

## **MIGRANT POPULATION IN MEGA-CITY REGIONS IN CHINA**

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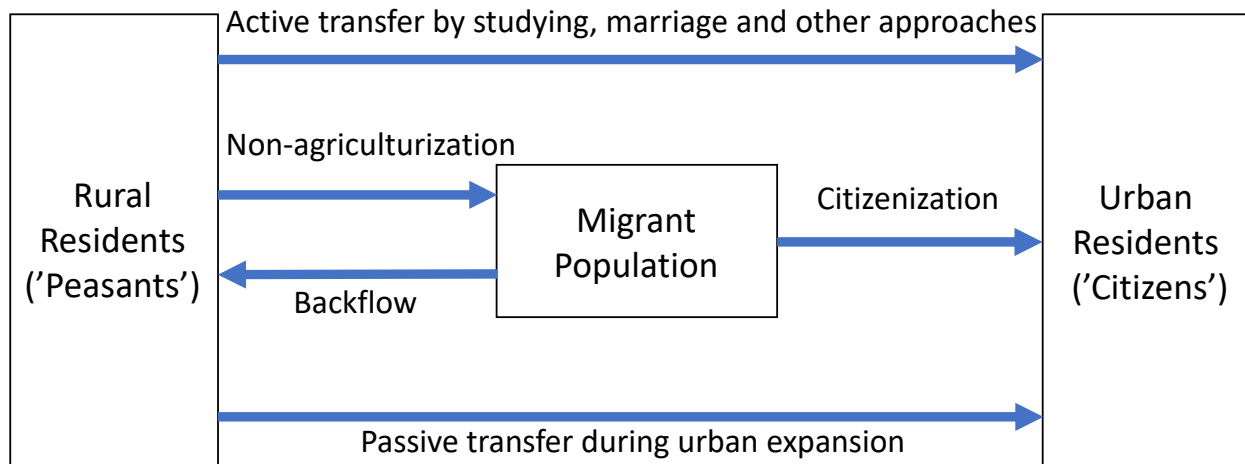
### **ABSTRACT**

Economic development and migration are often intrinsically related to each other. In China's urbanization process, the migrant population has made a significant contribution to the rapid economic growth. However, due to the urban-rural dualistic household registration system (*hukou*), it is far more difficult for migrants to obtain an urban hukou that will entitle them to all the public services and privileges as the permanent urban residents do. With an extraordinarily large number of migrants which accounts for 1/6 of the total national population, addressing the migration development in China is of great importance. This article, therefore, intends to explore the current situation of the migrant population in China's major mega-city regions, based on the case studies of the Beijing–Tianjin–Hebei, the Yangzi River Delta, and the Pearl River Delta. It shows that there are diverse distribution patterns of the migrant population among mega-city regions. As a result, different policy implications are provided for each region.

**Keywords:** Literature review, mega-city regions, hukou (household registration system), floating population.

### **INTRODUCTION**

Urbanization is largely dependent on the development of migration. In certain China's megacities today, there is an extraordinarily large number of migrant population, accounting for 20-50% of the total population (Liang, Messner, Chen, & Huang, 2012). In Shanghai, for example, there are nine million migrant workers among 23 million inhabitants. Figure 1 shows the urbanization process in China. Rural residents are able to become urban residents, either by education, marriage, and other approaches, or when rural collective lands are acquired due to the urban expansion (Huang, 2011). The migrant population emerges in the transition process.



**Figure 1: Urbanization process in China**

Source: Huang (2011)

Migration, according to the definition of International Union for the Scientific Study of Population (IUSSP), refers to the people's geographical changes. In China, based on the household registration system (*hukou*), migration is divided into two categories: changes of both place of living and place of household registration; and geographical changes without the alteration of the place of registration (Ma & Wang, 2010). The changes of the household registration have different requirements across Chinese provinces. In general, changing the household registration places to certain megacities where have more job opportunities, greater public resources, and higher quality of life, such as Beijing and Shanghai, is far more difficult. As a result, most of the migrants, who leave their places of origin or household registration to seek employment or education elsewhere, are not able to acquire the local hukou of the new places. In this article, we mainly focus on such massive migrant population, also known as the floating population.

