

Research on the Operation Logic and Optimal Development of Digital Economy-- A Case Study of Fujian Province

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Abstract: With the deepening of the new round of scientific and technological revolution, a series of digital technologies represented by artificial intelligence, Internet of things, big data, 5G network and block chain have been further developed and improved, and have been applied systematically and comprehensively. Taking Fujian Province as the research object, this paper uses the "three modernizations" framework composed of digital industrialization, industrial digitization and digital governance to analyze the operation mechanism of digital economic model, that is, digital industrialization is the basis of operation. It is the creator and supplier of digital technology, industrial digitization, as the main body of operation, is the main part of the value creation of digital economy in the current stage, and digital governance is the regulator of operation. To promote the digital economic system to operate more smoothly and efficiently, the three cooperate and promote each other in essence, but there is a certain competitive relationship.

1. Introduction

In recent years, the growth rate of GDP in China has gradually slowed down. How to achieve the transformation and upgrading of the economic structure, cultivate new economic growth points and achieve high-quality development has become a key issue to alleviate the downward pressure on the economy. As a new operation mode in the post-industrial era, the core position of digital economy is becoming more and more prominent.

In 2020, the Fifth Plenary session of the 19th CPC Central Committee made comprehensive arrangements for "accelerating digital development", requiring "to promote digital industrialization and industrial digitization, to promote the deep integration of digital economy and real economy, and to build digital industrial clusters with international competitiveness". Combined with the case study of the development of digital economy in Fujian Province, this study starts from the source of the gestation of digital economy, combs the development process of gradual diversification and systematization of digital economy, and excavates its decisive power. Thus answer the connotation and characteristics of digital economy, the operation mechanism of digital economy [1].

2. The development course and present situation of digital economy in Fujian Province

2.1 The development course of digital economy in Fujian Province

The development of digital economy in Fujian province is embodied in the step-by-step construction of "digital Fujian". After the "Tenth Five-year Plan for National Economic and Social Development of Fujian Province" was issued in 2001, the construction blueprint of "digital Fujian" was reflected in the "Tenth Five-year Plan for Digital Fujian" [2]. In a sense, this is the starting point of the development of digital economy in Fujian province in the past 20 years.

Much starker choices-and graver consequences-in "period, the digital economy is the revolution of science and technology under the threshold of gradually occupy the dominant position of the national economy, the strategy with the new trend of digital Fujian, informatization construction from the technical innovation, the network popularization and information diffusion to the comprehensive optimization of the allocation of resources [3] [4] and transformation of the forms of economic and social development direction, enter to accelerate the deepening transformation, depth of integration, integration of new stage of development.

2.2 The overall situation of digital economy development in Fujian Province

In terms of scale, value-added, structure and regional coordination, the development level of digital economy in Fujian province is at the middle and high level in China, and the development of digital economy has achieved initial results.

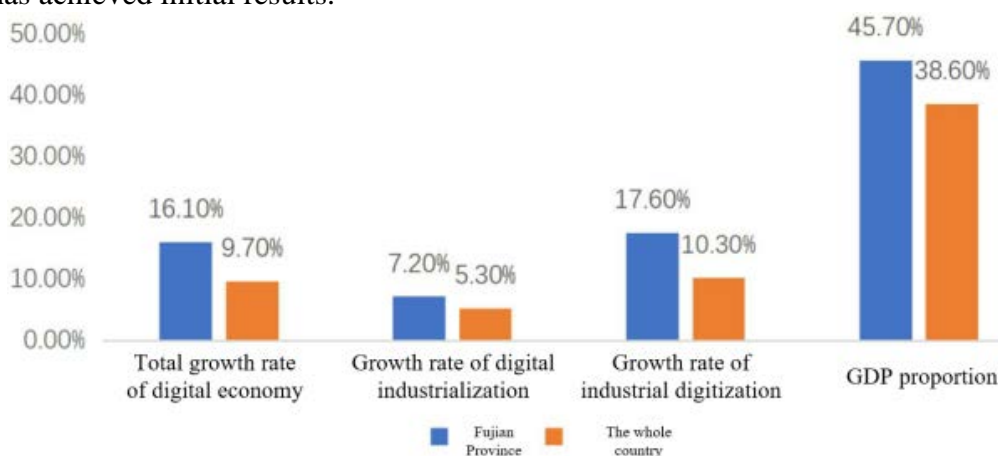


Figure 1: Comparison of digital economy in Fujian province with the national average in 2020

