

Significance of Synergetic Strategy of Factors, Infrastructure Development, and Trade in Regional Integration—A Case Study of the Yangtze River Delta Region

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Abstract

The Yangtze River Delta (YRD) is one of the regions with the most dynamic economy, the highest degree of openness, and the strongest innovation capability in China, possessing crucial factor markets, infrastructure development, and population resources. With the progress of China's reform and opening-up policies and economic development, the YRD has achieved remarkable economic growth and social progress over the past few decades. Research on the economic and social integration of the YRD aims to deeply understand the development status of factors, infrastructure development, and trade within the region, and to explore how to address issues of inter-regional cooperation, coordination, and integration in the corresponding direction. Comprehensive research methods, including desk research, quantitative analysis, and qualitative analysis, are needed to be adopted in this research. This paper primarily proves through data collection that the research on regional factors, infrastructure development, and trade integration in the YRD is of great significance for promoting regional synergetic development, optimizing resource allocation, and enhancing overall competitiveness.

Keywords: Yangtze River Delta region, factor market, infrastructure development, trade and investment, regional economic and social integration

1. Introduction

Existing domestic research mainly focuses on industrial development and layout, service economy, environmental governance and other aspects, while foreign research mainly focuses on regional exchanges and cooperation at the international level and other parts. Building upon previous research, this paper will further explore new models, strategies, and effects of the integration development of the Yangtze River Delta (YRD) region, supplementing the information of multi-perspective studies under the framework of regional integration of the YRD region in China, especially in the context of new domestic and international environments, to cope with challenges and achieve high-quality development in the YRD region. The development of factor markets is an inevitable requirement for regional integration development, infrastructure development is a necessary guarantee, and capital development injects vitality. The construction of these three major areas is an indispensable and important part of regional integration development. Subsequently, this paper will elaborate on the analysis of issues such as the integration of factor resources markets in the YRD, optimization of regional transportation network layout, improvement of communication infrastructure efficiency, optimization of the trade and investment environment, and then the relevant strategies and prospects will be presented. Through this research, we hope to provide scientific and reasonable decision-making recommendations for policymakers, offer reference information for enterprises and the public, stimulate new momentum for regional cooperation in the YRD, and promote the coordinated development of the economy and society in all provinces and cities within the region.

The significance of this research lies not only in providing theoretical and empirical support for the coordinated development of the YRD but also in proposing new ideas and solutions to promote the overall economic advancement of China. Simultaneously, this research aims to respond to the national policy calls for regional

integration and new urbanization strategy, providing a scientific basis for local government decision-making.

2. Literature Review on Integration of Factors, Infrastructure and Trade in the Yangtze River Delta Region

2.1 The Meaning of Regional Integration

Regional integration, an economics term, did not appear before 1942. By 1950, economists began to describe it as the state or process of integrating different economies into a larger economic entity. It was not until 1954 that Tinbergen first defined Regional Integration in his book *International Economic Integration* as the process by which a number of countries or regions cooperate with each other in order to weaken the forces that impede economic cooperation and exchanges, thereby creating an optimal economic structure between countries or regions. The essence of regional integration is to promote the free flow of factors in order to achieve the optimal allocation of regional resources. According to Li, Zhang, and Xia (2023), regional integration is both a process and a state. As far as the process is concerned, it consists mainly of the elimination of physical and institutional barriers to factor mobility between regions, i.e., transportation integration and institutional integration; as far as the state is concerned, it promotes the optimal allocation of factors and the realization of high-quality development of the economy, society and the environment under the two forces of agglomeration and dispersion. The report of the Twentieth Party Congress states, “Deeply implement the strategy of coordinated regional development, major regional strategies, the strategy of major functional zones, and the strategy of new-type urbanization, optimize the layout of major productive forces, and build a regional economic layout and territorial spatial system that has complementary advantages and high-quality development.” (Jinping, 2022). As one of the most active regions in China’s economic development, the YRD region, the enhancement of its regional integration level is of great significance in promoting the sustainable development of the regional economy.

