

Research on the Mechanism of Digital Economy Promoting the Successful Development of “China (Anhui) Pilot Free Trade Zone”

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Abstract: With the rapid development of digital economy, this paper firstly introduces the current status of digital economy and Anhui FTA in China, and lays the foundation for the development of digital economy, and the high-quality development of Anhui FTA, mainly focusing on production factor, industrial chain, industry development and enterprise catch. By utilizing the SWOT analysis method, On the current competitiveness of Anhui FTA, So that the current competitiveness of Anhui FTA is good, The digital economy is very effective in boosting Anhui FTA development; third, This paper explores the Anhui FTA construction path and effect in the digital economy environment, Made policy suggestions for the coordinated development of Anhui FTA and the digital economy, Help the Anhui FTA digital development; last, This article summarizes the structure of the full-text writing, A summary of the proposed policies is presented, In order to provide a reference for the Anhui FTA to develop the digital economy.

Keywords: Anhui FTA, Digital Economy, Globalization.

1. Introduction

Target tracking technology has an important application value in both military and civil fields [1]. In 1937, the first tracking radar station (SCR-28) appeared in the world [2]. Since then, with the continuous development and progress of sensor technology, target tracking systems based on radar, laser, infrared and satellite appear more and more in various fields.

Digital economy refers to the use of digital technology to achieve economic development and trade exchanges. In recent years, the wide application of digital technologies represented by the Internet, cloud computing, big data and artificial intelligence in the world is rapidly and profoundly changing the structure and mode of international economy and trade. Digital is increasingly integrated into the whole process of economic and social development, and the world has ushered in the era of digital economy and trade.

With the help of a sound industrial foundation and the rapid implementation of policies to support the development of digital economy, the scale of China's digital economy and its proportion in GDP have increased year by year. The scale of digital economy has increased from 2.61 trillion yuan in 2005 to 50.2 trillion yuan in 2023, and the proportion of digital economy in GDP has increased from 14.2% to 39.8%. Anhui province also proposed to build a national digital economy development demonstration zone in the development plan, which puts forward an urgent requirement for the digital transformation of the free trade zone.

According to the existing studies, although there is abundant literature on the impact of global trade digitalization and digital economic and trade era, the main research focus is on trade digitalization or pilot free trade zone itself, while there are few studies on the development of China (Anhui) Pilot Free Trade Zone in the digital economic and trade era. Therefore, this paper will further explore the development achievements of “China (Anhui) Pilot Free Trade Zone” by combining the existing research results of trade digitalization

and pilot free trade zones in the digital economic and trade era.

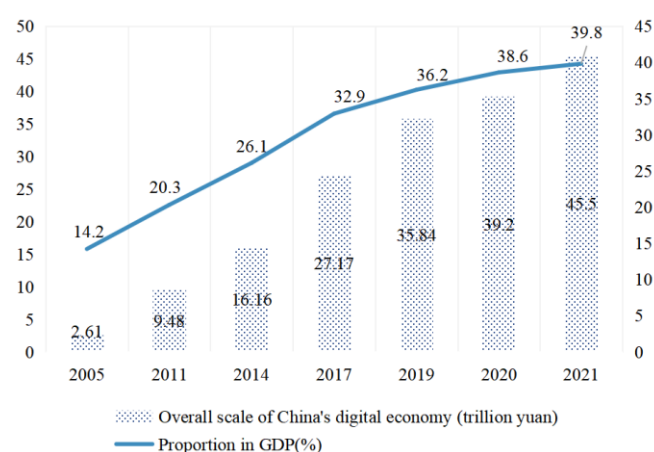


Figure 1. Changes in the overall scale of China's digital economy and its proportion in GDP from 2005 to 2021

2. Literature Review

This paper mainly introduces the literature including three aspects: global trade digitalization, Anhui FTA, and the impact of digital economy on the free trade zone.

In terms of related research on global trade digitalization, Yanming Wang (2020) gave the concept of digital trade, combined with the development status of digital trade, discussed the development opportunities and challenges of digital trade, and gave countermeasures and suggestions. Jun Xu (2022) studied the current status and challenges of the development of global trade digitalization, analyzed the promotion of trade digitalization rules in international organizations and some multilateral and bilateral agreements, and made a prospect for the development of trade digitalization. Dan Shi, Xinwei Nie, Fei Qi (2023) studied the strategic choice of China's digital trade in the context of digital economic globalization.

In terms of relevant research on China (Anhui) Pilot Free

Trade Zone, Min Xu (2022) combined with the characteristics of Anhui province's own development and the special function positioning of Anhui Pilot Free Trade Zone, and mainly discussed the advantages and disadvantages, opportunities and threats of Anhui FTA, which provided reference and ideas for its development.