3. The mechanism of digital economy in Fujian Province

3.1 Digital industrialization lays the foundation for operation

In 2020, the scale of China's digital industrialization will reach 7.5 trillion yuan, accounting for 19.13% of the total scale of the national digital economy. The scale of Fujian's digital industrialization will reach 264.9 billion yuan, accounting for 13.21% of the total scale of the province's digital economy. The level of digital industrialization reflects the application degree of digital technology, which is related to a series of issues such as the efficiency of digitalization of production factors, the degree of digitalization transformation of traditional industries [5], the integration of industries, and the government's digitalization decisions, thus affecting the overall development of digital economy. The progress of digital industrialization in Fujian province is reflected in two aspects:

(1) Information infrastructure lays the operational framework. As one of the three first-level indicators in the new infrastructure competitiveness index, the information infrastructure index can directly reflect the suitability of the digital industrialization construction environment in a region, so it can be used as a starting point to analyze the positioning function of digital industrialization.

(2) The emerging information industry represented by Internet enterprises will be established. At the current level of digital technology, the Internet is still the mainstream transmission channel, and data is still highly dependent on network transmission. Therefore, the quantity and quality of Internet enterprises can directly affect the level of digital industrialization in a region.

From the perspective of information infrastructure construction and information industry represented by Internet enterprises, Fujian province has a relatively solid foundation of digital industrialization and a solid force in the supply of digital production factors, which provides an important system guarantee for the development of Digital economy in Fujian province.

3.2 Industry digitization constitutes the main body of operation

At present, the development of digital economy in China is showing a "28 situation", and the structure of digital economy in various regions is dominated by industrial digitization. In 2020, the proportion of industrial digitization in the total scale of digital economy in Fujian Province is as high as 86.79%, with a scale of 1.7404 trillion yuan, ranking seventh in the country. The proportion of industrial digitization in GDP is close to 40%. This shows that the digital level of traditional industries in the province is at a higher level in China, and the pulling effect of industrial digitization on the total scale of digital economy is higher than the national average level. It also reflects that the digital industrialization of the province plays more of the supporting and auxiliary role of digital technology, and less completes the direct transformation of data value.

Integrated infrastructure refers to the in-depth application of Internet, big data, artificial intelligence and other technologies to support the transformation and upgrading of traditional infrastructure, thus forming new infrastructure, including intelligent transportation infrastructure and smart energy infrastructure, which is closely related to the digital transformation of the three traditional industries.

The integration infrastructure of the primary industry provides technical support for the digital upgrading of traditional agriculture, changes the old industrial chain on the macro level, improves the production and marketing efficiency to a certain extent [6], and thus realizes the value transformation of digitalized production factors in the primary industry.

4. The Internal Relations of the "three modernizations Framework"

By systematically combing the relationship among digital industrialization, industrial digitization and digital governance, we can get the operation mechanism of digital economy.

To sum up, digital industrialization, industrial digitalization and digital governance are mutually synergistic and mutually promoting in nature, but there is a certain competitive relationship among the three, which is a core feature of the operation mechanism of digital economy. To ensure the overall coordination and steady development of the digital economy system, it is necessary to grasp the balance point of the development of the three and improve the overall application level of digital technology guides the effective flow of data resources.