2.2 Domestic and Foreign Related Research

In previous studies on regional integration, domestic and abroad scholars have carried out relevant studies with different focuses. Domestic studies have mainly focused on industrial development and layout, service economy and environmental governance. For example, research on the spatio-temporal expansion of metropolitan area through industrial development big data, research on the development of business district of urban agglomeration using urban agglomeration panel data as research samples (Yiwen, Jiangang, & Di, 2023; Gangbang, 2023); analysis of the reconstruction of the leisure and sports market order in the Yangtze River Delta region from the perspectives of the theory of market order governance and regional integration and development, and research on the optimization of the layout of the elderly service facilities in the context of the integration (Yiwen, Jiangang, & Di, 2023; Jin & Zhengguo, 2023); and the assessment of the environmental governance effect based on the DID model (Wuqi, & Xiaohui, 2023). While abroad, Sebastian Bobowski studied cooperation and resilience in the East Asian region and Ben Shepherd studied regional integration in African value chains (Bobowski, 2023; Shepherd, 2023).

2.3 Possible Innovations and Shortcomings

Taken together, scholars at home and abroad have done a great deal of relevant research on the thesis of regional integration, but from a foreign point of view, most of them focus on a wide range of research on Africa, East Asia, Europe, South Korea and other regions or national perspectives, and there are few relevant studies on a certain region of China; While few domestic related studies have been conducted from multiple perspectives, and most of the factor aspects are production, capital, technology, etc. (Xinwei et al., 2021; Yuying, 2023). In this paper, on the basis of the analysis of capital and technology, the analysis of human and administrative factors is added; in terms of infrastructure, there is a discussion of landscape infrastructure (Zhang & Zhai, 2021), as well as a study of the obstacles of administrative factors in transportation facilities, and this paper will add a new study in terms of natural factors and resource allocation; in terms of trade, there is a study of the impact of imported trade (Mei, 2021), and more on the Pilot Free Trade Zone (PFTZ), which is a new area for the study of the impact of imported trade. In this paper, this aspect will be discussed in terms of location, competition and policy.

Due to certain limitations in data acquisition, my insufficient knowledge and lack of research ability, this paper may have certain deficiencies. On the one hand, there is not enough visualized data on transportation information in the YRD region, so this paper cannot carry out a detailed and profound study; on the other hand, due to the relatively limited accumulation of my knowledge in this field, there may be the problem of insufficiently deep theoretical analysis of the integration of the Yangtze River Delta and insufficiently comprehensive exploration of the mechanism.

3. Research Methodology

3.1 Desktop Research

It can also be called desktop research, which is a research method based on existing secondary information through computers, books, the Internet, etc. It is a non-field research method that collects, organizes and analyzes existing information to obtain the data and knowledge needed for research. Desktop research is able to draw on a wide range of perspectives to apply itself. This paper pays attention to the use of authoritative sources, and tries to select information from academic journals, government agencies, and other credible sources. At the same time, the massive amount of data to do a good job of screening, to ensure that the selected information is informative, the use of rigorous discourse.

3.2 Qualitative Analysis

Qualitative analysis is a descriptive research methodology in which non-numerical data are collected, organized and analyzed to gain an in-depth understanding of phenomena and issues. The article uses textual analysis to analyze textual materials such as books, articles, and reports to extract and interpret the themes, ideas, and meanings in them. Group discussions are organized to identify views, attitudes, and opinions to form descriptive conclusions through group discussions.

3.3 Quantitative Analysis

Quantitative analysis method is a research method based on numerical data, which collects, organizes and analyzes numerical data in order to obtain a quantitative understanding of phenomena and problems. This paper organizes the collected data and analyzes the trend of population aging in China over the past 10 years and the impact of this change. Data on cross-provincial and municipal transportation cooperation are recorded and analyzed to provide quantitative results and statistical inferences.

