

Study on the Countermeasures of the Integration of Northern Anhui into the Yangtze River Delta

Zejiang Zhou, Hongmei Chen*

School of Economics, Anhui University of Finance and Economics, Bengbu, Anhui, China

*1756551947@qq.com

Abstract

Under the new development pattern of double circulation, the integration of the Yangtze River Delta has become the key to cope with the century old changes and restructure the development pattern. As the development depression of the Yangtze River Delta, the deep integration of northern Anhui into the integration of the Yangtze River Delta will not only promote the healthy and steady development of northern Anhui, but also bring new development opportunities for the development of the Yangtze River Delta region. Multiple policy preferences, rich human resources, and the construction of industrial transfer clusters have brought development opportunities for northern Anhui to integrate into the integrated development of the Yangtze River Delta. However, there are still constraints such as institutional barriers, low industrial structure, insufficient scientific and technological innovation capabilities, and strong siphon effect of growth poles. In order to promote the deep integration of northern Anhui into the integration of the Yangtze River Delta and achieve high-quality development in northern Anhui, it is suggested to break the institutional barriers and refine the integration and cooperation system in the Yangtze River Delta; Actively promote the construction of industrial transfer cluster, optimize the upgrading of industrial structure; Strengthen the construction of scientific and technological innovation platform and create a scientific and technological innovation environment; Fully tap the market potential and build a double cycle development pattern.

Keywords

New Development Pattern; Yangtze River Delta Integration; High Quality Development.

1. Introduction

At present, China is facing unprecedented changes in a century, and the international pattern is changing constantly. In the face of the new development situation and environment, China must accelerate the construction of a new development pattern that takes the domestic big cycle as the main body and promotes the coexistence of domestic and international double cycles. The key to building a domestic circulation is to speed up the improvement of the domestic unified market, eliminate regional barriers, and strengthen regional exchanges and cooperation. As an important leading area for national economic development, the Yangtze River Delta urban agglomeration plays an important role in building a new development pattern in China. On May 24, 2010, the State Council formally approved the implementation of the Yangtze River Delta Regional Plan [1]. In September 2014, the issuance of the State Council's Guiding Opinions on Promoting the Development of the Yangtze River Economic Belt by Relying on the Golden Waterway made Anhui formally join the regional sequence of the "Yangtze River Delta" at the national level [2]. On December 1, 2019, the State Council issued the Outline of the Regional Integration Development Plan of the Yangtze River Delta, expanding the planned area to all areas of "three provinces and one city" in Shanghai, Jiangsu, Zhejiang and Anhui, and integrating

Anhui into the Yangtze River Delta[3]. With the support of the integration policy of the Yangtze River Delta, Anhui has made great progress in development, and the momentum of economic development is growing. In the first half of 2022, Anhui's total economic output will account for 16.21% of the Yangtze River Delta, up 2% from the same period in 2018. The turnover of technology contracts was RMB 75.02 billion, up 25.6%; The number of invention patents granted was 12900, up 12.6%, and the number of utility model patents granted was 59000, up 23.3%. However, there is still a significant gap between Anhui's integration into the Yangtze River Delta and that of Shanghai, Jiangsu and Zhejiang. In particular, northern Anhui is at the edge of the integration of the Yangtze River Delta, which is a depression for the development of Anhui and a key blocking point for the deep integration of Anhui into the integration of the Yangtze River Delta. In 2021, among the 41 cities in the Yangtze River Delta, most of the cities with slower economic growth are in northern Anhui. Among them, the growth rate of Bengbu's GDP in 2021 is planned to be 8.5% at the beginning of the year, and 0% in the whole year. The growth rate of major economic indicators is lower than expected, ranking lower. Therefore, it is of great significance to accelerate the integration of northern Anhui and the Yangtze River Delta.

In recent years, scholars have carried out a lot of research on regional cooperation. For example, Pan Yunkang (2008) believes that the construction of metropolitan areas plays a decisive role in China's urbanization and modernization process [4]. Xiao Yinan et al. (2012) discussed the regional cooperation mechanism of the Pearl River Delta urban agglomeration based on the urban attraction model, and found that the construction of the metropolitan area can improve the overall regional competitive advantage [5]. Teng Fei et al. (2017) believed that the city economic circle with complementary functions could break the administrative division, and the development of the whole provincial border area could be driven by industrial docking and cooperation, transportation networking, common market construction, etc. [6] That is, regional cooperation has produced $1+1>2$ economic development benefits, which is conducive to the overall development of China's economy. Another part of scholars studied the regional cooperation mechanism from the perspective of the government. For example, Ruan Rongping believes that the convergence of policy supply and policy demand is an important factor in helping efficiency [7]. By analyzing the cooperation cases of Shandong Peninsula city cluster, Tang Chenghui et al. (2022) concluded that the government-led cooperation model relies too much on administrative orders and is more suitable for the initial stage of regional cooperation; the market-led cooperation mainly focuses on industrial cooperation areas and is applicable to cities with complementary economies [8]. Yao Shangjian et al. (2022) believed that counterpart support determined intergovernmental cooperation, and local governments played a more active role in counterpart support than the central government [9].

