



# China's Population Census

*By Bert HOFMAN*

*China's population is still growing, but at a slower pace; the country is rapidly ageing and urbanising and is increasingly concentrated in coastal provinces. Families are getting smaller and the sex ratio is improving.*

## CHINA'S POPULATION WILL DECLINE, BUT NOT QUITE YET

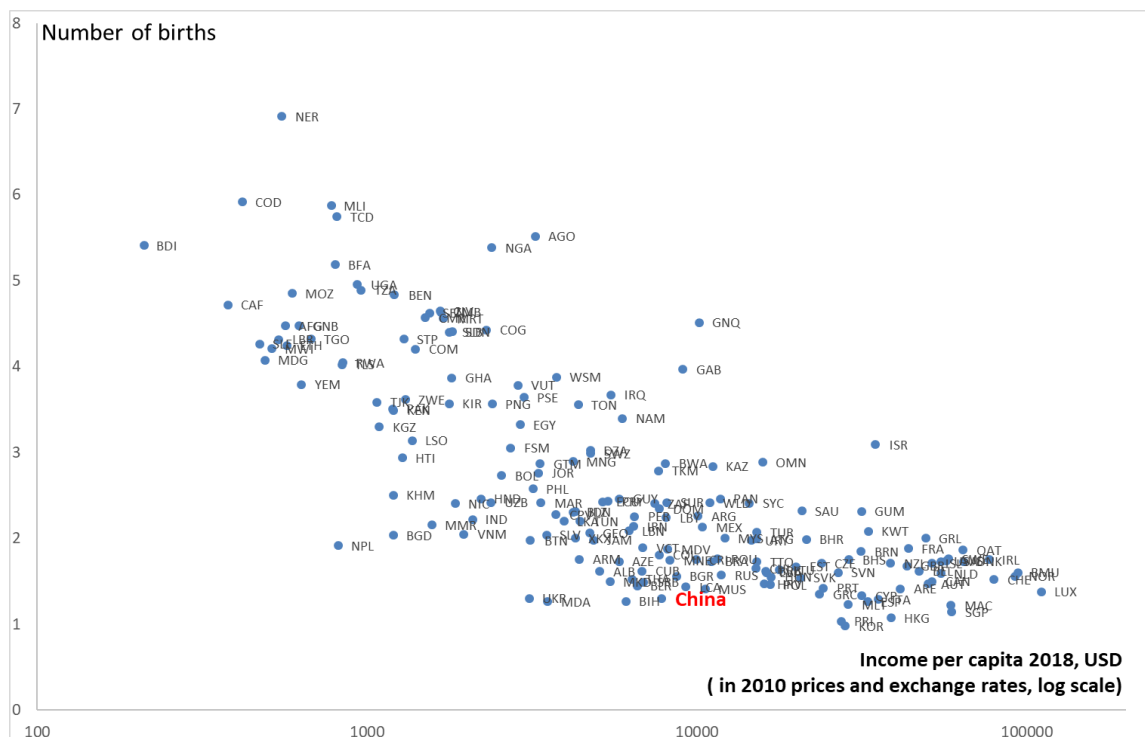
**D**ata from China's new population census, a once-a-decade event, was released on 11 May 2021, one month later than expected. The delay had fed speculations that this was caused by the findings of the first decline in China's population since the early 1960s. A decline would have been unexpected in light of the data the NBS (National Bureau of Statistics) releases every year based on a sample survey, and it turned out not to be the case. China's population growth slowed to 0.53% a year over the past decade, slightly lower than the growth rate in the decade before, but still higher than some 70 plus countries in the world. In some, such as Japan, Italy and Russia, population is already declining. In the European Union, population growth is barely positive at 0.17% and projected to decline in the coming years. The United States has currently about the same population growth as China, but in contrast to China, population growth in the United States is set to stay positive for the coming decades.

Based on current trends, China's population will start to decline in the coming decade and for the rest of this century. In this context, perhaps the most significant number released was China's total fertility rate (TFR), which indicates how many children a woman will have over her lifetime. According to Ning Jizhe, head of the NBS, TFR is now only 1.3, well below the 2.1 needed for a stable population, and considerably lower than the United States' 1.7 and even lower than Japan's 1.4.<sup>1</sup> Even during the time of the one-child policy, which was abolished in 2015, the number was never lower than 1.6. Evidently, after a brief baby blip in 2017, the abolition of the one-child policy and the switch to a two-child policy have not changed the tide.

