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**RESEARCH ARTICLE**

## **Necessity and Urgency Study on Promoting Regional Economic and Social Integration in China: A Case Study of the Yangtze River Delta Urban Agglomeration**

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**ABSTRACT**

Urban agglomerations mirror the highest level of spatial organization in urban development. They are characterized by one or more mega-cities serving as central hubs within a delineated region, upheld by three or more major cities. With advanced transportation, communication, and other facilities as the foundation, these agglomerations establish close spatial and economic ties, achieving a high degree of urbanization and integration. Against the backdrop of global and anti-globalization forces leading to shifts in foreign situations, coupled with domestic economic downturns resulting from changes in pandemic policies, the imperative to form an integrated regional economic society has become increasingly prominent. This study takes the construction and development of the Yangtze River Delta Urban Agglomeration (YRDUA) as an example, examining the necessity and urgency of promoting regional economic and social integration through the proportional changes in the three major industries of each city. As the earliest and representative urban agglomeration in national planning, the YRDUA serves as an illustrative model. The findings indicate that applying the experiences of regional economic and social integration in the YRDUA to the entire country is representative and offers valuable insights.

**KEYWORDS**

Yangtze River Delta Urban Agglomeration (YRDUA); Industrial transfer.

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### **1. Introduction**

The Yangtze River Delta Urban Agglomeration (YRDUA) stands as the first planned and constructed urban agglomeration across the nation. It holds the premier position among the four major urban agglomerations (with the other three allomerations being the Beijing-Tianjin-Hebei Urban Agglomeration, Pearl River Delta Urban Agglomeration, and Chengdu-Chongqing Urban Agglomeration). It plays a pioneering role in the development of the national unified market, paving the way forward amid the profound historical changes in both domestic and international contexts. Shanghai, as the representative city of the YRDUA, has actively contributed to the development of other cities by transferring some of its industries, thereby initiating the first step in urban agglomeration construction. This act serves as the foundation for promoting regional economic integration. The practice of a representative city transferring its industries to other cities is a crucial initial step in urban agglomeration construction and a key driver of regional economic integration. When a city relocates its partial industries to nearby cities, a binding relationship is formed with these recipient cities. For example, some of Shanghai's original textile factories have relocated to Suzhou and Jiaying, cities close to Shanghai. Subsequently, many textile-related orders are sent to Shanghai from these cities, and Shanghai's ports, airports, and highway hubs facilitate the transportation of these goods to other destinations. This effect illustrates the effects of the binding relationship. Returning to the initial example, Shanghai gains the space to develop its trade and transportation industries, while Suzhou seizes an opportunity for the development of primary manufacturing. Our research group explores the necessity and

urgency of nationwide regional economic and social integration through the complementary and binding characteristics of such urban agglomerations.

## **2. Demonstration Zones for Domestic Economic Integration**

Since the initiation of economic reforms and opening-up policies, China has experienced rapid economic development. Regions across the country have gradually overcome poverty and achieved substantial economic growth, laying a solid foundation for the future pursuit of common prosperity nationwide. Economic revitalization hinges on innovative development and, concurrently, a development model built on cooperative win-win strategies. In the process of reform and opening-up, the economic development of each city is not pursued in isolation but through collaborative efforts, with several cities forming alliances for coordinated development. [Guo et al. 2019] Each city possesses unique industrial advantages, and when these cities collectively form an urban agglomeration within a specific region, the cities within that agglomeration can effectively achieve mutual complementarity.

Up to the present, China has established several such collaboratively developing urban agglomerations, with the most notable being the four major urban agglomerations: the Beijing-Tianjin-Hebei Urban Agglomeration, Yangtze River Delta Urban Agglomeration, Pearl River Delta Urban Agglomeration, and Chengdu-Chongqing Urban Agglomeration.

### **2.1 Beijing-Tianjin-Hebei Urban Agglomeration**

The Beijing-Tianjin-Hebei Urban Agglomeration, serving as the central region for political, cultural, and North China connectivity, holds immense significance. This urban agglomeration encompasses cities such as Beijing, Tianjin, Zhangjiakou, Handan, Dingzhou, Xinji, and Anyang, among others, where similar activities contribute to its cohesive development. Notably, Beijing, Tianjin, and Baoding function as pivotal areas driving the development of the Beijing-Tianjin-Baoding region. As of December 5, 2019, the *China City Marketing Development Report (2019)* was released in Beijing, positioning the Beijing-Tianjin-Hebei Urban Agglomeration in the third position among urban agglomerations nationwide. This underscores its notable standing among various nationwide urban agglomerations.