Some scholars have also conducted in-depth research on the integration development of the Yangtze River Delta, and have made rich achievements. Different scholars have studied the development pattern of the integration of the Yangtze River Delta from the perspective of the integration of cities in the region. Li Shiqi et al. (2017) believed that Shanghai played a leading role in the integration process of the Yangtze River Delta based on the analysis of market unity, element homogeneity and system consistency, but the gap with the other three provinces is also growing [10]. However, some scholars have reached the opposite conclusion. Xu Qin (2018) believes that the Yangtze River Delta urban agglomeration has transformed into a "multi center pattern", and the gap between the core areas of the Yangtze River Delta and Shanghai is narrowing [11]. Zeng Gang and others (2018) believed that Shanghai has played a good role in radiation, and the innovation capacity of other node cities has been greatly improved. The pace of urban agglomeration development has been accelerated, and the pace of deep integration between cities has been accelerated [12].

At the same time, scholars discussed the key links, opportunities and challenges in the integration process of the Yangtze River Delta from an overall perspective around the integration development of the Yangtze River Delta. Sun Yanan (2014) believed that the integration of the Yangtze River Delta is developing from "superficial integration" to "deep integration". The superposition of national strategies and the construction of urban circle have brought great opportunities for the integration of the Yangtze River Delta, but the resource base, institutional mechanisms, etc. have also made the integration of the Yangtze River Delta face multiple challenges [13]. Zheng Yang (2018) pointed out that the integrated development of the Yangtze River Delta should not only focus on the regional cooperation with the Beijing Tianjin Hebei and Pearl River Delta urban agglomerations, but also strengthen the cooperation and exchange with world-class urban agglomerations [14]. Chen Lijun et al. (2019) believed that talent integration is the main challenge facing the development of the Yangtze River Delta region. We should adhere to the combination of point and area, high-quality integrated development, and strive to promote talent integration in the Yangtze River Delta [15]. Liu Zhibiao et al. (2020) pointed out that in the context of the reversal of globalization, the core of promoting the high-quality development of Yangtze River Delta integration is market integration, and the formation of a unified market will help better use the strong domestic market to achieve high-quality development [16]. Li Zhan et al. (2020) pointed out that administrative barriers, imperfect cooperation mechanisms and weak regional spatial ties are the main obstacles to the integration of the Yangtze River Delta [17]. Zhang Zhao'an (2021) believes that the Yangtze River Delta integration is characterized by the vigorous development of institutional construction and institutional mechanism integration [18].

In addition, scholars also discussed the path of Anhui's integration into the Yangtze River Delta. Zhang Yina et al. (2020) pointed out that the integrated unified market in the Yangtze River Delta has not yet formed. Compared with other cities in the Yangtze River Delta, Anhui has the strongest border effect and relatively lags behind in development [19]. Zhang Xueliang et al. (2021) believed that Anhui has given full play to its own advantages through the development of elevation quality, high-quality life and efficient governance, and has achieved remarkable results in integrating into the integrated development of the Yangtze River Delta [20]. Wu Xiaoqin et al. (2022) pointed out that Anhui should be integrated into the Yangtze River Delta by level and time sequence [21]. Wang Shuqun et al. (2022) believed that Anhui is rich in natural resources, but its regional economic differences are obvious, and its links with other cities in the Yangtze River Delta region are relatively low, so it is necessary to further improve the regional cooperation strategy [22].

To sum up, existing literature studies fully illustrate the key role of promising governments and effective markets in regional cooperation, and further discuss the different functions of central and local governments. Scholars mainly focused on the integrated development pattern of integrated cities in the Yangtze River Delta from the overall perspective, and deeply analyzed the key links of the integrated development of the Yangtze River Delta. Some scholars also analyzed the path of Anhui's integration into the Yangtze River Delta from the perspective of Anhui. However, few documents systematically analyze how northern Anhui integrates into the integration of the Yangtze River Delta. The integration of the Yangtze River Delta should be the integration of policy coordination, no administrative barriers, smooth flow of elements, and connectivity of infrastructure. However, the development gap between northern Anhui and other regions in the Yangtze River Delta is significant, and it failed to catch up with the integration pace of other regions in a timely manner. Northern Anhui, which started late and has a low level, is a weak point in the development of Anhui, and is also a weak point in the integration of the Yangtze River Delta. As the "short of the short", the northern Anhui region is the key and difficult point in the integrated development of the Yangtze River Delta. So what is the current situation of integrating the Yangtze River Delta into the development of northern

Anhui? What are the development problems in northern Anhui? And how to promote the deep integration of northern Anhui with the integrated development of the Yangtze River Delta?

