

# Central-Local Relations in the PRC under the Tax Assignment System: An Empirical Evaluation, 1994-97

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*In 1993, Chinese scholars Wang Shaoguang and Hu Angang registered a warning that the state capacity of the PRC was declining. According to Wang and Hu, this declining capacity is exemplified by two phenomena in the mid-1980s: the declining share of the national fiscal revenue in the gross domestic product (GDP) and the decline of the central government's share of national fiscal revenue. Wang and Hu warned that this declining capacity of the state will also lead to a widening disparity of wealth distribution and economic development, which eventually will produce social chaos. Many believed that the PRC government was affected by the above analysis and thus adopted a tax reform measure in 1994. The new tax system between the central and local governments, the tax assignment system (fen shui zhi), was designed to allow the central government to regain its lost share in national fiscal revenue and to alleviate local disparities.*

*By using official statistical data, this study intends to evaluate the effect of the practice of the tax assignment system in the years between 1994 and 1997. Different from what is claimed by the Chinese officials, this study finds that the system has not been able to successfully achieve its intended policy goals. This paper is able to reach such a different conclusion as it takes into account the "tax return" (shuishou fanhuan) from the central government to local governments. As an integral part of the tax assignment system, the "tax return" mechanism carries a strong compromising institutional character. The system, designed as an incentive for the local governments to cooperate, also hindered the central govern-*

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ment in raising its extractive capacity. The result of reviewing the practice of this system in the years from 1994 to 1997 shows that the central government seems unlikely to be able to phase out the "tax return" mechanism and put in place a full-fledged tax assignment system.

**KEYWORDS:** PRC central-local relations; tax reform; tax assignment system; tax return; patron-client relations

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In 1993, two Chinese scholars, Wang Shaoguang and Hu Angang, registered a warning that the state capacity of the PRC was declining. Within the state, moreover, the central government was also losing control over fiscal resources, with its share in the national fiscal revenue declining sharply as well. If the central government did not respond, the scholars warned, such inaction will not only lead to the failure of marketization reform, but the declining state extractive capacity would also imply both potential conflict between the state and society and thus political instability in the long run.<sup>1</sup> These two scholars have summarized the background leading to the creation of the tax assignment system (*fen shui zhi*) that the PRC central government created in late 1993. The tax assignment system was created exactly to strengthen the central government's extractive capacity by raising its share of national fiscal revenue and the share of the state fiscal revenue in the gross domestic product (GDP).

This paper examines whether the reform of adopting the tax assignment system to replace the tax contract system in 1994 has been successful according to the official statistics of the PRC. The paper evaluates the result of the reform in the three years from 1995 to 1997 by using official statistics from governmental yearbooks. After examining the empirical data, this paper comes to the conclusion that the reform has not been successful. Having not accumulated the expected resources under the new system, the central government is unlikely to regain full-fledged distribution control over national fiscal revenue in the future.

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<sup>1</sup>Wang Shaoguang and Hu Angang, *Zhongguo guojia nengli baogao* (A report on China's state capacity) (Shenyang: Liaoning renmin chubanshe, 1993).

This paper is structured as follows. The second section is an introduction to the 1994 tax assignment reform. This section will first analyze the problems of the previous fiscal contract system, describe how the tax assignment reform was intended to function, and most importantly, introduce an underanalyzed mechanism in this system—the "tax return" (*shuishou fanhuan*) measure.

The third section analyzes from three perspectives the impact of the tax assignment system on the central government. The first is the share of national fiscal revenue in national GDP. The second is the share of the fiscal revenue of the central government (before calculating the tax return) in the national fiscal revenue claimed by the official statistics. The third is the share of the disposable fiscal revenue of the central government (after deducting the tax return to the localities) in the national fiscal revenue.

The fourth section analyzes the three main impacts of the tax assignment system on the localities. The first is the continuing and enlarging disparity gap among the provinces. The second is the expanding fiscal deficit of the localities. The third is the increasing "extrabudgetary fiscal revenue" (*yusuanwai caizheng shouru*).

The fifth section evaluates the results of the tax assignment system. The evaluations will be based on regression analyses. First, a regression of tax return on population, GDP, and fiscal revenue of each locality will be conducted to analyze whether the tax assignment system has the effect of equalizing disparities among the provinces—and if not, discusses how such equality can be attained. This is an analysis of the distribution of the absolute amount of the tax return of each province. Second, by comparing the share of each locality in the national tax contribution and its share of tax return in the whole country, this paper constructs a "benefit index" based on the difference between these two share ratios. In addition, a regression of this "benefit index" will help to find which provinces benefit from the system in a relative sense. Third, the tax return is regressed upon local collection of national taxes and other factors. This regression seeks to find whether those provinces in which the central government collected more national taxes in the previous year were so encouraged by the system. Fourth, the regression of local fiscal deficit on population, GDP, fiscal revenue, and tax return is conducted to analyze whether local fiscal deficit

is a function of the tax return of the previous year. Lastly, a regression (local extrabudgetary fiscal revenue) is conducted to analyze whether such revenue is a function of the tax return of the previous year or any other factors (GDP, population, fiscal revenue, and fiscal deficit).

The last section sums up the analyses presented in previous sections, and attempts to make an overall evaluation of the practice of the tax assignment system since 1994. This system has not only failed to enable the central government to accumulate more resources for next-round bargaining, but has also failed to change either the fact that the local governments with strong extractive powers gain more from the system, or the fact that disparities exist and are expanding among the localities. To use the language of Wang Shaoguang and Hu Angang, the tax reassignment system has not been able to strengthen the "capacity of the state."<sup>2</sup>

## **Tax Assignment Reform in 1994 and the Tax Return**

### *Problems of Central-Local Government Fiscal Relations*

Before 1994, China's fiscal system was basically a fiscal contract system. This system was saddled with several problems. For one, the old tax contract system led to the erosion of state capacity according to the following indicators: the decline of the national revenue share in GDP and the decreased share of central revenue in the whole national revenue. In addition to the decline of these two indicators, the old system also failed to address regional income inequalities, and even contributed to increasing disparity among the provinces. Furthermore, the old system gave the local governments distorted incentives to pursue short-term interests at the cost of long-term development and nourished the tendency for local protectionism. Lastly, the old system also prompted the local governments to intervene in the economic activities of local enterprises, which in turn was disadvantageous to the development of a market system.<sup>3</sup>

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<sup>2</sup>Ibid.

<sup>3</sup>Donald J.S. Brean, ed., *Taxation in Modern China* (New York and London: Routledge,

The problem of the contract fiscal relationship between the central and local governments lies in the "principal-agent" relationship between the two. In the contract system, the central government had to rely on the local governments to collect the taxes, but the former also had to bargain with the latter regarding how the collected revenue should be shared between the two levels of government. The problem is hard to solve because the central government (as the principal) will never have the same degree of information that the local governments do. This information is needed to monitor whether the local governments have hidden fiscal resources from the central authorities, and what portion of these hidden resources has been wasted due to personal corruption.

### *The Tax Assignment Reform in 1994*

In *A Report on China's State Capacity* (hereafter the "Wang-Hu Report"), the two authors Wang Shaoguang and Hu Angang advocated the abolishment of the old system and the adoption of a new tax assignment system.<sup>4</sup> This idea was adopted by the Zhu Rongji government and became one of the theoretical foundations of the 1994 tax assignment reform. The new system was put into effect beginning on January 1, 1994. The new tax assignment system was different from the previous tax contract system in the following ways:

1. Revenue sources for the central and local governments were clearly delineated. Both the central and local governments have their own fixed revenue sources. They also have shared revenue sources, but the share of each party has been fixed. Table 1 illustrates this delineation of revenue sources under the tax assignment system.

The new system changed the value-added tax (VAT), the most important source of tax revenue, from being totally ascribed to the local governments in the fiscal contract system to being shared by the central and local

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1998), 22; Ehtisham Ahmad, "The Reform of the Fiscal Transfer System," *ibid.*, 230-36; Xiang Huaicheng, *Zhongguo caizheng tizhi gaige* (Reform of China's fiscal system) (Beijing: Zhongguo caizheng jingji chubanshe, 1994), 112-13; Jiang Weizhuang and Mei Yang, eds., *Zhongguo fenshuizhi de juece yu shijian* (The decision-making and practice of China's tax assignment system) (Beijing: Zhongguo caizheng jingji chubanshe, 1997), 2-3.

<sup>4</sup>Wang and Hu, *Zhongguo guojia nengli baogao*, 197-210.

**Table 1**  
**Revenue Source Arrangement of the 1994 Tax Assignment System in China**

Revenue Type	Items
<b>Centrally-Fixed Revenues</b>	<ul style="list-style-type: none"> <li>*Enterprise income taxes on centrally-owned enterprises</li> <li>*Customs duties</li> <li>*Consumption tax</li> <li>*Value-added tax (VAT) on imports</li> <li>*Business turnover taxes on railways, banks, nonbank financial institutions, and insurance companies</li> </ul>
<b>Locally-Fixed Revenues</b>	<ul style="list-style-type: none"> <li>*Enterprise income taxes on locally-owned enterprises, collectives, private enterprises, and joint ventures</li> <li>*Personal income taxes</li> <li>*Agricultural income tax</li> <li>*Business turnover taxes (except on railways, banks, non-bank financial institutions, and insurance companies)</li> <li>*Urban maintenance and development tax</li> <li>*City and town land-use taxes</li> <li>*VAT on real estate transactions</li> <li>*Stamp taxes</li> </ul>
<b>Shared Revenues</b>	<ul style="list-style-type: none"> <li>*VAT (75% for central government, 25% for provincial governments)</li> <li>*Securities and exchange tax (50:50 sharing)</li> <li>*Resource taxes</li> </ul>

**Source:** Dubravko Mihaljek, "The New Revenue-Sharing Arrangement in China: An Illustrative Example," in *Financing Decentralized Expenditures: An International Comparison of Grants*, ed. Ehtisham Ahmad (Cheltenham, UK; Brookfield, Vt.: Edward Elgar, 1997), 336.

governments. This change was designed to increase the central government's share of the national fiscal revenue.

