



Migration transition and planning responses in China

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After nearly 40 years of rapid development, China's internal migration and urbanisation process has entered a transformation phase, presenting a series of new features. PEAK Urban research colleagues at Peking University have long been concerned with issues of internal migration, urbanisation and urban-rural development in China. Using the PEAK framework, the team has expanded the social impact of their research through effective collaboration with central, provincial and city government departments, research institutions, planning and design agencies and the media.

This brief draws on two research projects the team has undertaken since 2018, in collaboration with central government departments and related research institutions. The first, Structural change and spatial demands for China's population and internal migration, was completed to provide policy recommendations and consultation reports to the compilation team of the "Outline of the National Territory Spatial Planning (2021-2035)" led by the Ministry of Natural Resources. The second, Changing spatial patterns of population distribution and their influence on urbanisation and urban systems in China, was a collaborative project with the National Development and Reform Commission. The results of this project were used in a series of government reports related to China's 14th Five-Year Plan.

The brief describes the characteristics of China's internal migration, accounting for size, structure and spatial patterns. It identifies the dilemmas faced by internal migrants – an important group in urban communities – and puts forward relevant planning and policy suggestions to promote future high-quality development via China's New-type Urbanisation.

Key findings and recommendations:

- Internal migration in China has been changing rapidly in terms of size, structure and spatial patterns. According to the 2020 census, one in four Chinese people is an "internal migrant". From 2000 to 2010, the coastal area of migrant concentration expanded continuously and showed a tendency for different segments to spatially connect with each other, while the inland region's ability to attract migrants continued to increase.
- The recent trend of family migration poses new challenges, such as the abandonment of farmland in rural areas, and unaffordable urban housing. Discriminatory policies against migrants have contributed to the housing dilemma faced by internal migrants in cities.
- The reform of the hukou¹ system has not effectively resolved the mismatch between migrants' intention to transfer their hukou and cities' thresholds for hukou transfer. Although large cities attract high numbers of migrants hoping to settle down, the hukou threshold in these cities is more stringent than in smaller cities.
- Planning should address the new demands stemming from internal migrants, aiming to resolve related challenges and promote sustainable urbanisation in the context of migration.
- The characteristics of internal migration in China remain in a state of rapid change. Researchers, urban planners and policymakers should continue to track new characteristics and trends, pay attention to the spatial heterogeneity of internal migrants, and propose more targeted policies.

1. hukou status is the institutional criterion for distinguishing between locals and migrants in each city

Part 1: The characteristics and evolution of internal migration in China

1.1 Size of internal migration

(a) Huge size and still in the stage of rapid growth

Since the 1980s, the Chinese government has introduced a series of reforms centred on building a market economy. Easing restrictions on internal migration is an important component. According to the Seventh National

Census in November 2020, the level of China's internal migration reached 376 million people, an increase of more than 50 times compared to the Third Census in 1982 (7 million).

Under the influence of various factors such as rapid economic growth and strict fertility policies, China's fertility rate is low compared to other countries, and the population growth rate has slowed gradually. According to census data, China's total population (TP) grew from 1.340 billion to 1.412 billion between 2010 and 2020, with an average annual growth rate of only 0.53 per cent, giving the last decade the lowest average annual population growth rate between two censuses. However, during the same period, the level of internal migration (IM) has maintained a high growth rate, from 247 million to 376 million, an increase of nearly 70 per cent, with an average annual growth rate of 4.29 per cent. Against the backdrop of a slowdown in overall population growth, China's internal migration continues to increase at a rapid pace.