### **2.2 Pearl River Delta Urban Agglomeration**

The Pearl River Delta Urban Agglomeration refers to a metropolitan cluster comprising Guangzhou, Shenzhen, Hong Kong, and Zhuhai, along with the broader region incorporating cities like Jiangmen and Macau. It stands out as the most dynamic and urbanized urban agglomeration in China. Despite constituting only 30% of the population in Guangdong Province, this region remarkably generates 77% of the provincial GDP. Covering an expansive area of 181,000 square kilometers, the Pearl River Delta Urban Agglomeration makes substantial contributions to the economic development of Guangdong Province.

### **2.3 Chengdu-Chongqing Urban Agglomeration**

The Chengdu-Chongqing Urban Agglomeration, also known as the Chengdu-Chongqing Region or Chengdu-Chongqing Economic Zone, encompasses the surrounding areas of Chengdu and Chongqing, including the regions in between. Traditionally, the Chengdu-Chongqing Urban Agglomeration referred to a narrow strip along the Chengdu-Chongqing transportation corridor. However, in contemporary terms, it includes a significant portion of the Sichuan Basin, covering cities such as Chengdu, Mianyang, Nanchong, Suining, Neijiang, and Zigong in Sichuan Province, as well as areas under the direct administration of Chongqing Municipality, including the former Chongqing city and Fuling.

The Chengdu-Chongqing Urban Agglomeration stands as the most developed economic region in western China and serves as the economic focal point in the western region. Within the entire southwestern region, the social development foundation of the Chengdu-Chongqing Urban Agglomeration is robust, and it enjoys relatively favorable natural ecological conditions. Currently, it has become a key area for large-scale development initiatives in western China.

## **3. Historical Development of the YRDUA**

The YRDUA primarily encompasses major cities in the Yangtze River Delta region (Guo & Deng, 2019). Situated on the alluvial plain before the Yangtze River flows into the sea, the urban agglomeration is composed of 26 cities, as defined by the *Development Plan for the Yangtze River Delta Urban Agglomeration*. These cities include Shanghai, Nanjing, Wuxi, Changzhou, Suzhou, Nantong, Yancheng, Xuancheng, etc.

According to currently available data from universities, one-fourth of China's "Double First Class" universities are located in the Yangtze River Delta region. Moreover, the region contributes one-third of the country's annual research and development funds and patent numbers. Positioned at a significant intersection of the Yangtze River Economic Belt and the "Belt and Road" initiative (Zhao et al., 2021), the Yangtze River Delta holds a crucial strategic position among China's four major development regions. It is also evolving towards globalization, striving to become a metropolitan area that radiates across the Asia-Pacific region and

connects with the world. In the realm of cities within the Yangtze River Delta, the most pivotal ones include Shanghai, Nanjing in Jiangsu Province, Hangzhou in Zhejiang Province, and Hefei in Anhui Province [Liu 2017].

### **3.1 Development of Shanghai**

Shanghai, positioned as the central city in the YRDUA, is also a prominent international metropolis within China. Shanghai's historical roots trace back to the Warring States period when it served as the fiefdom of Huang Xie, the Chunshen Jun of the State of Chu. During the Eastern Jin Dynasty, Shanghai acquired the abbreviated name “沪” (Hu). In the Tang Dynasty, Shanghai fell under the jurisdiction of Huating County. Subsequently, during the Song Dynasty, it was initially designated as Shanghai Town, and in the Yuan Dynasty, Shanghai was elevated from a town to a county. Until this juncture, Shanghai remained a relatively obscure locality [Wu et al. 2015]. It was not until the mid-Ming Dynasty that, with the influx of Western Learning spreading to the East, Shanghai embarked on a trajectory of gradual development, evolving into a pivotal port city for Western missionaries entering China.

In the wake of the Opium War during the Qing Dynasty, Shanghai became a significant treaty port under the Qing government. While this, to some extent, fostered economic development, it also led to the proliferation of foreign concessions in Shanghai. Various imperial powers vied to establish concessions in Shanghai, thereby intensifying the exploitation and plundering of the local populace.

It wasn't until the establishment of the People's Republic of China that foreign concessions in Shanghai were evacuated. The era of numerous concessions in Shanghai came to an end, paving the way for a leap forward in its subsequent development. Following the reform and opening-up policies, Shanghai actively responded to the call for reform and opening-up, becoming one of the first Chinese cities to experience economic prosperity.

