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Interprovincial Inequality in China

Over the past 30 years, China has transformed itself, posting extraordinary rates of growth and increasing the living standards of nearly all its citizens. At the same time, China has become a far less equal nation, with vast differences emerging between those living in rural versus urban areas, inland versus coastal areas, and globally oriented versus more insular areas. Headlong growth coupled with rising inequality has fostered social tension, raising questions about the sustainability of China's economic transformation.

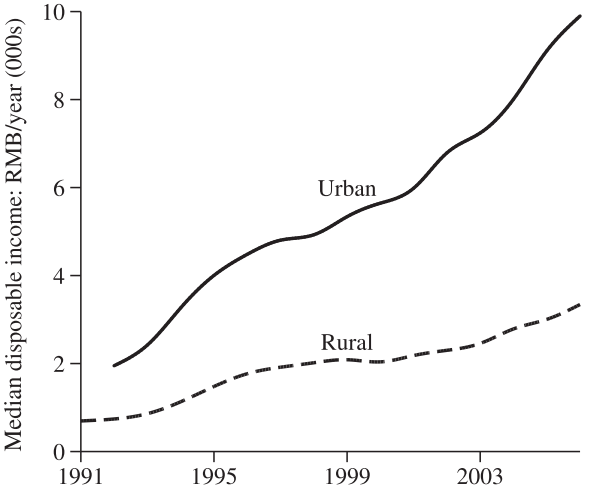
In this *Economic Letter,* we document the increasing income inequality among Chinese provinces over the past two decades. Our discussion highlights three important facts. First, economic growth has lifted living standards throughout China, with all provinces gaining in absolute terms. Second, economic growth has benefited some provinces more than others, increasing regional income inequality. Third, no single explanation can account for the steady increase in inequality among provinces over time. These observations suggest that China, like many industrialized nations, will continue to struggle to meet its growth goals while distributing the benefits of an expanding economy more equally.

Trends in income across China

China's rapid growth has produced remarkable improvements in the living standards of its citizens. Data from the World Bank, the Asian Development Bank, and the United Nations point to three decades of extraordinary increases in income and consumption, vast reductions in poverty rates in both rural and urban areas, and improvements in adult literacy, infant mortality, and adult life expectancy. While such data clearly show that all provinces have benefited from growth, some provinces have fared better than others.

Perhaps the most obvious divergence in incomes across China is between rural versus urban areas. Figure 1 shows median nominal disposable income (measured in renminbi or RMB) for rural and urban China, using data from the China Statistical Yearbook. Income in China's cities has grown faster than income outside urban centers, opening a rural-urban income gap that has widened continuously. Although scholars have spent considerable time studying China's rural-urban income gap, until recently the public showed little concern about the phenomenon.

Figure 1
Increasing income inequality in China



Several things likely kept public dissatisfaction in check. First, rural residents had access to self-produced consumption goods, primarily food, which boosted their living standards but were not included in official income measures. Second, the Chinese government used several policy levers to reduce the rural-urban gap, including subsidizing rural workers and providing price supports for agricultural commodities. Third, the gap between rural and urban incomes created an incentive for people who lived in the countryside to move to cities, which helped fuel China's growth. Finally, the gap was considered a short-run phenomenon associated with economic transformation and not something that would permanently leave rural residents behind.

Emergence of interprovincial urban inequality

Although the gap between cities and the countryside has continued to widen, more recent studies have

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Figure 2
Cross-province inequality in nominal and real wages

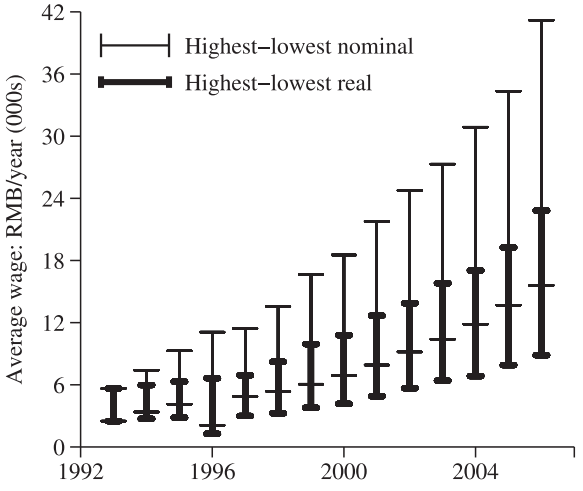
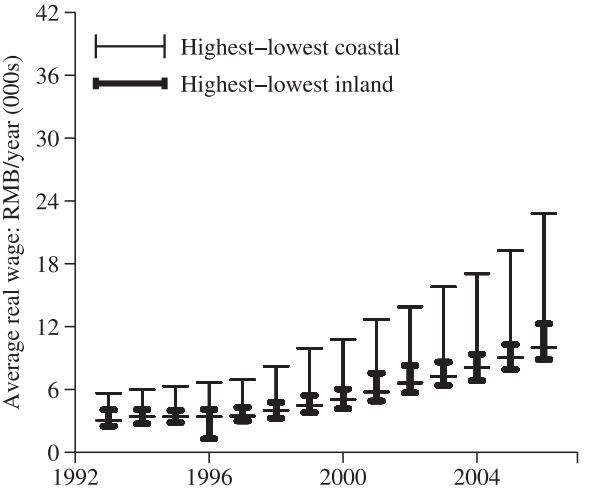


Figure 3
Inequality across coastal provinces is higher than across inland provinces



shown that Chinese inequality is not limited to the rural-urban divide. This can be seen in Figure 2, which shows an increase in urban wage inequality among Chinese provinces. The figure plots the highest and the lowest average nominal and real urban wages across provinces from 1993 through 2005. Real wages are constructed from provincial-level data on wages and consumer prices. Thus, we are able to account for differences in living costs across provinces.