2. Corresponding to this delineation, the government established a nationwide State Administration of Taxation, which was separate from the local administrations of taxation. The former was responsible for collecting central fiscal revenues, while the latter for collecting local revenues.

3. The central and local governments also have their own fixed categories of fiscal expenditure. Basically, the central government takes care of the following fiscal expenditures: national security, diplomacy, functioning of central governmental organizations, adjustment of national eco-

conomic structure, regional development coordination, measures for macro-economic management, and management of centrally-owned public utilities. In contrast, the local governments are responsible for the following: functioning of local governmental organizations and management of the local economy and local public utilities.<sup>5</sup>

4. Although being well designed and even undergoing advanced testing in several spots, the tax assignment system was actually not fully implemented when put into effect in January 1994.<sup>6</sup> From the very beginning, the process of institutional creation of the tax assignment system was characterized by a wide range of bargaining between the central and local governments. Since as early as 1990, when the Eighth Five-Year Plan was being designed, people with different opinions had already begun the debate on whether a tax assignment system should be adopted. In the second half of 1993, the central government, represented by then Vice-Premier Zhu Rongji, began to persuade and negotiate with the local governments. Zhu, together with sixty economic specialists, traveled through fifteen cities in order to strike a deal with local officials over the terms of the system in 1993 before coming up with a version acceptable to the provinces.<sup>7</sup>

The most important result of the tax assignment system bargaining process was the "tax return" measure. With this measure taken, the tax assignment system currently implemented became but an interim system judging from the policy goals it was intended to reach. The central government made several significant concessions to the local governments in order to acquire their willingness to participate in the new system. These concessions were given because the new tax institution was designed eventually to benefit the central government. The following subsections will describe the new tax return mechanism in more detail.

<sup>5</sup>Xiang, *Zhongguo caizheng tizhi gaige*, 116-17.

<sup>6</sup>The experiments were conducted in nine local governments in 1994: Liaoning, Shenyang, Dalian, Wuhan, Qingdao, Tianjin, Chongqing, Xinjiang, and Zhejiang. *Ibid.*, 115.

<sup>7</sup>*Lianhe bao* (United Daily News) (Taipei), December 26, 1990, 9; *ibid.*, October 29, 1993, 10; *Zhongguo shibao* (China Times) (Taipei), December 3, 1993, 11; *Gongshang shibao* (Commercial Times) (Taipei), December 29, 1990, 11; *ibid.*, December 6, 1993, 6; *Jingji ribao* (Economic Daily) (Taipei), February 25, 1994, 6; *Zhongyang ribao* (Central Daily News) (Taipei), November 15, 1993, 7.

## *The Significance of Tax Return in the Tax Assignment System*

1. *Tax return and the policy goals of the tax assignment system:* Based on the "Wang-Hu Report" and other official publications, this paper finds that the tax assignment system was designed to reach the following policy goals:

- (1) to raise the share of national fiscal revenue as a percentage of GDP
- (2) to raise the share of the fiscal revenue of the central government as a percentage of national fiscal revenue
- (3) to narrow local disparities among the provinces
- (4) to make the local governments fiscally more responsible: first, to give them incentives to collect more taxes and not to squander expenditures; and second, to institutionalize the local governments' resource-extractive behavior, of which the most important measure is to minimize extrabudgetary revenues

The first two policy goals are meant to strengthen the power of the state as a whole over both society and economy on the one hand, and also to strengthen the power of the central government over the local governments on the other. The last two goals are designed to mitigate the growing tendency for local protectionism or to break the vicious cycle of a near-sighted or predatory local state and a distorted or stagnated local economy. These assumed policy goals will be used later in this paper for evaluating the performance of the tax assignment system.

2. *Dynamics of institution building—compromises and concessions:* As stated previously, the process of institution building and the implementation of the tax assignment system are both marked by bargaining between the central and local governments. This bargaining process led to at least two important concessions by the central government to the provincial governments when the central government adopted the current tax return measure. The first concession was the tax return, a form of compensation given the possible losses by the provinces. The tax return was a compromise that the central government made in order to ensure that the amount of the local



revenue in each province would at least not decrease in comparison with that of the amount under the old system. The hope was that with such a compromise all the provinces would be willing to participate.

This research project arrived at the amount of the tax return in the following way. The tax return of each province in 1994 is calculated according to the net gain of the central government from the provincial government, that is, the difference between the fiscal revenue under the old system and that under the new one in 1993. The central government's net gain from the provincial government in 1993 is calculated according to the following equation:<sup>8</sup>

Central government's net gain from the provincial government in 1993 = consumption tax + (VAT  $\times$  0.75) – fiscal assignment from the central government

According to this equation, the amount of the tax return of each province in 1994 can be calculated as in the following equation:

Tax return 1994 = central government's net gain from the provincial government in 1993  $\times$   $\{1 + [( \text{consumption tax } 1994 + \text{VAT } 1994) - ( \text{consumption tax } 1993 + \text{VAT } 1993)] \times 0.3\}$

Similarly, the amount of the tax return in the following year is calculated as follows:<sup>9</sup>

Tax return<sub>(t)</sub> = central government's net gain from the provincial government<sub>(t-1)</sub>  $\times$   $\{1 + [( \text{consumption tax}_{(t)} + \text{VAT}_{(t)}) - ( \text{consumption tax}_{(t-1)} + \text{VAT}_{(t-1)})] \times 0.3\}$

In short, the 1994 tax return was to fill the budgetary gap of the provincial government that resulted from the new tax assignment system. In addition, the tax return in the following year is calculated in an incremental way—in a 1:0.3 proportion to the increase of the national consumption tax and VAT. In other words, when the national consumption tax and VAT increase 1 percent, the tax return to the provinces will increase 0.3 percent. However, if the amount of the net gain of the central government from a

<sup>8</sup>*Zhongguo caizheng nianjian 1995* (Fiscal yearbook of China 1995) (Beijing: Zhongguo caizheng zazhi chubanshe, 1995), 563.

<sup>9</sup>Xiang, *Zhongguo caizheng tizhi gaige*, 122.

certain provincial government in the following year should be less than that of 1994, then the insufficient amount would be deducted from the tax return to that province.<sup>10</sup>

However, this concession is an overall one that the central government made to all provinces, whether rich or poor. This concession did not contain any incentive mechanism for the local governments to collect more taxes than before. Some rich provinces then raised their voices over this point. The central government in turn made a second concession in August 1994: to recalculate the growth of the consumption tax and the VAT according to the 1:0.3 ratio of the growth in each province instead of according to the national average.<sup>11</sup> This enabled the rich provinces to gain more from economic development and from the increase of their tax collection than the poor provinces. In other words, this concession weakened the redistributive effect of the tax assignment system that aimed to narrow the growing disparities among the provinces.

3. *The central government's calculation:* The reason why the central government had to compromise was because without the cooperation of the provinces, the new tax institution would never be established. However, would a compromised version of tax assignment reform make any difference? To answer this question, important is to distinguish the central government's calculation in both the short and long terms. In the short term, the central government might not be able to gain much from the tax assignment system given the fact that some revenue is redeemed back to the local governments. In the long term, however, if the new system can generate more revenue for the central government than it redeems to the local governments, then the system can become a win-win game: an increase of fiscal revenue for both the central and local governments.

Since the VAT was the most important new revenue source for the central government in the tax assignment system, we can compare the amount of the central government's share of the VAT and the amount of tax return in each year. According to existing studies, the current interim sys-

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<sup>10</sup>Ibid.

<sup>11</sup>*Zhongguo caizheng nianjian* (1994), 62.

Table 2

The Central Government's Gain from the Tax Assignment System Expected by the Finance Ministry up to Year 2000

Unit: Billion yuan				
Year	Estimated VAT	Center's Share of Estimated VAT (1) •	Estimated Tax Return (2)	Center's Gain (1-2)
1994	175.9	131.9	132.8	-0.9
1995	228.5	171.4	117.2	54.2
1996	291.6	218.7	101.8	116.9
1997	369.6	277.2	83.1	194.1
1998	464.8	348.6	60.0	288.6
1999	584.6	438.4	81.7	356.7
2000	735.2	551.4	9.0	542.4

Source: Mihaljek, "The New Revenue-Sharing Arrangement in China," 345-46.

tem of tax assignment (with the tax return measures) is supposed to be phased out by either 1999 or 2000.<sup>12</sup> By then the central government is supposed to have accumulated enough extra revenue to be able to reset the rules of the interim system back to a full-fledged tax reassignment system. Dubravko Mihaljek has acquired a set of estimates by the PRC Ministry of Finance in 1993 regarding this calculation, as shown in table 2. According to this table, the central government planned to gradually decrease the tax return during the period 1994-2000 (from 132.8 billion *yuan* to 9.0 billion *yuan*) and to increase its gain from the VAT at the same time (from 131.9 billion *yuan* to 551.4 billion *yuan*). These two expectations led the Ministry of Finance to expect the net gain for the central government from the system to increase from a deficit of 0.9 billion *yuan* in 1994 to a surplus of 542.4 billion *yuan* by 2000. Based on this calculation, the central government should make concessions to the local governments.