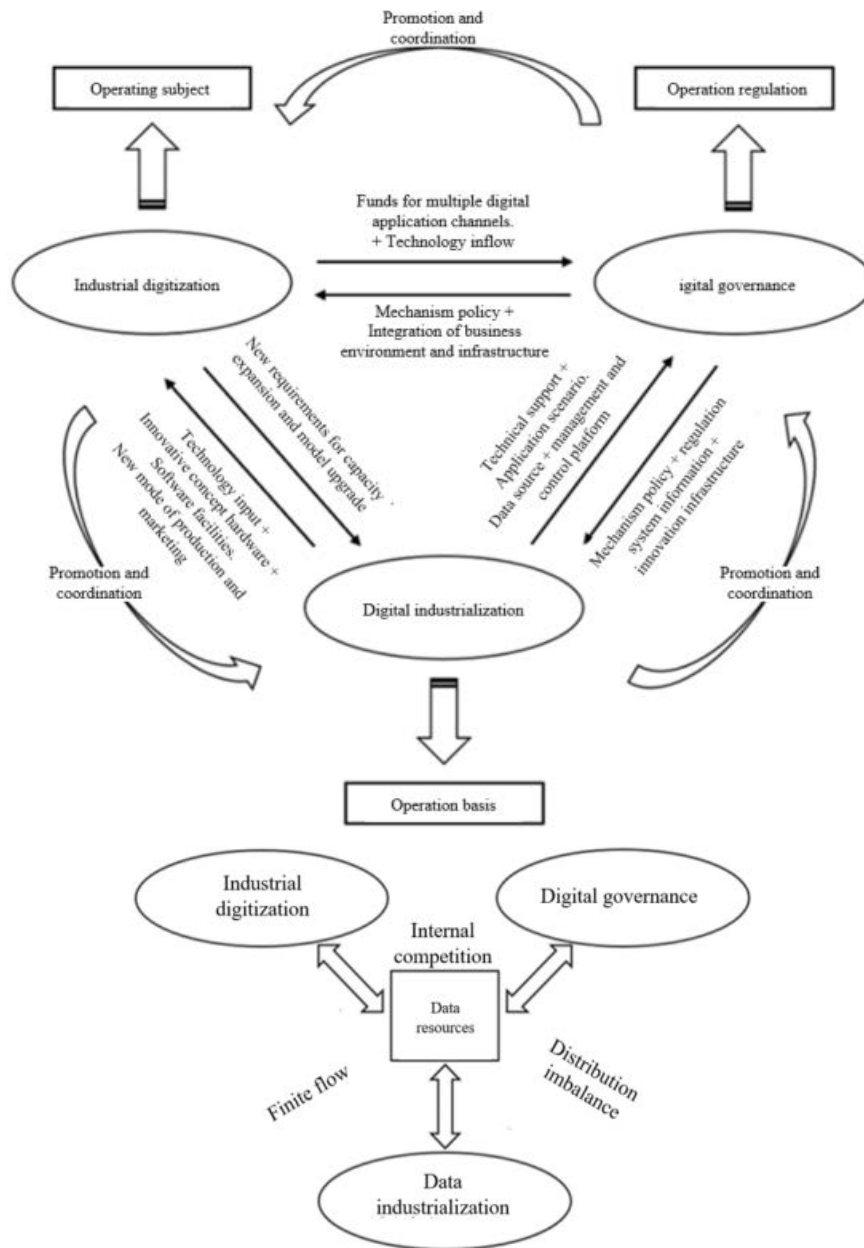


Figure 2: Operation mechanism of digital economy under the framework of "Three Modernizations"

5. The value of the development of digital economy

With the input of digital technology, the traditional value realization chain of enterprises has undergone a digital transformation, and the digital elements have been integrated into the production, circulation and sales links. The management structure and background decision-making departments of enterprises can collect a series of marketing data such as product information, sales information and consumer information at a high speed through big data application, and with the assistance of intelligent data center, make a systematic analysis of the marketing situation in different stages, so as to explore the room for improvement, help enterprise managers to adjust sales decisions, and improve the profitability of the enterprise.

6. Conclusion

Taking Fujian Province as the research object, this paper analyzes the operation mechanism of digital economy model by using the framework of digital industrialization, industrial digitization and digitization, and obtains that industrial digitization is the main body of operation and the main part of digital economy value creation at the current stage. Digital governance, as the operation regulator, promotes the more stable and efficient operation of digital economy system, In essence, the three cooperate and promote each other, but there is a certain competitive relationship.

References

- [1] He Yuchang, Liu Quanlin. *The technological basis, value essence and value composition of digital economy* [J]. *Journal of Shenzhen University (Humanities and Social Sciences Edition)*, 2021, 38 (03): 57-66.
- [2] He Xiaoyin. *Comparison of the connotation of digital economy and information economy, network economy and knowledge economy* [J]. *Time Finance*, 2011 (29): 47.
- [3] Yang Xiao. *Digital economy: new technologies, new models and new industries that affect the future* [M]. *People's posts and Telecommunications Publishing House*. 2019.
- [4] Fujian Economic Information Center. *School of Social Governance and Development, Tsinghua University. Internet Industry Research Institute. Changwei Information Technology Co., Ltd. White Paper on China's New Infrastructure Competitiveness Index* [R]. 2021.
- [5] Li Changjiang. *A preliminary discussion on the connotation of digital economy* [J]. *E-Government*, 2017 (09): 84-92.
- [6] Chen Yuefei, Xiao Ke, Zhang Hailu, Li Yongjian. *Research on the Development Coordination degree of China's Digital economy structure* [J]. *Learning and Exploration*, 2021 (08): 121,129.