Research on Power Enhancement of High-quality Development of China's Economy under the Background of Digital Economy

Jue Chen[1, 2]

[1] Xuzhou Port Office, Xuzhou, 221006, China
[2] University of Manchester, Manchester, M139PL, Britain

Abstract: Digital economy is the main economic form following agricultural economy and industrial economy. It is a new economic form that takes data resources as the key element, modern information network as the main carrier, and the integration and application of information and communication technology and the digital transformation of all elements as the important driving force to promote a more unified fairness and efficiency. We can improve the innovation ability of key core technologies, push forward to the middle and high end of the industrial chain, deepen the digital transformation and upgrading of manufacturing industry, promote the governance level of the digital economy and cultivate data element market to enhance the momentum of high-quality economic development.

1. Introduction

Socialism with Chinese characteristics has entered a new era. The development of the national economy has solved the problems that have long been wanted to solve but have not been solved [1]. However, China's economy is also facing structural contradictions, which adds uncertainty to its future development. It is clear that high-quality development is the primary task of building a socialist modern country in an all-round way. It is necessary to drive the development of enterprises with innovation and help make China go global. The report of the 20th National Congress of the Communist Party of China points out the direction for China's future economic development, and makes it clear that the focus of economic development is to develop the real economy. Scientific and technological innovation is the key to achieving this goal. At present, real economy, high-quality development and digital technology are the three key words of economic development. In the post epidemic era, the trend of anti-globalization and unilateralism prevailed, the risk of uncertainty of superimposed geopolitical conflicts increased, and the development of the world economy was unstable. In the face of the complex and volatile world economic situation, the CPC Central Committee has taken a long-term view, scientifically proposed a development strategy to implement new concepts and build a new pattern, and promoted China's economy and society to maintain a sustained, stable, and healthy growth momentum. To realize the digital economy, digital technology is one of the important productive factors, which has a comprehensive and fundamental impact on the development of social economy, and plays an important role in the real economy. In recent years, with the development of digital economy, digital technology continues to iterate and innovate. How to organically integrate digital technology with the real economy, especially with high-quality real economy goals, is still lack of systematic research at the theoretical level, and lack of samples for reference in practice. Systematically studying the integration advantages, modes and paths of digital technology and the development of high-quality real economy has theoretical value and practical significance for deeply implementing the spirit of the 20th National Congress of the Communist Party of China and further activating the high-quality development of the real economy enabled by digital technology [2].

2. Concept and Features of Digital Economy

2.1 Concept.

The G20 Digital Economy Development released during the G20 Summit in Hangzhou defines the digital economy as a broad economic activity, focusing on key production factors, carriers and improving efficiency [3]. In the white paper on the development of digital economy (2020), the Information and Communication Research Institute proposed that digital economy is an economic form. Digital economy is characterized by multi-dimensional and dynamic development. Through bibliometric analysis, relevant research has summarized the development of digital economy into three stages: e-commerce information economy stage, digital media knowledge economy stage, and Internet of Things and sharing economy stage. Other studies analyzed the reasons for the rapid development of China's digital economy from the aspects of its development basis, supporting conditions, external environment, etc. Liu Hang and others redefined the concept of digital economy based on several studies, summarized the characteristics of digital economy and the problems to be solved at the level of macroeconomic growth, the paper gives the idea of constructing the basic theoretical framework of digital economy development. This paper recognizes that digital economy is a new economic form of economic and social development mode, with the content of digital form as the key element, digital technology as the key driving force, modern information network as the carrier, relying on the intelligent application of network. The above summary and analysis of the domestic and foreign journal literature on digital economy can provide useful reference and guidance for further research in this field.