Based on this, this paper selects northern Anhui as the research object, deeply analyzes the opportunities of northern Anhui's integration into the Yangtze River Delta, and further clarifies the blocking points of northern Anhui's integration into the Yangtze River Delta in combination with the current situation and constraints of northern Anhui's integration into the Yangtze River Delta, so as to provide policy recommendations for northern Anhui's deep integration into the Yangtze River Delta and achieve high-quality development. The possible marginal contributions of this paper are: (1) This paper takes the northern Anhui region as the research object, which enriches the research field of regional cooperation in northern Anhui; (2) This paper deeply combs the key to the development of northern Anhui, providing theoretical support for the integration of northern Anhui into the Yangtze River Delta.

2. The Development Opportunity of North Anhui's Deep Integration into the Yangtze River Delta Integration

2.1. Multiple Policy Preferences to Provide Strategic Opportunities

Northern Anhui is an important part of Anhui's economic development. The successive multiple policies have stimulated the endogenous impetus for the development of northern Anhui and provided strategic opportunities for its development. In 2003, Anhui formally proposed to "integrate into the Yangtze River Delta", but it was not formally incorporated into the Yangtze River Delta. In 2004, the then Premier Wen Jiabao first put forward the strategy of "the rise of the central region", taking the promotion of coordinated regional development as the strategic focus of China's modernization drive, which provided strong support for the development of Anhui, and comprehensively accelerated the economic development of Anhui. In 2005, Anhui put forward the strategy of "eastward development", and the pace of integration into the Yangtze River Delta has accelerated significantly. In 2006, the guiding document of the rise of central China, "The Central Committee of the Communist Party of China and the State Council on the promotion of the rise of the central region of several opinions", was officially issued, providing policy support for the economic development of Anhui. In 2008, based on the population, resources, infrastructure, etc. of northern Anhui, Anhui Province issued "Several Opinions on Accelerating the Development of Northern Anhui and Some Cities and Counties along the Huaihe River", which for the first time put the revitalization of northern Anhui into the focus of provincial development, and clarified the urgent need for the development of northern Anhui. In 2010, "Several Opinions on Further Accelerating the Development of Northern Anhui" pointed out that government should strengthen overall planning and coordination, earnestly implement the implementation measures for the development of northern Anhui, and promote the faster development of northern Anhui. In 2011, in view of the unbalanced regional economic development in Anhui, especially the lagging development of northern Anhui, the Anhui Provincial Government successively issued inclined support policies to overcome the development difficulties in northern Anhui, and again clearly pointed out that accelerating the revitalization of northern Anhui should be the strategic focus of promoting regional coordinated development. In 2014, the CPC Anhui Provincial Committee and the provincial government put forward in "the Several Opinions on Promoting Sound and Rapid Development of Northern Anhui Province" that it is necessary to further strengthen support for the development of northern Anhui, especially pointing out ten aspects of key support, such as reform and innovation, infrastructure construction, and talent support, so as to promote sound and rapid development of northern Anhui and point out the direction for high-quality development of northern Anhui. However, at this time, the northern Anhui region was still not fully included in the Yangtze River Delta urban agglomeration. The strategic opportunities for

the development of northern Anhui mainly came from the Anhui Provincial Party Committee and the provincial government, and it has always been in the outer circle of the integrated development of the Yangtze River Delta. Until 2018, "the Three Year Action Plan for the Integrated Development of the Yangtze River Delta Region (2018-2020)" has defined the common vision of Shanghai, Jiangsu, Zhejiang and Anhui for the high-quality integrated development of the Yangtze River Delta. Fully integrating into the Yangtze River Delta integration is an important way for northern Anhui to achieve leapfrog development. In 2019, the State Council issued "the Outline of the Yangtze River Delta Regional Integration Development Plan", expanding the planned area to all regions of "three provinces and one city" in Shanghai, Jiangsu, Zhejiang and Anhui, and bringing great opportunities to northern Anhui. The strategies of the rise of the central region, the revitalization of northern Anhui, and the integrated development of the Yangtze River Delta have become historic opportunities for the development of northern Anhui, bringing unprecedented policy dividends to the development of northern Anhui. In 2020, the National Development and Reform Commission issued "Several Policies and Measures to Promote Northern Anhui to Undertake the Construction of Industrial Transfer Clusters", which customized "24" exclusive policies for northern Anhui from improving major policies, implementing major initiatives, and building major platforms, to support the construction of cluster areas, and stimulated the huge potential of industrial transfer development in northern Anhui. In the same year, the Anhui Provincial Party Committee and the provincial government attached great importance to the deep integration of northern Anhui into the Yangtze River Delta integration, formulated "the Implementation Plan for Northern Anhui to Undertake the Construction of Industrial Transfer Clusters", and "the Implementation Plan for Several Policies, Measures and Tasks of the State to Promote Northern Anhui to Undertake the Construction of Industrial Transfer Clusters" in a Timely manner, established a leading group to accelerate the development of northern Anhui at the provincial level, and took the construction of the cluster as a breakthrough, started the construction of "6+2+N" industry undertaking platform system. In July 2021, the Central Committee of the Communist Party of China and the State Council issued "the Opinions on Promoting the High Quality Development of Central China in the New Era", again proposing to promote the construction of industrial transfer clusters in northern Anhui and actively undertake the transfer of emerging industries", indicating the key areas of development in northern Anhui. In December 2021, the National Development and Reform Commission officially released "the Implementation Plan for Shanghai Jiangsu Zhejiang Cities to Cooperate and Help Cities in Northern Anhui", which clearly pointed out that the overall requirements for paired cooperation and assistance work are to promote the less developed regions such as northern Anhui to keep up with the high-quality development pace of the Yangtze River Delta region, and to fully stimulate the regional and resource advantages of northern Anhui. In 2022, "Anhui Province to implement the Yangtze River Delta integrated development plan "Fourteenth Five Year Plan "action plan" pointed out to focus on "integration" and "high quality", focus on promoting the revitalization of northern Anhui, give full play to the advantages of space, resources, markets and other advantages of northern Anhui, use the national promotion of northern Anhui to undertake industrial transfer agglomeration construction of a number of policies and measures, solid promotion of Shanghai, Jiangsu and Zhejiang cities twinning cooperation to help northern Anhui cities, and promote the integration of northern Anhui into the Yangtze River Delta depth.