As China becomes richer, the fertility rate is likely to decline further if international experience is any guide (Figure 1). China's richest provincial regions such as Shanghai and Beijing have the lowest birth rates in the country.

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<sup>1</sup> Data from the World Bank's World Development Indicators, <https://databank.worldbank.org/source/world-development-indicators#>, accessed 11 May 2021.

**FIGURE 1 TOTAL FERTILITY RATE AND INCOME PER CAPITA**

Note: Income per capita data and fertility data are from 2018, except for China's TFR, which is from 2020.

Source: World Development Indicators and NBS.

With a TFR of 1.3, China's population decline will be faster than originally projected, and its future population will be much lower. The current "medium variant" projections of the UN Population Division assumes a TFR of 1.7, which implies a population of about one billion by the end of the century. The current actual TFR is much closer to the 1.2 that is assumed in the "low variant" projection, which would yield a population of below 700 million by the end of the century. In such a scenario, it could become the third largest country in terms of population after India and Nigeria, and even the US population, at 430 million, would be of the same order of magnitude.

## DEMOGRAPHICS IS NOT GDP

Would this mean that China will have to give up on its dream of overtaking the United States economically? Hardly. First, demographics already stopped contributing to China's economic growth. In the 1980s and 1990s, the heydays of the demographic dividend, its contribution was never larger than two percentage points of the nine per cent per capita growth the country generated at the time. However, the labour force has already been declining since 2012, effectively subtracting from growth, which has come predominantly from high investment (adding capital to labour) and a little from the more productive use of existing resources ("total factor productivity), even though the latter has been disappointing.

Increasingly, China's education will play a role in driving productivity as the better educated enters the workforce, replacing the less educated leaving it. Since the last census, the share of university graduates has almost doubled to 15%, and in the current cohort entering the labour force, tertiary education is almost 40%, comparable to that of Korea when it reached China's current per capita income. A better educated population can well absorb and develop innovations that would drive future growth, and effectively manage China's production factors if the right institutional framework is in place.

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Second, population decline will only set in by the end of the decade, even with lower fertility. By 2035 China's population will still be 1.41 billion in the UN's low variant projection, about the same as today, and just 50 million less than the previously projected in the medium variant, not enough to make a big difference in economic terms. On current trends, therefore, China's GDP (gross domestic product) will still catch up with that of the United States by the end of this decade, or shortly after.

Third, China still has a large hidden reserve of labour that it can mobilise: the country's very young retirement age—60 for men, 55 for women and de facto even lower for both—means that the labour force is smaller than necessary. If China could achieve the same labour force participation among the elderly as Japan today, by the end of this decade the labour force would be some five per cent—or 40 million people—larger,<sup>2</sup> which is about the size of Germany's labour force today.

Finally, technological development, robotisation and AI (artificial intelligence) in particular, will make it easier for people to work longer and more productively, and take care of the elderly better than in the past. This is hence a good time for societies to grow old, before getting rich. Widely discussed policies to promote population growth are unlikely to make much of a difference to population growth. Such policies, including more and more affordable childcare, better career management for women who temporarily leave the workforce to have a family and more parental leave, are desirable by themselves as they would improve gender equity in the labour force. Even if the birth rate were to rebound, it will be a long time before its economic effects will be felt.

In some sense, China's population trajectory should be welcomed by China and the world. A population of half its current size will be far less of a burden on China's local environment, water resources and limited land. So will the global environment be better off in terms of greenhouse gas emissions. China is now by far the largest greenhouse gas emitter and even on a per capita basis it is now approaching Europe's. China has already pledged to achieve carbon neutrality by 2060 and a decline in population will certainly help achieve that goal, as the low fertility since the 1970s has done already.

## FISCAL PRESSURES

At the same time, other challenges of China's demographics remain real. First among them is the provision for the elderly. China's population above 60 now makes up 18.7% of the population, up by more than five percentage points compared to a decade ago. China's pension system is also not in good shape; according to projections of the China Academy of Social Sciences,<sup>3</sup> by the mid-2030s China's pension coffers will run dry. The balance of the urban pension system in 2019 was RMB4.3 trillion (\$669 billion) and the National Social Security Trust Fund contained an additional RMB2.7 trillion.

