

**CHINA'S POPULATION TRENDS FROM
THE 2020 CENSUS: AGEING, MOBILE
AND MORE EDUCATED**

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Executive Summary

1. China released preliminary results of the 2020 population census on 11 May 2021 after some delay. The once-a-decade count of every individual staying in mainland China clocked 1.412 billion, up by over 70 million from the 2010 census.
2. Evidently, China's population growth is levelling off. Total fertility rate had fallen to a low of 1.3 in 2020, particularly in the past five years with annual birth numbers sliding from 18 million to 12 million. As annual death numbers are stable at around 10 million, China's population peak is expected to be around the corner.
3. Meanwhile, population ageing has been accelerating, with those aged 60 and above exceeding those 15 and younger for the first time. In between, the working age population has shrunk by 40 million. China is about to become an aged society with 14% of the population in old age (65 and above) soon.
4. However, China's human capital stock is improving rapidly. At the turn of the millennium, fewer than 50 million Chinese had college education. In 2010, it more than doubled to 120 million. Adding nearly 100 million between 2010 and 2020, there are now 218 million Chinese with college education.
5. The biggest surprise from the census is the unexpectedly large number of migrants, totalling 376 million in 2020. Contrary to prevailing views, inter-provincial migration has continued to expand. The past decade has also seen a sudden surge in intra-city residence mobility.
6. Urbanisation has been in full gear. China was half urbanised a decade ago. Over 900 million Chinese are residing in cities/urbanised towns and another 500 million in the countryside. The urbanisation rate based on actual residence is nearly 64%.
7. Led by Guangdong and Zhejiang provinces, China's most developed eastern region has gained in population share. In sharp contrast, six provinces in northern China are registering population decline for the first time in many decades.

8. Notably, China's average household size has come down to a historical low of 2.6 and the sex ratio at birth had dropped from 118 (newborn boys per 100 girls) in 2010 to 111 in 2020; both Han Chinese and ethnic minorities have grown in number, with the latter slightly gaining in population share to 8.9%.
9. Overall, the 2020 census results portray a China that is approaching its population peak, ageing at an accelerated pace, and becoming more educated, urbanised and mobile. Meanwhile, the diverging demographic trends across regions/provinces are increasingly manifested.
10. The census sheds new light on China's evolving economy and society. The shrinking working age population would imply a vanishing demographic dividend. However, the 2020 census also suggests that China stands to gain a new form of demographic dividend from retiring the less educated cohorts and replacing them with the more educated and productive young cohorts.
11. The 2020 census results will have a bearing on China's policymaking process, with important implications for a wide range of policies and programmes. China's top leaders met in end May to review the active ageing strategy and decided to phase in the three-child policy. More policy initiatives and changes are expected.

CHINA'S POPULATION TRENDS FROM THE 2020 CENSUS: AGEING, MOBILE AND MORE EDUCATED

ZHAO Litao*

Main Results at a Glance

- 1.1 China's population has trended upwards in the past decade, along with an acceleration in population ageing. Its working age population has declined in number for the first time. Overall, China's population is becoming more educated, urbanised and mobile. China is also moving towards smaller households, with the average size coming down to a historical low of 2.6.
- 1.2 Preliminary results from the 2020 census, released on 11 May 2021 after some delay, also reveal sharply diverging demographic trends across regions and provinces.¹ At one extreme is Northeast China with a declining and fastest ageing population, and at the other extreme is Guangdong province, whose population is by far the largest and among the youngest of all provinces.²
- 1.3 China conducted its seventh population census in the last quarter of 2020. Over seven million census staff reported data directly in real time by fully adopting digital data collection. The post enumeration survey found a very low undercount rate of 0.03%, lower than any of the previous six censuses.³

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¹ Preliminary results of China's 2020 census are reported by China's National Bureau of Statistics (NBS) in communiques from No. 1 to No. 8, <http://www.stats.gov.cn/ztjc/zdtjgz/zgrkpc/dqcrkpc/ggl/>, accessed 24 May 2021.

² After a net gain of 22 million from 2010 to 2020, Guangdong had a population of 126 million. In comparison, the population of the Northeast region (comprising Heilongjiang, Jilin and Liaoning) had fallen below 100 million after a reduction of 11 million. Ibid.

³ See *NBS No. 1 Communique on the Seventh National Population Census*, http://www.stats.gov.cn/tjsj/zxfb/202105/t20210510_1817177.html, accessed 24 May 2021. The internationally acceptable margin of error is three per cent.

- 1.4 As late as 15 March, the spokesperson for the National Bureau of Statistics (NBS) said that NBS planned to publish census results in early April.⁴ However, it was postponed due to the “need for more preparation work”.⁵
- 1.5 The delay fed the speculation that China’s population could fall in 2020 to below 1.4 billion, an all-time high that was reached only in 1919. On 28 April 2021, the *Financial Times* speculated that China was set to announce its first population decline since the two-year decline in 1960-61 caused by the Great Famine.⁶ The alarming report prompted a quick rebuttal from NBS on 29 April, stating that China’s population had been growing in 2020, and detailed data would be released in the upcoming announcement, which NBS eventually did on 11 May.
- 1.6 The published results sent an assuring message that China’s population had a sizeable growth of over 70 million from 2010 to 2020, comparable to that from the decade before. Yearly birth and death numbers are not available yet, but NBS revealed in a press conference that the newborns in 2020 totalled 12 million, higher than the undisclosed death number. At 1.41 billion, China remains the world’s most populous country (see Table 1).
- 1.7 The pace of population ageing has also accelerated in the past decade. China became an ageing society in 2000 when those aged 65 and over made up seven per cent of the total population. The share increased slightly to 8.9% in 2010 and rose to 13.5% in 2020. At this pace, China is set to become an aged society in one or two years, with 14% of the population in the old age category. Notably, the Chinese population has reached maturity, by the measure of more people over 60 than under 15.⁷ In between, the working age population has declined in both share and number.

⁴ <http://www.scio.gov.cn/xwfbh/xwbfbh/wqfbh/44687/45066/wz45068/Document/1700308/1700308.htm>, accessed 24 May 2021. The 2010 census results were released in two communiques on 28 and 29 April 2011, respectively.

⁵ <http://www.scio.gov.cn/xwfbh/xwbfbh/wqfbh/44687/45283/wz45285/Document/1702181/1702181.htm>, accessed 24 May 2021.

⁶ See <https://www.ft.com/content/008ea78a-8bc1-4954-b283-700608d3dc6c>, accessed 24 May 2021.