In the past two decades, the introduction of successive policies has provided strategic opportunities for the development of northern Anhui. With the support of multiple policies, the development of northern Anhui has achieved remarkable results. In particular, northern Anhui has successfully become a "shift student" from a "bystander" in the Yangtze River Delta, bringing a historic opportunity for northern Anhui to deeply integrate into the Yangtze River

Delta integration. The opening of the pair cooperation and assistance model has actively promoted the development process of northern Anhui undertaking the Yangtze River Delta industrial transfer cluster area, accelerated the integration of northern Anhui into the Yangtze River Delta, overcome the weak links in the development of northern Anhui, and greatly released the policy dividend of northern Anhui development.

2.2. Rich Human Resources are Conducive to Releasing the Demographic Dividen

Northern Anhui is rich in human resources and has huge market potential, which is expected to release demographic dividend in the future. The advantages of human resources in northern Jiangsu and northern Anhui are obvious. In 2020, the top three non-central cities in the Yangtze River Delta are Xuzhou, Fuyang and Suzhou, among which the permanent population of Xuzhou is 9.08 million, that of Fuyang in northern Anhui is 8.2 million, and that of Suzhou is 5.33 million, while that of other regions in northern Anhui exceeds 3 million except Huaibei. As one of the most active factors in national economic development, human resources can promote the development of the whole economy and society. On the one hand, the rich human resources and cheap labor force provide a strong support for the northern Anhui region to undertake the industrial transfer cluster; On the other hand, the huge potential of consumer market and investment market has attracted foreign investment to a large extent. By attracting investment to give full play to the advantages of market resources in northern Anhui, thus promoting the deep integration of northern Anhui into the Yangtze River Delta market integration, the formation of the Yangtze River Delta region within the large cycle of the market, is conducive to the construction of a new double-cycle development pattern.

From the perspective of population age structure, the working age accounts for a large proportion in northern Anhui, which is expected to continue to release the demographic dividend. The proportion of the population aged 0-14 in six cities in northern Anhui exceeds the average level of the Yangtze River Delta, the proportion of the population under 14 exceeds 20%, and the proportion of Bozhou is as high as 25.61%, with rich medium and long-term human resources; The proportion of the working population aged 15-59 is about 60%. The large labor population provides an important support for the development of labor-intensive industries in northern Anhui, which is conducive to stimulating the endogenous impetus for the development of northern Anhui.

From 2011 to 2019, the natural population growth rate of northern Anhui was significantly higher than that of other regions. Horizontal analysis shows that the natural population growth rate of northern Anhui is generally higher than that of other non-central cities, with comparative advantages. The babies born from 2001 to 2005 are entering the labor market, while the babies born from 2006 to 2019 will gradually enter the labor market in the next decade. In terms of time sequence, the natural population growth rate in northern Anhui fluctuated from 2001 to 2019, but it showed an overall growth trend. That is to say, the advantages of human resources in northern Anhui will continue to be released for a long time in the future, providing sustained and strong support for the development of northern Anhui.