Several facts illustrated by Figure 2 are worth noting: Both average nominal wages and average real wages are rising in China and are growing even in the provinces at the bottom of the distribution. At the same time though, nominal wages are rising fastest at the top of the distribution, reflecting more rapid growth in higher-wage than in lower-wage provinces. As a result, differences in average urban wages among provinces are increasing.

To be sure, cost-of-living differences do offset somewhat the average wage differences. The gap between the highest-wage province and the lowest-wage province is half as large when measured in terms of real wages instead of nominal wages. Still, these increases in interprovincial real wage inequality among urban residents suggest that structural and long-term drivers of wages and incomes may be at work.

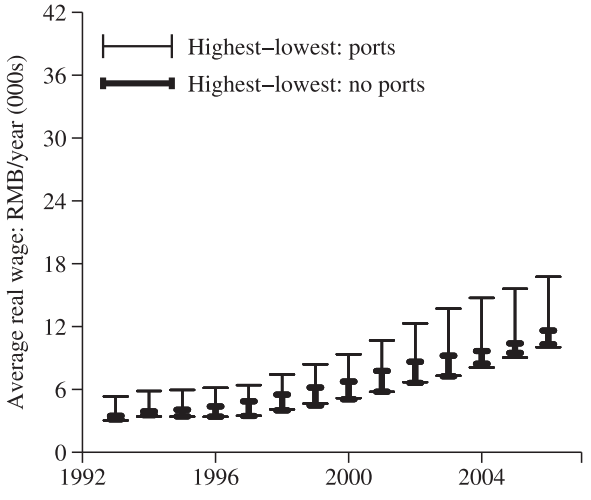
Explaining interprovincial real wage inequality

One possible explanation for regional disparity is that coastal provinces have had a growth advantage over inland ones. As Figure 3 shows, coastal areas have posted faster wage growth than inland provinces. This pattern is not especially surprising given that much of China's recent economic development was led by rapidly expanding exports, financed to a considerable extent by foreign direct investment. China established 15 free trade zones (FTZ) in coastal areas, most of which are located near cities with major ports. In addition, 15 export processing zones (EPZ) were established, mostly in coastal areas. Foreign companies, which often pay higher wages than domestic enterprises, quickly moved into these zones, perhaps pushing wage levels up throughout the coastal regions. The real wage difference between inland and coastal regions is high and rising.

A more surprising observation from the data in Figure 3, however, is that the difference between inland versus coastal provinces is less pronounced than that *across coastal provinces.* In fact, the highest average real wage among the coastal provinces increased dramatically, while the lowest average real wage among coastal provinces remained similar to the average real wage in inland provinces. It appears, therefore, that the benefits of China's economic growth have been concentrated in a subgroup of all coastal provinces. This observation is consistent with the finding of Yao and Zhang (2001) that groups (or clubs) of Chinese provinces diverge in terms of real per capita GDP.

One possibility is that, because China's economic growth is largely driven by exports, the access of a province to shipping facilities could be important in determining its performance in general and its wage level in particular. Figure 4 presents a simple check of this hypothesis. It shows the gap between the highest and the lowest average real wage for two subgroups of provinces: one including those with large commercial port capacity (defined as having more than 10 berths of 10,000 tons class), the other without such capacity. We limit our analysis to coastal provinces and exclude Shanghai and Tianjin, which are provincial-level cities. The category with sub-

Figure 4
Persistent inequality across provinces with ports



stantial port capacity includes six provinces, while the category without such capacity includes three: Fujian, Guangxi, and Hainan.

In support of the port hypothesis, the figure shows that coastal provinces without large commercial ports have a similar average real wage close to the average real wage in inland provinces (compared to Figure 3). That lends support to the idea that access to the coast boosts wages more in those provinces that have large commercial ports. However, there remain large differences in average real income among the provinces with large ports, indicating that increasing export activity is not the sole explanation for growing regional income inequality. Thus, further investigation of the reasons for such differences is needed.

In their recent study, Wan, Lu, and Chen (2007) show that, while globalization is a contributor to regional inequality in China, differences in physical capital, as well as speed of economic reform such as privatization, play a growing role in fueling regional inequality. Candelaria, Daly, and Hale (2009), moreover, find that cross-provincial differences in industry composition and availability of skilled and unskilled labor also account for some of the inequality.

Conclusion

In this *Economic Letter* we reviewed trends in Chinese interregional urban wage differences. While much attention is devoted to the rural-urban income divide, we demonstrate an increasing trend towards wage inequality among cities in different regions of China. This likely reflects structural factors and therefore could be persistent. The Chinese government has taken the problem of rising income inequality seriously, responding with regional income redistribution and a commitment to further study of the problem as part of its five-year plan. Still, the persistent nature of the rise suggests that more steps will be needed.

One possible area of change would be to allow greater labor mobility. Such mobility in China remains relatively low given regional income disparities and is not sufficient to prevent regional wage differences from rising, as shown in Candelaria, Daly, and Hale (2009). Thus, removing formal barriers to labor mobility, providing skill training in low-income regions, and providing social services to workers who relocate may be useful in stemming regional inequality.

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