Presently, the thriving economy of Shanghai attests to the success of its past development efforts, positioning the city as a leader in the nation's economic advancement. Simultaneously, Shanghai boasts the highest number of youth organizations nationwide. The young generation in this city is at the forefront of innovation and development in this new era.

### **3.2 Development of Nanjing**

Nanjing, situated in ancient China, embraces a rich historical legacy and is renowned for being one of the ancient capitals, often described as the “gaiety and splendor of Six Dynasties aristocratic life.” As early as the Three Kingdoms period (AD 220–280), Sun Quan established the capital in Nanjing, marking the city's first instance as a capital. Subsequently, during the Eastern Jin Dynasty and the Southern Dynasties of Song, Qi, Liang, and Chen, Nanjing served as the capital for various regimes. Throughout the entire Wei-Jin Northern and Southern Dynasties period (AD 266–589), as the capital of the Southern Dynasties, Nanjing witnessed the profound changes of an entire era.

During this period, Nanjing also emerged as the cultural epicenter of the nation, earning the description by Du Fu (a great realist poet in the Tang Dynasty): “Of the four hundred and eighty temples built in the Southern Dynasties, many towers and terraces are now there, shrouded in mist and rain.” This era in Nanjing was characterized by cultural prosperity, where the traditions of Confucianism, Buddhism, and Taoism achieved the first-ever historical amalgamation known as the “Combination of the Three Religions.”

After the Sui Dynasty conquered the Chen Dynasty, Nanjing faced demolition for a while to eliminate resistance from the Southern Dynasties. Despite the temporary dismantling, Nanjing did not decline but continued to propel economic development in the Yangtze River Basin. During the period of the Five Dynasties (907-960) and Ten Kingdoms (902-979), Nanjing became the capital of the Southern Tang Dynasty, marking the rise of literary and poetic culture in the region. Subsequently, toward the end of the Yuan Dynasty, Nanjing played a pivotal role in the development of Zhu Yuanzhang's forces (Founding Emperor of the Yuan Dynasty), eventually becoming the capital of the Ming Dynasty and holding significant importance to the political landscape in the early Ming Dynasty.

During the Qing Dynasty, the establishment of the Jiangning Weaving Bureau in Nanjing played a crucial role in overseeing the development of the textile industry in the Jiangnan region. Notably, the renowned literary figure Cao Xueqin had ancestors, including his great-grandfather, grandfather, and father, who served in the Jiangning Weaving Bureau. His experiences and connections in Nanjing became significant source material for one of the Four Great Classical Novels, *Dream of the Red Chamber*.

Nanjing not only witnessed the prosperity of ancient Chinese culture but also experienced the humiliations of modern times. Following the Opium War, the Qing government signed the *Treaty of Nanking* with foreign powers, marking the beginning of China's descent into a semi-colonial and semi-feudal society. Subsequently, during the Taiping Heavenly Kingdom, which engulfed

a large part of China, Nanjing served as its capital, severely weakening the decadent Qing Dynasty. During the era of the Republic of China, Nanjing became the capital of the Nationalist government. Amid the War of Resistance against Japanese Aggression, after the Japanese occupation of Nanjing, the infamous “Nanjing Massacre” occurred, shocking the world with countless compatriots falling victim to the brutality of the Japanese invaders. This remains one of the darkest moments in Nanjing’s history and, indeed, in all of Chinese history. In April 1949, Nanjing was liberated, ushering in a new era of development for the ancient city. Soon after, Nanjing rose once again and has since transformed into a modern metropolis. Additionally, Nanjing places significant emphasis on education, with nationally renowned institutions like Nanjing University and Southeast University.

### **3.3 Development of Hangzhou**

“Just as there is paradise in heaven, there are Suzhou and Hangzhou on earth.” Hangzhou, with its rich history, stands as a city of scenic beauty. During the Spring and Autumn Period, Hangzhou was under the jurisdiction of the Yue State and later became part of the Chu State after the demise of the Yue State. However, it was not until the Sui Dynasty that Hangzhou was officially established as a city, giving rise to the name “Hangzhou.” In the Tang Dynasty, the renowned poet Bai Juyi served in Hangzhou and constructed the Bai Causeway, contributing to the fame of West Lake with his poems, *A Spring Trip to Qiantang Lake* and *Dreaming of the Southern Shore*. [Zhao et al. 2021]. These literary works helped establish Hangzhou’s reputation far and wide.