⁷ From a comparative perspective, Europe reached maturity by the turn of the millennium. Globally, the medium United Nations projections estimate that by 2050, the world will see an equal number of old and young (at 20 billion), each accounting for 21% of the global population. See Sarah Harper (2016), *How Population Change Will Transform Our World*. Oxford: Oxford University Press.

TABLE 1 MAIN RESULTS OF THE 2020 CENSUS, IN COMPARISON WITH THE 2010 AND 2000 CENSUSES

	2000	2010	2020
Total population			
size (million)	1,266	1,340	1,412
growth (million)	----	74	72
annual growth rate (%)	----	0.57	0.53
Age composition (%)			
0-14	22.9	16.6	17.9
15-59	66.8	70.1	63.4
60 and above	10.3	13.3	18.7
(65 and above)	7.0	8.9	(13.5)
Sex ratio at birth (number of boys per 100 girls)			
	----	118.1	111.3
Urban and rural population			
Urban population (million)	456	666	902
Rural population (million)	807	674	510
Urbanisation rate (%)	36.1	49.7	63.9
Migrant population (million)			
(inter-provincial, million)	----	86	125
(intra-provincial, million)	----	135	251
Population by regions (%)			
East	----	37.8	39.9
Central	----	26.6	25.8
West	----	26.9	27.1
Southeast	----	8.2	7.0
Educational attainment			
Population with college education (million)	46	120	218
# of college educated per 100,000 population	3611	8,930	15,467
Average years of schooling for people aged 15 and above	----	9.08	9.91
Illiteracy rate for people aged 15 and above (%)	6.7	4.1	2.7
Average household size			
	3.4	3.1	2.6
Population of ethnic groups			
Han (million)	1,159	1,225	1,286
Ethnic minorities (million)	106	114	125
% ethnic minorities	8.4	8.5	8.9

Data source: NBS Communiques on the Seventh Population Census, <http://www.stats.gov.cn/ztc/zdtjgz/zgrkpc/dqcrkpc/ggl/>; and NBS Communiques on the Sixth Population Census and NBS Communiques on the Fifth Population Census, <http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/qgrkpcgb/>, accessed 24 May 2021.

- 1.8 China had a highly skewed sex ratio at birth as of 2010. There were about 118 newborn boys per 100 girls. The ratio dropped considerably to 111 in 2020.

- 1.9 Urbanisation is also in full gear. China was half urbanised a decade ago. Now over 900 million people are residing in cities/urbanised towns, along with another 500 million in the countryside. The urbanisation rate based on actual residence has reached nearly 64%.
- 1.10 One of the biggest surprises out of the 2020 census is the unexpectedly large number of migrants, which grew from 221 million in 2010 to 376 million in 2020. The primary driver is intra-provincial migration, but inter-provincial migration is also on the rise, suggesting that the COVID-19 pandemic has not deterred internal migration in China.
- 1.11 China's most developed eastern region continues to gain in population share, up to nearly 40% in 2020. While the western region edged up to reach 27.1%, the central region experienced a slight decrease to 25.8%. The northeastern region lost not only in share but also in number.⁸ The relative gain or loss of a region is largely associated with its economic vibrancy.
- 1.12 In terms of educational level, at the turn of the millennium, fewer than 50 million had college education. The number more than doubled to 120 million in 2010. Adding nearly 100 million between 2010 and 2020, China now has 218 million people with college education. The room for further expansion is huge as the college educated accounts for only 15% of the national population.
- 1.13 On the other hand, China's average household size continues to slide, from 3.4 in 2000 to 3.1 in 2010 and further down to 2.6 in 2020. Several factors have jointly contributed to this trend: the falling TFR (total fertility rate)—down to a very low level of 1.3 in 2020, rise of singlehood and one-person households, growing migration that reduces co-residence and so on.

⁸ The eastern region includes Beijing, Tianjin, Hebei, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong and Hainan, and the central region includes Shanxi, Henan, Hubei, Anhui, Hunan and Jiangxi. The western region includes Inner Mongolia, Xinjiang, Qinghai, Gansu, Ningxia, Shaanxi, Chongqing, Sichuan, Tibet, Yunnan, Guizhou and Guangxi, while the northeastern region includes Heilongjiang, Jilin and Liaoning.

- 1.14 Han Chinese continues to grow in number along with ethnic minorities, totalling 1,286 million and 125 million respectively in 2020. In relative terms, the share of ethnic minorities increased slightly from 8.5% in 2010 to 8.9% in 2020.

Population Growth Levelling Off

- 2.1 The size or growth of Chinese population has attracted more media and public attention than any other numbers in the census. The 2020 census is expected to provide a definitive answer to the billion-dollar question of how soon will China's population peak. It is a high-stake question because a growing population, even at a slowing pace, is increasingly seen as vital to China's economic growth. Conversely, a stagnant population will be used by advocates to mobilise support for the end of birth control policies, or by "naysayers" to argue that China's path to economic prosperity and national rejuvenation will be derailed and prematurely coming to an end.⁹
- 2.2 The published results raise more questions than provide answers. To many scholars and observers, the numbers released by NBS are too good to be true. Based on the yearly data shown in Figure 1 and the possibility of the COVID-19 pandemic cutting fertility, many expect a stagnant population of around 1.4 billion in 2020. The census found a larger population size (see Figure 1).
- 2.3 In theory, population growth is jointly determined by three factors: the number of births and deaths, and net immigration. In the case of China, net immigration has negligible impacts due to extremely restrictive immigration policies. The number of deaths has been stable in recent years, ranging from 9.5 million to 10 million in the past decade (see Table 2). The determining factor in China's population growth currently is hence largely in the number of births.

⁹ For some typical views, see Ren Zeping (2021), "Zhongguo renkou xingshi baogao" (Report on the situations of China's population), <http://finance.sina.com.cn/zt/china/2021-05-26/zt-ikmyaawc7544948.shtml>, accessed 27 May 2021. The report explicitly argues that China's current demographic trends will negatively affect economic growth, innovation capability, pension sustainability, national rejuvenation, national comprehensive power and so on.