As it stands, the government budget puts in RMB580 billion every year to provide for China's pensions.<sup>4</sup> What is more, the rural pension system not only is in its infancy, but also more than

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<sup>2</sup> World Bank and Development Research Centre, 2019, *Innovative China: New Drivers of Growth*, World Bank Washington DC, p. 15.

<sup>3</sup> Cited in a Bloomberg report by Tom Hancock, available at <https://www.bloomberg.com/news/articles/2021-05-11/china-bets-on-productivity-over-population-to-drive-its-economy>, accessed 12 May 2021.

<sup>4</sup> *Xinhua*, 2021, China will promote personal pension system account, accessible (in Chinese) at [http://www.xinhuanet.com/fortune/2021-02/27/c\\_1127146043.htm](http://www.xinhuanet.com/fortune/2021-02/27/c_1127146043.htm), accessed 12 May 2021.

half of retirees rely on a largely government funded and very modest pension using available resources from local governments. The rural pension of RMB120-200 per month is less than 10% of the average urban pension. The implicit pension debt that will accrue when (not if) pension systems become more equal is huge.

Second, ageing is a major driver behind rising health costs in any country, and certainly in China. The epidemiological transition that comes with ageing is driving up costs, as is the lack of cost controls, hospital-centric care and pay-per-treatment incentives in health services. Health spending as a share of GDP (currently more than six per cent) is set to reach 10% of GDP by the end of the decade. Government budget carries a considerable share of the costs by subsidising the rural health insurance system; public health spending tripled over the past decade, now constituting two per cent of GDP.

These fiscal pressures from pension and health care come at a time when China's budget resources as a share of GDP have been on a decline. The conversion to a consumption-based VAT (value-added tax) in 2016 and the various measures of tax relief in business taxes and personal income tax in the wake of COVID-19 meant that China's tax revenues to GDP are now barely 19%, down from 22% in 2015. This is a little more than half of the 34% of GDP that OECD countries raise in taxes.

China could of course incur more government debt to finance the costs of ageing, but with the *augmented* debt ratio at 90% of GDP, fiscal space has dramatically narrowed since the global financial crisis. China's government could also tap into its vast holdings of SOE (state-owned enterprise) assets to finance the gap: according to a State Council Report in 2019, those assets were a whopping RMB475 trillion, more than 400% of GDP,<sup>5</sup> but the current policy directions are unlikely to allow for much sale of these assets, and even getting dividends from SOEs for the budget remains a challenge.