During the period of the Five Dynasties and Ten Kingdoms, the Wuyue Kingdom made Hangzhou its capital. In the tumultuous times of that era, they pursued a policy of “protecting the borders and ensuring the people’s safety,” allowing Hangzhou to escape the ravages of war. This laid the foundation for the subsequent shift of the economic center southwards during the Song Dynasty. In the Southern Song Dynasty, after the move south during the Jianyan era, Hangzhou became the capital, holding onto political power for over a century.

During the Yuan Dynasty, the Grand Canal connecting Beijing to Hangzhou was officially completed, with Hangzhou serving as the southern terminus. The construction of the canal not only facilitated transportation but also significantly contributed to the economic development of Hangzhou. In the Ming and Qing Dynasties, Hangzhou gradually evolved into a prosperous city. However, in the modern era, due to the plundering by foreign powers, Hangzhou faced economic decline, and the city suffered considerable damage. It wasn’t until the establishment of the People’s Republic of China that Hangzhou’s economy began to recover, subsequently experiencing rapid development. Today, Hangzhou stands as a focal point for national e-commerce development. The city has made significant strides in electronic technology and innovation. Furthermore, Hangzhou is a prominent tourist destination, attracting numerous visitors with the picturesque landscapes of West Lake. As an ancient city, Hangzhou also boasts a rich Hanfu (the traditional dress of the Han Chinese people) culture. The China Silk Museum, located in Hangzhou, hosts the National Hanfu Festival every year, drawing enthusiasts from across the country to celebrate the vibrant culture of traditional Chinese clothing.

### **3.4 Development of the Yangtze River Delta**

Although many cities in the Yangtze River Delta have a long history, the integrated development of the Yangtze River Delta region has only become prominent in recent years. From the Ming Dynasty to the Qing Dynasty, nine relatively large commercial and handicraft towns were established in the Yangtze River Delta, including cities like Nanjing, Hangzhou, Suzhou, and Songjiang. Yangzhou was a hub for grain circulation, while Wuxi, Changzhou, and Huzhou played roles in the production and trade of printing and cultural goods.

After the Opium War, with the foundation of openness, there was a significant development in the primary commodity economy. The Yangtze River Delta witnessed the emergence of modern industrial urban agglomerations, gradually evolving and growing. As foreign products flooded into China, the processing industry, primarily based on raw materials, started expanding internationally, attracting foreign investment and financial organizations. Simultaneously, a range of industries emerged in the early modern period.

During the planned economy era, the Yangtze River Delta experienced a period of concentrated urban functions. Due to specific reasons such as the “Great Leap Forward,” various cities in the region underwent the development of heavy and light industries. Overall, these cities integrated with each other, transforming from consumer-oriented urban centers into production-oriented ones. Consequently, the pace of urbanization was remarkably slow.

With the establishment of a socialist market economy and the initiation of China’s reform and opening-up policies, the urban functions within the Yangtze River Delta’s metropolitan area entered a phase of reclassification and restructuring. Since then, the economic cooperation advantages of the Yangtze River Delta region began to emerge, and the development of the YRDLA took a leading position nationwide.

The logic behind the integration development of the Yangtze River Delta region is outlined as follows (Wu & Yang, 2015).

