

Executive Summary

We estimate China's human capital stock and describe its distribution and dynamics at the national and provincial levels from 1985 through 2017. A variety of human capital indices are constructed and reported.

In addition to the traditional education-based 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. We present both education-based and J-F measures for males and females, and by rural and urban areas.

We incorporate the Mincer model into the J-F framework to estimate income where the needed data are unavailable. Estimation of the Mincer model is implemented by combining micro survey data with provincial level aggregate data to fill in for missing micro-level observations.

We organize our estimates into a China human capital database that contains provincial panel datasets on human capital, physical capital, living-cost-adjustment indices, and other useful provincial data (raw and processed). The database is available for public use and can be downloaded free of charge at:

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

The Main Findings of the 2019 Report

(All real values are based on 1985 prices unless otherwise specified. The annual average growth rate calculates the simple growth rate for each year firstly, then average it to reflect the annual change in growth rate.)

I) Traditional Human Capital Measures

1. In 2017, the average age of the labor force at the national level is 37.8 years. The five provinces with the oldest labor force were Liaoning, Jilin, Heilongjiang, Chongqing, and Hunan, and the five provinces with youngest labor force were Guangdong, Guizhou, Hainan, Xinjiang and Tibet.

2. In 2017, the average years of schooling of the labor force at the national level was 10.2. 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, Yunnan, Guizhou, Qinghai and Tibet.
3. In 2017, the proportion of the labor force with high school education or higher was 37.51%, 20.5% in rural areas and 50.32% in urban areas.
4. In 2017, the proportion of labor force with college education or above was 17.6%, 5.5% for the rural areas and 26.7% for the urban areas.

II) The J-F based human capital measures

5. The J-F measure of China's total human capital reached RMB 1934.3 trillion in current value in 2017, with RMB 1587.4 trillion (82.1%) in urban and RMB 346.9 trillion (17.9%) in rural areas.
6. Human capital per capita was RMB 1721 thousand in current value in 2017, RMB 2349 thousand for urban residents and 774 thousand for rural residents. Males' average human capital was RMB 2175 thousand and females' was 1206 thousand.
7. In 2017, the five provinces with highest human capital stock were Shandong, Jiangsu, Henan, Guangdong and Zhejiang, 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 Shanghai, Beijing, Tianjin, Zhejiang and Jiangsu, and the five provinces with lowest level were Heilongjiang, Xinjiang, Tibet, Yunnan, Gansu and Qinghai.
9. The five provinces with highest average labor force human capital per capita were Beijing, Tianjin, Shanghai, Zhejiang and Jiangsu, and five provinces with the least were Guizhou, Yunnan, Gansu, Qinghai and Tibet.
10. China's total real human capital stock in 2017 was 10.4 times its level in 1985, having grown at an average annual rate of 7.7%. The average annual growth rate during the decade 2008-2017 was 7.4%.

11. From 1985 to 2017, rural human capital grew at an average annual rate of 3.7%, and urban human capital grew at 10.3%; while during the decade 2008-2017, the growth rate was 8.4% for urban areas but only 3.7% for rural areas. This decline in the average annual growth of rural human capital largely reflects China's rapid urbanization.
12. Urban human capital surpassed the rural human capital in 1992 and has remained higher since then.
13. Human capital per capita grew from 39,780 yuan to 345,790 yuan in real value, at an average annual rate of 7.1% over the period 1985-2017 and at a rate of 7.1% over the years 2008-2017.
14. The average annual growth rate of human capital per capita during the period of 1985-2017 was 6.4% for urban and 5.4% for rural areas. For the years 2008-2017 the growth rates were 5.7% and 6.2%, respectively.

III) Hong Kong and Taiwan

15. In 2017, the average age of labor force was 39.1 years in Hong Kong and 38.2 years in Taiwan.
16. In 2017, the average years of schooling of the labor force were 12.4 years in Hong Kong and 13.6 years in Taiwan.
17. In 2017, the proportion of the labor force with high school education or above was 76.5% in Hong Kong and 87.9% in Taiwan.
18. In 2017, the proportion of the labor force with college education or above was 43.0% in Hong Kong and 54.5% in Taiwan.
19. In Hong Kong, the average annual growth rate of J-F based total human capital between 1985 and 2017 was 4.2%, and for human capital per capita it was 3.6%; while over the years 2008-2017, the rates were 4.0% and 4.2%, respectively.
20. In Taiwan, during 1985-2017, the average annual growth rate of J-F based total human capital was 1.7%, and for human capital per capita it was 1.6%; while over the years 2008-2017, the rates were -1.5% and -0.8%, respective.