In 2020, one in four Chinese was an internal migrant

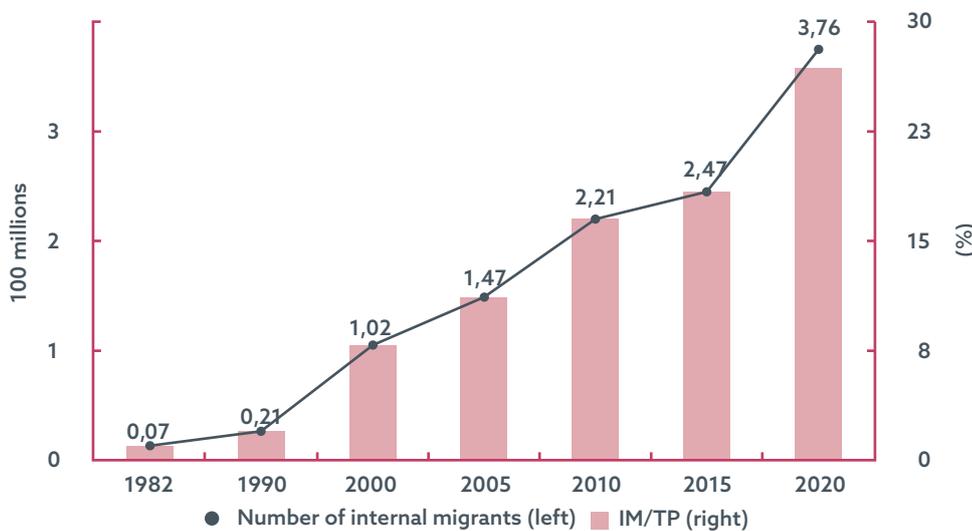


Fig.1 The rapid growth of China's internal migration (1982-2020)

(b) Rural-urban migration is a key driver of rapid urbanisation

China's urbanisation rate in 2020 was already close to 65 per cent (63.98 per cent, according to the census), with over 900 million people living in urban areas. The average annual urban population increase in China in the last decade was over 24 million, making it one of the fastest urbanising countries or regions in the world in

terms of scale and speed.

Cross-border migration is negligible in China, involving 1.43 million people in 2020, representing only 0.1 per cent of the total population. As a result, the rural-urban migrant population is seen as the leading driver of the country's rapid urbanisation over the last 40 years. The latest census data shows that rural-urban migration is still the main direction

of internal migration in China, with 249 million rural-urban migrants in 2020, placing about seven out of every 10 Chinese internal migrants in the rural-urban category. This means that one in four people in China’s urban areas comes from a rural area.

China can be considered an ageing society and is in a phase of accelerated ageing. In 2020, 13.5 per cent of the total population was aged 65 or over. China will be considered a “deeply ageing society” by international standards soon. In contrast, data from the 2015 “1 per cent” Population Sample Survey (“Micro Census”) shows that the average age of China’s internal migrants is 32.1 years. Internal migrants, mainly young and middle-aged labourers, have slowed down the ageing process in areas of inward migration and become an important source of local labour supply.

1.2 Structure of internal migration

(a) The proportion of people aged over 40 is increasing and the labour supply will be under pressure for the next 15 years



Fig.2 The age structure of internal migration in China (2010-2015)

However, this fact is being challenged in the recent context of the accelerating ageing of the national population. The 2010 Census and 2015 Micro Census show that the average age of internal migrants increased by 1.2 years over the five years. Figure 2 shows the age structure of China’s internal migration in 2010 and 2015. The data shows an increase in the proportion of internal migrants aged 40 to 55, which is the main reason for the increase in the average age. Based on the current statutory retirement age of 60 for men and 55 for women, it is expected that by 2035, internal migrants aged 40 to 55 will have exited the labour market and the labour supply will be under pressure, which may lead to an increase in labour costs.

(b) Internal migrants are significantly more educated, and the mass movement of high-quality talent could widen regional disparities

The human capital of China’s migrant population has increased significantly in recent years, highlighted by the fact that the proportion of the migrant population with a university education or above increased from 15 per cent in 2010 to 24 per cent in 2015, with one in four migrants having received higher education. Comparison of the number of people with a university education or above per 10,000 people in the national population and the migrant population

shows that the proportion of highly qualified people is greater among the migrant population than the total population, and the gap between the two continued to increase between 2010 and 2015. The mobile population with a high education level has a significant preference for

urban amenities such as an agreeable ecological environment, strong employment opportunities and high-quality public services (Cao et al., 2021). The availability of such amenities influences the flow of migrants with a high level of education.

