

Executive Summary

We estimate China's human capital stock and describe its distribution and dynamics at the national and provincial levels from 1985 through 2016. 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/en/Human_Capital_Index_Project.htm.

The Main Findings of the 2018 Report

(All real values are based on 1985 prices unless otherwise specified)

I) Traditional Human Capital Measures

1. In 2016, the average age of the labor force at the national level is 37.3 years. The five provinces with the oldest labor force were Heilongjiang,

Liaoning, Chongqing, Jilin and Inner Mongolia, and the five provinces with youngest labor force were Gansu, Xinjiang, Hainan, Guizhou and Tibet.

2. In 2016, average years of schooling of the labor force at the national level was 10.0. 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 2016, the proportion of the labor force with high school education or higher was 34.08%, 13.16% in rural areas and 50.36% in urban areas.
4. In 2016, the proportion of labor force with college education or above was 16.99%, 2.93% for the rural areas and 27.92% 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 1,675 trillion in current value in 2016, with RMB 1,404 trillion (84%) in urban and RMB 271 trillion (16%) in rural areas.
6. Human capital per capita was RMB 1.5 million in current value in 2016, RMB 2.1 million for urban residents and 0.6 million for rural residents. Males' average human capital was RMB 1.9 million and females' was 1.0 million.
7. In 2016, the five provinces with highest human capital stock were Shandong, Henan, Guangdong, Jiangsu and Zhejiang, and the five provinces with lowest human capital stock were Gansu, Hainan, Ningxia, Qinghai and Tibet.

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.

The five provinces with highest average labor force human capital were Beijing, Shanghai and Tianjin, Zhejiang and Jiangsu, and five provinces with the least were Guizhou, Gansu, Yunnan, Qinghai and Tibet.

8. China's total real human capital stock in 2016 was 10.63 times its level in 1985, having grown at an average annual rate of 7.98%. The average annual growth rate during the decade 2006-2016 was 6.22%.
9. From 1985 to 2016, rural human capital grew at an average annual rate of 3.84%, and urban human capital grew at 10.28%; while during the decade 2006-2016, the growth rate was 7.90% for urban areas but only 0.63% for rural areas. This decline in the average annual growth of rural human capital largely reflects China's rapid urbanization.
10. Urban human capital surpassed the rural human capital in 1993 and has remained higher since then.
11. Human capital per capita grew from 35,029 yuan to 300,478 yuan in real value, at an average annual rate of 7.33% over the period 1985-2016 and at a rate of 5.77% over the years 2006-2016.
12. The average annual growth rate of human capital per capita during the period of 1985-2016 was 6.28% for urban and 5.33% for rural areas. For the years 2006-2016 the growth rates were 4.94% and 2.88%, respectively.

III) Hong Kong and Taiwan

13. In 2016, the average age of labor force was 39.05 years in Hong Kong and 38.59 years in Taiwan.
14. In 2016, the average years of schooling of the labor force were 12.03 years in Hong Kong and 13.53 years in Taiwan.
15. In 2016, the proportion of the labor force with high school education or above was 72.37% in Hong Kong and 86.65% in Taiwan.
16. In 2016, the proportion of the labor force with college education or above was 38.45% in Hong Kong and 53.09% in Taiwan.

17. In Hong Kong, during 1985-2016, the average annual growth rate of J-F based total human capital between 1985 and 2016 was 4.57%, and for human capital per capita it was 3.73%; while over the years 2006-2016, the rates were 4.91% and 4.82%, respectively.
18. In Taiwan, during 1985-2016, the average annual growth rate of J-F based total human capital was 1.29%, and for human capital per capita it was 1.07%; while over the years 2006-2016, the rates were -2.98% and -2.49%, respectively.