2.3. Undertake the Industrial Transfer Cluster Area, and Continuously Improve the Quality of Industrial Development

Northern Anhui is located in a strategic location that moves from south to north and from east to west. With the vast Huaibei Plain, it is an important region driven by the radiation of the Yangtze River Delta. In 2019, "the Outline of the Yangtze River Delta Regional Integration Development Plan" pointed out that it is necessary to build a cluster area to undertake industrial transfer in northern Anhui and actively undertake industrial transfer. In 2020, the National Development and Reform Commission issued "Several Policies and Measures to

Promote the Construction of Industrial Transfer Clusters in Northern Anhui"; In 2021, Anhui Province will introduce "the Implementation Plan for the Construction of Industrial Transfer Cluster in Northern Anhui", respond to and support northern Anhui to undertake industrial transfer, promote northern Anhui to actively undertake the transfer of emerging industries, focus on supporting the undertaking of key links in the industrial chain, accelerate the building of industrial transfer cluster in northern Anhui as a breakthrough, take twinning cooperation and assistance as a platform link, actively support the cluster to cultivate and strengthen leading industries, and promote industrial agglomeration. In September of the same year, Anhui Province held a conference in Bengbu to enhance the momentum of high-quality development in the underdeveloped regions of the Yangtze River Delta and promote the construction of industrial transfer clusters in northern Anhui. It strengthened the implementation of the "24 rules" and successively formulated the work arrangements, supporting policies, evaluation and assessment methods for accelerating the construction of industrial transfer clusters in northern Anhui, which provided institutional guarantee for northern Anhui to undertake industrial transfer. In 2020, North Anhui will undertake 1077 foreign investment projects under construction in the industrial transfer cluster zone of more than 100 million yuan, with a year-on-year growth of 15.93%. The actually paid in capital was 263.799 billion yuan, up 11.02% year on year. In 2021, Northern Anhui will undertake the industrial transfer cluster area and achieve remarkable results. 2092 foreign investment projects worth more than 100 million yuan are under construction, and 506.16 billion yuan has been actually paid in. In the first three quarters of 2022, North Anhui undertook 1260 projects invested outside the province with an amount of more than 100 million yuan under construction in the industrial transfer cluster area, an increase of 90 over the same period last year, and the actual funds paid in were 296.31 billion yuan, an increase of 11.43% over the same period last year. In 2020, Jiangsu, Zhejiang, Guangdong, Shanghai and Beijing ranked the top five provinces and cities in Anhui in terms of investment capital, with the actual paid in capital of 1099.69 billion yuan, up 15.8% year on year; Accounting for 78% of the province, up 2.3 percentage points year on year. Shanghai, Jiangsu and Zhejiang invested 3493 projects worth more than 100 million yuan in Anhui, with 749.05 billion yuan actually paid in, up 16.8% year on year; Accounting for 53.1% of the whole province, up 1.9 percentage points year on year. The high-level undertaking of the industrial transfer cluster area in the Yangtze River Delta by northern Anhui is a practical action to implement the national deployment strategy, and also a major opportunity for northern Anhui to deeply integrate into the integration of the Yangtze River Delta.

First of all, northern Anhui has obvious regional advantages, connecting from east to west and from north to south. In recent years, the traffic layout network in northern Anhui has been optimized. In particular, the opening of high-speed railway has greatly narrowed the distance between northern Anhui and the important growth poles in the Yangtze River Delta, enhanced the interaction between northern Anhui cities and Hefei Metropolitan Circle, Nanjing Metropolitan Circle, Hangzhou Metropolitan Circle, and Shanghai Metropolitan Circle, optimized the allocation of elements and resources, and provided unique conditions for undertaking industrial transfer, The regional advantages of northern Anhui in the development pattern of the Yangtze River Delta have been highlighted, which is conducive to the growth spillover of northern Anhui. Secondly, northern Anhui has a large area of cultivated land. Compared with southern and central Anhui, northern Anhui has the largest plain area, accounting for about 69% of the province's plain area. Northern Anhui has a cultivated land area of 32.065 million mu. The vast cultivated land area guarantees the demand for construction land in northern Anhui to undertake industrial transfer and construction cluster areas. There is a large space for development, which provides favorable conditions for undertaking industrial transfer. At the same time, northern Anhui is rich in mineral resources, with proven reserves of 1.8 billion tons of coal, more than 2 billion tons of iron, hundreds of

thousands of tons of lead and zinc, 300000 tons of copper, and tens of tons of gold. The irreplaceability of coal, iron and other mineral resources provides important support for northern Anhui to undertake industrial transfer, and becomes the driving force for northern Anhui to deeply integrate into the Yangtze River Delta integration.

3. The Current Situation and Problems of North Anhui's Deep Integration into the Yangtze River Delta Integration

Since northern Anhui was included in the Yangtze River Delta region, the development momentum of northern Anhui has been strong and remarkable achievements have been made. However, there are still a variety of constraints in the northern Anhui region that hinder the integration of northern Anhui into the Yangtze River Delta, and it is difficult to meet the requirements of high-quality development of the Yangtze River Delta integration.