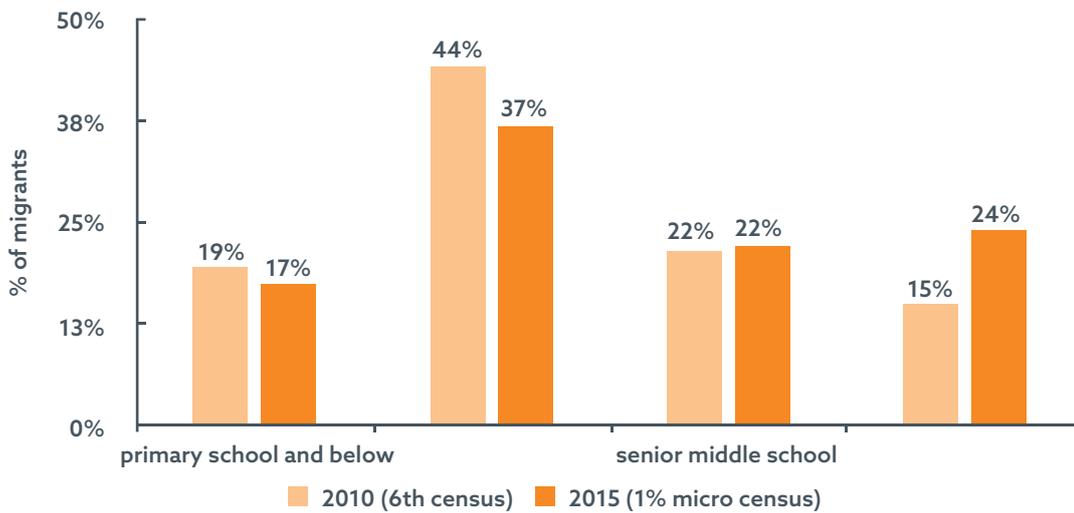


Fig.3 The education level of internal migrants in China (2010-2015)

	2010 (6th census)	2015 (1 per cent Micro Census)	2015 vs. 2010
Internal Migrants (IM)	14791	23792	1.61
Total population (TP)	8930	12445	1.39
IM/TP	1.66	1.91	

Tab.1 The number of people with college education or above in every 10,000 (2010-2015)

Statistics also show that the proportion of highly qualified people among the mobile population is growing faster than the total population. The rapid concentration of well-qualified talent in economically developed regions may widen the gap in human capital between regions, which in turn affects the spatial pattern of regional development.

(a) Expanding coastal clusters and rising inland cities

Based on county-level data from the fifth and sixth National Censuses, Figure 4 shows that coastal areas of migrant concentration expanded continuously and showed a tendency to spatially connect with each other (Liu et al., 2015). This tendency was most prominent in the Yangtze River Delta, while the spatial expansion of areas of migrant concentration in the Pearl River Delta and the Beijing-Tianjin-Hebei Region was limited. The floating population also grew rapidly in the Shandong Peninsula, the coastal area of Fujian, and the central and southern

1.3 Spatial patterns of internal migration

areas of Liaoning. These six largest coastal megacity regions are highly attractive for migrants. Consequently, the entire coastal region displayed a trend of migrant expansion and became the primary region for economic activity and population concentration.

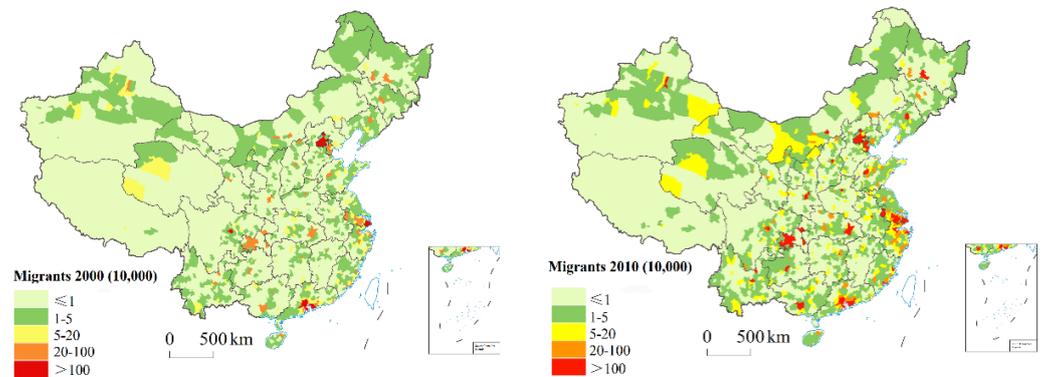


Fig.4 The spatial distribution of internal migration in China (2000-2010)

The inland region's ability to attract migrants continues to increase. A study reports that the region's contribution to China's urbanisation also continues to grow (Cao and Liu, 2011), which is consistent with inward flows of migrants. The overall distribution pattern of migrants in the inland region is characterised by a concentration in provincial capital cities and relatively even distribution in other places.

