

# **Regional Price Differences in Urban China 1986-2001: Estimation and Implication**

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## **Abstract**

In the last two decades, China has experienced a significant increase in regional inequality of nominal income. The question naturally arises as to how much of the regional income inequality is due to an increase in real income inequality and how much is due to an increase in regional price variation. Despite the intensive effort made by economists to examine regional income inequality, limited attention has been paid to disentangle the relative contributions of regional price differentials in China.

The commonly adopted method to calculate Spatial Price Index is to use Basket Cost Method, which defines a national basket and measures price variation of this common basket across different regions. The weakness of this method is that it arbitrarily assumes consumers' preferences with regard to what goods should be included in the basket. Unfortunately in China even this non-ideal method cannot be properly implemented due to lack of price level data for many regions, many commodities, and at different periods, especially during the significant reform period of the 1990s. To resolve this problem Brandt and Holz (2007) use the 1990 price level data to calculate the SPI for that year and then deflate it using regional CPIs for the period until 2004. In addition to the arbitrary assumption on consumers' preferences, their method also fixes the basket of goods at the base year, which imposes another assumption that no substitution effect is allowed over a period of considerable price and income changes.

Our paper follows Hamilton (2000a) and adopts the Engel curve approach to estimate Spatial Price Index for different provinces in urban China using the China Urban Household Income and Expenditure Survey for the period 1986 to 2001. The main idea of the methodology is quite simple. Because Engel's Law is regarded as the best established economic law, movements in the budget share of food could serve as an indication for movements in real income. The strength of this method is that the true cost of living is inferred directly from consumer's behavior. Unlike the basket cost method, it reflects the consumers' own judgment about the price level taking into account the substitution, distribution, as well as quality effects.

We believe that such a method is particularly suitable for a period of dramatic change in price level, price structure, as well as income, such as the one studied in this paper.

The results of Engel curve approach show a significant increase in price difference among provinces in urban China during the late 1980s to mid 1990s and a converging trend after the mid 1990s. A strong and positive relationship is also observed between spatial price indices and the average per capita disposable income for most years. This implies that cost of living is relatively higher in high income regions than in low income regions. Consequently, after adjusting for Spatial Price Index, urban inter-regional income inequality in China is significantly reduced.