On the digital research on the influence of free trade area, Guomao Sun, guowen Chen and Dezhen Li (2022) for more than 10 years of statistical data analysis and comparison, from six aspects the free trade development trend and strategy implementation effect, put forward the strategy of “free trade zone 2.0” concept and “free trade area digital development index” concept, and from four dimensions to build the digital development index of free trade zone index system. Xiaoyi Ren, Xuesha Su, Xi Chang and Zilong Tang (2022) explored the important impact of the establishment of the pilot free trade zone in the new era of digital economy on the digital transformation of micro enterprises. Room super, Yuanli Hu (2022) in the characteristics of “digital age” digital trade and development trend of the paper theory, on the basis of fully describes the China (shaanxi) free trade area of digital trade development, objectively summarizes the existing problems, in view of the existing problems from multiple angles put forward the basic countermeasures of promoting FTA digital trade development countermeasures. Yixiao Hu, Zefang Liao (2023) included the digital economy, free trade zone and trade circulation industry into a research framework, discussed the correlation between the three in different economic regions, and proposed that the free trade zone should increase the construction of digital economy in the circulation industry, and implement targeted innovative policies for different

regions.

According to the existing studies, although there is abundant literature on the impact of global trade digitalization and the digital economic and trade era, the main research focus is on the digitalization of trade or the pilot free trade zone itself, while there are few studies on the development of Anhui pilot free trade zone in the digital economic and trade era. Therefore, this paper will further explore the existing research results of digital trade digitalization to promote the development results of digital economy “China (Anhui) Pilot Free Trade Zone”.

3. The Role Mechanism of Digital Economy to Boost the Development of Free Trade Zones

On July 22, 2021, the central committee of the communist party of China under the State Council on the new era to promote the “development of the central region high quality opinions”, the opinion put forward to “high standard construction of Anhui, Henan, Hubei, Hunan free trade area, support first try, form can copy can promote system innovation, further play a radiation leading role.” The release of the guideline provides a clear plan for the digital economy to promote the development of the free trade zone, and also creates more opportunities for the high-quality development of Anhui FTA in the context of the digital economy. The mechanism of digital economy to boost the high-quality development of the free trade zone mainly focuses on four aspects: production factors, industrial chain, industry development and enterprises.



Figure 2. The Construction process of China's Free Trade Zone

3.1. Perspective of Production Factors

The digital economy introduces technology and data elements for the free trade zone to promote production efficiency. In the context of digital economy, the wide application of digital technology in the production of the free trade zone can introduce new factors of production for it, change the growth impetus and mode of the industry, and promote the improvement of industrial productivity. On the one hand, artificial intelligence, ICT and other digital technology capital, as effective capital investment, promotes the intelligent, networked and digital transformation of manufacturing through digital technology, reduce production costs, realize lean production, and promote the improvement of industrial production efficiency in the free trade zone.

Second, data is invested into the production link of the free trade zone as a new production factor, change the use mode of resources, improve the value transformation efficiency of the original production factors in the industry, and promote the improvement of production efficiency. Third, the free trade zone can realize efficient production through specialized intermediate investment, rely on the advantages of Internet platform enterprises connecting inside and outside the zone, break through the location barriers and field barriers of production resources, realize data flow, resource sharing and complementary advantages, and reduce production pressure from the aspect of effective allocation and utilization of production resources.

3.2. Industrial Chain Perspective

The digital economy will create new business forms, new models and new jobs for the free trade zones. The perspective of the industrial chain can first give birth to emerging business forms. Digital technology can divide and integrate the value chain and industrial chain links of different industries or the same industry, form a new enterprise organization, new business model and even new industrial form, and reduce the trade cost; then it can form a new trade model. Due to the influence of spatial and temporal geography and other factors, incomplete information causes the imbalance of supply and demand, which greatly improves the difficulty of trade. Digital technology dynamically matches large lot of demand and supply through algorithms, reduces conversion cost and creates new service models; finally, creates new jobs. The integrated development of digital economy and free trade zone will give birth to a large number of new employment forms relying on the information network to carry out production, service, research and development, management and other work tasks, with a large number of jobs and diversified categories.

3.3. Perspective of Industry Development

The digital economy will promote the supply-side reform of the trade industry, and achieve an effective connection between supply and demand and precise services. The integration of the digital economy and the pilot free trade zone can effectively make use of labor, capital, technology, data and other factors, which is conducive to promoting the supply-side structural reform of the trade industry, and realize the effective connection between supply and demand and precise services. Stimulate demand by improving the quality, efficiency and convenience of trade. At the same time, the use of stock resources to expand the supply of trade industries. Digital technology can integrate potential resources with high efficiency and low cost, and make the feasibility of value creation through the shared service mode. Major public health events such as the epidemic will have a great impact on the trade industry. The use of digital technology can effectively reduce trade contact and develop digital orders, digital conferences and digital services, so as to enhance the stability of the development of the trade industry.