(b) Migrants from all sizes of city have the highest preference for large cities, and the lowest for medium-sized ones.

Rural-urban migration is an important driver of urbanisation, while urban-urban migration is driving reconfiguration of city sizes. China's urban-urban migration has grown rapidly in recent years, reaching 82 million according to the 2020 Census. Since 2014, China's State Council has classified all cities into five categories and seven sub-categories (see Table 2). Data from the 2017 China Migrants Dynamic Survey organised by the National Health Commission showed that urban-urban migrants prefer large cities and are least willing to relocate to medium-sized cities. Migrants from small and medium-sized cities prefer large cities, while those from large and huge cities prefer super cities.

Category	Size (10,000 persons)
Small II	<20
Small I	20-50
Medium	50-100
Large II	100-300
Large I	300-500
Huge	500-1000
Super	≥ 1000

Tab.2 The current standard of city-size classification in China (2014)

The preference for larger cities may be because large, huge and super cities offer better employment opportunities, income levels and public services, although smaller cities with a lower cost of living and more agreeable living environment are also attractive to urban-urban migrants. However, medium-sized cities fall between the two and are the least attractive.

Destination origin	Small	Medium	Large	Huge	Super	All
Small	0.20	0.05	0.44	0.13	0.18	1.00
Medium	0.14	0.06	0.33	0.19	0.27	1.00
Large	0.21	0.04	0.25	0.15	0.35	1.00
Huge	0.16	0.08	0.22	0.10	0.44	1.00
Super	0.18	0.05	0.32	0.24	0.22	1.00
All	0.19	0.05	0.36	0.15	0.25	1.00

Tab.3 Origin-destination patterns of urban-urban migration by city size in China (2017)

Part 2: Challenges arising from China's internal migration

2.1 Family migration, abandoned farmland and the urban housing dilemma

Family migration in China comprises four stages (Duan et al., 2013), namely individual migration, couples migration, nuclear family migration (young couple and children) and extended family migration (migrants' parents included). In 2017, the average family size of China's internal migrants in destination cities reached 2.72 people, and the average duration of settlement reached 6.23 years. China's internal migration has exhibited patterns akin to Duan's first two stages, and now is entering the third stage (Fan and Li, 2019). The recent trend of family migration poses new challenges to the "two ends of urbanisation", urban and rural areas.

	Uses of farmland	Per cent (%)
Cultivation	Cultivation by self/family members	51.66
	Cultivation by employees	1.6
	Cultivation by relatives and friends	23.05
Renting	Renting to other villagers	12.94
	Renting to the rural collective	1.24
	Renting to enterprises	0.4
	Abandoned	6.85
	Tree planting	1.47
	Other uses	0.79

Tab.4 The farmland use patterns of rural-urban migrants in China (2017)

Against the backdrop of continued rural-urban migration, the labour force in China's rural areas, especially for "male" labour, continues to decline. In the countryside, young women and "young seniors" who are still in good health are the main participants in land cultivation. The recent trend of family migration has further reduced the labour force engaged in agricultural production in rural areas. A 2017 survey shows that 6.85 per cent of rural-urban migrants have abandoned their farmland. This population loss has to a certain degree a negative impact on agricultural production.