## **GROWING AND SHRINKING REGIONS**

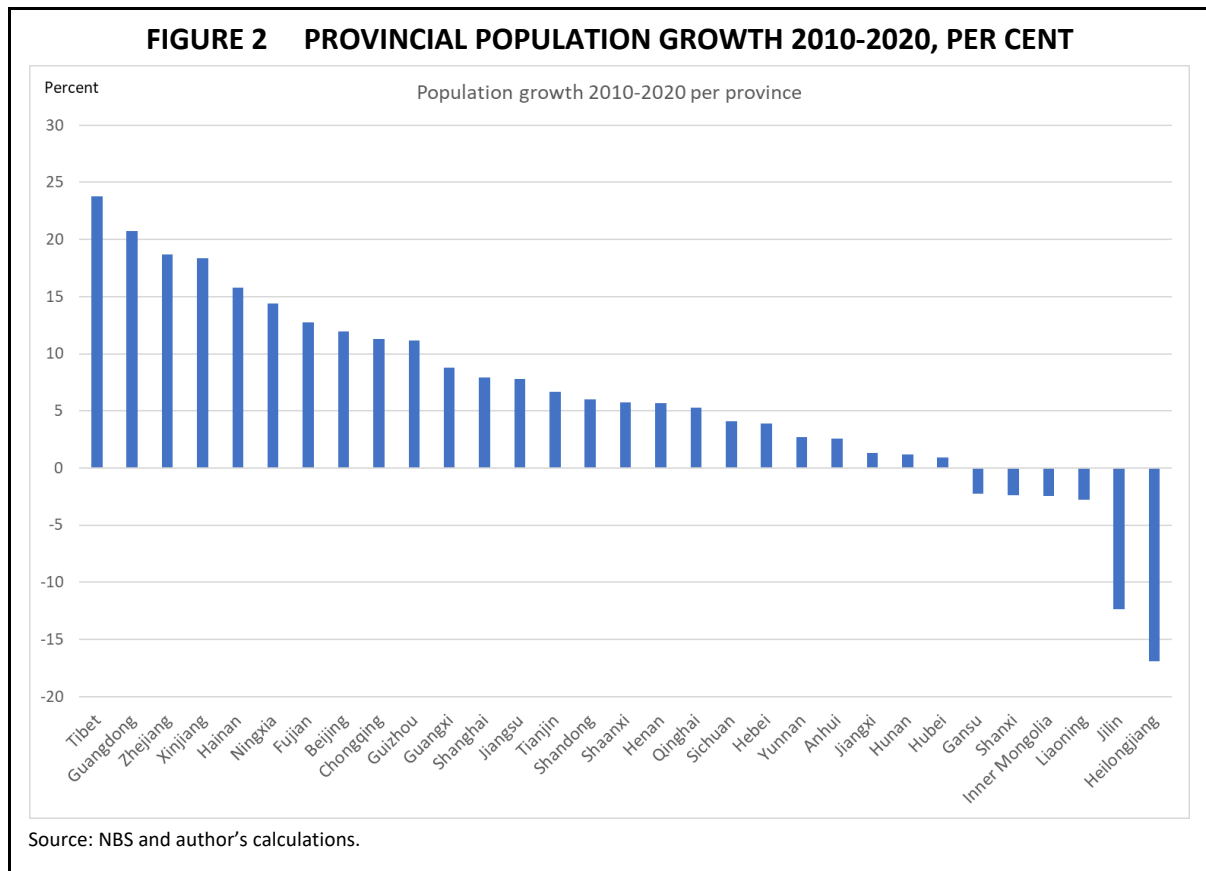
The new census confirms that China's population is becoming increasingly urban. Almost 64% of Chinese now live in cities. This is up from 50% only a decade ago and higher than the registered urban population suggested before. This is good news for China as one of the key drivers of productivity growth in the past was the move of people from low productivity rural jobs to higher productivity urban jobs. Sadly though, less than 50% of the 64% urbanites have urban household registration; for this "floating population" it is harder to find housing, get social insurance and obtain social services such as health care and education for their kids. This reinforces the need for reforms in the household registration system, which has been on the book for a long time but has made little progress to date.

The concentration of population may also be a concern. China's population is progressively concentrated in its eastern (or coastal) provinces. Compared to 10 years ago, the share of the population in eastern provinces rose by 2.15%, while central and northeastern provinces saw a declining share. Strikingly, the population of Heilongjiang province in the northeast declined by almost 17% in the past decade, whereas that of Guangdong province rose by 20% (Figure 2). The northeastern provinces, in part because of out-migration, also face steeper ageing problems than the rest of China. The shares of the population over 60 in Liaoning, Jilin and Heilongjiang are 25.7%, 23.1% and 23.2% respectively, compared to 18.7% nationally. These

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<sup>5</sup> <https://www.caixinglobal.com/2019-10-24/china-reports-67-trillion-book-of-state-assets-101474684.html>, accessed 12 May 2021.

provinces face particularly steep challenges in meeting the bills for health care and pensions, while they continue to lag in terms of economic development.



Minority provinces such as Tibet, Xinjiang and Ningxia also saw their population increase more than average. On the one hand, this is because population growth of minorities has been higher than the Han majority (10.3% versus 5%). On the other hand, these provinces also see in-migration of Han Chinese in pursuit of economic opportunity presented by heavy government spending in those regions. Such migration is not without its challenges; in the past it has led to ethnic tensions in a number of provinces.

A bright spark in the census data is the improving gender balance in China's population. The ratio of male births over female births was 111, down from almost 118 in the last census. It is still not the 106 that nature predicts, but much better than in the past when the one-child policy combined with a cultural preference for sons led to selective abortion and failure to register girls. It seems that the relaxation of population policies in 2016 has led to a more balanced sex ratio, which is good news for China. Meanwhile, the Chinese live in ever smaller families: The average family now is 2.6 people, down from 3.1 a decade ago. This is due to not only fewer children, but also more people choosing not to get married, and more elderly Chinese preferring to stay by themselves than to move in with their kids.

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