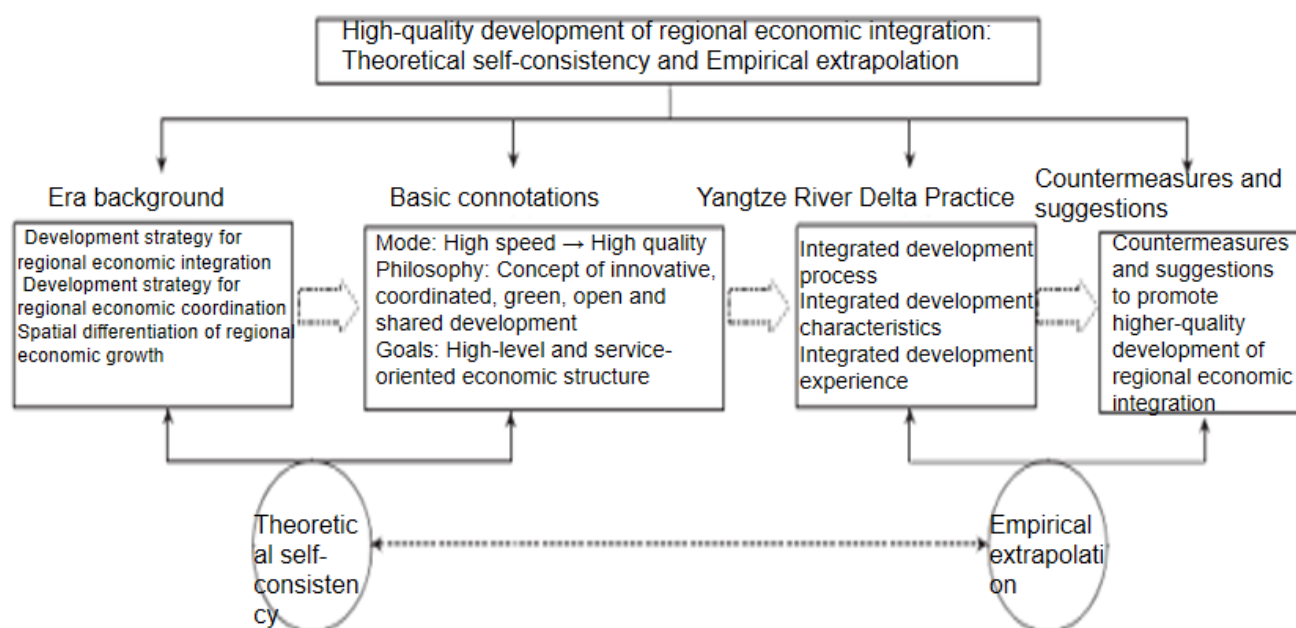


Figure 1 Development Strategy for the Regional Economic Integration

In 1992, the Joint Meeting System for Directors of the Economic Cooperation Offices among the 14 cities in the Yangtze River Delta was formally established. After 26 years of development, President Xi Jinping gave full recognition to the development of the Yangtze River Delta region. During the first exposition, the integration development of the Yangtze River Delta was incorporated into the national strategy.

Table 1 illustrates the historical development of the YRDUA.

Table 1 Major Events in the Development of YRDUA

Time	Major Events and Conferences
1992	The Joint Meeting System for Directors of the Economic Cooperation Offices (Committees) of the 14 cities in the Yangtze River Delta was established.
1996	The original Yangtze River Delta City Economic Coordination Committee was upgraded, with Taizhou City in Jiangsu Province absorbed as the fifteenth member.
2001	The "Zhejiang Economic and Trade Exchange Seminar," attended by leaders of provinces (municipalities), was jointly established by Shanghai, Jiangsu, and Zhejiang.
2003	The fourth Nanjing conference included the participation of Taizhou City in Zhejiang, forming the main framework of the Yangtze River Delta within sixteen cities.
2004	The main leadership symposium system for Shanghai, Jiangsu, and Zhejiang was launched.
2008	The State Council issued the <i>Guiding Opinions on Further Promoting Reform, Opening-up, and Socioeconomic Development in the Yangtze River Delta Region</i> , outlining the layout of the Yangtze River Delta within Shanghai, Jiangsu, and Zhejiang, with a commitment to building it into a crucial international gateway, the world's major high-end manufacturing center, and a world-class urban agglomeration with international competitiveness.
2008	The Yangtze River Delta established a three-tier regional cooperation mechanism, including decision-making, coordination, and administrative layers. At the decision-making level, there was the "Government Heads Symposium of Yangtze River Delta" and the "Regional Cooperation Joint Meeting of Yangtze River Delta" + "Regional Cooperation Joint Meeting of Yangtze River Delta." At the administrative level, mechanisms such as the "Joint Meeting Office," "Key Cooperation Groups," and "Regional Economic Cooperation Group of Yangtze River Delta" were set up in succession, gradually improving mechanisms like the "Joint Meeting Office" and "Key Cooperation Topics."
2009	Shanghai, Jiangsu, and Zhejiang invited representatives from Anhui Province to participate in the Main Leadership Symposium and Regional Economic Cooperation Exchange Symposium of the Yangtze River Delta.