The urban-rural dualistic household registration system was established in the mid-to-late 1950s. In the era of planned economy, it was an essential tool of social control. Because it was directly correlated with the key entitlements of food ration, employment, education, medical care, and social welfare (Liang et al., 2012). Hence, the objectives of the household registration system include household registration and statistics, migration control, and management of permanent as well as temporary residents. Nowadays, although the system has become less restrictive, a worker's access to public provisions is still limited in the new place of destination. It is criticized that the system has resulted in not only rural and urban segmentation but also regional

segmentation, which in the end would impede current economic development in China. As a consequence, some regions have introduced the reform on the household registration system.

The total migrant population has shrunk for the second consecutive year. Based on China's Migrant Population Development Report in 2017, the number of migrants reaches 245 million in 2016, which is 1/6 of the total national population. In 2020, there is expected to be 291 million migrants, with 220 million coming from rural areas. It is worth noting that there is a higher percentage of younger people. Migrants who were born after 1980 account for 56.5% of the total migrant population and those were born after 1990 account for 18.7%. Besides, the inter-provincial migrant population declines year by year. With an increasing number of migrant families, the medical and educational spending of migrants keep rising accordingly. The report sketches the basic figures and overall tendency of the migration development in China. This article, furthermore, aims to explore the current situation of the migrant population in China's major mega-city regions, based on the case studies of the Beijing-Tianjin-Hebei (Jing-Jin-Ji), the Yangzi River Delta (YRD), and the Pearl River Delta (PRD).

The rest of the article is organized as follows. The literature on the migration in China is first reviewed. The case studies on the three migration centers will then be presented. In the end, conclusions are discussed, and policy options for the migration development in the major mega-city regions in China will also be provided.

## **LITERATURE REVIEW**

Both pros and cons of migration in China's contexts are discussed in the literature. From the positive perspective, both the area of origin and destination would benefit from the update of the industrial structure because of the migration (Zhang, 2015). The migrants directly contribute to the economic development of the destination area. In turn, the migrant population may relieve the employment pressure of the origin area. In addition, since the economic strategy of "Mass Entrepreneurship and Innovation" was proposed in 2014, there would be more migrants who choose to go back to their hometown to open startups, which brings capital and new technology to the area of origin.

On the other hand, the concentration of the migrants in the destination area and the hollow of the labor in the origin area may lead to certain problems. The "diseases of the megacity" are a distinct manifestation of the drawbacks of migration (Hamilton, 2014; Wu, Luo, Zhang, & Skitmore, 2016). Also, the lack of labor forces in the origin area would have an adverse effect on the local development. Furthermore, the migrant population would face a variety of challenges. They may have limited access to education, employment, medical services, pension insurance and housing security which are tied with the urban hukou (Liang et al., 2012). The development

and redevelopment of the urban villages which generally have a high level of potential risk have drawn a great many of attention (Hao, Sliuzas, & Geertman, 2011). In addition to the inequality issue, the large number of left-behind children becomes a significant concern for the society (Dick & Schmidt-Kallert, 2011; Zhang, 2018).

Integration of economic, social, and political factors leads to the massive migration in China. Based on the division between inter-provincial and intra-provincial migration, scholars have explored a wide range of factors which may affect migrants' choices of the destinations. In addition, rural migrants, because of their large proportion of the total migrant population, have drawn intensive social as well as academic attention. Despite the slight differences among these diverse migrant groups, there are certain principal drivers.

The economic development level of the destination cities is a decisive factor. It includes the GDP per capita, industrial structure, employment rate, and local wage level (Zhang & Cen, 2014). Currently, migrants seem to concentrate in the cities where have a higher level of tertiary industry development. Besides, the level of modernization and internationalization become increasingly important "pulling" factors (Yu, 2012).

From the social perspective, places with higher urbanization rate and greater public resources, such as medical treatment, education, housing and infrastructure, attract more migrant population. The influence from their cohorts is also important (Tang & Feng, 2015).