3.1. Institutional Barriers

In recent years, the introduction of a series of policies has accelerated the integration of northern Anhui into the Yangtze River Delta, but there is an access threshold for regional mechanism differences, which hinders the integration of northern Anhui into the Yangtze River Delta. The system of northern Anhui is still limited to the division of administrative regions, which cannot be well connected with the mechanisms of other regions in the Yangtze River Delta, and there are administrative barriers. By actively undertaking industrial transfer and agglomeration, northern Anhui has tried to deeply integrate into the integration of the Yangtze River Delta, and has also achieved certain results. However, the integrated development of the Yangtze River Delta is not a simple industrial division of labor. To establish a stable and long-term cooperative relationship, breaking the restrictions of regional planning and mechanism system is the key to achieve regional integration. Due to the existing administrative divisions, departments and industry barriers, the system and mechanism are not smooth, and the city boundary is obvious, and northern Anhui has not been fully integrated into the Yangtze River Delta.

Since the national strategy of Yangtze River Delta integration was put forward, local protectionism still exists, and administrative barriers hinder the free flow of capital, technology, labor and other elements [23]. Administrative barriers mainly include administrative barriers and regional differences barriers. Among them, administrative barriers are excessive government intervention in the management of micro affairs, such as cumbersome and redundant approval procedures, market access rules in competitive areas; Regional difference barriers are due to the differences and imbalances in the economic development of different regions [24]. Due to the different demands for actual interests of different administrative divisions, local governments set restrictions on the cross regional flow of commodities, capital, labor, technology and other elements to protect the interests of their own regions, resulting in the northern Anhui region always being at the edge of the Yangtze River Delta. In terms of GDP, the GDP of northern Jiangsu in 14 non-central cities is far higher than that of western Zhejiang and northern Anhui, of which the GDP of Xuzhou is up to 732 billion yuan, while that of Fuyang, the highest in northern Anhui, is only 280.5 billion yuan. From the perspective of per capita GDP, the per capita GDP of Xuzhou and Huai'an in northern Jiangsu has exceeded 80000 yuan, and that of other regions in northern Jiangsu has also exceeded 60000 yuan. There is little difference between Quzhou and Lishui in western Zhejiang and northern Jiangsu. There is still a large gap between the per capita GDP of northern Anhui and that of northern Jiangsu and western Zhejiang, and there is also a significant gap between the six divisions in northern Anhui. Bengbu ranks first in northern Anhui with 63,209 yuan, followed by Huaibei with 56,661 yuan, while the per capita GDP of Bozhou and Suzhou is less than 40,000 yuan. It can be concluded that there are significant differences in the economic development of northern Jiangsu, western

Zhejiang and northern Anhui, and the economic development of each city in northern Anhui is also very different, which makes the development priorities of each city different, thus creating barriers to regional differences, which is not conducive to the integration of northern Anhui into the Yangtze River Delta.

3.2. Low Level of Industrial Structure and Insufficient Scientific and Technological Innovation Capability

The proportion of three industries in northern Anhui has been adjusted from 33 : 32.9 : 34.1 in 2000 to 12.22 : 38.06 : 49.71 in 2020. The level of industrial structure has been improved and the industrial structure has been optimized to a certain extent. The industrial development of the six cities in northern Anhui has its own characteristics, such as the traditional Chinese medicine and Baijiu in Bozhou, the coal industry in Huainan and Huaibei, the agriculture in Fuyang, the food processing and textile industry in Suzhou, and the electronic information industry in Bengbu. However, the industrial development in northern Anhui is still insufficient, the level of industrial structure is still not high, and the scientific and technological innovation ability is insufficient. There are still major problems.

Science and technology are the foundation of a country's prosperity, innovation is the soul of national progress, scientific and technological innovation is the core of innovation driven development strategy, and the key to economic growth and enterprise wealth creation. It can be seen that only Huaibei and Bengbu account for more than 40% of the secondary industry in Huaibei, while the secondary industry in Huainan accounts for 39.34%, while the secondary industry in Northern Jiangsu accounts for more than 40%. Among them, the secondary industries in Huaibei and Huainan are mainly resource-based industries with low technology content, low added value and low scientific and technological innovation capacity. Bengbu's secondary industry is dominated by high energy consumption, high pollution heavy chemical industry and manufacturing industry. The other three cities are still dominated by traditional industries, with low industrial structure benefits. The industrial layout in northern Anhui is also concentrated in industries with high pollution, weak sustainable development capacity and low industrial capacity, such as natural resource development, agricultural and sideline products deep processing. The development of high-tech industries, cultural industries and other emerging industries is relatively backward. On the one hand, this is due to its weak industrial foundation in history. On the other hand, the six cities in northern Anhui are undertaking labor-intensive industries in Jiangsu and Zhejiang, which has led to the failure of northern Anhui to form its own complete industrial system. Compared with Quzhou and Lishui, which are also relatively backward in development in Zhejiang Province, it can be found that the industrial structure in western Zhejiang is developing towards both secondary and tertiary industries. The industrial development of Quzhou and Lishui shows the structural characteristics of "three, two and one", and the overall structure has been improved. An obvious evidence is that Quzhou is known as the national electronic silicon material manufacturing center, mining machinery manufacturing center, fluorosilicone chemical manufacturing center, and the hometown of bamboo charcoal. Lishui has formed a regional characteristic industry focusing on high-end equipment manufacturing industry, intelligent household appliances industry, and big health industry, each with its own characteristics. Although the proportion of the tertiary industry in northern Anhui has been greatly increased compared with that 20 years ago, the development of the tertiary industry has not formed an advantageous feature. On the whole, the industrial development in northern Anhui is characterized by "weak primary industry, small secondary industry, and poor tertiary industry". In particular, the scientific and technological innovation ability is not high, the lack of a good scientific and technological innovation environment, the secondary industry is dominated by traditional industries, the lack of technological innovation industries, excessive dependence on natural resources, and the weak innovation driving ability,