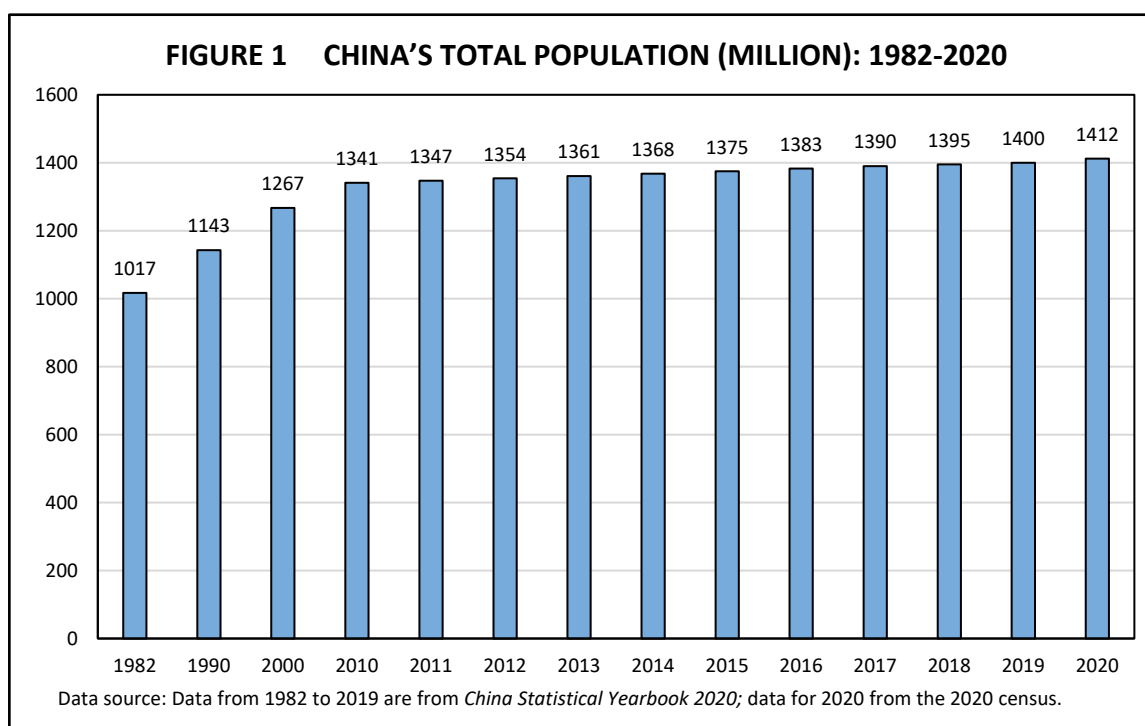


TABLE 2 CHINA'S FERTILITY AND MORTALITY FROM 2000 TO 2020

	Total population (million)	birth rate (‰)	death rate (‰)	Number of births (million)	Number of deaths (million)	Net growth (million)
2000	1,267	14.03	6.45	17.8	8.2	9.6
2005	1,308	12.40	6.51	16.2	8.5	7.7
2006	1,314	12.09	6.81	15.9	8.9	6.9
2007	1,321	12.10	6.93	16.0	9.2	6.8
2008	1,328	12.14	7.06	16.1	9.4	6.7
2009	1,335	11.95	7.08	16.0	9.5	6.5
2010	1,341	11.90	7.11	16.0	9.5	6.4
2011	1,347	11.93	7.14	16.1	9.6	6.5
2012	1,354	12.10	7.15	16.4	9.7	6.7
2013	1,361	12.08	7.16	16.4	9.7	6.7
2014	1,368	12.37	7.16	16.9	9.8	7.1
2015	1,375	12.07	7.11	16.6	9.8	6.8
2016	1,383	12.95	7.09	17.9	9.8	8.1
2017	1,390	12.43	7.11	17.3	9.9	7.4
2018	1,395	10.94	7.13	15.3	9.9	5.3
2019	1,400	10.48	7.14	14.7	10.0	4.7
2020	1,412	----	----	12.0	----	----

Data source: All data are from *China Statistical Yearbook 2020* except for the data of 2020, which are from the 2020 census.

Notes: The number of births is calculated as total population*birth rate; likewise, the number of deaths is calculated as total population*death rate.

2.4 In the past decade, China's relaxation of the birth control policy had visible yet short-lived effects on fertility. In late 2013, China moved to allow couples to have a second child if the husband or wife is from a single-child family. Previously, the

right to have a second child was conditional on both spouses being singletons. The policy effect was evident in 2014, but the growth momentum disappeared in 2015, prompting the government to announce the universal two-child policy in late 2015. The new policy produced a larger effect. However, the growth momentum did not last long either. In 2018, the number of births dropped to an all-time low in many decades, and the slide continued in 2019 and 2020 (see Table 2).

- 2.5 The NBS yearly data based on sampled surveys add up to a cumulative growth of below 60 million from 2011 to 2019. Given the COVID-19 pandemic, many expect little or no population growth in 2020. By all signs, China is approaching the population peak of 1.4 billion. To many people's surprise, the 2020 census found a cumulative growth of 72 million from 2010 to 2020, comparable to the growth of 74 million from 2000 to 2010.
- 2.6 The growing number and share of the young under 15 are even more unexpected. The population share of this group decreased considerably from 22.9% in 2000 to 16.6% in 2010. Given the falling fertility rate, it is indeed a surprising find that the trend of rapid decline was reversed in the 2010s. According to the 2020 census, the population share of those under 15 bounced to 18.0% in 2020 and the total number increased to 253 million (from 223 million in 2010).¹⁰
- 2.7 The sizeable discrepancies between the yearly data and census data are not new to China's statistical system. The earlier gaps are even more astonishing. For example, the NBS estimated a total of 320 million in the under 15 age group in 1999. The census the following year found a drastically lower number at 290 million in 2000. The discrepancies resurfaced in the following census cycle. NBS put the number at 247 million in 2009, while the 2010 census produced a considerably lower number of 223 million.¹¹ In the 1990s and 2000s, the NBS yearly data consistently over-estimated the birth numbers.

¹⁰ <http://www.stats.gov.cn/zjtj/zdtjgz/zgrkpc/dqcrkpc/ggl/>, accessed 24 May 2021

¹¹ *China Statistical Yearbook 2020*.

- 2.8 The discrepancies were again evident in the 2010s. Interestingly, this time the yearly data under-estimated the birth numbers, if the 2020 census results are assumed to be accurate and reliable. The contrast may reflect profound institutional changes in the past decade. The former National Family Planning Commission as the population authority had a strong vested interest in maintaining anti-natal policies. It repeatedly argued for stringent birth control based on over-stated birth numbers (until the census data made a drastic downward adjustment imperative).
- 2.9 After two rounds of restructuring in 2013 and 2018, the National Family Planning Commission was abolished. The removal of the staunchest defender of the one-child policy may explain the convergence of the yearly data and census data towards 2020, compared with much larger discrepancies found in previous census data. Nonetheless, it remains unclear if data discrepancies up to 2020 were mainly due to technical reasons (sampling versus census) as explained by the NBS.¹²
- 2.10 Controversies aside, China's population growth is levelling off. Based on the census data, the NBS announced that China's TFR had dropped to a very low level of 1.3 in 2020. In a short span of three years, the annual birth number fell from 18 million in 2018 to 12 million in 2020, while the annual death number has remained at around 10 million. Fertility may bounce back in the aftermath of the COVID-19 pandemic, but few would dispute that China's population peak is around the corner.