4. Reflection on the Resistance to Regional Integration in the YRD Region Based on Factors, Infrastructure Development, and Trade Directions

4.1 Resistance to Factor Market Integration

4.1.1 Population Aging and the Siphon Effect in Large Cities

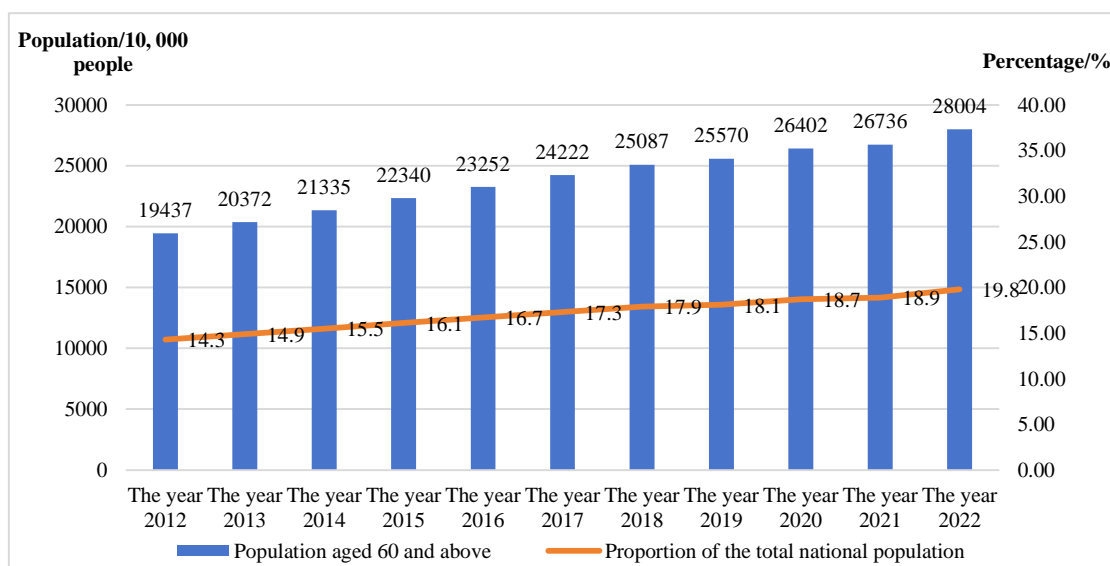


Figure 1. Number and proportion of population aged 60 and above in China from 2012 to 2022

As shown in Figure 1, the proportion of people aged 60 and above in China is increasing year by year. The decline in birth rates and increased average lifetime have intensified the growth of the older adult population. The YRD region is also grappling with the challenge of a shifting demographic composition, characterized by a growing proportion of older adults. This demographic shift is expected to result in a decrease in the working-age population, potentially leading to labor shortages in certain cities.

Large, medium, and small cities, to develop their urban economies and complete the assessment indicators, have

successively introduced various policies to attract high-end talents. However, the economic core zones centered around Shanghai and Nanjing generate a strong “siphon effect” on talents, possessing substantial attractiveness to talents from surrounding cities, which results in a shortage of high-end talent in other cities, leading to fewer landing opportunities for high-tech enterprises and insufficient innovation capabilities. A scarcity of enterprises also reduces employment opportunities, further diminishing the attractiveness to high-end talents, and forming a disadvantageous cycle. The lack of urban development is detrimental to the integration process.

With the deepening of supply-side reforms in China and the construction of a dual circulation of domestic and international markets, higher requirements are put forward in the field of high technology, and the original skill structure will gradually be phased out by the market, presenting new challenges for the skill qualities of the broad masses of workers. In this context, the inability of the working-age labor force to find suitable employment positions leads to the wastage of the labor force and is detrimental to the stability of urban industrial structures.

4.1.2 Changes in the Macro Environment and the Capital Attraction Capacity of Large Cities Affect Capital Flows

Currently, the international situation is complex and volatile, and the world is now undergoing momentous changes unseen in a century. China is at a crucial stage of economic and social development, emphasizing the necessity of a peaceful and secure international environment. Leveraging its superior conditions, the YRD region opened up to the outside world early, attracting a large influx of circulating capital in the early stages. However, on the one hand, Western capitalist countries, led by the United States, are imposing restrictions on China’s commodity imports and exports and the utilization of technology patents. On the other hand, the Sino-American Cold War has led to a slowdown in international capital inflows and a decrease in foreign capital.