2.2 Feature One: Data Becomes a New Factor of Production.

From the perspective of economics, data, as a new factor of production, has broken the limited supply constraints of traditional factors and become a key factor to discover new knowledge, enhance new capabilities and create new value. The characteristics of strong replication and fast iteration determine that the larger the scale and dimensions of data, the higher the marginal value. At the same time, data also promotes the leapfrog innovation of information products and services; Integrating into e-commerce, finance and other fields, digital consumption services have been continuously derived, promoting the formation of a digital governance model. For a country, data has gradually penetrated every corner of the national economy and society, which is related to national development and security and is an important national asset of a country. Data assets are important components of personal, enterprise and even national assets. Assets refer to resources formed by past business transactions or various events, owned, or controlled by the enterprise, and expected to bring economic benefits to the enterprise. Enterprises have formed a large amount of data in the process of production, operation, and management, such as customer information, market analysis, product design, production procedures, patents, copyrights, management systems, etc. These data can bring economic benefits for the subsequent development of enterprises, and thus become important data assets of enterprises [4].

2.3 Feature Two: Digital Economy Is a Resource-Saving and Environment-Friendly Green Economy.

The new business type and mode are characterized by a high degree of digitalization, which can ease the pressure on energy and environment and contribute to improving economic benefits and environmental protection. For example, the sharing economy has improved the utilization efficiency of resources, and the popularity of online medical, education, office and other applications has formed a digital sustainable development model. The application of digital technology in the field of green economy plays a positive role in promoting green technology innovation, improving green economic efficiency, achieving energy conservation, emission reduction and low-carbon, and promoting green development. It can effectively promote the achievement of energy conservation and emission reduction goals, and promote the green transformation of the economy. The application of blockchain can force enterprises to realize green transformation characterized by efficiency

improvement, significantly reduce sulfur dioxide emissions and pollution control costs, and help reduce the inflection point of environmental regulation intensity.

2.4 Feature Three: Synergistic Value Effect Is Constantly Highlighted.

Information technology makes the circulation and transfer of materials, goods, services, funds, and other links more accurate and efficient. The shortening of circulation time has accelerated the operation and circulation of the economy. The biggest feature of business type innovation in economic development is cross-border integration. Enterprises cooperate to form a community of interests. By introducing new ideas, new technologies and new tools, they activate and optimize the allocation of resources to innovate business models. In social governance, the government focuses on coordinating the interests of multiple entities, and takes the system as the guarantee. Platform enterprises have accumulated a lot of data, and at the same time, they are highly flexible, which can effectively supplement the areas where the government's public goods and services are insufficient. Relying on the network platform, new business forms and new models in the field of digital economy are emerging constantly, realizing technology iteration, and updating, mode innovation and diffusion, and driving the coordinated development of upstream and downstream industries. The rapid growth of digital marketing, mobile payment, warehousing, logistics, express and other related services. New forms of business such as e-commerce, express delivery, takeout, and live broadcast have created flexible employment opportunities. Many individuals rely on the self-media social platform to innovate and start businesses online, constantly emerging various new service products, new scenarios, and applications, and generating huge collaborative value.

3. Power Promotion Strategies of High-quality Development of China's Economy Under the Background of Digital Economy

3.1 Improve the Innovation Ability of Key Core Technologies.

Improve the basic research and development capability of digital technology, strengthen the key core technology tackling, carry out targeted research and development of high-end chips, operating systems, artificial intelligence, and other key core technologies, and focus on original innovation and ecological cultivation. Accelerate the layout of cutting-edge technologies, build provincial cutting-edge technology research institutes and national key laboratories around cutting-edge technology innovation such as blockchain, artificial intelligence, quantum communication, and neural chips, promote the optimal allocation and resource sharing of scientific research forces of scientific research institutes, universities, and enterprises, and pool wisdom to accelerate the development of strategic subversive technologies. The core technology of digital economy involves data, algorithm, and computing power. Data is becoming the key production factor of the economy. We need to study and promote data right confirmation and classified and hierarchical management, smooth the flow of data transactions, realize the market-oriented allocation of data elements, and rationally distribute the benefits of data elements. After solving the data circulation problems such as data security, privacy protection and data supervision, the most important thing is to form a reasonable economic distribution mechanism, to drive the independent accounting of departments within the enterprise and the data sharing among enterprises to form a data element market, realize the market-oriented allocation of data elements, and reasonably distribute the benefits of data elements. Key core technology tackling focuses on modern data resources, manufacturing industry digitalization, service industry digitalization, agriculture digitalization, new generation electronic information, new business types, new models, and other fields. Efforts are made to develop new technologies and layout commanding technologies in advance [5].