Population Ageing Accelerating

- 3.1 The census data are also important for shedding light on the population structure. China is known to be one of the world's fastest ageing countries. The falling fertility, driven by the one-child policy together with the spectacular economic and social development, has long been argued as a major driver. It propels population ageing when it reduces the population share of those under 15. Relatively less clear is the extent to which the other driver—growing longevity—contributes to the ageing of Chinese population.

¹² See http://www.stats.gov.cn/tjsj/zxfb/202105/t20210512_1817360.html, accessed 20 May 2021.

3.2 Results from the 2020 census suggest that the growing longevity has risen to become a major factor in the past decade, while falling fertility was the major driver in the decade before. The size of the under 15 group shrank by 67 million, down by a share of 6.3 percentage points. However, the trend was reversed between 2010 and 2020 as the under 15 group gained in both number and share (see Table 3).

TABLE 3 CHANGES IN CHINA'S AGE STRUCTURE FROM 2000 TO 2020

	Total population (million)	0-14 group		15-64 group		65 and above	
		Number (million)	Share (%)	Number (million)	Share (%)	Number (million)	Share (%)
2000	1,267	290	22.9	889	70.1	88	7.0
2005	1,308	265	20.3	942	72.0	101	7.1
2010	1,341	223	16.6	999	74.5	119	8.9
2011	1,347	222	16.5	1,003	74.4	123	9.1
2012	1,354	223	16.5	1,004	74.1	127	9.4
2013	1,361	223	16.4	1,006	73.9	132	9.7
2014	1,368	226	16.5	1,005	73.4	138	10.1
2015	1,375	227	16.5	1,004	73.0	144	10.5
2016	1,383	230	16.7	1,003	72.5	150	10.8
2017	1,390	233	16.8	998	71.8	158	11.4
2018	1,395	235	16.9	994	71.2	167	11.9
2019	1,400	235	16.8	989	70.6	176	12.6
2020	1,412	253	18.0	968	68.6	191	13.5

Data source: All data are from *China Statistical Yearbook 2020* except for the data of 2020, which are from the 2020 census.

3.3 The 65 and above group on the other hand was on a continuous upward trend from 2000 to 2020. The first decade saw a sizeable growth of 31 million, but was far surpassed in the second decade with an even higher 72 million. In terms of population share, the first decade gained modestly from 7.0% to 8.9%, while there was a leap from 8.9% to 13.5% in the past decade.

3.4 Among older adults, the oldest old—aged 80 and above—grew even faster, increasing from 20.95 million in 2010 to 35.80 million in 2020, a growth of 70.9%, higher than the 60.5% growth for all older adults.¹³ The 2020 census clearly shows that growing longevity has become a major driver of population ageing in China.

3.5 In short, China's age structure has undergone substantial changes in the new millennium. The young group under 15 shrank considerably in size and share in the

¹³ <http://www.scio.gov.cn/xwfbh/xwfbh/wqfbh/44687/45470/wz45472/Document/1703620/1703620.htm>, accessed 27 May 2021.

2000s but bounced back somewhat in the 2010s. The working age group (15-64) followed an opposite trajectory, growing in size and share in the first decade while shrinking in the second decade. The aged group not only continued to grow in size and share in both decades, but also at an accelerated pace over time. Given the very low fertility rate, the under 15 group is likely to shrink in the upcoming decade, suggesting that the falling fertility and growing longevity will jointly hasten China's population ageing in the near future.

Higher Education Expanding

- 4.1 Changes in the age structure, particularly the shrinking labour force, have raised concerns about China's growth prospect and pension sustainability. The population share of the working age group (15-64) decreased from the peak of 74.5% in 2010 to a new low of 68.6% in 2020. In terms of absolute numbers, this group peaked in 2013 and shrank by nearly 40 million thereafter (see Table 3).
- 4.2 Although China continues to top the world's largest working age population, totalling 968 million in 2020 in the age group of 15-64 (or 894 million in the age group of 15-59), China faces the challenge of diminishing demographic dividend (人口红利). Favourable conditions—an extended period of falling child dependency ratio, low level of aged dependency ratio, and growing number and share of working age population—are rapidly vanishing.
- 4.3 China increasingly turns its attention to another form of demographic dividend (人才红利) generated in the process of retiring the less educated and less skilled cohorts and replacing with more educated and productive ones. The 2020 census suggests that China stands to reap the new demographic dividend.
- 4.4 Census data show that in 2000, having access to college education was truly a privilege. Nationwide, only 3.6% received college or higher education. However, college education expanded rapidly in the 2000s. Consequently, 8.9% had access to college education in 2010. The growth momentum continued in the 2010s as evidenced by the 15.5% of mainland Chinese now having college or higher education (see Table 4).

TABLE 4 NUMBER OF PERSONS BY THE HIGHEST LEVEL OF EDUCATION ATTAINED PER 100,000 POPULATION IN 2000, 2010 AND 2020

	College and above	Senior secondary education	Junior secondary education	Primary education
2000	3,611	11,146	33,961	35,701
2010	8,930	14,032	38,788	26,779
2020	15,467	15,008	34,507	24,767

Data source: See <http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/qgrkpcgb/> for 2000 and 2010 data, and <http://www.stats.gov.cn/ztjc/zdtjgz/zgrkpc/dqcrkpc/ggl/> for 2020 data, accessed 28 May 2021.

- 4.5 In terms of absolute numbers, China had 46 million college-educated adults in 2000. The number more than doubled to 120 million in 2010 and 218 million in 2020 (see Table 1). The pace of expansion has been spectacular, increasing nearly five-fold in the past two decades, at an average growth rate of nearly 10 million every year from 2010 to 2020.
- 4.6 China's rapid expansion in higher education enrolment started in 1999, as an ad hoc policy response to the economic fallouts of the 1997 Asian financial crisis. It took place when China was about to become an ageing society in 2000. In the following two decades, China's rapid population ageing proceeded in tandem with rapid higher education expansion.
- 4.7 In 1998, China's regular higher education institutions enrolled 1.1 million new students, an extremely small figure for a country with over 1.2 billion people. From 1999, new tertiary enrolment increased by 0.5-0.7 million every year until 2006. By then, annual new intakes had reached 6.6 million.¹⁴ The enrolment continued its upward trajectory, albeit at a more moderate pace since. In 2020, 9.7 million high school leavers progressed to colleges/universities.¹⁵
- 4.8 The NBS has yet to publish detailed data on educational attainment by age. Research using nationally representative survey data has found that China's older cohorts are much less educated than the younger cohorts. Less than 10% of those aged 55-59 and about 15% of those aged 50-54 received college education, compared with 26%

¹⁴ See *China Statistical Yearbook 2021*.