However, things did not turn out as intended. Table 3 shows what exactly happened from 1994 to 1997. The fact was that the VAT did not increase as much as expected. The amount the central government really

<sup>12</sup>Dubravko Mihaljek, "The New Revenue-Sharing Arrangement in China: An Illustrative Example," in *Financing Decentralized Expenditures: An International Comparison of Grants*, ed. Ehtisham Ahmad (Cheltenham, UK; Brookfield, Vt.: Edward Elgar, 1997), 334; Brean, *Taxation in Modern China*, 23.

**Table 3****The Central Government's Gain from the Tax Assignment System, 1994-97**

Unit: Billion *yuan*

Year	Center's Share of VAT	Tax Return	Center's Gain
1994	172.840	179.900	-7.060
1995	194.790	186.726	8.064
1996	222.000	194.864	27.136
1997	245.960	201.163	44.797

**Sources:** VAT data in *Zhongguo caizheng nianjian 1998* (Fiscal yearbook of China 1998) (Beijing: Zhongguo caizheng zazhi chubanshe, 1998), 469; tax return data obtained from interviews with Finance Ministry officials.

gained from the VAT was greater than expected only up to 1996, and was actually 31.24 billion *yuan* short in 1997. Another serious fact was that the tax return increased rather than decreased. The real total amount of tax returns from 1994 to 1997 from the central to local governments was 327.753 billion *yuan* more than expected in 1993.

However, just by looking at these two items we see that the central government still enjoyed some net gain after the tax return (e.g., 44.8 billion *yuan* in 1997), although not as much as expected. The real story is much more complicated than this, however. In the following sections, this paper will examine the impact of the tax assignment reform. The paper will distinguish the respective impacts of the tax assignment reform on both the central and local governments.

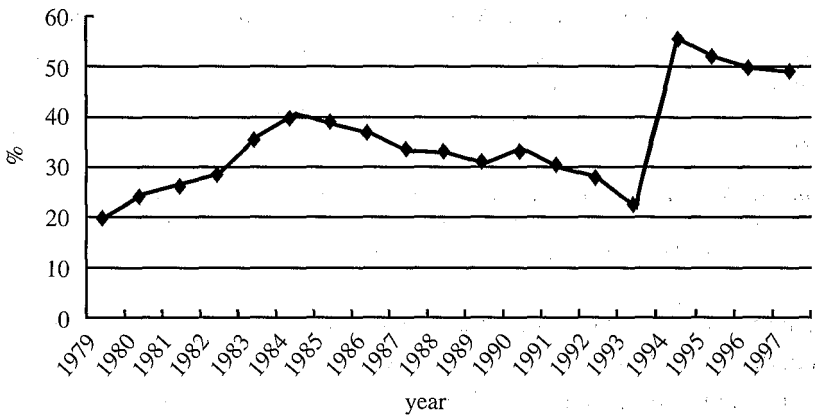
### **The Impact of Tax Assignment Reform on the Central Government**

#### *Reform Result I: Central Government Fiscal Revenue as a Percentage of National Governmental Fiscal Revenue before Tax Return*

Most Chinese officials and scholars have given positive evaluations to the effectiveness of the tax assignment system. For example, the Ministry of Finance has expressed that the tax assignment system enabled the state to extract more fiscal revenue than before. The ministry holds that the

**Figure 1**

**The Share of the Central Government Fiscal Revenue in National Fiscal Revenue, 1979-96**



**Sources:** *Zhongguo tongji nianjian 1998* (Statistical yearbook of China 1998) (Beijing: Zhongguo tongji chubanshe, 1998), 462; *Zhongguo tongji zhaiyao 1998* (A statistical survey of China 1998) (Beijing: Zhongguo tongji chubanshe, 1998), 56.

system also had the effect of transforming local governments' perception of fiscal management more toward a self-sufficiency principle, which in turn had the effect of rationalizing the local economic structure.<sup>13</sup> Hu Angang also argued that the tax assignment system had basically won the "first battle," and had raised the central government's share of national fiscal revenue.<sup>14</sup> Many other scholars and observers also concurred with this opinion by saying that the central government had successfully increased its share in the national fiscal revenue or reasserted its centralized power.<sup>15</sup>

Figure 1 shows the fact stated by these scholars—that the share of the central government's fiscal revenue as a percentage of the national revenue has increased tremendously since 1994 (from 22 percent in 1993 to 55.7 percent in 1994) and remained stable (at the level of 48.8 percent in 1997).

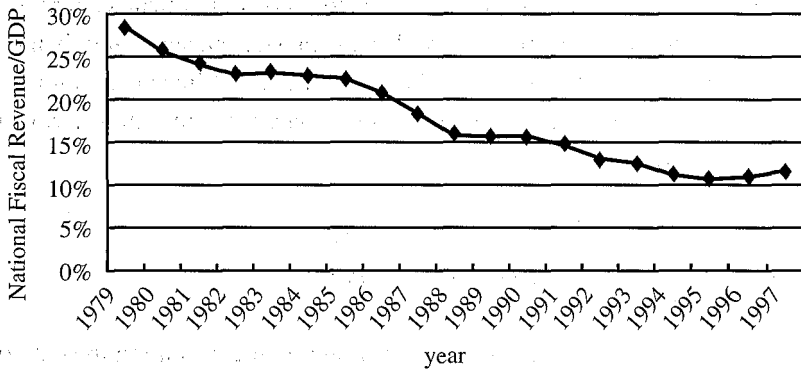
<sup>13</sup>*Zhongguo caizheng nianjian* (1995), 63.

<sup>14</sup>Hu Angang, "Difficult Institutional Innovation: A Preliminary Evaluation of the Tax Assignment System," *Dongya jikan* (East Asia Quarterly) (Taipei) 28, no. 1 (1997): 53.

<sup>15</sup>Luo Jiwei, "Constraints in Reforming the Transfer System in China," in Ahmad, *Financing Decentralized Expenditures*, 350; Brean, *Taxation in Modern China*, 17.

**Figure 2**

**The Share of National Fiscal Revenue in National GDP (%), 1979-97**



Sources: *Zhongguo tongji nianjian* 1998, 12, 56.

In other words, the central state's capacity vis-à-vis the local state in terms of extracting fiscal resources has dramatically increased.

#### *Reform Result II: National Governmental Fiscal Revenue as a Percentage of National GDP*

The "Wang-Hu Report" began its analysis by warning that the state capacity of the PRC had been in continuous decline since reforms began in 1979. The most conspicuous indicator was the share of national fiscal revenue in GDP. Figure 2 shows this share in percentage form from 1979 to 1997. The data shows that the trend has not been substantially reversed even after the tax assignment system was introduced in 1994. The share of national fiscal revenue as a percentage of national GDP from 1994 to 1997 was 11.2, 10.7, 10.9, and 11.6—all less than the 1993 share of 12.6. Thus the current tax assignment system (as an interim, or imperfect, version) has not successfully improved the share of national fiscal revenue as a percentage of national GDP. Quite different from the result presented in figure 1, this second result shows that the PRC's state capacity to extract resources from the economy has not improved, and perhaps has even weakened, after 1994.

The question then becomes: Why has the tax assignment system not

been able to reverse the trend of decreasing state capacity to extract resources from the fast-growing economy? This phenomenon has puzzled scholars such as Hu Angang who advocated a tax assignment system as a necessary solution to the problem of decreasing state capacity and then declared that the tax system had won the "first battle."<sup>16</sup> If the tax assignment system is as successful as shown in figure 1, why was the state's fiscal capacity still declining?

*Reform Result III: Disposable Central Government  
Fiscal Revenue as a Percentage of National  
Governmental Fiscal Revenue*

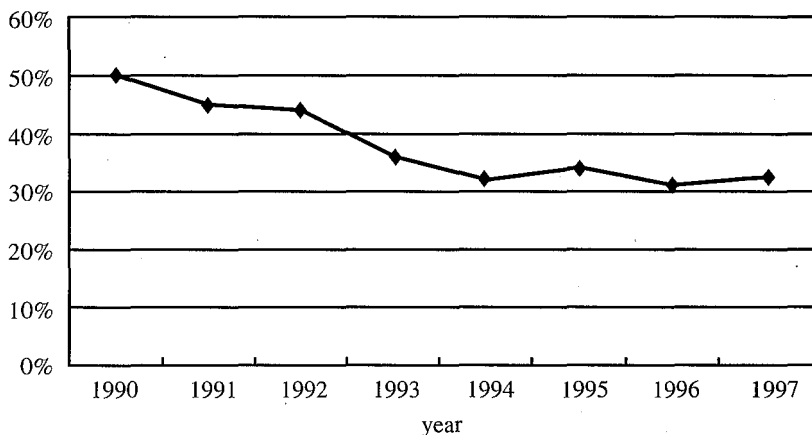
The key to solving the puzzle lies simply in incorporating the data of tax return to our interpretation. If we incorporate the data of tax return from 1994 to 1997, and deduct this amount of tax return from the central government's fiscal revenue, then we are left with the amount of the central government's "disposable fiscal revenue" which must be less than the original central fiscal revenue. If we compute the share of this "disposable fiscal revenue of the central government" as a percentage of the national fiscal revenue, we come up with a new share percentage. If we compare these new share percentages from 1994 to 1997 with those before 1993, we find that the tax assignment system has not yet been able to raise the share of the central government, and has probably even made it erode further. Figure 3 shows this situation.