Core cities gather a large number of high-quality enterprises and high-end talents, possessing a systematic infrastructure and well-developed supporting services that can better generate interest. Most of the interest-chasing capitals flock to the core cities. Meanwhile, the development of Jiangsu, Zhejiang, and Shanghai surpasses that of Anhui. Under the current administrative system, each province and region has formed a relatively closed and self-contained economic operation system, with prevalent regional protectionism and regional departmentalism, resulting in slow progress in the coordinated development of regional economies.

4.1.3 Technological and Information Barriers Impede Market Integration

The scientific and technological level, infrastructure, and supporting capabilities vary among different cities. When the same technology is specifically exchanged, some cities may find themselves in a predicament where it is difficult to convert the acquired technology into products. Merely possessing technology without output may frustrate the enthusiasm for regional technological information integration in certain cities.

The YRD region is composed of multiple cities, each of which may have differences in technical standards and specifications, and also have concerns about the privacy of each other’s data, leading to the preservation of shared data. This inconsistency and reservation may impede the connectivity between the technology and information market, limiting the extent and impact of cross-city cooperation and resource sharing.

4.1.4 The Fragmentation of Administrative Regions and the Repeated Construction of Public Facilities Result in a Low Land Utilization Rate

While the pace of regional economic integration continues to accelerate, the construction of large cities by various provinces has led to the allocation of land in surrounding cities, and fragmented land market management among cities, each pursuing individualistic policies. The vicious competition formed between cities for attracting investment leads to distorted regional land prices and low land utilization efficiency, and consequently a relatively chaotic regional land market (Yang, 2009).

To attract investment, cities within the region push down low prices and even implement various policy feedback mechanisms, artificially depreciating the land value. Administrative divisions result in the segmentation of the land market among cities, failing to establish unified market transaction rules. This disruption to the land market pricing directly leads to extensive utilization of industrial land within the region. Simultaneously, the notable duplication of public facilities also causes substantial resource wastage (Zhan, 2011). Taking Jiangsu as an example, nine airports have been constructed, with Suzhou even applying to build its own airport, which has led to substantial overlap in functional radiation ranges.

4.2 Dual Challenges of Traffic Bottlenecks and Resource Balance

The YRD urban agglomeration, as one of the fastest-growing economic regions in China, occupies a pivotal position both domestically and internationally due to its vast geographical area and numerous cities. This region covers three provinces and one municipality: Shanghai, Jiangsu, Zhejiang, and Anhui, with many economically

developed cities such as Shanghai, Nanjing, Hangzhou, Suzhou, Hefei, Wuxi, Changzhou, and Ningbo.

Due to the vast geographical expanse of the YRD urban agglomeration, its internal natural and geographical conditions are complex and changeable, and the spanning of the Yangtze River has become a significant challenge in its development. The Yangtze River is not only the mother river of China but also an important economic belt. However, its existence, while facilitating economic exchanges among cities along its banks, also forms a natural barrier between cities on both sides. Especially in the transportation sector, despite notable improvements in connectivity along the Yangtze River, there are still limitations to some extent, which not only increase costs in logistics transportation but also bring inconvenience to personnel exchanges.

Transportation is a crucial artery for the development of the YRD urban agglomeration. However, due to inconsistent policies and systems and varying market economic conditions in the region, the connectivity of infrastructure development lacks uniformity. Examples include not uncommon phenomenon of broken roads and waterways. This results in inefficient connections for various transportation modes, hindering the comprehensive utilization of resources, and restricting the free flow of transportation factors (Jinping, 2022). These practical issues seriously affect the mobility and connectivity within the region. Despite recent vigorous efforts in the region to promote transportation infrastructure development, such as expanding the expressway network and building the Yangtze River Bridge, the improvement and optimization of the transportation network is a long-term and complex process that requires substantial capital investment and scientific and technological support.