¹⁵ http://www.stats.gov.cn/tjsj/zxfb/202102/t20210227_1814154.html, accessed 28 May 2021.

for the 40-49 group, 36% for the 35-39 group and 47% for the 30-34 group.¹⁶ Such inter-cohort differences in the attainment of college education suggest that the process of replacing the less educated cohorts with more educated ones can last two to three decades or even longer for China.

- 4.9 Studies have shown that young Chinese in their 20s and 30s are twice as productive as those who are about to retire. China's rapid advances in automation and artificial intelligence technologies are expected to more than offset the reduction in the workforce in the next 30 years.¹⁷
- 4.10 The 2020 census reveals two findings on the demographic dividend. First, while China's labour force shrank by 40 million in the past decade, the manpower loss will be compensated by the entry of young but better-educated cohorts. Noting that the number of college educated increased nearly 100 million from 2010 to 2020, China may have gained in terms of person multiplied by the years of schooling.
- 4.11 Second, China has tremendous room to improve its human capital stock. In 2020, those with college education made up 15% of its total population. The coming decades will see the less educated cohorts being replaced by the increasingly more educated ones. The replacement, which takes many decades to run its course, will generate a new form of demographic dividend to propel China's economic growth and beef up its innovation capability.

Migration and Urbanisation Surging

- 5.1 Several developments have shaped migration and urbanisation in China in recent years. The first is the leveling off of rural-to-urban migration due to shrinking rural population and return migration of the ageing "peasant workers". According to the NBS annual monitoring reports, rural migrant workers decreased 2.7% year-on-year

¹⁶ Zhao Litao, Qian Jiwei and Shan Wei (2021), "Understanding China's Ageing Cohorts: Education, Marriage and Living Arrangement", *EAI Background Brief*, No. 1582, East Asian Institute, National University of Singapore.

¹⁷ Cited from Yao Yang (2021), "Aging Problem Comes with Opportunities", <https://global.chinadaily.com.cn/a/202105/20/WS60a59e00a31024ad0bac01ef.html>, accessed 29 May 2021.

to below 170 million in 2020. Inter-provincial migration declined faster, down by 6.1% to barely above 70 million.¹⁸

- 5.2 The second is the New Urbanisation/Townisation Programme rolled out in 2014. The Programme set several targets to be achieved by 2020: grant urban *hukou* to 100 million rural residents who have moved out of agriculture (农业转移人口); guide 100 million rural residents in central and western provinces to settle in nearby cities and towns (就近城镇化); and reduce the gap between *hukou*-based urbanisation rate and residence-based urbanisation rate.¹⁹
- 5.3 The rising return migration and accelerated conversion of rural *hukou* holders to urban settlers have given rise to a shift in view that emphasises the ending of the rapid expansion of the size of the migrant population.²⁰ A bifurcated pattern of migration and urbanisation has emerged: rural residents in central and western provinces are increasingly migrating to and settling in county towns and nearby cities, and urban residents in the third- and fourth-tier cities are the major source of migrants in the first- and second-tier cities.²¹
- 5.4 Surprisingly, the 2020 census results portray a China that is substantially more mobile and diversified than what the prevailing views suggest. Figure 2 presents the size of *hukou*-residence split population (人户分离人口) and migrant population (流动人口) from 2000 to 2020. The term “*hukou*-residence split population” refers to those who have moved from their place of household registration to a different place for six months or more without changing their household registration. The

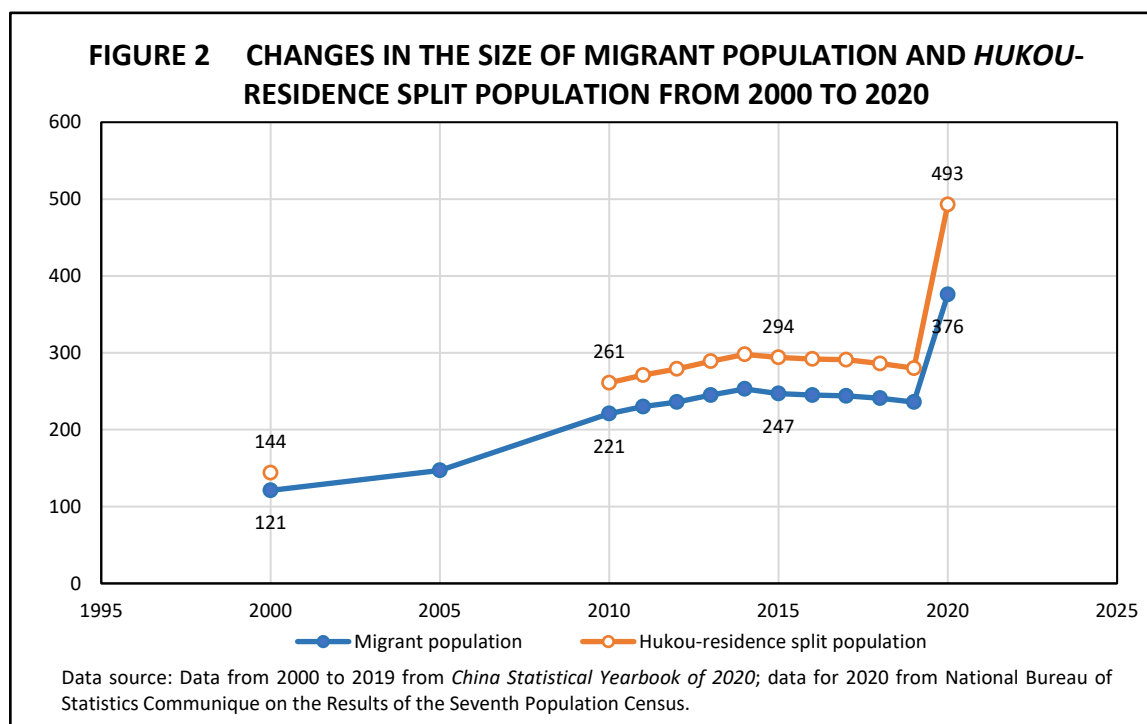
¹⁸ NBS (2021), “2020 nian nongmin gong jiance diaocha baogao” (The 2020 monitoring report on peasant workers in 2020), http://www.stats.gov.cn/tjsj/zxfb/202104/t20210430_1816933.html, accessed 29 May 2021.