it is difficult to provide inexhaustible power for regional development, and it is difficult to achieve sustainable development. This is the resistance of the integration of northern Anhui and northern Anhui into the high-quality development of the Yangtze River Delta.

3.3. Strong Siphon Effect of Growth Pole

The development mode of regional integration in the Yangtze River Delta is to build an innovation system led by innovation growth pole, coordinated innovation of industrial chain and inter regional linkage innovation. The growth pole will drive the development of surrounding areas through the radiation effect, and will also aggravate the economic gap between regions through the polarization effect. The siphon effect of the economically developed growth poles in the Yangtze River Delta region is strong, which will attract high-quality factor resources from underdeveloped regions and aggravate the development gap between regions. For example, Shanghai, Nanjing, Hangzhou and other regions gather a large number of high-quality resources, and the talents and factor resources in northern Anhui all flow to developed regions.

The opening of high-speed railway has accelerated the flow of economic factors among cities, and has also promoted the concentration of capital, talents and information to cities with superior development environment and high administrative efficiency, thus expanding the economic gap between cities along the high-speed railway and regional central cities, resulting in a "siphon effect". Compared with other developed cities in the Yangtze River Delta, there is still a big gap in economic attraction in northern Anhui. In particular, the central cities in the Yangtze River Delta have many high-quality large enterprises, as well as multinational companies, which have formed an industrial structure dominated by service economy. Moreover, with diversified industrial types, developed market economy, and intensive science and technology industries, a large number of R&D personnel are needed, and a large number of high-quality technical talents flock to the central cities. In addition, various factories and front-line technicians in central cities have also generated a large number of employment opportunities. In addition, high-quality employment environment, diverse job opportunities, and generous salaries have led to the loss of talents, resource elements, etc. to developed areas, which has led to a more prominent contradiction between the shortage of technical talents and industrial development in northern Anhui. Talents are the foundation of development, innovation and competition. The development of manufacturing industry needs the support and promotion of a large number of innovative talents and teams, and high-level professional and technical talents are particularly scarce in northern Anhui. First, because most enterprises cannot play the main role in cultivating highly skilled talents, and have not established an effective mechanism for evaluating, encouraging and flowing highly skilled talents, it is difficult and stressful to cultivate highly skilled talents. Second, due to the lack of regional advantages, the academician workstation has not been established, and the environment for the gathering and growth of high-tech talents has not yet been fully formed, the wages are not high, resulting in a shortage of scientific and technological innovative talents and a serious brain drain. The siphon effect of the growth pole has attracted a large number of high-quality resources and talents in northern Anhui, which is essentially due to the lack of industrial development in the region, the low vitality of the market economy, the unreasonable allocation of high-quality resources, and the inability of the region to provide more and better employment opportunities than the central cities, leading to the brain drain to economically developed regions, which has exacerbated the economic development gap between northern Anhui and other cities, It seriously hinders the integration of northern Anhui into the Yangtze River Delta.

4. Conclusions and Suggestions

To sum up, the deep integration of northern Anhui into the Yangtze River Delta integration is a key measure to promote the construction of a major domestic circular market. The successive multiple policies stimulated the endogenous impetus for the development of northern Anhui and provided strategic opportunities for the development of northern Anhui; Abundant human resources make northern Anhui have a huge potential market, which is conducive to the integration of northern Anhui into the Yangtze River Delta market; Undertake the industrial transfer and cluster area, making the industrial development in northern Anhui continuously improve and upgrade. However, the integration of northern Anhui into the Yangtze River Delta has always been hampered by institutional mechanisms, and there is an access threshold for regional differences in mechanisms; The industrial structure is low and the scientific and technological innovation ability is insufficient; The siphon effect of the growth pole is strong, which aggravates the development gap between regions. Northern Anhui is still a depression for the economic development of the Yangtze River Delta. In order to further promote the deep integration of northern Anhui into the Yangtze River Delta integration and achieve leapfrog high-quality development, this paper proposes the following suggestions:

4.1. Break Down Institutional Barriers and Refine and Integrate into the Yangtze River Delta Integrated Cooperation System

In order to deeply integrate into the integration of the Yangtze River Delta, northern Anhui must break down the institutional barriers, especially to break all kinds of administrative industry monopolies, eliminate local protectionism, build an open economy, further refine the integration cooperation system of the Yangtze River Delta, take the initiative to connect with the central cities of the Yangtze River Delta, establish a unified and standardized institutional system, form a unified and open market with free flow of factors, and enable the flow of talents and factors without barriers, jointly build and share all kinds of infrastructure to provide a strong endogenous impetus for higher quality integrated development. This requires the government to do something, improve the quality of government services, make a clear development plan, formulate a long-term development plan, adhere to one route and one direction, coordinate, integrate and arrange resources and forces, and actively promote the integration of northern Anhui into the Yangtze River Delta.

4.2. Actively Promote the Construction of Industrial Transfer Cluster and Optimize the Upgrading of Industrial Structure

It is the key to realize the transformation of economic development mode and sustainable development to undertake the professional transfer cluster area in northern Anhui. We must continue to promote the undertaking of industrial transfer clusters, cultivate and strengthen competitive industries and characteristic industries, focus on adjusting and optimizing the industrial structure, guide innovation with science and technology, strengthen the leading force of the secondary industry, and focus on the development of high-quality characteristic industries in the tertiary industry. When undertaking the industrial transfer cluster area in northern Anhui, we should base on the local characteristics and advantages, make overall planning, focus on the industrial chain to undertake the industrial transfer, so that each industrial park has its own characteristics and advantages, form complementary advantages in spatial distribution, cooperate to win the industrial layout, and avoid industrial homogenization and vicious competition. Actively learn from the development experience of western Zhejiang and northern Jiangsu, and issue detailed guidance on the future development goals, spatial layout, undertaking park construction, undertaking development priorities of the cluster area as soon as possible. In particular, it is necessary to purposefully, selectively and focus on attracting central cities to have supporting and cooperative projects that can be driven,

strengthen the association between enterprises in the industrial park, and better drive the coordinated and balanced development of northern Anhui, quickly catch up with the development pace of developed regions, and obtain growth and regional spillover effects.

4.3. Strengthen Scientific and Technological Innovation Ability and Create a Scientific and Technological Innovation Environment

Strengthening the ability of scientific and technological innovation and creating an environment for scientific and technological innovation is the key to achieving high-quality development in northern Anhui, and also an important link for northern Anhui to deeply integrate into the Yangtze River Delta integration. First of all, improve the regional scientific and technological innovation service system, drive the development of emerging technology industries with scientific and technological innovation, improve the market oriented mechanism and government guidance mechanism of technological innovation, and form advantageous and characteristic industries by strengthening the collaborative innovation of industry, university and research. Secondly, guide all kinds of innovation factors to enterprises, promote enterprises to become the main body of technological innovation decision-making, R&D investment and transformation of results, play the leading role of enterprises, the implementation of demand-oriented supply of scientific and technological achievements, guide enterprises to rely on the implementation of the project, play a leading role in the transformation and application of scientific and technological achievements, to create a good environment for scientific and technological innovation.

4.4. Fully Tap the Market Potential and Build a Double Cycle Development Pattern

Northern Anhui should give full play to the advantages of local human resources, fully stimulate market potential, improve the quality of products and services, strengthen industrial division and cooperation with surrounding areas, achieve dislocation and complementary development, and promote the transfer of employment of workers in northern Anhui Province. All municipal governments should strive to solve the outstanding problems such as insufficient employment and asymmetric information on labor employment, and further play the role of government promotion and market regulation; At the same time, strengthen the construction of human resources market in northern Anhui, guide northern Anhui to speed up the completion of provincial human resources services industrial park and professional, industry-specific talent, human resources services industry cluster market, create a regional human resources allocation center, give full play to the advantages of human resources in northern Anhui, actively promote the integration of talent, provide policy guidance and institutional safeguards for the integration of northern Anhui into the Yangtze River Delta. In addition, the government will retain talents through preferential policies, incentives and subsidies to form a large circular market in the region and mitigate the siphon effect of growth poles. Besides, northern Anhui should actively promote cross regional opening and cooperation with other cities in the Yangtze River Delta, and form a new development pattern where both internal and external cycles promote each other. Relying on the mode of pair cooperation and assistance, undertaking industrial transfer cluster areas, etc., strengthen cooperation and exchanges with other cities, deeply promote the integrated development of cities in northern Anhui and other cities in Shanghai, Jiangsu and Zhejiang in key areas, and integrate into the integration of the Yangtze River Delta in an all-round way.

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