3.2 Push Forward to the Middle and High End of the Industrial Chain.

We will complement the weak points of industrial basic capabilities, focus on integrated circuits, basic software, major equipment, and other key areas, speed up the complement of basic components,

key basic materials, advanced basic processes, industrial technology, and other weak points in the industrial chain, and create an independent and reliable digital industrial chain supply chain. Improve the modernization level of the industrial chain, guide upstream and downstream enterprises to strengthen the digital management and integrated collaboration of the supply chain, carry out collaborative procurement, collaborative manufacturing and collaborative distribution based on the industrial Internet platform, promote enterprises to improve the supply chain security management system, and create a safe and stable supply chain network. Improve the level of industrial agglomeration in industrial parks. With industrial parks as the carrier, develop digital solutions for key links such as resource sharing and collaborative manufacturing, cultivate several benchmarks for digital transformation of parks, promote the development of industrial clusters, and improve the level of industrial agglomeration. Guide high-quality factor resources to cluster efficiently, and improve the development ability of digital industry cluster in digital technology, data, scenarios, platforms, solutions, etc. In addition, we will create an ecosystem of cluster coordinated development, support clusters to establish collaborative development organizations, innovation promotion centers, and public service platforms, improve cluster service capabilities, and focus on building a highly integrated cluster development ecosystem of scientific and technological innovation, financial services, and digital talents. Innovate, cultivate, develop, and dynamically optimize the working mechanism, focus on digital industrialization, industrial digitalization, element value and other directions, guide and support the construction of several professional and characteristic digital industrial clusters.

3.3 Deepen the Digital Transformation and Upgrading of Manufacturing Industry.

Deeply promote the digital transformation of manufacturing enterprises, unswervingly develop the industrial Internet, develop intelligent manufacturing, guide manufacturing enterprises to achieve digital upgrading with the help of the industrial internet, comprehensively deepen the digital application of production, management, market services and other links, accelerate the integration and sharing of business data and the automatic modeling of industrial knowledge and mechanism, and accelerate the intelligent transformation of the combination of data driven and industrial knowledge. Comprehensively promote the digital upgrading of the industry. For manufacturing, mining, energy, transportation, logistics, medical and other key industries, comprehensively develop a digital transformation roadmap, determine the goals and schedule, and form a batch of replicable and promotable industrial digital transformation system solutions. We will develop new models and business types enabled by the platform, cultivate new models such as digital management, platform based design, intelligent production, personalized customization, networked collaboration, and service-oriented extension for specific industries, develop new business types such as odd work economy and platform economy, achieve a wider range of resource optimization and allocation, a deeper level of production mode change, and a higher level of value creation, and cultivate new growth points and new growth poles for the manufacturing industry. Focusing on the digital transformation needs of manufacturing enterprises, encourage large enterprises and leading enterprises to build digital platforms, open sales, data resources and sharing capabilities to small and medium-sized enterprises, and bring small and medium-sized enterprises into the innovation system and supply system of large enterprises to drive the digital transformation of small and medium-sized enterprises. Build regional digital manufacturing clusters, cultivate digital characteristic industrial parks and manufacturing industry clusters, and build digital industry clusters with international competitiveness.