In short, if tax returns are actually not a part of the central government's disposable fiscal revenue because of the compromise that was struck, we should deduct the returns when considering whether the central government has gained more control of fiscal revenue after the reform. According to figure 3, the answer is very clear. The central government has at least not yet regained the share of national fiscal revenue that it used to enjoy before the reform. Therefore, the central government has not yet rebuilt the state's declining "capacity" in terms of revenue control.

<sup>16</sup>Hu Angang admitted that the phenomenon of a decreasing share of national fiscal revenue in national GDP in 1994 and 1995 was "puzzling" to him. See Hu, "Difficult Institutional Innovation," 41.

Figure 3

The Share of the Central Government's Disposable Fiscal Revenue in National Fiscal Revenue, 1990-97



**Sources:** Data for 1995 in Ministry of Finance, *Difang caizheng tongji ziliao* (Local fiscal statistical data) (Beijing: Xinhua chubanshe, 1996), 19; data for other years obtained from interviews with Finance Ministry officials. Data for the central government's disposable fiscal revenue is shown in appendix 4.

### The Impact of Tax Assignment Reform on Local Governments

#### *Reform Result I: Tax Return and Local Disparity*

One of the most important policy goals of the tax assignment system was to mitigate the enlarging disparities among the provinces in the reform era. Therefore, comparing the local disparities before and after the implementation of the tax assignment system will help us to see whether the tax assignment system has made a difference in the local disparities. This paper adopts the measurements suggested by Hu, Wang, and Su with the following two equations.<sup>17</sup> First is the indicator of local disparity, constituted by the ratio of the standard deviation over the mean of local GDP per

<sup>17</sup>Hu Angang, Wang Shaoguang, and Su Xiaokang, *Zhongguo diqu chaju baogao* (Regional disparities in China) (Taipei: Zhiliang chubanshe, 1996).



**Table 4****Weighted GDP Per Capita Disparity Indicator among the Localities, 1991-97**

Year	GDP Disparity Indicator	Weighted GDP Disparity
1991	0.6009	0.0791
1992	0.6165	0.0822
1993	0.6297	0.0860
1994	0.6945	0.0673
1995	0.6572	0.0691
1996	0.6465	0.0711
1997	0.6507	0.0729

**Source:** Computed from provincial GDP and population data in *Zhongguo tongji nianjian 1998* (Statistical yearbook of China 1998) (Beijing: Zhongguo tongji chubanshe, 1998), 62.

capita. The second is a weighted indicator of the first, by taking into account the proportion of the local population in the national population. According to these two equations, the two sets of indicators to measure the local disparities are illustrated in table 4 as follows:<sup>18</sup>

$$V_{uw} = \left\{ \sum_i^N [(X_i - \bar{X})^2 / N] \right\}^{1/2} / \bar{X}$$

$$V_{vw} = \left\{ \sum_i^N [(X_i - \bar{X})^2 \times (P_i / P) / N] \right\}^{1/2} / \bar{X}$$

where  $V_{uw}$ —indicator of local disparity;  $V_{vw}$ —weighted indicator of local disparity;  $X_i$ —mean of local GDP per capita;  $\bar{X}$ —mean of all  $X_i$ ;  $N$ —number of locality;  $P_i$ —local population in province  $i$ ;  $P$ —national population.

According to table 4, the disparity among the localities has not improved much after the 1994 tax assignment reform. The values of the first GDP disparity indicator from 1991 to 1997 all fall between 0.60 and 0.69, without much fluctuation. There are some changes in the values of the second index, the weighted GDP disparity indicator, from 1991 to 1997. The 1994 value of 0.0673 is less than the 1993 figure of 0.0860. However,

<sup>18</sup>Ibid., 139.

this value rose to 0.07 in 1996 and 1997, approximating the value in 1991. To sum up, these data do not show that the tax assignment system has effectively narrowed disparities, which is supposed to be one of the policy goals of the reform. Such experts as Mihaljek did indeed warn that, if grants in a tax assignment system "are not based on objective criteria, the system will be open to political influence and regional disparities may widen."<sup>19</sup>

### *Reform Result II: Tax Return and Local Fiscal Deficit*

One important goal of the 1994 tax reform was to rationalize the fiscal situation of the local governments, making them more responsible to their locality and to the state as a whole. According to this policy goal, deficit control by the local governments should be a reasonable result of the reform. However, figure 4 shows that the local deficit has increased dramatically after the tax assignment reform since 1994, and the national budget deficit has also increased ever since.

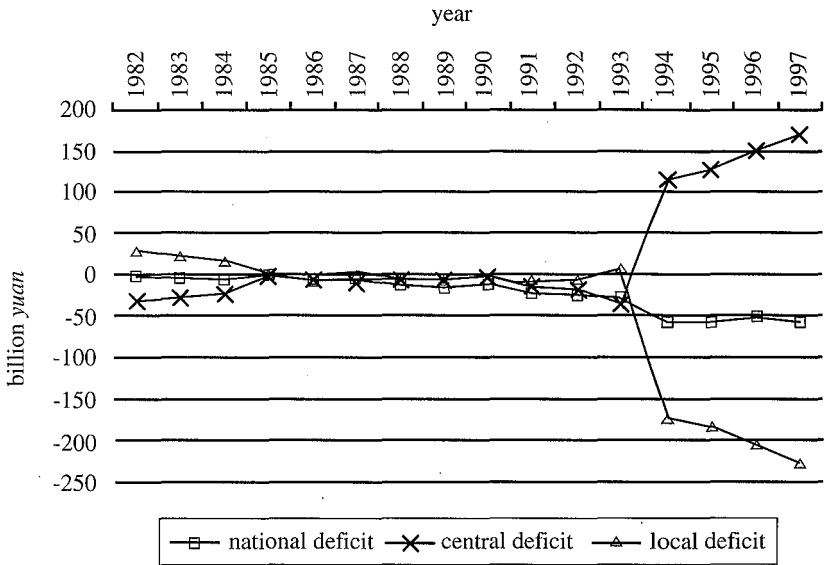
One of the reasons that the local deficit has increased was due to the reallocation of fiscal responsibilities under the tax assignment reform. Under the new system, the local governments have greater responsibilities to care for the provision of public services and utilities. Since there were only punishment mechanisms for local governments who collected too few taxes, but not any for those who overspent, there is an incentive for the local governments to be too free with spending under the tax assignment system. This flaw became more serious when the tax return was not based on a merit system, but rather on a compromise to guarantee the local governments' vested interests in their local budgets. Mihaljek has warned, "If grants are used simply to fill the budget gaps, local governments will have little incentive to implement prudent fiscal policies."<sup>20</sup> The post-tax assignment reform situation has again testified to such warnings.

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<sup>19</sup>Mihaljek, "The New Revenue-Sharing Arrangement in China," 347.

<sup>20</sup>Ibid.

**Figure 4**  
**National, Central, and Local Fiscal Deficits, 1982-97**



Source: *Zhongguo tongji zhaiyao* 1998, 56-57.

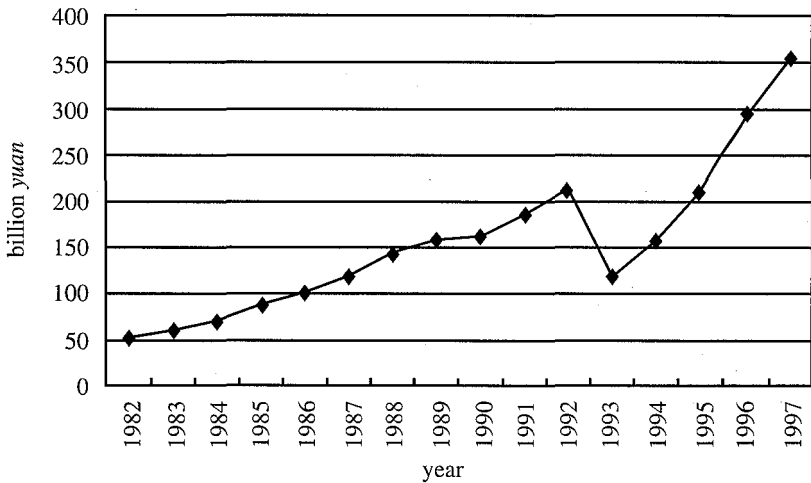
### *Reform Result III: Tax Return and Local Expansionism—Extrabudgetary Fiscal Revenue*

In the reform era, scholars have noticed that there has been another increasingly serious problem in China's fiscal system—the growing "extrabudgetary fiscal revenue" (or "off-budget fiscal revenue").<sup>21</sup> The extrabudgetary fiscal revenue has seriously eroded the state's capacity to extract resources from the economy. If the 1994 tax assignment reform was intended to rationalize the tax and fiscal systems so that the new system can contribute to a more healthy business environment for the enterprises, the extrabudgetary system must be one of the targets to be eliminated.