The newly released *Cooperation Agreement on the Implementation of Cross-Provincial and Municipal Transportation Infrastructure Fast Connectivity in the Yangtze River Delta (2022-2025)* comprises 66 public transportation integration construction projects within the region, with details provided in the table below.

Table 1. Project list of cooperation agreement on the implementation of cross-provincial and municipal transportation infrastructure fast connectivity in the Yangtze River Delta

Overview	Subdivision	Number/Pieces	Total/Pieces
Number of projects involving three provinces/cities	Shanghai, Jiangsu, Zhejiang	2	4
	Shanghai, Jiangsu, Anhui	1	
	Jiangsu, Zhejiang, Anhui	1	
	Jiangsu, Anhui	29	
Number of projects involving only two provinces/cities	Jiangsu, Zhejiang	10	62
	Zhejiang, Anhui	4	
	Shanghai, Jiangsu	11	
	Shanghai, Zhejiang	8	

It can be seen that the integration cooperation between the two parties is becoming more frequent and closer, among which the number of integration projects between Jiangsu and Anhui ranks first, while the integration cooperation among the three provinces and cities appears to be less satisfactory.

Additionally, the issue of uneven distribution of public resources in the YRD region is becoming increasingly prominent. With the rapid economic development, the resource allocation capability of regional central cities such as Shanghai has been continuously enhanced, while some marginal areas lag comparatively. This internal unbalanced development poses challenges to the coordinated development of the entire YRD. In the allocation of resources in areas such as education, medical care, and environmental protection, inequality is undoubtedly a major obstacle to promoting the harmonious development of the whole regional society.

4.3 Limitations in Trade and Investment

1) Imbalanced utilization of location advantages and resource endowments

There are differences in location advantages and resource endowments among different cities and regions in the YRD. Some cities excessively rely on a specific type of resource or industry, leading to the waste of other resources and the failure to fully exploit their potential, consequently resulting in resource misallocation and inefficient allocation of production factors. This hinders the synergetic economic development and comprehensive competitiveness of the entire YRD region and also restricts the stable development of the YRD urban agglomeration.

2) Industrial characteristics and market competition

Some industries in the YRD region experience homogenous competition, where multiple enterprises engage in similar industries or produce similar products, resulting in fierce market competition and narrowing profit margins. This has adversely affected the profitability and return on investment of enterprises. In the market competition, technological barriers and the protection of intellectual property are significant issues. If certain enterprises possess core technology and intellectual property and can effectively protect them, they may have stronger market competitiveness. However, other businesses may face difficulties in acquiring technology and the risk of intellectual property infringement.

3) Policy barriers and regional protectionism

The YRD region involves multiple provinces and cities, presenting challenges in administrative management and policy convergence among different regions. The lack of a coordinated mechanism and consistent policies may hinder the smooth operation and cooperative development of the industrial chain. To attract investment, all regions in the YRD compete by introducing preferential policies, falling into the “dumping” competition. Taking land transfer as an example, the land transfer price in certain areas of southern Jiangsu is as low as 50, 000 yuan per mu. Under the pressure of vicious competition, the surrounding areas like Wujiang, Ningbo, and Hangzhou have to lower land prices to an ultra-low level of 50, 000 yuan per mu. However, the investment in infrastructure and land transfer fees in mature development zones should be at the level of 150, 000 yuan per mu. The price difference is paid by the government, resulting in a huge expense on local finances (Tang et al., 2023).

5. Feasibility Analysis of Integration Construction in Factors, Infrastructure Development, and Trade

5.1 Feasibility Analysis of Factor Market Integration

1) Solid talent reserves and infrastructure development

The YRD region possesses abundant human resources, including high-quality talents and labor resources. All regions have accumulated experience in the development and cultivation of human resources, and there is a well-established education and training system. The integration of the human resources market can facilitate the flow and exchange of talents, optimize the allocation, improve the efficiency of talent allocation, and enhance the innovation capabilities and competitiveness of the entire region.