¹⁹ The residence-based urbanisation rate counts rural-to-urban migrants who have stayed in the cities for over six months as urban population while the *hukou*-based urbanisation rate excludes rural-to-urban migrants. In 2012, the gap was 17.3 percentage points, with the residence-based urbanisation standing at 52.6% and the *hukou*-based urbanisation rate lower at 35.3%. The targets for 2020 were 60% versus 45% respectively. See http://www.gov.cn/zhengce/2014-03/16/content_2640075.htm, accessed 29 May 2021.

²⁰ NBS, UNFPA and UNICEF (2019), *Domestic Migrants in China (2018): Trends, Challenges and Recommendations*, <https://china.unfpa.org/en/report/20190816>, accessed 30 May 2021.

²¹ Yao Yang (2021), “Aging Problem Comes with Opportunities”, <https://global.chinadaily.com.cn/a/202105/20/WS60a59e00a31024ad0bac01ef.html>, accessed 29 May 2021.

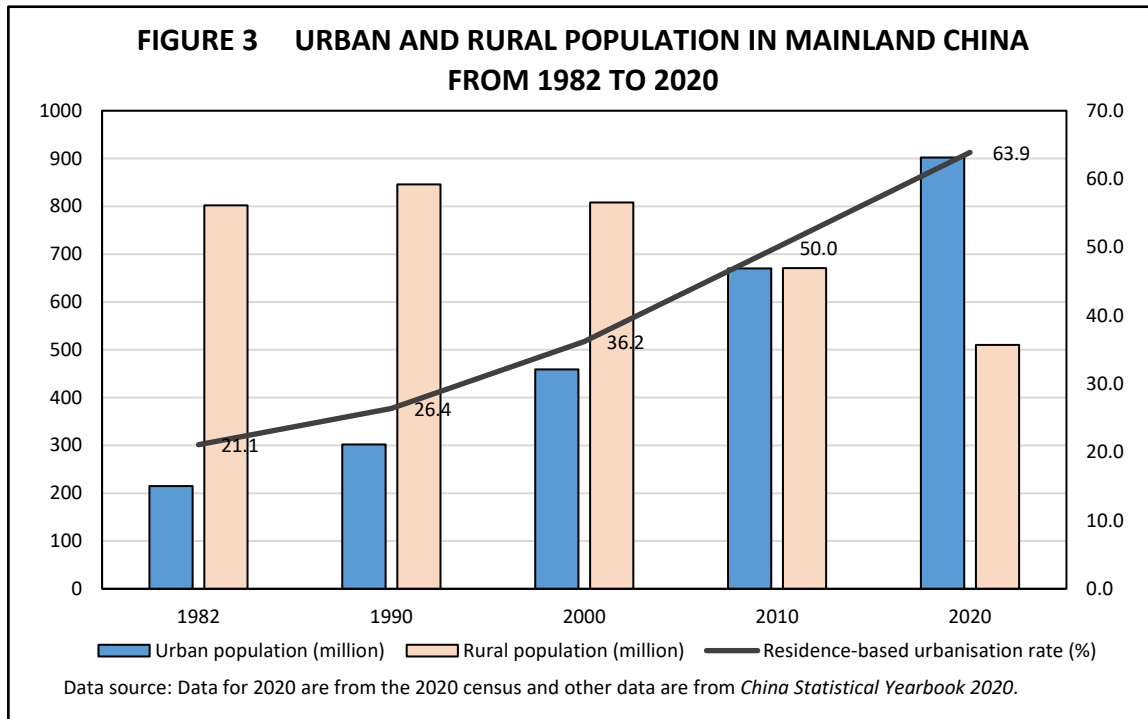
migrant population is a subset of the *hukou*-residence split population. The only difference is that the latter includes those moving across urban districts within the same city.



5.5 Figure 2 shows two important changes. First, the Chinese population is much more mobile than widely believed. The rapid growth of migrant population not only continued, but also accelerated in the 2010s. In 2000, about one in every 12 Chinese was a migrant; it became nearly one in every three Chinese in 2020. The yearly data from 2011 to 2019 seriously underestimated the scale of migration.

5.6 Second, intra-city residence mobility, indicated by the gap between the *hukou*-residence split population and the migrant population, has unexpectedly surged in the past decade. Relatively small in size in 2000 and 2010, the gap was 117 million in 2020. The causes and consequences of the sudden surge in intra-city residence mobility remain less known thus far.

5.7 In terms of urbanisation, the 2020 census results show that the New-Type Urbanisation/Townisation Programme (2014-2020) has achieved some targets while falling short in some others. The residence-based urbanisation rate reached 63.9% in 2020, higher than the target of 60% (see Figure 3).



5.8 For reasons yet to be known, the NBS did not report the *hukou*-based urbanisation rate of the 2020 census. Instead, it cited the figure—45.4%—provided by the Ministry of Public Security, which is slightly higher than the target of 45%. However, if urban *hukou* holders accounted for 45.4% of the national population, the gap between the residence-based urbanisation rate and the *hukou*-based urbanisation rate has in reality increased from 17.3% in 2012 to 18.5% in 2020, larger than the target of 15%. China’s *hukou* reform therefore falls short of narrowing the gap.