Last but not least, the government always has a significant impact on the migration. The release of household registration restrictions, population policy, and the land and tax system are directly related to the development of migration (Liu, Qi, & Cao, 2015). For example, cities with higher administrative level may have a competitive advantage to acquire more lands and thus show a much greater capacity to accommodate more migrants.

The literature concludes that the eastern coastal region in China is the most popular destinations of the migration (Zhang & Bao, 2015). Meanwhile, there is an increasing tendency to the western and central regions. However, very limited studies focus on the migrant population within a region. Also, there is a lack of studies on comparing the development of the migrant population among different regions. Therefore, this article intends to compare the migrant population of the three major mega-city regions in China, in order to get a better understanding of the development of the migration which is a decisive factor contributing to China's growth in the New Normal Economy.

**THREE MIGRATION CENTERS IN CHINA**

The latest Nationwide Population Census (Sixth Census) in 2010 shows that there form three major migration centers in China. These centers are consistent with the largest three mega-city regions: Jing–Jin–Ji, the YRD, and the PRD. With 2.8% of China’s total land area, these three mega-city regions have gathered 18% of the population and created 36% of the GDP (Xu & Yang, 2013). Among the population within these regions, a large proportion are migrants who have become a vital force driving China’s rapid economic growth. Table 1 presents the migrant population flow in three mega-city regions. PRD has the largest migrant population inflow in China, which accounted for 28.75% of its total population. While the most massive population outflow is from YRD. Overall, PRD is the top one migration center, with nearly 40% migrants in this region.

**Table 1: Migrant population flow in three mega-city regions in China**

Regions	Inflow		Outflow		Net inflow	
	Total population (10,000 persons)	Percentage (%)	Total population (10,000 persons)	Percentage (%)	Total population (10,000 persons)	Percentage (%)
Jing–Jin–Ji	603.7	8.01	197	4.58	406.7	5.83
Yangzi River Delta	1751.7	23.24	203.5	4.73	1548.2	18.64
Pearl River Delta	2166.5	28.75	108	2.51	2058.5	38.05

Data source: Ji & Zhu (2014).

***Migrant Population in Beijing–Tianjin–Hebei***

Jing–Jin–Ji is characterized by the “dual-core” distribution of the migrant population. The migrant population density is extremely high in Beijing and Tianjin (Liu, 2017). The migrants concentrate in the urban area in Beijing and Binhai New Area of Tianjin rather than cover the whole region (Yao et al., 2017; Zhang & Cen, 2014). The net outflow of migrant population from periphery cities stays relatively high. In contrast, Beijing is experiencing a severe stagnation of population outflow. On the other hand, the population inflow keeps rising. Yin (2015) proposed the phenomenon as the stagflation of migrant population flow in Beijing.

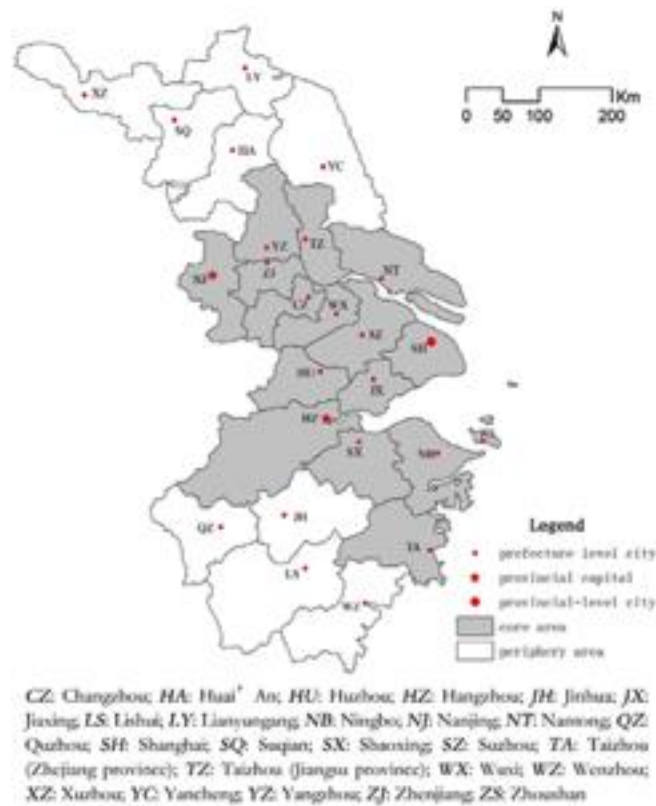
The “dual-core” distribution of the migrant population results from a series of reasons. First, the central government has implemented a variety of policies which are aimed at promoting the integration among Beijing, Tianjin, and Hebei by strengthening the population flow. These policies cover household registration, housing, fertility, education, and so forth (Zhang, 2015). For example, the talents with a high level of education are able to obtain the Beijing and Tianjin