2) Well-established financial system

The YRD region is one of the most developed economic regions in China, with a relatively well-established financial system and capital markets. Various areas have achieved certain results in capital market construction and financing. Factor market integration can facilitate the flow and allocation of capital, improve the efficiency of capital utilization, and provide more opportunities for enterprise growth.

3) High-level enterprise institutions and innovative research and development capabilities

The YRD region has a high level of scientific and technological innovation and technology research and development, and there are several outstanding high-tech enterprises and research and development institutions in various regions. Factor market integration can promote the sharing and collaboration of technology, strengthen technological innovation capabilities, and enhance the competitiveness and innovation capabilities of the entire region's industries. Information sharing plays a catalytic role in the path of factor market integration.

4) Overall coordination of land resources and improvement of resource utilization efficiency

The land resources in the YRD region are relatively limited, but based on the national planning and land use redlines, there are certain land reserve and utilization plans in various regions. On the one hand, factor market integration can promote the rational utilization and allocation of land resources, improve land utilization efficiency, and promote the coordination of industrial development and urban planning; on the other hand, it can optimize the layout of land structures (Yang, 2009).

5.2 Strategic Measures to Implement the Synergetic Development in the YRD Region

Since the early 1990s, starting with the development of the Pudong New Area, the economy of the YRD region has developed rapidly. In 2002, utilizing less than 1% of the national land area and 5.8% of the population, the region contributed 1.9142 trillion yuan to the Gross Domestic Product (GDP) and 404.2 billion yuan to fiscal revenue, accounting for 18.7% and 21.4% of the national totals, respectively. During this period, the per capita GDP in the YRD reached 25,300 yuan, which is 2.2 times the national average of 7,932 yuan, demonstrating that the region holds a leading position nationwide in comprehensive competitiveness across various aspects, including economy, culture, science and technology, and environment. This economic prosperity provides a solid foundation for the construction of a regional large-scale transportation system, information and communication networks, and regional integration. The YRD now has the most advanced transportation network, a relatively

complete industrial system, and leading levels of education and science and technology in China (Zhao et al., 2021). In such a highly developed region, the integration between cities is not only necessary but also feasible (Sun, 2004).

Therefore, the goal of the three provinces and one city should be the creation of a green, efficient, and diverse comprehensive transportation system. This involves constructing a comprehensive transportation control system in the demonstration area from four aspects: efficient and fast public transportation, convenient and orderly road transportation, user-friendly and accessible characteristic transportation, and flexible and diverse intelligent transportation, to explore and form cross-provincial integrated connection technologies of transportation (Liu, Xu, & Kong, n. d.).

5.3 Strategic Significance of Trade and Investment Integration

1) Deepening pathways of regional trade cooperation

Reducing trade barriers and simplifying customs clearance procedures to facilitate trade cooperation among enterprises within the YRD region helps enhance the scale and efficiency of intra-regional trade and promote the creation of employment opportunities. The YRD region can actively participate in the negotiation and signing of free trade agreements, establish a more open and stable trade environment, attract more foreign investment and multinational companies to invest in the region, achieving interactive development of trade and investment.

2) Industrial investment, optimization, and upgrading

All regions in the YRD should comprehensively consider factors like resource endowment, market demand, and national policies, to enhance regional competitive advantages and break the “vicious” competition pattern of industrial structure homogenization. For example, Zhejiang and Jiangsu can make optimal choices around industries such as bioengineering, modern information, and high-tech manufacturing (Xu & Pan, 2022). Through guiding industrial investments, resources can be reasonably allocated within the region, forming a complete industrial chain.

3) A long-term perspective on the construction of regional economic communities

The YRD region provides robust support for regional economic cooperation by strengthening the alignment of policies and systems and establishing a unified legal framework and rule system. The region can facilitate the flow and exchange of talents, share human resources, knowledge, and technology, enhance the innovation capabilities and competitiveness of the entire region, and achieve the long-term goal of constructing a regional economic community.