Instead of declining, however, local extrabudgetary fiscal revenue has unfortunately only increased sharply. Figure 5 shows the change in local

<sup>21</sup>Christine P.W. Wong, "Fiscal Dualism in China: Gradualist Reform and the Growth of Off-Budget Finance," in Brean, *Taxation in Modern China*, 187-208.

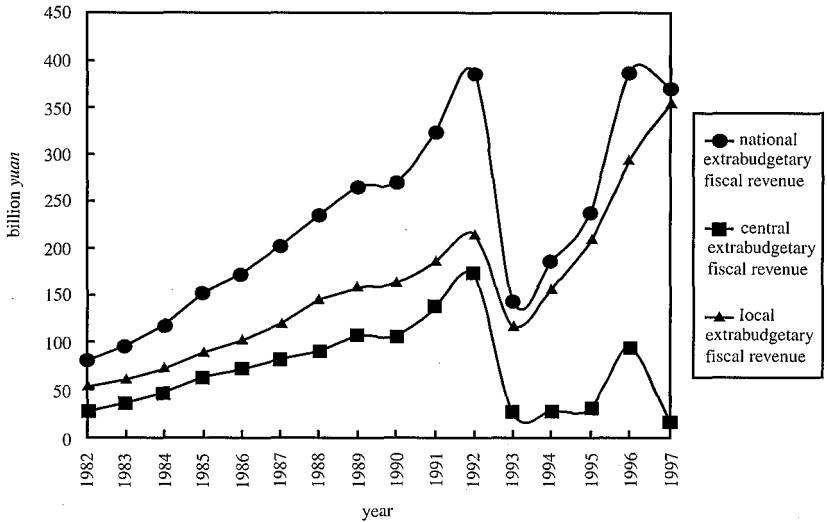
**Figure 5**  
**Local Extrabudgetary Fiscal Revenue, 1982-97**



**Source:** *Zhongguo caizheng nianjian* 1998, 473-74.

fiscal revenue from 1982 to 1997. As we can see from the figure, local extrabudgetary fiscal revenue has grown gradually since 1983—from 60.78 billion *yuan* in 1983 to 214.72 billion *yuan* in 1992. Revenue fell in 1993, but since the tax assignment system was introduced in 1994, grew sharply again—at a much faster rate than that between 1982 and 1992. In 1997, local extrabudgetary fiscal revenue grew to 361 billion *yuan* (see appendix 6).

If we compare the growth of extrabudgetary fiscal revenue of local governments with that of the central government, we find a more vivid contrast. Figure 6 shows the change in national, central, and local extrabudgetary fiscal revenues. This figure illustrates that both the central and local extrabudgetary fiscal revenues fell in 1993. However, the extrabudgetary fiscal revenue of the central government was basically under control after 1993, while those of the local governments skyrocketed during the same period. These two facts when taken together imply that most of the growth of national extrabudgetary fiscal revenue after 1993 was caused in part by the growth of those of the local governments. Thus, after the tax assignment system was implemented, the local governments were undermining

**Figure 6****National, Central, and Local Extrabudgetary Fiscal Revenues, 1982-97**

Source: *Zhongguo caizheng nianjian* 1998, 473-74.

the state's overall capacity to extract fiscal resources from the growing economy. This may be seen as a counterstrategy adopted by the local governments in facing the central government's change of the rules for redistributing fiscal resources—this despite the fact that the central government had made some major compromises to protect the vested interests of the provinces. From this perspective, the sacrifices and concessions made by the central government in the 1994 tax assignment reform were not really appreciated by the local governments. To use a game theoretical term, the local governments adopted a "noncooperative" strategy to respond to the central government's "cooperative" initiative.

### Further Assessments of the Tax Assignment System: Regression Analyses

In previous sections, the paper has presented data to describe some general trends of the distribution of fiscal revenue after the 1994 tax assign-

ment reform. To sum up briefly, this analysis has suggested that after the tax assignment system was introduced, the central state was still not able to strengthen its fiscal revenue-extractive capacity. The central level has not regained a larger share of national fiscal revenue as a percentage of GDP, nor has it regained a larger share of the central government's fiscal revenue as a percentage of national revenue. Ever since the tax assignment system was introduced, local governments have expanded their fiscal deficit as well as their extrabudgetary fiscal revenue. Moreover, although not as great as that before 1994, the disparity among the provinces is still serious. This section will make some further assessments of the tax assignment system, particularly by focusing on both whether the tax assignment system as a grant system can equally benefit different categories of local governments as well as the mechanisms through which the system would affect the local governments.

The method adopted here is a statistical analysis of regression. There will be five regression analyses. The first is the regression of tax return on GDP, local fiscal revenue, and population. The second is the regression of a constructed variable "benefit index" of the local governments (to what extent each local government benefits from the tax assignment system) on GDP, population, and local fiscal revenue. The third is the regression of tax return on GDP, population, local fiscal revenue, and—different from the first—the local collection of national taxes. The fourth is the regression of local fiscal deficit on GDP, population, tax return, and local fiscal revenue. The fifth is the regression of local extrabudgetary fiscal revenue on GDP, population, local fiscal revenue, and local fiscal deficit. These regression analyses will lend us further evidence to assess whether the tax assignment system has been successful so far.

#### *Regression of Tax Return on GDP, Local Fiscal Revenue, and Population*

Table 5 illustrates the regression of tax return on GDP, local fiscal revenue, and population in 1995, 1996, and 1997. The reason for choosing GDP, local fiscal revenue, and population is that they represent the major background factors that constitute the bargaining power of the local governments. The results show that local fiscal revenues of the previous year

**Table 5****Regression of Tax Return on GDP, Local Fiscal Revenue, and Population, 1995-97**

	Tax Return	
	Beta	Significance
<b>1995</b>		
GDP	0.738**	0.003
Local fiscal revenue (1994)	0.284 <sup>†</sup>	0.091
Population	-0.154	0.342
Adjusted R <sup>2</sup>	0.726	
N	30	
<b>1996</b>		
GDP	0.690**	0.005
Local fiscal revenue (1995)	0.328 <sup>†</sup>	0.053
Population	-0.134	0.407
Adjusted R <sup>2</sup>	0.746	
N	30	
<b>1997</b>		
GDP	0.258	0.236
Local fiscal revenue (1996)	0.703**	0.000
Population	-0.030	0.819
Adjusted R <sup>2</sup>	0.822	
N	30	

<sup>†</sup>p < 0.1; \*\*p < 0.01.

were all significantly related to the tax return at least at a 90 percent confidence level in 1995, 1996, and 1997. There are two implications of this outcome. First, those provinces that collect more local taxes (in terms of an absolute amount) tend to receive more from the tax return. The tax return seems to have an encouraging effect on their ability to collect local taxes, although the central government cannot directly benefit from this collection. However, another implication is that those provinces with more local fiscal revenue would receive a greater portion of tax returns back from the central government. This seems to benefit those provinces that were already strong in their capacity to extract local resources. This may not help those provinces with weak extractive capacity to perform better financially.

In 1995 and 1996, GDP was also related to tax return—at a 99 percent confidence level for both years. This implies that rich provinces tend to receive a larger tax return (in terms of an absolute amount) than poor provinces, and that the tax return itself did not have the effect of narrowing the disparities between the rich and poor provinces.

*Regression of Benefit Index on GDP, Local Fiscal Revenue, and Population*

To use the amount of tax return as an evaluation of the tax assignment system has the problem of not taking into consideration the local governments' capacity to collect taxes for the central government. The fact that rich provinces receive a larger tax return may be attributed to the fact that they contribute more to national taxes. Therefore, this paper constructs an indicator to represent to what extent each province benefits from the give-and-take game of the tax assignment system. This indicator, the "benefit index," is calculated by deducting each province's contribution share of national taxes (*guoshui*) from its share of the overall tax return. The following equation summarizes the process of calculation:

$$\text{Benefit index}_{(i)} = (\text{tax return to province}_{(i)} \div \text{overall tax return}) - (\text{national taxes collected in province}_{(i)} \div \text{overall national taxes})$$

According to this equation, we can calculate the benefit index in each province under the tax assignment system in 1995, 1996, and 1997. The results are illustrated in appendix 7. A positive index value means the province receives a greater share of tax return than it contributes to national taxes (i.e., the province benefits from the tax assignment system). A negative value means the province loses more than it contributes (i.e., no benefit from the tax assignment system). We can then use these indices to conduct regression analysis. The benefit index will be regressed on GDP, population, and local fiscal revenue of the previous year by using 1995, 1996, and 1997 data.

The regression results of the benefit index in these three years are shown in table 6. The benefit indices in 1996 and 1997 are negatively related to local fiscal revenue at a confidence level of at least 99 percent.



**Table 6**  
**Regression of Benefit Index on GDP, Local Fiscal Revenue, and Population,**  
**1995-97**

	Benefit Index (%)	
	Beta	Significance
<b>1995</b>		
GDP	-0.500	0.158
Local fiscal revenue (1994)	-0.371	0.152
Population	-0.818**	0.003
Adjusted R <sup>2</sup>	0.335	
N	30	
<b>1996</b>		
GDP	0.390	0.169
Local fiscal revenue (1995)	-1.123**	0.000
Population	0.234	0.239
Adjusted R <sup>2</sup>	0.624	
N	30	
<b>1997</b>		
GDP	0.230	0.396
Local fiscal revenue (1996)	-1.191**	0.000
Population	0.695**	0.000
Adjusted R <sup>2</sup>	0.722	
N	30	

\*\*p < 0.01.

