Regional Income Inequality in China (Summary)

Takahiro Akita,
Professor, International Development Program
Graduate School of International Relations, International University of Japan

Kazumi Kawamura,
Researcher, Research Division, ERINA

This paper estimates regional income inequality in China over the rapid growth period of 1990-97 by the Theil index based on provincial GDP and population data from the China Statistical Yearbook, and analyzes factors in regional income inequality by decomposing regional income inequality, as measured by the Theil index, into the inter-region inequality component and the intra-region inequality component. It also estimates regional income inequality in

1997, based on district-level GDP and population data from various provincial statistical yearbooks. By employing the two-stage Theil decomposition method, the paper investigates the contribution of intra-province income inequalities to overall regional income inequality, based on district-level data. The major findings are summarized as follows.

(1) Decomposition of the overall regional income inequality based on provincial data into the inter-region and intra-region components reveals that a significant increase in the overall regional inequality over the study period of 1990-97 is due wholly to a rise in the inter-region inequality component, in particular, a rise in inequality between the Eastern region and the other three regions (the Western, Central and Northeastern regions).

(2) Though the intra-region component was found to be relatively stable over the study period, each intra-region inequality shows a distinct movement. The intra-region inequality of the Eastern region reveals a slight downward trend, indicating that economic activity has gradually spread into the whole Eastern provinces as the regional economy has developed under the reform and open-door policies. However, intra-region inequality was still the highest in 1997. It seems that the Eastern region's development center has been shifting from the northern provinces of Hebei and Shandong to the southern provinces of Guangdong and Zhejiang. In contrast to the Eastern region, the intra-region inequality of the Western region demonstrates an upward trend. In 1990 it was the third largest, but it gradually increased and became the second largest after the Eastern region in 1997. On the other hand, the intra-region inequality of the Central region was very stable and at a very low level, indicating that the Central region has managed balanced regional economic growth even under the reform and open-door policies. Finally, the intra-region inequality of the Northeastern region fluctuated. Until 1994 (with the exception of 1993), the Northeastern region had the second largest intra-region inequality, but in 1995, the Western region overtook the Northeastern region.

(3) Comparison between China and Indonesia in regional inequality, based on provincial GDP and population data, shows that China had a higher regional income inequality in 1997 than Indonesia when Jakarta and West Java were merged into one province, like Shanghai and Jiangsu in China. While the inter-region inequality component accounted for 73 % of the overall regional inequality in China, in Indonesia it accounted for only 28 %. The intra-region inequality component, especially the intra-region inequality of Java, plays a major role in the overall regional inequality in Indonesia.

(4) When the overall regional income inequality was measured, based on district-level GDP and population data, it was 0.238 in 1997, much larger than the overall inequality based on provincial GDP and population data (0.085). According to the two-stage Theil decomposition analysis, this large difference (0.153) is due to the intra-province inequality component, indicating that large income inequalities exist within provinces.

(5) Among Western provinces, Qinghai had the largest intra-province inequality in 1997 (0.327) as measured by the Theil index T, followed by Yunnan (0.324) and Xinjiang (0.267) respectively. Provinces in the Central region are much more equitable than provinces in the Western region. In 1997, Shanxi had the largest intra-province inequality in the Central region (0.093), but the figure was smaller than the smallest intra-province inequality in the Western region. This suggests that the Central region has so far achieved very balanced regional development, not only across provinces but also within provinces. There is a large variation in intra-province inequalities in the Eastern region. Guangdong registered the largest intra-province inequality at 0.399 in 1997, followed by Jiangsu (0.215) and Shandong (0.133) respectively. Guangdong, in fact, had the largest intra-province inequality in China in 1997. On the other hand, the smallest intra-province inequality was recorded by Zhejiang: at 0.057, it was among the smallest in China. These observations suggest that each province in the Eastern region has had a distinct pattern of provincial economic development under the reform and open-door policies. At the district level in Guangdong, the largest per capita GDP was 103,200 yuan in 1997, which was more than 40 times as much as the smallest in the province. On the other hand, in Zhejiang, the ratio between the largest and the smallest was only 3.7. It should be noted that, together with the region's inter-province inequality, the Eastern region accounted for about half of the overall regional inequality. Among provinces in the Northeastern region, Heilongjiang had the highest intra-province inequality at 0.148 in 1997, as measured by the Theil index T, followed by Liaoning (0.136), Neimonggu (Inner Mongolia) (0.092), and Jilin (0.039) respectively.