3.4 Promote the Governance Level of the Digital Economy.

We will promote the normal development of anti-monopoly regulation on digital platforms and promote the orderly and healthy development of the industry [6]. Strengthen the application of digital technology in governance, use Internet, big data, cloud computing, artificial intelligence, blockchain and other digital technologies to improve governance efficiency, make good use of big data platform, reduce governance costs, and improve governance efficiency. We will strengthen the overall

planning of government information construction, strengthen government digital governance and service capacity building, and effectively play a supporting role in regulating the market, encouraging innovation, and protecting consumers' rights and interests. Establish and improve the statistical monitoring and decision-making analysis system based on big data, artificial intelligence, blockchain and other new technologies, and improve the accuracy, coordination, and effectiveness of digital economy governance. We will improve the risk emergency response process and mechanism, strengthen the research and judgment of major issues and risk early warning, and improve the level of systematic risk prevention. Explore the establishment of a regulatory mechanism that fits the characteristics of the platform economy, promote the effective connection between online and offline supervision, and strengthen the supervision of platform operators and their behaviors. We will standardize the development of the digital economy and adhere to both development and supervision. Explore and establish a governance mode suitable for the sustainable and healthy development of the digital economy, formulate more flexible and effective policies and measures, and innovate a collaborative governance mode. Clarify the responsibilities of competent departments and regulators, strengthen cross departmental, cross hierarchical and cross regional collaborative supervision, clarify the scope of supervision and unified rules, and strengthen division of work and cooperation and coordination.

3.5 Cultivate and Build Data Element Market.

We will optimize the supply of data resources, build an open platform for unified sharing of national data, and promote enterprises to strengthen the full life cycle value management of data collection, labeling, cleaning, storage, transmission, and application. Cultivate the data element market, accelerate the construction of data element market rules, cultivate standardized data trading platforms and market players, explore the data trading mode combining the market with the market, establish the data capital asset pricing mechanism, and promote the data resource trading circulation. We will strengthen data security governance, implement the Data Security Law and the Personal Information Protection Law, crack down on data black market transactions, create a safe and orderly market environment, encourage industry, local governments, and enterprises to promote data classification and hierarchical management, explore a credible data circulation framework, such as the construction of a credible data space, and prevent data security risks. The data resource system has been basically completed, and data resources are used to promote the synergy of the whole value chain of research, production, circulation, service, and consumption. The marketization of data elements has achieved remarkable results. Data right confirmation, pricing and trading have been carried out in an orderly manner. We have explored the establishment of an income distribution mechanism commensurate with the value and contribution of data elements, and stimulated the innovation vitality of market players. Speed up the construction of data element market rules, cultivate market players, improve the governance system, and promote the circulation of data element market. Encourage market entities to explore the data asset pricing mechanism, promote the formation of a data asset catalog, and gradually improve the data pricing system.

4. Conclusion

The report of the 20th National Congress of the Communist Party of China emphasized that "accelerating the development of the digital economy, promoting the deep integration of the digital economy and the real economy, and building a digital industrial cluster with international competitiveness". In today's era, with the rapid development of big data, cloud computing, the Internet of Things, blockchain and other cutting-edge information technologies, digital technology and digital economy have increasingly become the key areas of a new round of international competition. On the new journey of building a socialist modern country in an all-round way, we need to accelerate the development of the digital economy and boost the high-quality development of China's economy.

References

[1] Litvinenko V S. Digital economy as a factor in the technological development of the mineral sector[J]. Natural Resources Research, 2020, 29(3): 1521-1541.

[2] Wilson K B, Karg A, Ghaderi H. Prospecting non-fungible tokens in the digital economy: Stakeholders and ecosystem, risk and opportunity[J]. Business Horizons, 2022, 65(5): 657-670.

[3] Banalieva E R, Dhanaraj C. Internalization theory for the digital economy[J]. Journal of International Business Studies, 2019, 50(8): 1372-1387.

[4] Tambunan M R U D, Rosdiana H. Indonesia tax authority measure on facing the challenge in taxing digital economy[J]. The International Technology Management Review, 2020, 9(1): 1-10.

[5] Avdeeva Z K, Kovriga S V, Lepskiy V E, et al. The Distributed Situational Centers System as an Instrument of State and Corporate Strategic Goal-Setting in the Digital Economy[J]. IFAC-PapersOnLine, 2020, 53(2): 17499-17504.