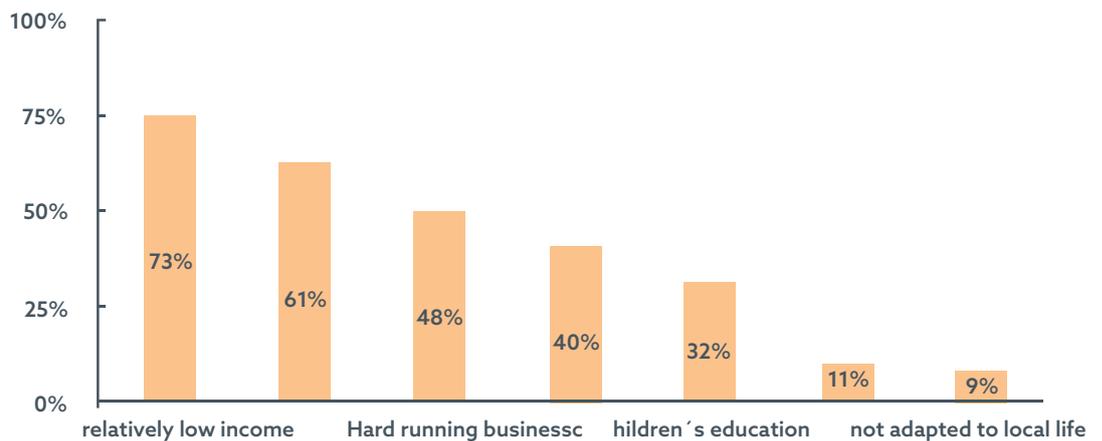


Fig.5 The main difficulties faced by China's internal migrants in the destination cities (2017)

In cities, the family migration trend inevitably leads to a higher demand for urban housing among internal migrants, with implications for the housing market. High urban housing prices and discriminatory policies against migrants (Huang and Tao, 2015) have contributed to the housing dilemma in cities, with 61 per cent of internal migrants citing "unaffordable housing" as one of the main difficulties of living in cities in 2017.

differentiated. As shown in Figure 6, about 30 per cent of migrants in cities of under 3 million people intend to transfer their hukou, while for 'Large I' cities and huge cities, the figure is above 40 per cent. In cities with more than 10 million people, close to 70 per cent of migrants aspire to obtain a local hukou.

2.2 Both hukou transfer intention and hukou thresholds in China's mega-cities are high

In China, hukou status is the institutional criterion for distinguishing between locals and migrants in each city. The non-local-hukou migrants cannot enjoy the same quality of urban public services as locals in terms of medical care and children's education (Chan and Buckingham, 2008). Due to the huge differences in employment opportunities, income levels and public services between cities, migrants' intention to transfer their hukou to various sized cities is significantly

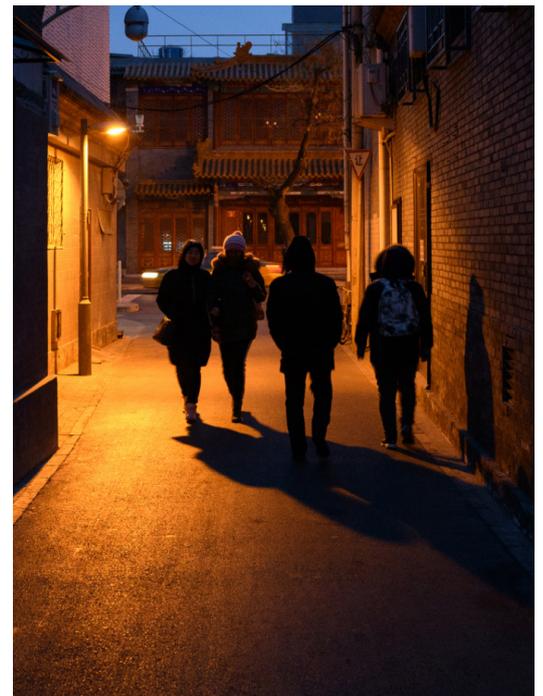




Fig. 6 Hukou transfer intention of internal migrants in cities of different sizes (2017)

Although large cities attract many migrants wanting to settle down, the hukou threshold in large cities is more stringent. The National New-type Urbanisation Plan (2014-2020) issued by the central government proposes a “city-size based” hukou policy, which can be simplified as “the larger the city, the more difficult it is to transfer

one’s hukou to the city”. Recently, the restriction on hukou transfer in cities with less than 3 million people has been completely removed. However, the threshold for settling in large, huge and super cities still exists, although migrants’ need for hukou transfer in those cities remains strong.