4. SWOT Analysis of Anhui FTA

SWOT analysis is an analysis method that combines the research object with the internal and external environment by analyzing the advantages (S), disadvantages (W), opportunity (O) and threat (T), so as to observe the development status of the research object.

4.1. S (Strength)

Anhui FTA Have location advantages and transportation advantages. Anhui province is located in the important geographical location of the “Yangtze River Economic Belt”. In the new stage of digital economic and trade development, there is not only the logistics cost advantage of large radiation radius, but also the transportation advantage of port shipping link to the sea, which is conducive to becoming a logistics hub connecting the internal and external circulation. It plays an important role in further opening up to the outside world, helping Anhui province to learn and communicate abroad, and further promote the digital transformation.

At present, Anhui province has a complete range of

industrial system, among which the most advantageous is the automobile industry, the annual sales of automobiles have been maintaining a leading position in the country. It insists on the deep integration of traditional industries and emerging industries, penetrates the digitalization into its characteristic industries, enhances the competitiveness of traditional industries, and guides the development of emerging industries. Now, NIO headquarters has settled in Hefei, striving to build the world's advanced new energy vehicle industry and inject new momentum into the high-quality economic development of Anhui Province. These advantages are conducive to attracting domestic and foreign investors to invest in Anhui and promote industrial transformation and upgrading.

4.2. W (Weak)

The economic outward orientation of Anhui province is relatively low, and the unbalanced economic outward orientation of regional development is still lower than that of other provinces in the Yangtze River Delta Economic Belt, which reflects that the degree of Anhui province's participation in international economic and trade needs to be further improved, and the integration with digital is not enough. At the same time, there is a serious imbalance in the development of all regions in the province. In addition, the development gap between urban and rural areas is also large. The industrial complementarity of Anhui Province is poor, the industrial structure needs to be optimized and upgraded, the development of its modern industrial system is not balanced, and the development gap between strategic emerging industries and high-tech industries is still very large compared with Jiangsu, Zhejiang and Shanghai. Some remote counties and districts are very backward in development, and there is a lack of division of labor and cooperation between regions. The contradiction of unbalanced development is prominent, which affects the overall development level of open economy in Anhui Province.

4.3. O (Opportunity)

Anhui province is located in the intersection of Yangtze River Economic Belt and “Belt and Road”, so its unique advantages are supported by “Belt and Road” and the major development strategy of Yangtze River Economic Belt. Anhui FTA provides a higher platform for Anhui province to directly participate in international economic cooperation and actively and effectively attract foreign investment. Under the background of China entering the new normal economy, Anhui FTA will gain rare opportunities for development. At the same time, the first five batches of free trade zones have formed a set of experience that can be promoted and replicated, many of the free trade zones are located in inland areas. Anhui FTA construction can learn from the experience of the successful operation of the previous batches of free trade zones, strengthen the connection with other free trade zones, promote the economic development of Anhui Province, and improve the level of opening up.

4.4. T (Threat)

All the provinces and cities and regions across the country are actively striving for the development opportunities of opening up to the outside world to promote the reform by opening up. All free trade zones are optimizing the industrial structure, actively cultivating advanced and high-end industries, and promoting industrial upgrading and optimization. With the improvement of the business

environment of the free trade zone, it has formed a great attraction to the existing capital and factors, produced a siphon effect on the capital of Anhui Province, and brought great challenges to Anhui FTA construction.

At present, Anhui province is still in the stage of exploring how to build a high-quality free trade zone, there is no a complete legal system, and the digital legislation is not perfect.

This will become an obstacle to Anhui FTA construction, which is easy to lead to the phenomenon of relevant management departments, and then have a great impact on the investment work in Anhui Province.

After analyzing the overall strategic environment, obtain the SWOT matrix analysis of Anhui FTA:

S	1. Location advantage and transportation advantage 2. Resource advantages 3. Development advantages of characteristic industries 4. Advantages of independent innovation	O	1.National Strategic Support 2.Free trade zones can learn from their experience 3.Use the RCEP to cooperate with South Korea's digital economy
W	1.Regional development is not balanced 2.The industrial structure needs to be upgraded 3.Enterprise competitiveness is weak	T	1.Regional open competition is fierce 2.The legal system is not sound 3.The system of attracting investment is not perfect

Figure 3. SWOT matrix analysis

5. Anhui FTA Construction Path and Effectiveness Under the Digital Economy Environment

5.1. Coordinated Layout of Digital Infrastructure

Digital construction is the foundation of digital reform. Anhui FTA focuses on network infrastructure construction and integrated infrastructure construction, and carries out overall planning and effective layout in the region. In China academy of information and communication released the 2022 China “5G industrial Internet” development performance evaluation report, Anhui province with Jiangsu, Guangdong, Zhejiang, Shandong, Beijing, a total of 6 provinces (municipalities) in the nationwide “demonstration lead” characteristics, shows that “5G industrial Internet” in Anhui province in the national development application the first phalanx.

In the future, the areas of Anhui will accelerate the construction of integrated infrastructure, realize the deep coverage of intelligent manufacturing infrastructure, accelerate the construction of “5G + digital supply chain”; promote the construction of virtual private network and hybrid private network, promote the application of collaborative research and development design and remote equipment control, expand new business forms such as intelligent production and shared manufacturing, effectively break through the barriers between R&D, production and service, and create a closed loop covering real-time analysis and scientific decision-making.

5.2. Linkage Development of the Digital Industry

Digital industry is a powerful starting point for the construction of digital free trade zone. Focusing on building a digital economy highland, Hefei Area took the lead in issuing a special plan for digital economy development, focusing on the strategic frontier and commanding heights, vigorously cultivating strategic emerging industries, focusing on the development of digital industries with new display, integrated circuits and artificial intelligence as the core, and actively building the city into an “industrial landmark”. Wuhu

area promotes the development of smart home appliances and intelligent connected vehicles by building an industrial chain integration innovation platform, implements the mode of “block chain + comprehensive window through office”, and applies the “intelligent administrative approval system” to provide all-weather services. Bengbu area plans to build a number of imported commodity stores and direct selling centers in the World Free Trade City, and will make every effort to apply for the national cross-border e-commerce retail import pilot and the national cross-border e-commerce comprehensive pilot zone.

5.3. Innovate Digital Regulatory Services

Guided by the principle of “data enabling, coordination, service optimization, security and control”, the digital supervision service reform in each district of Anhui province constantly innovates the supervision mode and improves the service efficiency. In the Anhui FTA Special Promotion Action Plan released in 2021, It clearly shows that: the implementation of overseas entry into the comprehensive bonded zone of food in the free trade zone is “released after sampling” supervision, At the same time, explore the establishment of the Yangtze River Delta customs inspection operation integrated operation process, Improve customs clearance facilitation at the Yangtze River Delta ports; Improve and promote the “Customs ERP network supervision”, We will explore and implement pilot verification reforms in free trade zones, We will vigorously promote online supervision, Explore and promote the use of “Internet + verification” and “online + offline” verification methods; In the free trade zone, imported fresh agricultural products will adopt the “inspection” and “inspection and release” mode, Reduce the approval process and time for entry animal and plant quarantine in the free trade zone, Realize the whole process of online processing.

6. Conclusion

This paper analyzes the development status of Anhui FTA under the background of digital economy, and further explores how digital economy promotes the promotion of Anhui Free Trade Zone in the stage of the rapid development of digital economy. Through data analysis and SWOT analysis, analyze the competitiveness of Anhui Free Trade

Zone; meanwhile, it explores the mechanism of digital economy on Anhui Free Trade Zone from the perspective of production factors, industrial chain, industry development and enterprises, and have a preliminary understanding of the successful research of Anhui Free Trade Zone.

We find that the digital economy provides technology and data elements for the FTA to promote the production efficiency, it creates new forms, new models and new employment to promote high-quality economic development; On the other hand, the digital economy promotes the trade supply side reform, connect supply and demand and provide precise service, thus penetrating the whole chain and improving the efficiency of business operation. According to the development status of Anhui Free Trade Zone, we made the SWOT analysis model and constructed the competitiveness evaluation system, so as to draw the conclusion that Anhui Free Trade Zone has strong competitiveness.

These findings have important policy implications. The free trade zone should improve the innovation capacity of the high-end industries in the industrial chain. The free trade zone can make use of digital technology, data resources, digital talents and other production factors to build a high-end industry of the industrial chain, build a high-end industrial innovation platform of the industrial chain through data collection, and improve the innovation ability of the high-end industries of the industrial chain. At the same time, the free trade zone will set up a free trade zone trade data center. The trade big data center is the heart of digital trade, responsible for collecting, calculating, processing and feedback trade data. Due to the nature of public goods, big data centers need to be established under the leadership of the government, and all enterprises in the free trade zone should participate in and provide data. The data center will feed back these data to foreign trade enterprises after processing, processing and calculation, so as to help enterprises to achieve accurate market positioning based on the data. To sum up, this paper studies the development of digital economy in Anhui Free

Trade Zone, in order to provide experience for the national provincial free trade zones.

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