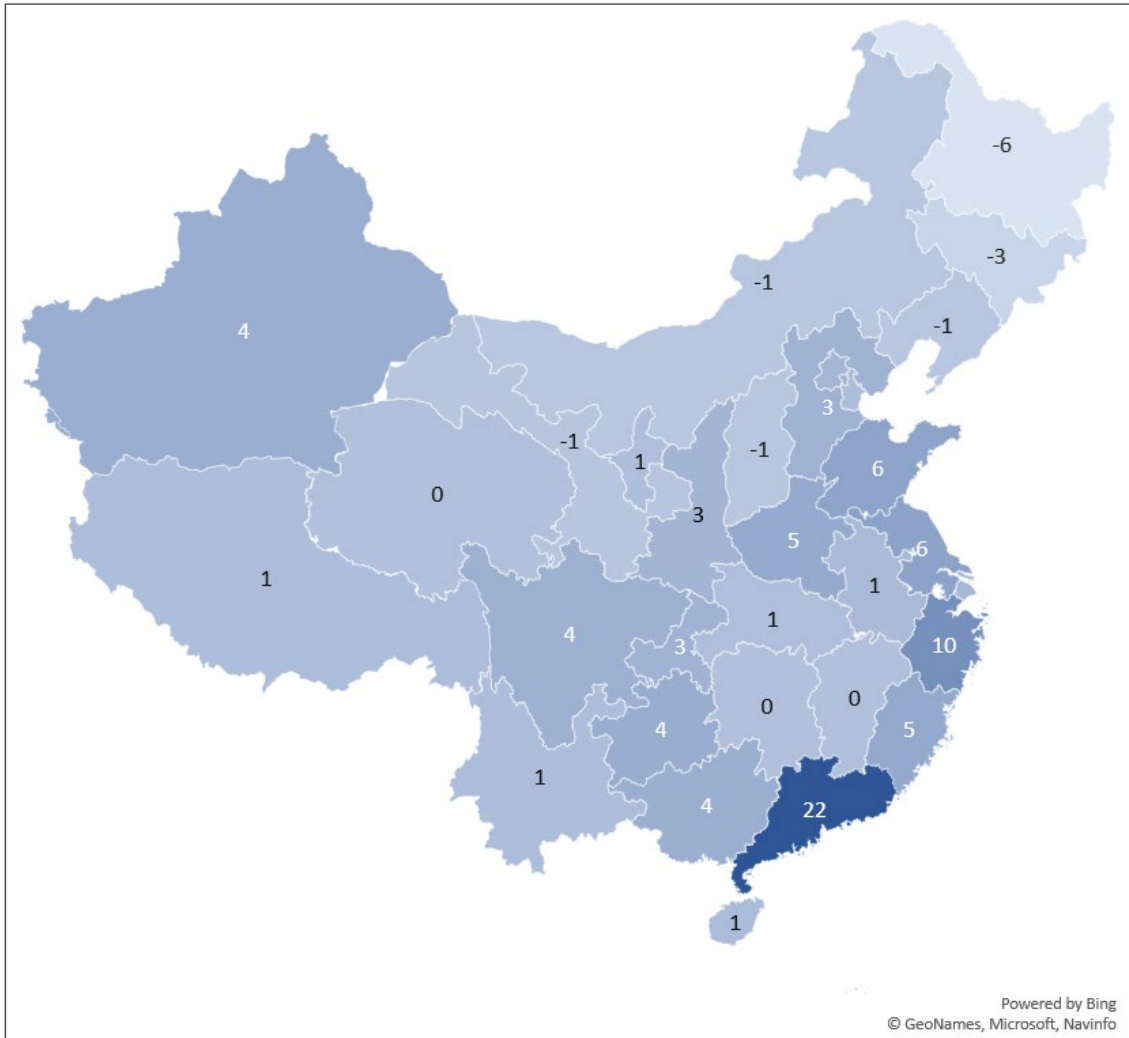
5.9 Other important findings include changes in population size at the provincial/regional level (see Figure 4). Guangdong province remains the most attractive destination for migrants. Its population grew by 22 million in the past decade. Zhejiang and Jiangsu provinces followed with a growth of 10 million and six million respectively. The Pearl River Delta Region and Yangtze River Delta Region continue to attract inter-provincial migrants in large numbers.²²

5.10 In contrast, six provinces experienced population decline from 2010 to 2020, led by Heilongjiang (six million), Jilin (three million) and Liaoning (one million) in

²² Apart from migration, Guangdong benefitted from a higher fertility rate, while Zhejiang and Jiangsu relied more on in-migration.

Northeast China. The other three provinces—Inner Mongolia, Shanxi and Gansu—are also in Northern China. Low fertility and out-migration are the main causes of their population decline. Within these provinces, the prime cities have gained in population at the cost of most other cities and counties.²³

FIGURE 4 GROWTH OF PROVINCIAL POPULATION (MILLION) IN MAINLAND CHINA FROM 2010 TO 2020



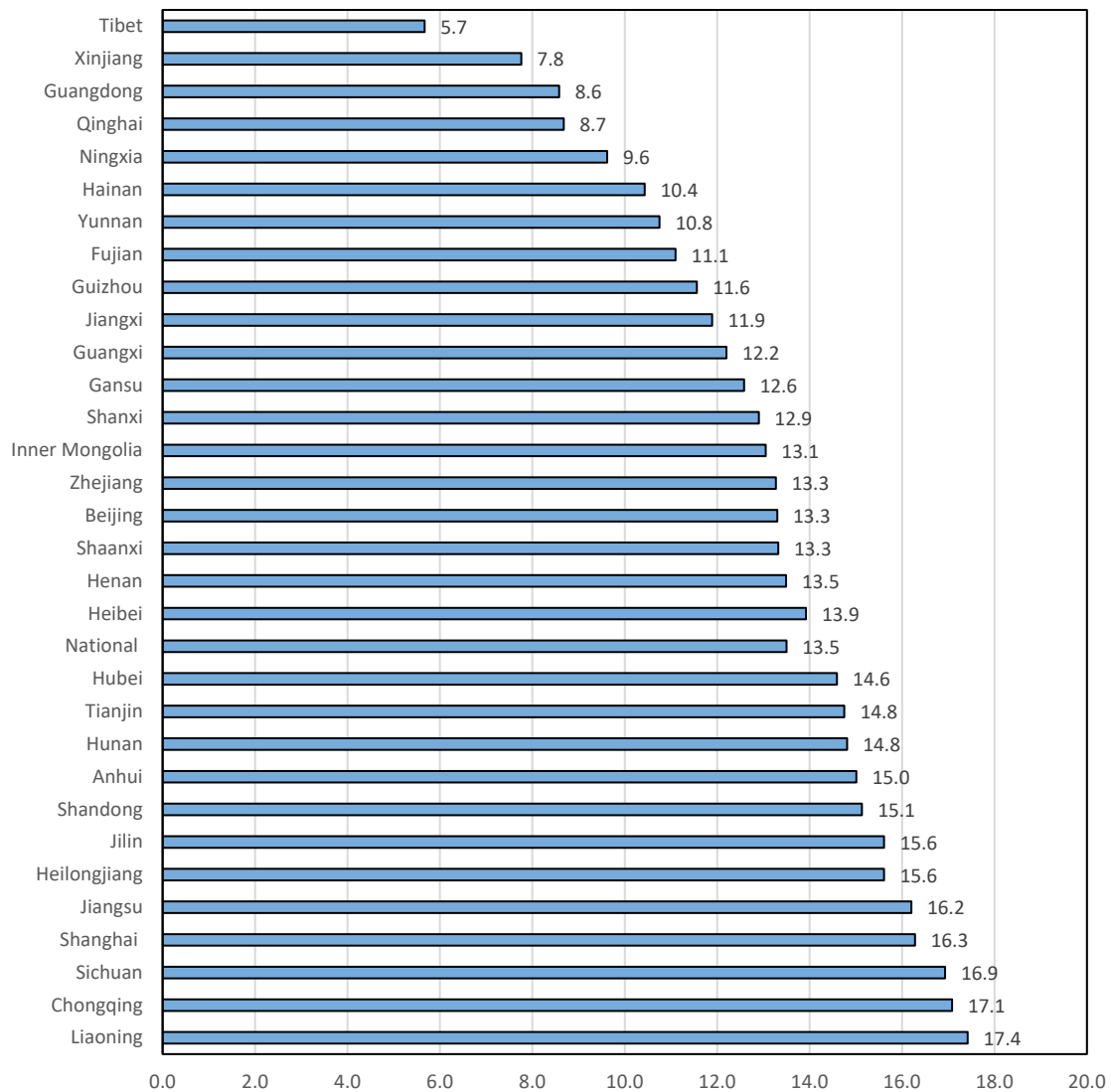
Data source: Author's calculation based on the 2010 census data, http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/qgrkpcgb/201104/t20110428_30327.html, accessed 20 May 2021 and the 2020 census data, <http://www.stats.gov.cn/ztjc/zdtjgz/zgrkpc/dqcrkpc/ggl/>, accessed 24 May 2021.