<b>Time</b>	<b>Major Events and Conferences</b>
2010	The <i>Regional Planning of the Yangtze River Delta</i> has been approved by the State Council, aiming to accelerate the development of the Yangtze River Delta and radiate the surrounding urban agglomerations to expedite its progress.
2011	Anhui Province held the Main Leadership Symposium and Regional Economic Cooperation Symposium of the Yangtze River Delta as the host for the first time.
2016	The State Council issued the <i>Development Plan for the Yangtze River Delta Urban Agglomeration</i> , incorporating eight cities in Anhui Province, Yancheng City in Jiangsu Province, Jinhua City in Zhejiang Province, and a total of 26 cities in Shanghai, Jiangsu, Zhejiang, and Anhui.
Jan. 2018	Shanghai released the <i>Shanghai Master Plan (2017-2035)</i> , proposing active integration and deepened cooperation with the Yangtze River Delta to create a world-class production center and promote regional socioeconomic development.
Mar. 2018	The National Development and Reform Commission issued a <i>Notice on the Implementation of Key Tasks for Promoting the Construction of New Urbanization</i> in 2018, stating that the Yangtze River Delta would accelerate development in 2018 and form a regional development pattern of "one core, five metropolitan areas, and four developmental belts."
Apr. 2018	President Xi Jinping made an imperative instruction on the integration of the Yangtze River Delta, emphasizing that Shanghai should play a leading role in better guiding the development of the Yangtze Economic Belt, serving the overall development of the country, with Shanghai as the core.
Nov. 2018	President Xi Jinping proposed <i>New Thoughts to Promote the Economic and Social Development of the Yangtze River Delta</i> at the first China International Import Expo.

#### **4. Challenges in the Development of the Yangtze River Delta**

Currently, albeit with the overall positive economic development in the Yangtze River Delta, there are still numerous challenges that impede the economic progress of the region. This study takes Shanghai, the leading city, as an example.

##### **4.1 Defective Public Transportation and Suboptimal Infrastructure Coverage**

Public transportation and infrastructure development have not fully covered the daily commuting needs of the entire urban agglomeration. For instance, taking Shanghai as a case study, the currently prioritized subway line connecting Songjiang New City to the city center is only one, and the travel time to the city center (using Line 9 from Songjiang Xincheng Station to Xujiahui Station, for instance) generally takes an hour. Even with high-speed trains, although the travel time is shorter, the quantity is limited, and the terminal stations are located in remote areas with poor connectivity. Additionally, Shanghai's investment and supportive infrastructure development for remote cities within its leadership in the YRDUA, such as in the case of Zhoushan, are still in the early stages. For example, the construction of bridges and stations for the Shanghai-Ningbo-Hangzhou Railway passing through Zhoushan has just commenced, and tangible results will require several more years.

##### **4.2 Incomplete Standardization of Social Development**

The standardization of social development is yet to be completed and could be initiated through pilot programs. For instance, the mobility of populations within the YRDUA involves social insurance, which currently operates on a city-by-city and a phase-by-phase basis. In this regard, a pilot program could be implemented to promote mutual recognition of social insurance. As a starting point, Shanghai could explore reciprocal agreements with its neighboring cities, such as Suzhou and Jiaxing. This would cater to the needs of individuals living in Suzhou and Jiaxing while working in Shanghai and vice versa.

##### **4.3 Relocation of Primary Manufacturing Industries**

Shanghai has consistently relocated its primary manufacturing industries to neighboring cities. While this strategy has freed up significant land for industrial transformation, attracting high-tech manufacturing enterprises, there remains a need to retain some primary industries. This is crucial as the industrial transformation in Shanghai is directly linked to the proportion of skilled talent in the city. A substantial workforce with primary education qualifications is still required to support the service and retail industries, serving as the backbone for providing services to the broader population.

## 5. Conclusion

- (1) The current plan led by Shanghai for the YRDUA has commenced, revealing numerous challenges that involve extended resolution times and the participation of various stakeholders. These challenges serve as valuable references for large-scale initiatives aimed at promoting the integration of regional socioeconomic development in a national sense.
- (2) To foster the integration of China's regional socioeconomic landscape, it is imperative to begin with the planning of urban agglomerations. This necessitates meticulous planning in three key areas: inter-city transportation, mutual recognition of social insurance, and industrial relocation. These constitute major initiatives to facilitate the movement and interaction of urban residents.
- (3) The artificial termination of the pandemic aims to expedite the restoration of economic activities, particularly as the virulence of the current strains diminishes among the younger population. As urban agglomerations are in the process of recovery, the post-pandemic construction of these urban agglomerations and the broader endeavor of nationwide regional socioeconomic integration will be a litmus test for the country.

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