hukou on a certain of conditions (Wei, 2018; Zhao, 2018). As a result, people are motivated to engage in the migration. Second, different economic development levels among the region directly lead to the unbalance. With a higher level of GDP per capita and a higher proportion of tertiary industry, Beijing and Tianjin have a greater advantage to attract more migrant population. Third, as a consequence of rapid economic development, the labor markets and public services in Beijing and Tianjin are much better than the other cities. Last, different administrative levels yield a separation between the core and periphery cities (Liu, Qi, & Cao, 2015; Sun, Yao, Lu, & Zhang, 2016). As the direct-controlled municipalities by the central government, Beijing and Tianjin benefit from many prior emphases and preferential policy treatments.

The “dual-core” distribution of the migrant population has incurred certain problems which would become a threat to the economic growth. Jing–Jin–Ji has kept focusing on the increases of the GDP which largely relying on the contribution of the migrant population. Because of a lack of scientific planning based on the sound management of population information, “diseases of the megacity” are rather distinct in this region (Yin, 2015). It includes the shortage of public resources, unbalances of public services, continuing deterioration of infrastructure, traffic congestion, and air pollution. For example, the education expenditure in Hebei province is only 30% of that in Beijing, and 40% of Tianjin (Yao et al., 2017). As a response, “population ceiling” was proposed to control the population. According to the Annual Report on Economic Development of Beijing (2016-2017), the resident population in Beijing should be controlled at 23 million by 2020. The total population is 21.7 million by 2016. However, the isolation of the migrant population is undoubtedly problematic (Wang, 2015).

### ***Migrant Population in the Yangtze River Delta***

The distribution of the migrant population in the YRD presents a “pyramid” structure. YRD covers Shanghai, Jiangsu, and Zhejiang provinces, with a total of 16 prefecture level or above administrative districts (Lei & Zhao, 2016). Figure 2 shows the core and periphery areas within the region. According to the statistics from the Sixth Census (2010), YRD has replaced PRD to become the most important migration center in China (Yu & Gao, 2016). In terms of the amount of the migrant population, Shanghai is the largest city of migrants. Besides the migration core, Hangzhou and Nanjing, which are the provincial capitals respectively, attract more migrants than other cities. In addition, there are nine cities with more than one million migrant population. Therefore, it forms a “pyramid” structure with one core, dual subsidiaries, and multipoles of migration (Liu, Qi, & Cao, 2015). The migration in Shanghai has diffused to Zhejiang, Jiangsu, and even neighboring Anhui province which is not included in the YRD.



**Figure 2: Core and periphery areas in the Yangtze River Delta**

Source: Li & Phelps (2018)

Collaborative governance and fiscal capacity are two significant factors contributing to the “pyramid” structure of migration. With the goal of resources sharing, YRD has been trying to break the administrative boundaries and establish the regional collaborative mechanism for a long time. Beginning with the informal and non-periodical meeting, YRD experiences a long way to achieve the mature collaborative institutions, which covers human capital development, infrastructure investment, environmental protection, and so on (Yao et al., 2017). Meanwhile, the strong fiscal capacity of the YRD supports it to provide more public services within the whole region (Liu, Qi, & Cao, 2015). It is encouraged to build campuses of famous schools of megacities in the other less developed cities (Luo & Shen, 2007). Also, in order to promote the medical treatment received in a different place, particularly for the migrants, citizens from seven cities in Jiangsu and eight cities in Zhejiang are able to make a balance of the medical insurance within their own province since 2009. After that, the balance of the medical treatment is available among 16 core cities in the YRD (Zou, Hu, & Qian, 2013).