However, the benefit index was not related to the local fiscal revenue in 1995 at an acceptable confidence level. This result is quite different from the regression analysis of the amount of the tax return. In the regression analysis in table 5, the coefficient of the local fiscal revenue on tax return was positive in all three years. In two of the three years—1995 and 1997—population was also related at a 99 percent confidence level. The benefit index was related to GDP only in 1995, at an 85 percent confidence level.

The regression analysis in table 6 leads to a different conclusion from that in table 5. According to this result, after taking into consideration the contribution share of each province to national taxes, we can argue that those provinces with less local fiscal revenue benefit more from the tax assignment system. Those provinces with less local fiscal revenue tend to

receive a greater share of the tax return than the share they contribute to national taxes. Therefore, from this perspective, the practice of the tax assignment system can equally benefit different types of provinces.

The difference between the regressions in tables 5 and 6 can be understood as the contrast between "relative gains" and "absolute gains" as argued in the theoretical debate between realism and liberalism in international politics.<sup>22</sup> The regression of the "benefit index" shows the "relative gains" of the provinces (contrasting between those having more and those having less local fiscal revenue). However, the regression of the "tax return" shows the "absolute gains" of the provinces (contrasting between those having more and those having less local fiscal budget or GDP). The rich provinces, or provinces with strong local extractive capacity, may not benefit from the tax assignment reform in terms of "relative gains"; that is, they may not benefit from the tax return as much as they contribute to national taxes in comparison with other provinces. However, they may still benefit in terms of "absolute gains," meaning they gain more in terms of the absolute amount of tax return (since their scale is larger). This may be the reason why both rich and poor provinces or both local governments with strong and weak local extractive capacity are so far all willing to participate in this game of tax assignment and tax return.

*Regression of Tax Return on GDP, Population,  
Local Fiscal Revenue, and Local Collection  
of National Taxes*

The regression analysis of the "benefit index" does not tell us whether the tax return mechanism itself has encouraged the local governments to collect more national taxes for the central government. Therefore, another regression is conducted on whether the tax return is related to the amount of national taxes collected in each province. Table 7 shows the result of regression in 1996 and 1997. According to this table, the tax return has a clearly positive connection with the amount of national taxes collected in

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<sup>22</sup>David A. Baldwin, ed., *Neorealism and Neoliberalism: The Contemporary Debate* (New York: Columbia University Press, 1993), 5.

**Table 7****Regression of Tax Return on GDP, Local Fiscal Revenue, Population, and Local Collection of National Taxes in 1996-97**

	Tax Return	
	Beta	Significance
<b>1996</b>		
GDP	0.001	0.992
Local fiscal revenue (1995)	-0.055	0.405
Population	0.129*	0.042
Local collection of national taxes (1995)	0.848**	0.000
Adjusted R <sup>2</sup>		0.968
N		30
<b>1997</b>		
GDP	0.078	0.711
Local fiscal revenue (1996)	-1.145**	0.007
Population	0.296**	0.018
Local collection of national taxes (1996)	1.706**	0.000
Adjusted R <sup>2</sup>		0.906
N		30

\*p &lt; 0.05; \*\*p &lt; 0.01.

each province in the previous year. That is, the more the central government collects national taxes in one province, the more that province will receive from the tax return. This strong message should encourage the local state to cooperate with the central government or to provide assistance for the (central) State Administration of Taxation in the locality to collect more national taxes so that the local governments can in turn benefit more from the tax return mechanism.

The central government in the give-and-take game of the tax assignment system wishes to maintain its credibility by rewarding those provinces in which the national taxes are better collected. However, we have to bear in mind that tax return is not the only arena in which the central and local governments play the game. The following subsection focuses on two other arenas in which the local governments can wield other strategies to protect or promote their own interests, sometimes at the cost of the central government or even the state as a whole.

**Table 8****Regression of Local Fiscal Deficit on GDP, Local Fiscal Revenue, Population, and Tax Return in 1995-97**

	Local Fiscal Deficit	
1995	Beta	Significance
GDP	-0.535 <sup>†</sup>	0.060
Local fiscal revenue	0.391*	0.045
Population	0.638**	0.001
Tax return (1994)	0.527*	0.015
Adjusted R <sup>2</sup>	0.704	
N	30	
1996		
GDP	-0.366	0.227
Local fiscal revenue (1995)	-0.015	0.958
Population	0.684**	0.001
Tax return (1995)	0.672*	0.011
Adjusted R <sup>2</sup>	0.706	
N	30	
1997		
GDP	-0.421	0.153
Local fiscal revenue (1996)	-0.037	0.892
Population	0.551**	0.003
Tax return (1996)	0.870**	0.001
Adjusted R <sup>2</sup>	0.729	
N	30	

<sup>†</sup>p < 0.1; \*p < 0.05; \*\*p < 0.01.

*Regression of Local Fiscal Deficit on Previous Year's GDP, Population, Tax Return, and Local Fiscal Revenue*

In figure 4, we have observed that the local fiscal deficit grew sharply after 1994. This prompts us to ask whether this growth of local deficit is a common phenomenon among all provinces, or is only particular to certain provinces. This paper seeks to uncover if the tax assignment system itself explains this variation. Here the regression of local fiscal deficit on GDP, population, local fiscal revenue, and especially the tax return of the previous year is presented to explore these possibilities. The results are presented in table 8.

According to table 8, local deficit was related to population at a 99 percent confidence level, and related to the tax return of the previous year and local fiscal revenue at a 95 percent confidence level in 1995. Local deficit was also negatively related to GDP at a 90 percent confidence level. In 1996, local fiscal deficit was related to population at a 99 percent confidence level, and to the tax return of the previous year at a 95 percent confidence level. In 1997, local fiscal deficit was related to population and the tax return of the previous year all at a 99 percent confidence level.

These regression analyses of local fiscal deficit reveal the following observations. The tax return has an encouraging effect on local governments' expanding fiscal deficit. When GDP, population, and local fiscal revenue are controlled, those provinces with a greater tax return from the previous year tend to have a larger local fiscal deficit. In other words, quite contrary to what is expected by the policy goal, the tax assignment reform, owing to the existence of a compromising tax return mechanism, has had the effect of encouraging rather than curbing irresponsible local fiscal behavior.

Another phenomenon that is worth noticing is that provinces with a larger population are more likely to have higher fiscal deficits. One reason may be that the local governments with large populations are obliged to provide more public services and facilities than other provinces. The problem is, however, that under the new tax assignment system most of these burdens have to be born by the local governments themselves. Therefore, expanding fiscal deficit seems to be a reasonable solution in the short run, under the circumstance that in the long run these local governments expect the central government would eventually come to their assistance. If true, this explanation is not good news as it implies, as Mihaljek pointed out, that if tax returns in the tax assignment system are decided on an ad hoc and nonobjective basis (for example, as a result of central-local one-to-one bargaining), then the local governments would not have a strong incentive to adopt a prudent or responsible fiscal expenditure in the long run.

*Regression of Local Extrabudgetary Fiscal Revenue on GDP, Population, Tax Return, Fiscal Revenue, and Fiscal Deficit (in the Previous Year)*

Expanding fiscal deficit is not the only strategy for the local govern-

ments to protect or promote their own interests, and even may not be the most devastating to the central government. Another strategy for the local governments that may have more serious consequences for the central government is the expansion of their "extrabudgetary fiscal revenue." The following regression analysis tries to determine whether extrabudgetary fiscal revenue is influenced by GDP, population, local fiscal revenue, local fiscal deficit, and especially important, the tax return of the previous year.

According to table 9, in 1995, local extrabudgetary fiscal revenue was related only to GDP at a 99 percent confidence level. The table shows that in 1996, local extrabudgetary fiscal revenue was related also only to GDP at a 95 percent confidence level. In 1997, local extrabudgetary fiscal revenue was related to GDP at a 99 percent confidence level, and negatively related to local fiscal revenue at a 95 percent confidence level.

The results of these regression analyses give rise to the following observations. GDP has significant effects in all three years. The richer provinces tend to have more local extrabudgetary fiscal revenue. The rich local government has an incentive to explore noninstitutional ways to extract even more fiscal resources from the local economy. In that case, there is a strong tendency for the state not to be able to benefit from the growing economy through institutionalized fiscal mechanisms. In short, the tax assignment system has not proved helpful in strengthening state capacity. For those rich provinces (usually also the ones with relatively stronger extractive capacity), the control from the central government becomes less and less important if the latter cannot curb them from extracting extrabudgetary fiscal revenue.