Size of city (10,000 persons)	Hukou policy
<50 (Small)	“Fully relaxing the restrictions”
50-100 (Medium)	“Orderly relaxing of the restrictions”
100-300 (Large II)	“Reasonable relaxing of the restrictions”
300-500 (Large I)	“Reasonably determining the conditions of hukou transfer”
≥500 (Huge and Super)	“Strictly controlled”

Tab. 5 Hukou transfer policies of cities of different sizes determined by the “National New-type Urbanisation Plan (2014-2020)”

Part 3: Planning responses: towards a people-oriented urban future

China's internal migration is still growing at relatively high speed, while recently presenting new characteristics and trends such as ageing and family migration. Large scale rural-urban migration has had a negative impact on agricultural production, while at the same time the urban housing market is under pressure from the imbalance between supply and demand caused by inward migrants. There is also still a mismatch between the hukou thresholds and

migrants' hukou transfer intention in mega-cities, creating inequality in public services between locals and migrants. Planning should address new demands, help resolve challenges and promote sustainable urbanisation and urban futures. Key policy recommendations for city governments are:

- Maintain awareness of the different sizes and components of migrants in different cities, to better serve new citizens.
- Grant migrants full citizenship through ongoing hukou reform and indiscriminate provision of basic public services.
- Provide adequate supplies of decent jobs and affordable housing to meet migrants' core concerns.

Hukou Reform: A local issue

The results in Figure 6 and Table 5 show significant differences in the hukou status of internal migrants in different sized cities in China. At present, it is quite easy to move a hukou to small and medium-sized cities. However, these cities are not internal migrants' main destinations, and their hukou is not strongly attractive to migrants. The hukou transfer intention in these cities is therefore quite low (around 30 per cent). The situation is quite different in cities categorised by the state as 'Large I' and huge, and especially in the super-cities such as Beijing and Shanghai, where there is a significant concentration of internal migrants. Over 50 per cent of these migrants want to obtain a local hukou, but are unable to do so because of the high threshold. Therefore, the key to hukou reform in China today lies in the mega-cities, making it not only a national issue, but also a local one for mega-city governments.

Taking a localised perspective, Liu and Shi (2020) revealed that hukou practices are operated locally to serve the city's development needs. In the case of Beijing, migrants with a postgraduate education and who serve the capital's political functions are more likely than others to win a hukou – an advantage not made explicit in government documents.

The decision-making objectives of local governments in mega-cities are multiple. They are aware that population concentration will lead to increased production and consumption and boost the local economy, so they have an incentive to relax hukou restrictions to attract internal migrants. However, they also try to avoid the problems of resource pressure, environmental pollution and traffic congestion caused by overcrowding. Different cities also have different leading industries, urban functions and development goals, and local governments may combine hukou thresholds with urban development needs. In terms of planning responses to address hukou reform, there is a need to understand the diverse policymaking objectives of local governments and the demands of internal migrants.

Conclusion and Recommendations

Further reading

PEAK Urban programme. (2018). Internal migration and urbanisation in China, <https://www.peak-urban.org/project/internal-migration-and-urbanisation-china>

The 14th Five-Year Plan: <https://chinadialogue.net/en/climate/11434-the-14th-five-year-plan-what-ideas-are-on-the-table/>

Urbanisation issues in the 14th Five-Year Plan of China: <https://news.cgtn.com/news/2021-03-25/Graphics-China-to-see-10-million-more-urban-residents-per-year-YTsMIKKY6c/index.html>

National Territory Spatial Planning System in China: <https://news.cgtn.com/news/3d3d514e354d544f34457a6333566d54/index.html>

PEAK Urban blog. (2021). Great expectations and dashed hopes: Hukou transfer in Beijing. <https://www.peak-urban.org/blog/great-expectations-and-dashed-hopes-hukou-transfer-beijing>

References:

- ao, G., Liu, T. (2011). Rising role of inland regions in China's urbanization in the 21st century: The new trend and its explanation. *Acta Geographica Sinica*, 66(12), 1631-1643. (in Chinese)
- Cao, G., Liu, J., & Liu, T. (2021). Examining the role of air quality in shaping the landscape of China's internal migration: Phase characteristics, push and pull effects. *Geographical Research*. 40(1), 199-212. (in Chinese)
- Chan, K. W., & Buckingham, W. (2008). Is China abolishing the hukou system? *The China Quarterly*, 195, 582-606.
- Duan, C., Lyu, L., & Zou, X. (2013). Major Challenges for China's Floating Population and Policy Suggestions: An Analysis of the 2010 Population Census Data. *Population Research*, (2), 17-24. (in Chinese)
- Fan, C. C., & Li, T. (2019). Familization of rural-urban migration in China: evidence from the 2011 and 2015 national floating population surveys. *Area Development and Policy*, 4(2), 134-156.
- Huang, Y., & Tao, R. (2015). Housing migrants in Chinese cities: Current status and policy design. *Environment and Planning C: Government and Policy*, 33(3), 640-660.
- Liu, T., Qi, Y., Cao, G., & Liu, H. (2015). Spatial patterns, driving forces, and urbanization effects of China's internal migration: County-level analysis based on the 2000 and 2010 censuses. *Journal of Geographical Sciences*, 25(2), 236-256.
- Liu, T., & Shi, Q. (2020). Acquiring a Beijing hukou: who is eligible and who is successful? *The China Quarterly*, 243, 855-868.
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- Liu, T., Peng, R., Zhuo, Y., & Cao, G. (2022). China's changing population distribution and influencing factors: Insights from the 2020 census data. *Acta Geographica Sinica*, 77(2): 381-394. (in Chinese)
- Cao, G., Chen, S., & Liu, T. (2021). Changing spatial patterns of internal migration to five major urban agglomerations in China. *Acta Geographica Sinica*, 76(6): 1334-1349. (in Chinese)
- Liu, T., Zhuo, Y., & Wang, J. (2020). How multi-proximity affects destination choice in onward migration: A nested logit model. *Acta Geographica Sinica*, 75(12): 2716-2729. (in Chinese)
- Liu, T., & Wang, J. (2020). Bringing city size in understanding the permanent settlement intention of rural-urban migrants in China. *Population, Space and Place*. 26. e2295: 1-15.
- Liu, T., Chen, J., Jin, Y., & Xiao, W. (2020). Spatial dynamics of the COVID-19 pandemic in China: effects of human mobility and control measures. *Journal of Global Change Data & Discovery*, 4(3): 224-240.
- Shi, Q., & Liu, T. (2019). Glimpsing China's future urbanization from the geography of a floating population. *Environment and Planning A: Economy and Space*. 51(4): 817-819.
- The briefing is based on the following forthcoming peer-reviewed publications:
- Shi, Q., Liu, T., Zhuo, Y., & Peng, R. (forthcoming) People and places in the 2020 Census: New geographies of population growth in China?. *The Professional Geographer*.
- To have access to manuscripts, please get in touch with liutao@pku.edu.cn (Liu, T.)

About us

The PEAK Urban programme aims to aid decision-making on urban futures by:

1. Generating new research grounded in the logic of urban complexity;
2. Fostering the next generation of leaders that draw on different perspectives and backgrounds to address the greatest urban challenges of the 21st century;
3. Growing the capacity of cities to understand and plan their own futures.

In PEAK Urban, cities are recognised as complex, evolving systems that are characterised by their propensity for innovation and change. Big data and mathematical models will be combined with insights from the social sciences and humanities to analyse three key arenas of metropolitan intervention: city morphologies (built forms and infrastructures) and resilience; city flux (mobility and dynamics) and technological change; as well as health and wellbeing.

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Our framework



The PEAK Urban programme uses a framework with four inter-related components to guide its work.

First, the sciences of **Prediction** are employed to understand how cities evolve using data from often unconventional sources.

Second, **Emergence** captures the essence of the outcome from the confluence of dynamics, peoples, interests and tools that characterise cities, which lead to change.

Third, **Adoption** signals to the choices made by states, citizens and companies, given the specificities of their places, their resources and the interplay of urban dynamics, resulting in changing local power and influencing dynamics.

Finally, the **Knowledge** component accounts for the way in which knowledge is exchanged or shared and how it shapes the future of the city.

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PEAK Urban is a partnership between:

