Regional Income Inequality in China  
(Summary)

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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.
An Analysis of Regional Disparities in FDI in China
(Summary)

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1. Introduction
Foreign direct investment (FDI) has played a significant role in Chinese economic growth. It reached $49.4 billion in 2000, or 350.3 billion RMB, accounting for 12.5% of total fixed asset investment (3261.9 billion RMB). Attention should be paid to two aspects of foreign capital growth in China: firstly, the disparity of FDI distribution among the eastern, central and western regions has increased since the initial prosperity of eastern China. Slow development in the central and western regions is becoming a serious problem. Secondly, the cost of production factors, such as land and labor, has sharply risen in the east, while that region’s international comparative advantage has declined.

2. Distribution of FDI
Due to its large potential market and abundant cheap labor, China has gained more and more FDI from the mid-1980s. However, FDI has shown remarkable regional disparities in China, being concentrated in the coastal area. During the fifteen years from 1985 to 1999, 87.8% of total FDI was directed eastwards. Central China’s share of FDI increased from 5.42% in 1985 to 10.46% in 1999, while that of the west decreased from 5.13% to 3.20%. Guangdong Province experienced the largest FDI gains, accounting for 29.39% of total FDI during this period. In 1985, Guangdong accounted for nearly half of total FDI: 49.42%.

On the other hand, per capita GNP and the price of production factors in the east were higher than other areas of China from the mid-1980s. This phenomenon indicates that the favorable investment climate, such as preferential policies, transportation, communications, human resources, etc., has weakened the influence of production factor costs on foreign investors.

3. Impact of FDI on Regional Development
FDI increases local investment and GDP, while also enhancing local human resources, but this is a relatively slow process. In addition, FDI also promotes the introduction of technology and the improvement of management.

3.1 FDI Disparity and Regional GDP
China utilized only $13.55 billion dollars of accumulated foreign capital from 1986 to 1990. In this period, FDI had a negligible influence on regional development and the correlation between regional FDI and national income was weak. Since the 1990s, as FDI gradually increased, the correlation has strengthened, demonstrating that there is increasingly a consistent imbalance in the distribution of FDI and GDP.

3.2 Capital Inflow
In the last two decades, there was a strong correlation between the prosperity of the east and the large amount of FDI: 88% of total FDI was invested in the area. Continual investment on the
part of multinational corporations can boost related industries, with a large project having the ability to raise capital inflows to the local area, as well as improve transport, communications and other services. On the other hand, FDI results in a significant increase in exports from the east. The value of foreign capital enterprise imports and exports reached $139.1 billion in 1996, accounting for 47.3% of the total.

3.3 FDI and Population Migration

FDI not only directly provides employment opportunities, but also attracts labor immigrating to the area being invested in. With their high technology and the high salaries they offer to employees, multinational corporations hold a strong attraction for external labor, especially highly-educated labor. In the early 1980s, the opening of the Pearl River Delta and the Changjiang River Delta caused labor to migrate to the east coast. Guangdong, Fujian, Zhejiang, Jiangsu and Shandong were still the main focus of immigration till the mid-1990s. The net increase in population in Shanghai was equivalent to a medium-sized city after Pudong was developed.

There was a net out-migration of population, especially highly-educated labor, from the central and west regions, and a net in-migration in the east. This reflects differing demands for labor in different areas. On the other hand, the potential of the central and the west declined as a result of the continuous outflow of highly-educated labor.

4. Conclusion

Having a comparative advantage and a very large potential market, China has become the biggest country utilizing foreign capital. However, the distribution of FDI in China is extremely unbalanced. Along with rapid economic growth, the cost of land and labor in the east is rising faster than in the central and western regions. After the 1997 Asian financial crisis, China’s comparative advantage has dwindled due to the currency depreciation experienced by Southeast Asian countries. The growth rate of FDI and exports slowed in both 1998 and 1999, directly resulting in a fall in the economic growth rate.

But the economies of scale in eastern China have expanded. The increase in production factors prices is still not discouraging foreign capital inflows to the east. On the other hand, a great deal of surplus labor and rich natural resources in the central and western regions has not been utilized sufficiently. In 1997, China implemented a strategy to exploit the west. The central government offers many preferential policies to under-developed provinces, while at the same time, these provinces have also adopted many measures to absorb FDI. In summary, the investment environment in the west is gradually improving.