6. Conclusion

As China’s economy transitions to a high-quality development stage, the regional integration construction in the YRD region has entered deep waters, presenting numerous profound difficulties and challenges, which also bring new opportunities for its integration development. From the perspective of factor markets, infrastructure development, and trade in the YRD region, this paper analyzes the pain points faced in further achieving integration in various fields. The analysis reveals that the realization of regional integration in the YRD region faces the problem of imbalanced development among regions, with barriers to the circulation of resources in various fields, preventing the maximization of resource utilization. The feasibility verification of implementing integration strategies in these three major directions demonstrates that the YRD region has laid a solid foundation for cooperation in factor markets, infrastructure development, and trade over the past decade, confirming the feasibility and necessity of implementing integration construction in these three major fields.

Based on the above conclusions, this paper proposes the following policy recommendations.

Firstly, market factors need to strengthen the circulation among regions. We should strengthen talent training and exchange, establish cross-regional talent training mechanisms, and strengthen cooperation in higher education and vocational training, to facilitate the flow and exchange of talents. All regions should standardize talent introduction policies and talent evaluation mechanisms, and simultaneously establish a talent service platform in the YRD region, providing services such as talent recruitment, training, and exchange, to promote the sharing and utilization of talent resources. The cooperation and coordination of regional capital markets need to be strengthened and the connectivity of capital markets should be promoted, providing more choices and opportunities for enterprise financing. We can establish cross-regional investment funds to guide capital flow to the real economy and support the development of high-quality enterprises; establish a unified financial supervision mechanism to enhance financial risk prevention and control capabilities; build a technological innovation cooperation platform in the YRD region to promote technical exchanges and cooperation between

scientific research institutions and enterprises; strengthen the coordination and cooperation in cross-regional land utilization planning, optimize the land utilization structure, and improve land utilization efficiency; establish a cross-regional mechanism for sharing land resources to promote the rational utilization and allocation of land resources.

The second is to strengthen the connectivity of infrastructure development. Currently, the development of transportation networks in Jiangsu, Zhejiang, Anhui, and Shanghai is uneven. In planning, attention should be paid to road connectivity, giving priority to the development of expressways and main road networks between cities and upgrading existing trunk lines. We should utilize the network effects and positive externalities of transportation infrastructure to attract more foreign investment, adjust the regional industrial layout, promote regional openness through transportation hubs, leverage geographical advantages, and enhance trade (Zhou, 2012). Simultaneously, we can accelerate the construction of digital communication infrastructure such as cloud computing and data centers, establish a robust cloud service environment, integrate various technologies, provide information technology support for regional trade and enterprise activities, and promote trade development.

The third is to break through trade barriers and optimize the trade and investment environment. Externally, we should establish and improve free trade zone agreements, reduce tariffs and non-tariff barriers, and promote trade liberalization. Customs procedures should be simplified, to speed up customs clearance and facilitate cross-border trade. We should improve transportation networks to enhance logistics efficiency and reduce transportation costs. Internally, we should revise and improve investment laws and regulations to protect investors' rights and interests and boost investor confidence. Economic growth should be maintained stably to control inflation and provide a favorable investment return environment. We can reduce corporate tax burdens and offer tax incentives and financial support to attract more investors. Cross-regional integrated industrial policies should be formulated and implemented to encourage cooperation and synergetic development and promote the integration of industrial chains. We can also promote technological innovation and transfer, break geographical barriers, encourage the flow of talents, and strengthen the synergetic development of trade industries within the region.