### **Conclusion**

To sum up the above findings, this paper argues that the tax assignment reform cannot be said to be successful so far. Although having achieved some progress and having attained some of the policy goals, the tax assignment system nevertheless remains seriously flawed in achieving the most important goal—raising the extractive capacity of the state, especially that of the central government. If the "tax return" mechanism was

**Table 9**

**Regression of Local Extrabudgetary Fiscal Revenue on GDP, Local Fiscal Revenue, Population, Tax Return of the Previous Year, and Local Fiscal Deficit, 1995-97**

Local Extrabudgetary Fiscal Revenue		
1995	Beta	Significance
GDP	0.683**	0.003
Local fiscal revenue	0.116	0.397
Population	0.061	0.702
Tax return (1994)	0.160	0.360
Local fiscal deficit	-0.039	0.397
Adjusted R <sup>2</sup>	0.848	
N	30	
1996		
GDP	1.112**	0.000
Local fiscal revenue	-0.183	0.320
Population	-0.020	0.887
Tax return (1995)	0.001	0.996
Local fiscal deficit	0.011	0.934
Adjusted R <sup>2</sup>	0.880	
N	30	
1997		
GDP	1.143**	0.000
Local fiscal revenue	-0.389*	0.032
Population	-0.034	0.788
Tax return (1996)	0.160	0.388
Local fiscal deficit	0.045	0.724
Adjusted R <sup>2</sup>	0.894	
N	30	

\* $p < 0.05$ ; \*\* $p < 0.01$ .

meant to be an interim measure for winning initial cooperation that would then be gradually phased out, unfortunate is that the central government is unlikely to be able to replace this old system with a full-fledged tax assignment system in the near future.

In this paper, examination of empirical data has led to the following findings. On the bright side, the central government seemingly has regained a larger share of national fiscal revenue in the tax assignment

system, if "tax return" is not considered a minus drag on the central government's power or extractive capacity. One may argue that there is a major difference between "tax return" in the tax assignment system and "tax reallocation" under the old tax contract system, as the former is legally under the control of the central government while the latter is institutionally subject to one-to-one bargaining. Second, at least what the central government gains from the VAT is more than what it pays in tax return to the local governments. After the give-and-take, the central government has a positive balance sheet. The third good news of the tax assignment system is that tax return has been a non-zero-sum game in two senses. In terms of relative gains (that is, the share of tax return minus the contribution share of national taxes of each province), the tax assignment system has compensated those provinces that have weaker local fiscal extractive capacity. At the same time, the tax return measure has also benefited the provinces with strong local extractive capacity in terms of absolute gains, making them willing to participate in the game. The fourth merit of the tax assignment system is that the tax return mechanism has the effect of encouraging those provinces that assist the national tax administration in their localities to collect more national taxes.

However, there are also some counterarguments for the above assertions. Regarding the first argument, important to note is that "tax return" itself from the very beginning was also a result of bargaining. Even though the power to decide on tax returns legally lies with the central government, the central leaders have to make a *de facto* compromise with those at the local level. Regarding the second argument, the real question should be whether the accumulation of this gain is large enough, or when will it be large enough, as building blocks for the central government's power base, to reset the rules of the game in the future. Moreover, this gain may be too small when compared with what the local governments gain from the game. Regarding the third argument on the non-zero-sum nature of the system, worth noticing is that tax return is not the only arena of the game where each party can gain or lose. As for the fourth point, whether the central government collects more national taxes may not be the end of the game. Whether local governments may gain more *vis-à-vis* the central government may be more important to the result of the game.



On the pessimistic side of the tax assignment system, this paper also has some important findings. First, neither of the two most important indicators of the state extractive capacity—the share of the national fiscal revenue as a percentage of national GDP and the share of the central government's fiscal revenue as a percentage of the national fiscal revenue—has increased after the tax assignment system was put into practice. If we do not take tax return as part of the gains of the central government, the central level's share of national fiscal revenue has not increased. The most important reason should be attributed to the nature of the tax return mechanism as an ad hoc result of the bargaining process, and a compromise made by the central government in such a process. Another reason may be attributed to the bad news that what the central government gains from VAT was not as much as expected, which in turn may be a result of poor general economic performance.

Second, the disparity among the provinces has not been substantially minimized after the tax assignment system was implemented. This fact not only hurts the poor provinces' incentive to participate in the game, but also lowers the credibility of the central government in the long run. Third, the central state seems to be losing control over the local governments in the sense that provinces with larger populations tend to increase their fiscal deficit. This fact implies that these provinces still do not have enough confidence in the execution of the tax assignment system. When they are given greater responsibility to take care of their local citizens, the provinces have not been able to receive enough support from the central government, nor do they have enough local extractive capacity to cover the necessary expenses; and thus resort to expanding deficits. What is worse is the fact that tax return has further encouraged these provinces to expand their fiscal deficit, thus creating a vicious cycle. If the tax assignment system cannot solve this problem, this expanding deficit will not only create a burden for the whole system, but will also directly damage the credibility of the central government again. Fourth, the central government is losing control over another group of provincial governments—the rich provinces. The rich provinces may be willing to play the game, but under the table they are relentlessly expanding their extrabudgetary fiscal revenue. This move of the rich provinces increases their autonomy and power base vis-à-vis the

central government. This independence will also undermine the overall control of the state over the economy. Moreover, there is a mutually strengthening effect among these problems, where the last two can exacerbate the first two. And the deterioration of the first two problems will also prompt the provinces to go further in the direction of the third and fourth problems.

What are the policy implications of this analysis? To answer this question, we have to address another question: Is there any possibility for the tax assignment system to be successful at all? If the game keeps continuing as before, then the possibility for the central government to win is definitely becoming more and more remote. The move of the central government to make substantial compromises in the tax return arena at the beginning of the game has a critical consequence for the result. Although we do not have to assume a zero-sum game in implementing the tax assignment system, in practice the central government has lost to the local governments in a relative sense, while it has not gained much in an absolute sense either. The strategy of the central government has always been cooperation, while the local governments have been playing cooperation superficially but noncooperation in reality. The problem of unparalleled information between the central and local governments that has haunted the contract system has not disappeared, and has perhaps even become more acute. The central government was trying to lower its dependence (as a principal) on the local governments (as the agents). In reality, however, the lack of the information of and control over the provinces' reactions—such as expanding local deficit and extrabudgetary fiscal revenue—has weakened not only the central government's bargaining power, but also its credibility. If the game eventually leads to a "noncooperation vs. noncooperation" situation, the central government may lose more than the local governments. Therefore, how to increase local governments' loss resulting from their noncooperation is an important strategy that the central government should adopt. If the central government was not able to punish the provinces with financial means, political means would be the only method left available. Premature, perhaps, may be to jump to the conclusion that such a tax assignment system of incomplete version is doomed to fail, but at least the trend is not positive. If one day we were sure

that the tax system may very possibly fail, would it not be reasonable to consider a more radical change, such as a version more toward federalist arrangements for the central-local fiscal relations in the PRC?

## Appendix 1

### Tax Return from the Central to Local Governments in China, 1994-97

Unit: Billion yuan

Provincial Units	1994	1995	1996	1997
Beijing	6.641	6.944	7.112	7.355
Tianjin	4.232	4.484	4.553	4.555
Hebei	7.173	7.382	7.678	7.988
Shanxi	3.627	3.905	4.090	4.188
Inner Mongolia	2.884	2.906	2.998	3.050
Liaoning	11.198	11.352	11.696	11.768
Jilin	4.136	4.281	4.452	4.617
Heilongjiang	4.941	5.329	5.541	5.689
Shanghai	14.420	14.982	15.743	16.197
Jiangsu	13.131	13.695	14.330	15.058
Zhejiang	9.829	10.291	10.766	11.248
Anhui	4.510	4.706	5.060	5.278
Fujian	4.916	5.160	5.312	5.482
Jiangxi	3.149	3.198	3.320	3.272
Shandong	9.828	10.268	11.069	11.511
Henan	7.353	7.661	8.030	8.263
Hubei	6.382	6.629	6.907	7.228
Hunan	6.866	7.064	7.305	7.532
Guangdong	15.351	16.232	16.975	17.615
Guangxi	4.663	4.788	4.860	4.971
Hainan	0.582	0.586	0.602	0.619
Sichuan	9.785	10.006	10.349	10.616
Guizhou	3.177	3.239	3.374	3.481
Yunnan	11.824	11.933	12.226	12.450
Tibet (Xizang)	0.049	0.082	0.103	0.151
Shaanxi	3.405	3.488	3.623	3.763
Gansu	3.152	3.325	3.609	3.891
Qinghai	0.630	0.637	0.629	0.647
Ningxia	0.561	0.577	0.611	0.635
Xinjiang	1.505	1.596	1.941	2.045
Total	179.900	186.726	194.864	201.163

**Sources:** Data for 1995 in Ministry of Finance, *Difang caizheng tongji ziliao* (Local fiscal statistical data) (Beijing: Xinhua chubanshe, 1996), 19; data for other years obtained from interviews with Finance Ministry officials.

## Appendix 2

### National Fiscal Revenue as a Percentage of National GDP, 1979-97

Year	GDP*	National Fiscal Revenue*	National Fiscal Revenue in GDP (%)
1979	403.82	114.64	28.4
1980	451.78	115.99	25.7
1981	486.24	117.58	24.2
1982	529.47	121.23	22.9
1983	593.45	136.70	23.0
1984	717.10	164.29	22.9
1985	896.44	200.48	22.4
1986	1,020.22	212.20	20.8
1987	1,196.25	219.94	18.4
1988	1,492.83	235.72	15.8
1989	1,690.92	266.49	15.8
1990	1,854.79	293.71	15.8
1991	2,161.78	314.95	14.6
1992	2,663.81	348.34	13.1
1993	3,463.44	434.90	12.6
1994	4,675.94	521.81	11.2
1995	5,847.81	624.22	10.7
1996	6,788.46	740.80	10.9
1997	7,477.24	864.20	11.6

\*GDP and national fiscal revenue in billion yuan.

**Sources:** *Zhongguo tongji nianjian 1998* (Statistical yearbook of China 1998) (Beijing: Zhongguo tongji chubanshe, 1998), 12, 56.

