

Executive Summary

We estimate China's human capital stock and describe its distribution and dynamics at the national and provincial levels from 1985 through 2019¹. A variety of human capital indices are constructed and reported.

In addition to the traditional metrics, we apply the widely used Jorgenson-Fraumeni income-based approach (hereinafter referred to as “J-F method”), which provides a more comprehensive measurement of human capital.

The following notes define terms and measures used throughout this report:

- Total human capital refers to: female and male with age range of 0-55 and 0-60, respectively, in Mainland; and 0-60 and 0-65, respectively, in Hong Kong; and 0-60 in Taiwan.
- Labor force human capital refers to (not including full-time students): female and male with age range of 16-54 and 16-59, respectively, in Mainland; and 15-59 and 15-64, respectively, in Hong Kong; and 15-59 in Taiwan.
- We use the term “nation” and “mainland” interchangeably to refer to the 31 provinces (autonomous regions and municipalities) of the mainland China, not including Hong Kong, Macau and Taiwan.
- Unless otherwise specified, the monetary values are measured in 1985 RMB.
- Real provincial-level human capital is adjusted using the relevant provincial living-cost-adjustment index (LCI) and the Consumer Price Index (CPI) with 1985 as base year and Beijing as base province.
- Average annual growth rates across years are calculated based on the simple average of annual growth rates.

For more details, refer to the comprehensive China Human Capital Report 2021.

All the data and results are available at the China human capital database and are free for public use. The data can be downloaded at:

¹ The results for Hong Kong and Taiwan are reported starting from 1997.

Official website of China Center for Human Capital and Labor Market Research:

<http://humancapital.cufe.edu.cn/rlzbzsxm.htm>

Official website of Central University of Finance and Economics & University of Electronic Science and Technology of China Joint Research Data Center:

<http://cedcdata.cufe.edu.cn/cedc/metadata/list.html>

The Main Findings of the 2021 Human Capital Report

A. Human Capital at National Level

(I) Traditional Human Capital Measures

1. In 2019, the average age of the labor force at the national level was 38.8 years. The five provinces with the oldest labor force were Heilongjiang, Liaoning, Jilin, Inner Mongolia and Zhejiang, and the five provinces with youngest labor force were Ningxia, Guangdong, Hainan, Guizhou and Tibet.
2. In 2019, the average schooling years of the labor force at the national level was 10.5. The five provinces with highest years of schooling were Beijing, Shanghai, Tianjin, Jiangsu and Liaoning, and the five provinces with the lowest years of schooling were Gansu, Guizhou, Yunnan, Qinghai and Tibet.
3. In 2019, the proportion of the labor force with high school education or higher was 41.6%, with 21.6% in rural areas and 54.6% in urban areas.
4. In 2019, the proportion of the labor force with college education or above was 20.6%, with 5.6% in rural areas and 30.4% in urban areas.

(II) The Jorgenson-Fraumeni (J-F) Based Human Capital Measures

5. The J-F measure of China's nominal total human capital reached 2776.4 trillion yuan in 2019, with 2418.9 trillion yuan (87.1%) in urban areas and 357.5 trillion yuan (12.9%) in rural areas.
6. Nominal human capital per capita was 2.5 million yuan in 2019, 3.3 million yuan for urban residents and 0.9 million yuan for rural residents. Average human capital

for male was 3.1 million yuan and for female was 1.7 million yuan.

7. In 2019, the five provinces with highest human capital stock were Shandong, Jiangsu, Henan, Guangdong and Hebei, and the five provinces with lowest human capital stock were Gansu, Hainan, Ningxia, Qinghai and Tibet.
8. The five provinces with highest human capital per capita were Beijing, Shanghai, Tianjin, Zhejiang and Jiangsu, and the five provinces with lowest level were Xinjiang, Tibet, Yunnan, Gansu and Qinghai.
9. The five provinces with highest average labor force human capital were Beijing, Tianjin, Shanghai, Zhejiang and Jiangsu, and five provinces with the least were Xinjiang, Hainan, Yunnan, Gansu and Qinghai.
10. In 2019, the proportion of the population aged 0-15 among non-retired people at the national level was 21.9%, and their human capital accounted for 48.5% of total human capital.
11. In 2019, the proportion of the population aged 25-45 to the total labor force was 54.9% at the national level, and their human capital accounted for 66.3% of the total labor force human capital.
12. China's total real human capital in 2019 was 11.5 times its level in 1985, having grown at an average annual rate of 7.9%. The average annual growth rate during the decade 2010-2019 was 8.0%.
13. From 1985 to 2019, rural human capital grew at an average annual rate of 3.2%, and urban human capital grew at 10.4%; while during the decade 2010-2019, the growth rate was 9.8% for urban areas but only 0.7% for rural areas. This decline in the average annual growth of rural human capital largely reflects China's rapid urbanization.
14. Urban human capital surpassed the rural human capital before 1994 and has remained higher since then.
15. Human capital per capita grew from 43.7 thousand yuan to 474.4 thousand yuan, at an average annual rate of 7.5% over the period 1985-2019 and at a rate of 8.4% over the years 2010-2019.
16. The average annual growth rate of human capital per capita during the period of

1985-2019 was 6.5% and 5.3% for urban and rural areas, respectively. For the years 2010-2019, the growth rates were 7.8% and 4.2%, respectively.

B. Human Capital in Hong Kong and Taiwan

17. In 2019, the average age of the labor force was 42.1 years in Hong Kong and 40.8 years in Taiwan.
18. In 2019, the average schooling years of the labor force were 12.4 years in Hong Kong and 13.8 years in Taiwan.
19. In 2019, the proportion of the labor force with high school education or above was 75.6% in Hong Kong and 87.4% in Taiwan.
20. In 2019, the proportion of the labor force with college education or above was 42.3% in Hong Kong and 55.4% in Taiwan.
21. In 2019, the proportion of the population aged 0-15 among non-retired people was 16.9% in Hong Kong, and their human capital accounted for 21.0% of total human capital in Hong Kong.
22. In 2019, the proportion of the population aged 0-15 among non-retired people was 17.8% in Taiwan, and their human capital accounted for 18.8% of total human capital in Taiwan.
23. In 2019, the proportion of the population aged 25-45 to the total labor force was 49.0% in Hong Kong, and their human capital accounted for 59.2% of total labor force human capital in Hong Kong.
24. In 2019, the proportion of the population aged 25-45 to the total labor force was 40.8% in Taiwan, and it accounted for 49.4% of total labor force human in Taiwan.
25. In Hong Kong, the average annual growth rate of J-F based total human capital between 1997 and 2019 was 0.7% while the annual growth rate of human capital per capita was 0.2%. Over the years 2010-2019, the corresponding rates were 2.9% and 2.7%, respectively.
26. In Taiwan, during 1997-2019, the average annual growth rate of J-F based total human capital was -1.4%, and it was -1.0% for human capital per capita; while over the years 2009-2019, the corresponding rates were -1.3% and -0.4%, respectively.