarantee for retaining national economic se-

curity and market order. Taking the form of collaboration to carry out technological innovation will be the most suitable way for small economies to develop the digital economy.

For developing countries and countries with small economies, the development of digital innovation is inseparable from economic development and accumulation of technological experience. The innovation speed of China's digital technology benefits from China's continuous investment in the field of scientific and technological innovation in the past. A decade ago, the growth rate of innovation investment in Asia was already ahead of Europe, and China's innovation process was particularly rapid. The proportion of China's innovation investment in GDP increased rapidly from 0.76% in 1997 to 1.49% in 2007[4, p.92-93]. It is also this decade that has laid a solid foundation for China's digital technology innovation. Only on this basis can China be able to vigorously develop digital technology in recent years and actively merge digital technology with economic development, which not only seized the dividends of the digital age, but also accumulated capital and experience for the development of China's economy and the improvement of its innovation capabilities. According to the calculation of the China Academy of Information and Communications Technology, from 2005 to 2018, the scale of China's digital industry expanded from 1.28 trillion yuan to 24.9 trillion yuan, with an average annual growth rate of 26%, much higher than the GDP growth rate in the same period. By the end of 2020, China's industrial digitalization scale will be about 31.7 trillion yuan, an increase of virtually 25 times compared with 2015. According to Chinese experts' forecast, by the end of 2022, at least 50% of the world's GDP will be presented digitally, which means that in the future, as long as the development of the digital economy is accelerated, China's economic development will continue to benefit. However, due to the late start of China's economic development, it does not have strong advantages in many cores’ technology fields, and there are no high barriers to technology sharing. Accordingly, China has been actively cooperating with small economic countries in technological innovation of the digital economy and has reached good results.

In 2019, at the «China Development High-level Forum Symposium», Ms. Li Ying, the inspector of the Industrial Informatization and Software Service Industry Department of the Ministry of Industry and Information Technology of China, mentioned in her speech: «In 2018, China-ASEAN Information Harbor Digital The economic industry alliance has been launched, China and the Arab countries have launched the Silk Road online, and the Ningxia hub project has been accelerated. By June 2019, China had signed memorandums

of understanding on cooperation in the construction of the Digital Silk Road with 16 countries along the Belt and Road, including the Czech Republic and Cuba. Signed e-commerce co-leasing memorandum with 18 countries including Argentina, and established a bilateral e-commerce cooperation mechanism». In this process, Chinese enterprises have played an important role as bridges. For example, she mentioned the Genyun (Yin) platform of the iRootech Technology Co., Ltd. in her speech. This service platform has served many local enterprises in the countries along the «Belt and Road». These countries include Kenya, Germany, India, South Africa, Indonesia, Mexico, etc. Cooperative innovation in digital technology not only allows Chinese companies to go global, but also attracts foreign companies to enter China's digital economy platform, leading the model of industrial innovation.

Therefore, in terms of cooperation and innovation, especially with small economic countries, China not only has sufficient scientific and technological strength, but also has cooperation sincerity and experience. Especially in maintaining network information security and market supervision of cross-border e-commerce, China has accumulated much experience. These experiences can also provide some help and reference for small economic countries to improve their regulatory system to avoid risks in the process of developing digital technology innovation and digital economy.

References

1. China Academy of Information and Communications Technology, White Paper on Global Digital Governance. Beijing: China Academy of Information and Communications Technology, 2021, p. 2.

2. China Academy of Information and Communications Technology, China's "5G + Industrial Internet" Development Report. Beijing: China Academy of Information and Communications Technology, 2021, pp. 27-28.

3. United Nations Conference on Trade and Development. The Digital Economy Report 2021. New York，United Nations Publications. 2021. p.149.

4. Давыденко, Е.Л., Ботеновская Е.С. Европейские страны с малой экономикой. Особенности внешней торговли и инновационного развития. Минск, 2015. [Davydenko E.L., Botenovskaya E.S. 2015. European countries with small economies. Features of foreign trade and innovative development. Minsk: BGU. 275 ð. (In Russ.)]