References

- Bobowski, S. (2023). *Regional Cooperation and Resilience in East Asia*. Taylor and Francis. <https://doi.org/10.4324/9781003458357>
- Gangbang, Z. (2023). *Study on spatial and temporal evolution of urban business districts and influencing factors in the Yangtze River Delta urban agglomeration*. Hunan Institute of Technology.
- Jin, S., & Zhengguo, X. (2023). Optimization of the Layout of Elderly Service Facilities in the Context of Yangtze River Delta Integration. *Shanghai Urban Management*, 32(6), 25-32.
- Jinping, X. (2022). Holding high the great banner of socialism with Chinese characteristics and unitedly striving for the comprehensive construction of a modernized socialist country--Report at the 20th National Congress of the Communist Party of China. *People's Daily*, (1).
- Liu, Z. B., Xu, N., & Kong, L. C. (n. d.). Integration Development in the China Yangtze River Delta.
- Mei, R. (2021). Analysis of the Impact of Regional Economic Integration on Import Trade in the Yangtze River Delta Region--Based on the Data of the Yangtze River Delta Region from 2009 to 2018. *Market Forum*, (9), 79-87, 97.
- Na, L., Yan, Z., & Wen, X. (2023). Research on Mechanism and Evaluation of Regional Integration. *Shanghai Urban Management*, 32(5), 2-13.
- Shepherd, B. (2023). Regional integration and services in African value chains: retrospect and prospect. *The World Economy*, 46(11), 3231-3258. <https://doi.org/10.1111/twec.13502>
- Sun, J. P. (2004). Inevitability and Resistance of Yangtze River Delta Becoming "the Sixth Urban Agglomeration in the World". *Jiangnan Forum*, (12), 12-13.
- Tang, J. Y., He, J. T., Zhang, Y., et al. (2023). Development Status and Suggestions of Public Transportation Integration in Yangtze River Delta Region. *Communications Science and Technology Heilongjiang*, 46(3), 140-142.
- Wuqi, Z., & Xiaohui, G. (2023). Assessment of environmental governance effects of regional integration in the Yangtze River Delta--An empirical study based on the DID model. *China Environmental Management*, 15(2), 109-118.

- Xiaofeng, C., Jian, K., Lanfang, Z. et al. (2023). Study on the Reconstruction of Recreational Sports Market Order in Yangtze River Delta Region under the Background of Regional Integration Development. *Journal of Capital Institute of Physical Education*, 35(5), 568-576.
- Xinwei, X., Jiajia, D., Fei, T. et al. (2021). Research on data factor allocation mechanism in the process of regional economic integration of Yangtze River Delta. *Journal of Nanyang Institute of Technology*, 13(6), 1-5, 35.
- Xu, J., & Pan, L. (2022). Study on Guidelines for Transportation Planning and Construction in Yangtze River Delta Integration Demonstration Zone. *Urban Roads Bridges & Flood Control*, (11), 1-4.
- Yang Y. L. (2009). *Study on Land Market Integration under Yangtze River Delta Economic Integration*. Nanjing Agricultural University.
- Yang, D. C. (2009). The Industrial Development in Yangtze River Delta: from Vicious Competition to Integrated Division of Labor. *China Development*, 9(01), 84-89.
- Yiwen, W., Jiangang, X., & Di, L. (2023). Spatial and temporal characterization of built-up area expansion in Nanjing metropolitan area based on industrial development big data. *Tropical Geography*, 43(5), 821-836.
- Yuying, Z. (2023). Comparison of the development of technology factor market integration in three regions and its inspiration to Guangdong, Hong Kong and Macao Greater Bay Area. *Science Management Research*, 41(03), 121-129.
- Zhan, H. B. (2011). *Study on Urban Land Market Integration in Yangtze River Delta*. Nanjing Agricultural University.
- Zhang, M., & Zhai, J. (2021). A development model of “New Jiangnan Water Town” based on landscape infrastructure--A case study of Yangtze River Delta Ecological Green Integration Demonstration Zone. *China Garden*, 37(8), 115-120.
- Zhao, J., Zhu, D., Cheng, J. et al. (2021). Does regional economic integration promote urban land use efficiency? Evidence from the Yangtze River Delta, China. *Habitat International*, 116, 102404. <https://doi.org/10.1016/j.habitatint.2021.102404>
- Zhou, R. R. (2012). The Optimization of Industrial Structure and the Upgrade of Economic Transition in the Yangtze River Delta. *Jiangsu Social Sciences*, (06), 78-83. <https://doi.org/10.13858/j.cnki.cn32-1312/c.2012.06.036>

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