5.11 Due to differences in fertility, mortality and migration flow, Chinese provinces vary widely in the extent of population ageing. As Figure 5 shows, provinces with a high concentration of ethnic minorities such as Tibet, Xinjiang, Qinghai, Ningxia and

²³ For instance, in Liaoning province, Shenyang and Dalian have an increase in population between 2010 and 2020, while population in other cities except for Panjin has dwindled. See <http://tjj.ln.gov.cn/tjsj/tjgb/rkpcgb/>, accessed 31 May 2021.

Yunnan have a lower percentage of old-age population. Notably, Guangdong also belongs to this group, though the main contributor is in-migration rather than fertility and/or mortality. At the other end, Liaoning, Chongqing and Sichuan are the fastest ageing provinces. Interestingly, Beijing and Zhejiang have smaller proportions of people in the old age group than that for Shanghai and Jiangsu.

FIGURE 5 PERCENTAGE OF POPULATION AGED 65 AND ABOVE BY PROVINCE IN 2020



Data source: http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/qgrkpcgb/201104/t20110428_30327.html, accessed 20 May 2021.

Policy Implications

- 6.1 The 2020 census has shed new light on the changing demographics in China, including the very low fertility rate, shrinking labour force, accelerating population

ageing, surprisingly strong momentum of migration and urbanisation, divergent population growth trends between and within provinces, and surging number of college educated. These findings are likely to impact China's policymaking process.

Birth control policy

- 6.2 The first major policy change after the release of the 2020 census results has already been announced. The Politburo of the Chinese Communist Party decided on 31 May to further relax birth control, replacing the two-child policy with the three-child policy.²⁴ Given that the desired fertility has fallen to 1.8 and actual fertility is further down at 1.3, the introduction of the three-child policy is unlikely to attain a larger effect on birth promotion than the shift to the universal two-child policy. Concerns about China falling into the “low fertility trap” will prompt policymakers to roll out more pro-natal measures.

Pension reform

- 6.3 The 2020 census results will add urgency to China's pension reform agenda in two ways. First, the finding on accelerated population ageing will propel the government to take quicker actions on raising the retirement age. China's policymakers have long considered this option, but were hesitant to realise it due to strong resistance from the public. The 2020 census is likely to tilt the balance and make the government more determined to roll out specific measures in the 14th Five-Year Plan (2021-2025) period.
- 6.4 Second, the finding of large and growing differences in the old dependency ratio across provinces will likely prompt the central government to quickly pool pension funds nationwide. In mid-2018, China established a central adjustment system to balance pension burdens of local governments. The adjustment system draws a certain portion from provincial funds and redistributes it nationwide based on provincial needs, the first step towards building a “nationally unified pension

²⁴ See http://www.xinhuanet.com/politics/2021-05/31/c_1127513067.htm, accessed 31 May 2021.

system”.²⁵ The 2020 census highlights the need for a review of what can be done and what is the second step.

Hukou reform

6.5 The surge in the *hukou*-residence split population suggests that the *hukou* system is increasingly less relevant and effective in regulating migration flows. The introduction of the points-for-*hukou* system (积分入户制) in many large cities has pushed the *hukou* reform in the wrong direction.²⁶ The idea of settling at a given place with a local *hukou* is becoming increasingly obsolete, one which is incongruent with the reality of surging intra-city residence mobility and surprisingly strong migration flows.

6.6 As concerns shift from uncontrollable population growth to looming population decline, a growing number of local governments will be compelled to view population, not just professionals, investors and fresh college graduates, as assets to have. The 2020 census will certainly quicken this value shift, making it clear that the *hukou* reform should make household registration flexible and movable to accommodate the newfound reality that the Chinese people are becoming more mobile.

Fiscal policy

6.7 The growing concentration of residents in coastal provinces, national or regional major cities, or urbanised towns (from nearby villages) has important fiscal policy implications. Prominent experts have already called for a financial transfer system that takes population mobility into account, arguing that the previous “static”, area/region-based method of allocating fiscal spending should give way to a system

²⁵ http://www.xinhuanet.com/english/2018-06/13/c_137250976.htm, accessed 1 June 2021.

²⁶ The points-for-*hukou* system is highly biased and in favour of professionals, entrepreneurs and investors. Moreover, the *hukou* quota allocated to this system is too small to have any real impact on reducing the number of migrants.

of “dynamic” adjustment based on people’s actual place of residence rather than their place of household registration.²⁷

Active ageing policy

6.8 China had made “proactively responding to population ageing” a national strategy in late 2019. On 31 May 2021, about three weeks after the release of census results, Xi Jinping chaired a politburo meeting to hear reports on major policy measures in the 14th Five-Year Plan period (2021-2025), including raising the retirement age in phases, improving the multi-pillar pension system, establishing long-term care insurance, and building home- and community-based systems of elderly care services.²⁸ Boosted by the 2020 census results, the active ageing strategy is set to receive more policy attention.

²⁷ Liu Shangxi (2021), “Dangjin caizheng zhengce mianlin de xin keti” (New issues facing China’s current fiscal policy), *Beijing Daily*, 13 May 2021.

²⁸ http://www.xinhuanet.com/english/2021-05/31/c_139981170.htm, accessed 1 June 2021.