### ***Migrant Population in the Pearl River Delta***

The polycentric distribution of the migrant population emerges in the PRD. PRD consists of nine prefecture level or above administrative districts within Guangdong province. Among them, the migrant population in Shenzhen, Dongguan, Guangzhou, Foshan, Zhongshan, and Huizhou exceeds one million (Liu, Qi, & Cao, 2015). A majority of the migrants are young people, who are employed in the secondary and tertiary industry (Li & Li, 2013). The migrant population has made a significant contribution to the shift from the traditional agricultural economy to the industrial and service economy. PRD is known as the significant industrial agglomeration in China. The polycentric distribution is a result of the combination of political, economic and geographical edges (Sun, Yao, Lu, & Zhang, 2016). PRD has benefited from numerous policy supports as it implemented the economic reform in a very earlier stage. Also, it achieves the economic growth based on a large-scale labor-intensive industry. Moreover, with the geographic and cultural proximity to Hong Kong, Macau and Taiwan, PRD has had greater access to more and better resources.

However, the recent backflow of the migrant population may suggest a considerable challenge in the PRD. According to the Guangdong Province Statistical Yearbook, the growth rate of the migrants has exceeded 7% over the period of 2006-2010. Afterward, due to the launch of certain national and local policies, such as the Rise of Central China Plan, Development of Western China Plan, and the industrial restructuring within the PRD, there is an increasing number of migrants who go back to their hometown to work. The growth rate of the migrants has declined a lot from 2011 to 2014. In 2011 and 2013, the growth rate even turns out to be negative. Moreover, the job mobility rate of the migrants stays at a rather high level (Liang et al., 2012). It is related to the low wages, poor working conditions, and weak social security (Zeng, Tian, & Li, 2013).

To attract and retain the migrant population, PRD has introduced the household registration system reform from a very early time. The urban-rural dualistic household registration system has been criticized as an institutional barrier for social equality. Hence, Zhuhai, Foshan, and Shenzhen canceled the agricultural registration around 2003. In 2009, the score settled management policy was put forward, aimed to transform the rural migrants into the urban citizens based on the scores which are accumulated by achieving specific requirements (Deng & Zhao, 2014). However, there are not as many migrants as expected to apply for the transformation. Even though obtaining the urban hukou is still viewed as a privilege, some rural migrants from the better-off regions resist actively to the reform because of the high land prices (Zhao, 2013). Moreover, with the increases in the living cost, the migrant population might move



to other regions (Lei & Zhao, 2016). The integration of the migrants into the urban citizenry remains a tough issue to solve.

The geographic space occupied by internal immigrants moving from rural areas to urban areas can create conflicts that adversely affect the new arrivals. In most countries, a big influx of migrants tends to provoke grumbles among the natives. But in China migrants are most frequently grumbled about and treated with hostility, although they are not foreigners. They are Chinese rural people who move to the cities in search of a better life. China is presently booting out these rural immigrants living in the only substandard housing near their work they could afford. The location of such spaces near the urban center of Beijing is to be used by the government to create new “green spaces” that could improve the air quality in the polluted capital. Such government actions are not a new phenomenon (Garcia-Zamor, 2018).

## **CONCLUSIONS AND POLICY IMPLICATIONS**

The different distribution patterns of the migrant population in each mega-city region lead to their characteristics as well as challenges. As a result, in addition to the general principles to address the migration issue, such as the household registration system reform (Lei & Zhao, 2016; Wang & Wu, 2015), industrial structure update (Yin, 2015; Zhang, 2015), public services equalization (Liu, 2017), differentiating the policy implications is of great significance.

With the “dual-core” distribution of the migrant population in Jing–Jin–Ji, this region suffers from great population pressure. As the unbalance of the migration increases, the “diseases of the megacity” become much more severe. Nevertheless, instead of the incremental mitigation, there presents a lack of inclusiveness for rural migrants. Therefore, local governments in Jing–Jin–Ji need to balance the economic and social diversity development in the meantime, for example, by providing the affordable housing for rural migrants. On the one hand, it needs to focus on the expansion of the absorbing capability. On the other hand, being engaged more in the collaboration among jurisdictions would be a necessary approach in the future.

In the YRD region, it has achieved the collaborative governance through the “pyramid” structure. The continuous exploration of the coordination mechanism, plus the strong fiscal capacity, makes the YRD become the most important migration center in China.

The polycentric pattern in the PRD could lead to much more economic growth unless the backflow of the migrant population is well addressed. In terms of the score settled management, providing sufficient opportunities for both well-educated migrants and those with a lower level of education and skill could better solve the conflicts between the supply and demand.

## REFERENCES

- Deng, X., & Zhao, D. (2014). Problems and strategies of the score settled management reform on migrant population in the Pearl River Delta. *The Journal of Yunnan Administration College*, (6), 138–142 (in Chinese).
- Dick, E., & Schmidt-Kallert, E. (2011). Understanding the (mega-)urban from the rural: Non-permanent migration and multi-locational households. *disP - The Planning Review*, 47(187), 24–36. <https://doi.org/10.1080/02513625.2011.10654016>
- Garcia-Zamor, J.C. (2018). *Ethical dilemmas of migration: Moral challenges to policymakers*. New York: Springer Publishers.
- Hamilton, D. K. (2014). *Governing metropolitan areas: Growth and change in a networked age* (2nd ed.). NY: Routledge.
- Hao, P., Sliuzas, R., & Geertman, S. (2011). The development and redevelopment of urban villages in Shenzhen. *Habitat International*, 35(2), 214–224. <https://doi.org/10.1016/J.HABITATINT.2010.09.001>
- Ji, S., & Zhu, Z. (2014). Equilibrium of population migration and economic development in urban agglomerations in China-Based on data from the Sixth Census. *Economic Theory and Business Management*, (2), 5–16 (in Chinese with English abstract).
- Lei, Y., & Zhao, J. (2016). Development track and new-type urbanization approaches in major conurbation in China. *Acta Scientiarum Naturalium Universitatis Sunyatseni*, 55(5), 141–150 (in Chinese with English abstract).
- Li, H., & Li, S. (2013). Study on the coupled about population migration to undertake and the evolution of the Pearl River Delta city economic and social structure. *Economic Geography*, 33(8), 46–51 (in Chinese with English abstract).
- Li, Y., & Phelps, N. (2018). Megalopolis unbound: Knowledge collaboration and functional polycentricity within and beyond the Yangtze River Delta Region in China, 2014. *Urban Studies*, 55(2), 443–460. <https://doi.org/10.1177/0042098016656971>
- Liang, Z., Messner, S. F., Chen, C., & Huang, Y. (2012). *The emergence of a new urban China*. Lanham: Lexington Books.