## Appendix 3

**Fiscal Revenues of the Central and Local Governments as a Percentage of the National Fiscal Revenue, 1979-97**

Year	National Fiscal Revenue*	Central Government Revenue*	Local Government Revenue*	Central Government Revenue as % of National Revenue	Local Government Revenue as % of National Revenue
1979	114.64	23.13	91.50	20.2	79.8
1980	115.99	28.45	87.55	24.5	75.5
1981	117.58	31.11	86.47	26.5	73.5
1982	121.23	34.68	86.55	28.6	71.4
1983	136.70	49.00	87.69	35.8	64.2
1984	164.29	66.55	97.74	40.5	59.5
1985	200.48	76.96	123.52	38.4	61.6
1986	212.20	77.84	134.36	36.7	63.3
1987	219.94	73.63	146.31	33.5	66.5
1988	235.72	77.48	158.24	32.9	67.1
1989	266.49	82.25	184.24	30.9	69.1
1990	293.71	99.24	194.47	33.8	66.2
1991	314.95	93.83	221.12	29.8	70.2
1992	348.34	97.95	250.39	28.1	71.9
1993	434.90	95.75	339.14	22.0	78.0
1994	521.81	290.65	231.16	55.7	44.3
1995	624.22	325.66	298.56	52.2	47.8
1996	740.80	366.61	374.69	49.5	50.5
1997	864.20	421.65	442.55	48.8	51.2

\*Fiscal revenue in billion yuan.

**Sources:** *Zhongguo tongji nianjian 1998*, 462; *Zhongguo tongji zhaiyao 1998* (A statistical survey of China 1998) (Beijing: Zhongguo tongji chubanshe, 1998), 56.

#### Appendix 4

#### Disposable Central Government Fiscal Revenue as a Percentage of National Government Fiscal Revenue in the 1990s

Year	National Fiscal Revenue	Tax Return	Revenue from Local to Central Government	Estimated Fiscal Revenue of Central Government	Disposable Revenue of Central Government	
					Amount	As % of National Revenue
1990	293.71	—	48.22	—	147.46	50.0
1991	314.95	—	49.03	—	142.86	45.0
1992	348.34	—	55.86	—	153.81	44.0
1993	434.90	—	60.03	—	155.78	36.0
1994	521.81	179.90	57.01	191.1	167.76	32.0
1995	624.22	186.73	71.00	264.7	209.93	34.0
1996	740.80	194.86	60.39	353.2	232.14	31.0
1997	864.20	201.16	60.38	458.5	280.87	32.5

\*Revenue in billion yuan.

**Sources:** *Zhongguo caizheng nianjian 1997* (Fiscal yearbook of China 1997) (Beijing: Zhongguo caizheng zazhi chubanshe, 1997), 460; *ibid.* (1998), 462; Dubravko Mihaljek, "The New Revenue-Sharing Arrangement in China: An Illustrative Example," in *Financing Decentralized Expenditures: An International Comparison of Grants*, ed. Ehtisham Ahmad (Cheltenham, UK; Brookfield, Vt.: Edward Elgar, 1997), 346.

**Appendix 5****Fiscal Deficit of Each Provincial Unit, 1995-97**

Unit: Billion yuan

Provincial Units	Fiscal Deficit		
	1995	1996	1997
Beijing	3.91	3.65	5.41
Tianjin	3.14	3.42	3.29
Hebei	7.12	8.01	9.44
Shanxi	4.07	4.90	5.07
Inner Mongolia	5.85	6.91	7.68
Liaoning	8.94	10.31	11.24
Jilin	5.76	6.91	8.49
Heilongjiang	7.33	8.20	8.42
Shanghai	4.04	5.27	7.63
Jiangsu	8.09	8.77	10.88
Zhejiang	6.35	7.41	8.29
Anhui	5.21	6.41	6.67
Fujian	5.42	5.82	6.15
Jiangxi	3.62	5.47	6.18
Shandong	9.69	11.73	11.74
Henan	8.27	9.32	9.87
Hubei	6.27	7.29	8.38
Hunan	6.57	8.73	9.36
Guangdong	14.32	12.18	13.88
Guangxi	6.12	6.65	7.16
Hainan	1.39	1.45	1.69
Sichuan	11.06	11.77	14.39
Guizhou	4.65	5.01	5.59
Yunnan	13.67	14.04	16.28
Tibet (Xizang)	3.27	3.44	3.52
Shaanxi	5.14	5.42	6.12
Gansu	4.75	4.76	5.74
Qinghai	2.02	2.31	2.56
Ningxia	1.40	1.68	1.95
Xinjiang	5.81	6.66	6.89
Total	183.25	203.90	229.96

**Source:** *Zhongguo tongji zhaiyao* 1998, 56-57.

## Appendix 6

### Growth of Extrabudgetary Fiscal Revenue, 1982-97

Unit: Billion yuan

Year	National	Central	Local
1982	80.27	27.07	53.20
1983	96.77	35.99	60.78
1984	118.84	47.05	71.79
1985	153.00	63.61	89.39
1986	173.73	71.66	102.07
1987	202.88	82.80	120.08
1988	236.08	90.72	145.36
1989	265.89	107.23	158.66
1990	270.87	107.33	163.54
1991	324.33	138.11	186.22
1992	385.49	170.77	214.72
1993	143.25	24.59	118.66
1994	186.25	28.33	157.92
1995	240.65	31.76	208.89
1996	389.34	94.77	294.57
1997	375.56	14.51	361.05

Source: *Zhongguo caizheng nianjian* 1998, 473-74.



## Appendix 7

## Benefit Index in 1995, 1996, and 1997

Year	Local Share of Tax Return (1) (%)			Local Contributive Share of National Taxes (%) (2)			Benefit Index (%) (1-2)		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
Beijing	3.719	3.650	3.656	5.27	4.90	4.85	-1.549	-1.251	-1.196
Tianjin	2.401	2.337	2.264	3.05	2.57	2.95	-0.653	-0.235	-0.690
Hebei	3.953	3.940	3.971	3.37	3.28	3.34	0.583	0.658	0.629
Shanxi	2.091	2.099	2.082	2.01	2.14	1.94	0.077	-0.041	0.144
Inner Mongolia	1.556	1.539	1.516	1.16	1.40	1.08	0.399	0.135	0.438
Liaoning	6.079	6.002	5.850	6.54	5.59	5.11	-0.465	0.409	0.741
Jilin	2.293	2.285	2.295	2.11	1.87	1.95	0.182	0.412	0.344
Heilongjiang	2.854	2.844	2.828	3.51	3.43	3.51	-0.658	-0.582	-0.685
Shanghai	8.024	8.079	8.052	10.29	10.06	12.25	-2.262	-1.979	-4.200
Jiangsu	7.334	7.354	7.485	6.47	5.71	6.42	0.862	1.647	1.064
Zhejiang	5.511	5.525	5.591	5.54	4.24	4.75	-0.032	1.281	0.844
Anhui	2.520	2.597	2.624	2.04	2.37	2.23	0.481	0.228	0.393
Fujian	2.763	2.726	2.725	2.48	2.91	2.57	0.282	-0.182	0.151
Jiangxi	1.713	1.704	1.627	1.39	1.41	1.08	0.328	0.294	0.547
Shandong	5.499	5.680	5.722	6.50	6.96	6.63	-1.000	-1.276	-0.907
Henan	4.103	4.121	4.108	3.49	3.47	3.49	0.610	0.651	0.621
Hubei	3.550	3.545	3.593	2.57	2.79	2.80	0.976	0.757	0.790
Hunan	3.783	3.749	3.744	2.97	2.79	2.90	0.813	0.956	0.849
Guangdong	8.693	8.711	8.757	9.67	13.62	12.66	-0.977	-4.906	-3.907
Guangxi	2.564	2.494	2.471	1.99	1.67	1.55	0.570	0.828	0.918
Hainan	0.314	0.309	0.308	0.11	0.45	0.34	0.203	-0.145	-0.027
Sichuan	5.359	5.311	5.277	5.36	5.80	4.15	-0.004	-0.484	1.129
Guizhou	1.735	1.731	1.730	1.30	1.15	1.22	0.432	0.577	0.508
Yunnan	6.391	6.274	6.189	6.32	4.99	5.71	0.070	1.282	0.479
Tibet (Xizang)	0.044	0.053	0.075	0.10	0.06	0.10	-0.057	-0.009	-0.026
Shaanxi	1.868	1.859	1.871	1.48	1.49	1.52	0.388	0.366	0.349
Gansu	1.781	1.852	1.934	1.18	1.12	1.10	0.597	0.737	0.832
Qinghai	0.341	0.323	0.322	0.29	0.23	0.23	0.051	0.093	0.090
Ningxia	0.309	0.314	0.316	0.30	0.30	0.31	0.008	0.019	0.009
Xinjiang	0.855	0.996	1.017	1.11	1.23	1.25	-0.257	-0.237	-0.237
Total	100%	100%	100%	100%	100%	100%	0.00%	0.00%	-0.01%

**Sources:** For tax return shares, see appendix 1; for local contributive shares in national taxes, see *Zhongguo shuiwu nianjian 1995* (Taxation yearbook of China 1995) (Beijing: Zhongguo shuiwu chubanshe, 1995), 653; *ibid.* (1996), 919, 930; *ibid.* (1997), 513; *ibid.* (1998), 511.