Research on Tax Transfer inside China’s Different Regions by Using a Statistical Analysis Method

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ABSTRACT

The paper demonstrates that China has undergone an increasingly severe transfer of regional taxes from the central and western areas to the coastal region between 1997 and 2006, and among the taxes transferred, the enterprise income tax claimed a lion’s share. Such transfer of regional taxes resulted in an unfair distribution of tax revenue, failing to alleviate the gap between rich and poor.

Keywords: China, Economic Disparity, Regional Taxes, Tax Disparity, Tax Transfer

1. INTRODUCTION

In recent years, the deviation of tax revenue from tax resource in China is attracting more and more attention from the government and from scholars. Qiao and Wang (2004) use the ratio of per capita income tax variance coefficients and per capita GDP variance to estimate the tax revenue gap in China from 1994-2001, concluding that there exists a huge regional difference in tax revenue.

The Research Group of Shanxi State Taxation Bureau (2007) reports a similar result while investigating the tax revenue and tax resource in Shanxi province. The evidence shows that there is a deviation of tax revenue from tax resource in less developed region.

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A case study by Jin (2007) illustrates that the deviation between tax revenue and tax source results from enterprise’s consolidated tax payment, cross-area management, pricing of primary resource products and tax system design.

Jin and Fu (2007) analyze the influence of the tax distribution when managing the consolidated tax payment after implementing the unified Enterprise Income Tax Law. They suggest the principle of tax contribution should be based on the tax contribution among all regions. Based on the case of the Suzhou city in Jiangsu Province, Jia, Yan, and Yan (2007) analyze how a headquarter-based economy worsens the regional tax competition by detailing the affiliated transactions of the enterprises located in the headquarters economy and the difficulties in tax regulation and comparing the preferential fiscal and tax policies in several central cities.

Peng and Yin (2008) argue that tax transfer between regions has obvious influences on regional macro tax burden. They conducted an empirical analysis on the tax transfer of the four municipalities Beijing, Shanghai, Tianjin, and Chongqing during the years of 1999-2006 and reach a conclusion that tax revenue has flowed into Beijing, Shanghai and Tianjin but out of Chongqing. However, the data of tax revenues they have used are confined to four cities, not sufficient to figure out the true size of the deviation.

The foregoing provides a clear picture of regional tax transfer, but the dynamics of tax transfer has not been widely studied. This paper employs more statistical indices from different angles to estimate the deviation of tax revenues from tax sources in 31 provinces in China to give a more comprehensive understanding of tax transfer among the regions in China. The dataset refers to the eastern, central and western regions in China from 1997-2006, with the exception of Hong Kong, Macao and Taiwan.

2. ANALYSIS OF DEVIATION BETWEEN TAX REVENUES AND RESOURCE

To measure the deviation of tax revenues from tax sources, we can compare a province’s tax revenue proportion of the total amount with the economic volume proportion of the national economy. It can be expressed by the following equation (The Tax and Tax Problems Research Group, 2007):

\[ s_i = \frac{T_i}{\sum_{i=1}^{31} T_i} - \frac{G_i}{\sum_{i=1}^{31} G_i} \]

Where \( s_i \) is the difference between the proportion of the tax and the proportion of economy in province \( i \), \( T_i \) is the tax revenue in province \( i \) and \( G_i \) is the Gross Domestic Product in province \( i \). The equation depicts the deviation of tax revenue from tax sources, namely, when \( s_i = 0 \), the tax revenue and the tax sources are consistent; when \( s_i > 0 \), the tax transfer flows into province \( i \); when \( s_i < 0 \), tax transfer flows out of province \( i \).

As the right hand side of the equation shows, to calculate the \( s_i \), we can use the province \( i \)'s tax revenue of the national total value minus the province \( i \)'s GDP of the national total value. The result is represented in Table 1.

(1) In general, tax revenue mainly flows into the east regions.

From Table 1, the \( s_i \), as percentage of the degree of deviation, varies over time in the range of -1.72 to +4.15 among 31 provinces, of which 13 provinces are the receivers of the tax transfers and 18 provinces suppliers. The provinces with a net tax revenue inflow are mainly concentrated in the eastern region: 7 in
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