- Liu, A. (2017). Analysis on the spatial agglomeration and its influence factors of the floating population in Beijing-Tianjin-Hebei. *Population & Economics*, (6), 71–78 (in Chinese with English abstract).
- Liu, T., Qi, Y., & Cao, G. (2015). China's floating population in the 21st century: Uneven landscape, influencing factors, and effects on urbanization. *Acta Geographica Sinica*, 70(4), 567–581 (in Chinese with English abstract).
- Luo, X., & Shen, J. (2007). Models of inter-city cooperation and its theoretical implications: An empirical study on the Yangtze River Delta. *Acta Geographica Sinica*, 62(2), 115–126 (in Chinese with English abstract).
- Ma, Z., & Wang J. (2010). Regional competition and the distribution of floating population in China. *Population Research*, 34(3), 3–16 (in Chinese with English abstract).
- National Health Commission of the People's Republic of China. (2017). *China's migrant population development report in 2017* (in Chinese).
- Sun, Y., Yao, S., Lu, D., & Zhang, L. (2016). Population mobility of urban agglomeration in China: A case study on the three coastal agglomerations. *Scientia Geographica Sinica*, 36(12), 1777–1783 (in Chinese with English abstract).
- Tang, S., & Feng, J. (2015). Cohort differences in the urban settlement intentions of rural migrants: A case study in Jiangsu Province, China. *Habitat International*, 49, 357–365. <https://doi.org/10.1016/J.HABITATINT.2015.06.009>
- Wang, Y., & Wu, J. (2015). The research summary and institutional innovation on Beijing's floating population management policy under the perspective of collaborative development of Beijing, Tianjin and Hebei. *Population & Development*, 21(5), 34–46 (in Chinese with English abstract).
- Wei, Y. (2018). *Beijing promotes 19 new rules in the "talents battel" to introduce the innovative talents*. Retrieved May 27, 2018, from 21 Century Business Herald: [http://epaper.21jingji.com/html/2018-03/23/content\\_82367.htm](http://epaper.21jingji.com/html/2018-03/23/content_82367.htm) (in Chinese).
- Wu, Y., Luo, J., Zhang, X., & Skitmore, M. (2016). Urban growth dilemmas and solutions in China: Looking forward to 2030. *Habitat International*, 56, 42–51. <https://doi.org/10.1016/J.HABITATINT.2016.04.004>

- Xu, K., & Yang, W. (2013). *China's urbanization rate is comparable to the average level in the world in 2012, reaching 52. 57%*. Retrieved Apr 28, 2018, from Xinhuanet Web site: <http://politics.people.com.cn/n/2013/0626/c70731-21984043.html> (in Chinese).
- Yao, S., Zhou, C., Wang, D., Xiu, C., Wang, C., & Chen, M. (2017). *New perspectives on urban agglomerations in China*. Beijing: Science Press (in Chinese).
- Yin, D. (2015). Theoretical thinking and realistic response to the relief on capital population. *Population and family planning*, (8), 23–25 (in Chinese).
- Yu, T. (2012). Spatial-temporal features and influential factors of the China urban floating population growth. *Chinese Journal of Population Science*, (4), 47–58 (in Chinese with English abstract).
- Yu, X., & Chen, X. (2016). A study on typical features of floating population in Guangdong province. *Population Journal*, 38(6), 27–36 (in Chinese with English abstract).
- Yu, Y., & Gao, X. (2016). The spatial pattern and aggregation of China's floating population: A perspective of prefecture-level regions. *South China Population*, 31(5), 57–69 (in Chinese with English abstract).
- Zeng, S., Tian, N., & Li, C. (2013). Reasons and countermeasures of the high flowing migrant workers: An empirical investigation based on the Pearl River Delta Region. *Adult Education*, (7), 50–53 (in Chinese with English abstract).
- Zhang, L. (2018). *The orphans of China's economic miracle*. Retrieved May 27, 2018, from The New York Times: <http://politics.people.com.cn/n/2013/0626/c70731-21984043.html>
- Zhang, P. (2015). Research on the migration in the Beijing–Tianjin–Hebei. *Business Culture*, (8), 240 (in Chinese).
- Zhang, W., & Bao, S. (2015). Created unequal: China's regional pay inequality and its relationship with mega-trend urbanization. *Applied Geography*, 61, 81–93. <https://doi.org/10.1016/J.APGEOG.2014.12.019>
- Zhang, Y., & Cen, Q. (2014). Spatial patterns of population mobility and determinants of inter-provincial migration in China. *Population Research*, 38(5), 54–71 (in Chinese with English abstract).

- Zhao, D. (2013). The experience and inspiration to Shanghai: Score settled management policy in Guangdong. *Scientific Development*, (8), 109–112 (in Chinese with English abstract).
- Zhao, X. (2018). *The new policy on talents in Tianjin attracts 300,000 people in one day*. Retrieved May 27, 2018, from Beijing Youth Daily: [http://www.xinhuanet.com/2018-05/18/c\\_1122850313.htm](http://www.xinhuanet.com/2018-05/18/c_1122850313.htm) (in Chinese).
- Zou, C., Hu, Y., & Qian, S. (2013). Promoting medical treatment received in a different place. *China Social Security*, (1), 73 (in Chinese).