

January 2006

CHINA – RURAL PUBLIC FINANCE

The Township Perspective

ANNEX 8: World Bank Report

**FISCAL REFORM AND ROLE OF THE
TOWNSHIP**

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1. ABSTRACT

In this paper we set out to accomplish three objectives. First, we wanted to track and describe the way the fiscal reforms have been implemented in China's townships. Second, we have tried to identify the effect that the fiscal reforms have had on the fiscal health of the township. This objective was pursued in three contexts: the effect on the average township; the effect on townships in different provinces; and the effect on townships in poor and rich townships. Finally, we sought to assess the impact that the fiscal reforms had on village fiscal health and farmer satisfaction.

Although farmers certainly have expressed their support for tax and fee reduction through a variety of media, our results show that the fiscal reforms are far more complicated and complex than tax reduction policies. They include a large set of policies that have sought to reassign expenditures, realign responsibilities (for control over resources that flow from county to town and town to county), reduce the importance of extrabudgetary and self raised funds, and increase investment into the public goods infrastructure in rural areas. When assessing the broad impact of these policies on township fiscal health, we find the average township has not fared well. Although county to town transfers have risen, the targeted transfers to offset the decline due to the tax and fee reduction policies do not nearly cover the losses of fiscal resources in the system as a whole. In addition, many policies are putting increasing control in the hands of the county financial office—through changes such as increasing requirement to hand up town to county transfers and expenditure reassignments (even though the fiscal resources come out of the township's budget). Hence, overall the fiscal condition of township's operating budget has clearly deteriorated between 2000 and 2004.

The bright side of the fiscal reforms has come in the area of capital budget management and flows of fiscal resources into new infrastructure investment. Between 2000 and 2004 there has been a veritable explosion of investment into the rural economy, mostly in roads, but also into irrigation, drinking water and to a lesser degree into clinics. The investments have risen largely due to the rising allocation by upper level governments.

While we show that the rising investment from any source increases farmer satisfaction, there are some concerns with the new effort to improve rural infrastructure. First, in many places (and especially in Jiangsu and other richer townships) as investments from above have risen requirements for matching funds apparently have led to an increase in township debt. Second, the increasing reliance investment from above also has a

* We would like to express our thanks to other CCAP members, such as Yuanyuan Yan, Renfu Luo, Haoqing Zhang and Lerong Yu for their useful help with data analysis.

drawback. While any investment from any source is shown to increase the satisfaction of farmers, *ceteris paribus*, when the investments come from above, they appear to reduce farmer satisfaction. Apparently, when villages are less involved with the project selection, design and implementation, the projects leave farmers less satisfied.

2. FISCAL REFORM AND ROLE OF THE TOWNSHIP IN CHINA'S RURAL DEVELOPMENT

Of all the problems facing China's rural policy makers, the fiscal system stands out as one of the most serious problems (Nyberg and Rozelle, 1999). In many of her writings, Wang and her colleagues (e.g., Wang and West, 1997; Wang, 2004) have shown that the fiscal system has not produced enough revenues, allocated expenditure efficiently or transferred fiscal resources in a way that leads to increased equity. The system has been shown to overspend on wages (Park et al., 1996) and fail to increase investment into rural villages (Berstein and Lu, 2000). The fiscal system was blamed for the high rate of taxation in some of China's poorest villages (Tao, 2004). In short, the fiscal system in rural areas is thought to have been behind the backwardness of China's rural economy and lagging incomes.

In response, over the past several years, policy makers have initiated a large number of reforms that were targeted at overcoming some of these problems. Fee and tax reduction, fiscal management regulation shifts, and rural service and expenditure reassignments. A new commitment has been announced build up the infrastructure and level of services in the rural economy, especially in poor areas. The pace and breadth of the reforms, at least on paper, are breathtaking and potentially could be able to aid the transformation of the rural economy from its long time position as China's lagging sector.

Almost surprisingly, given the importance of such reforms, until now there has not been any effort to systematically analyze the extent to which the reforms have been implemented and their effect across China—especially at the town level, the lowest official level of government in China's administrative hierarchy. Indeed, there have been studies launched of the rural fiscal reforms. Brandt et al. (2005) examined the effect of the fiscal reforms on the rural economy, focusing exclusive on the impact on villages. Wang et al. (2005) and Bai et al. (2005) have looked at the fiscal reforms at the county and above level. Zhou (2005) and Bai (2004) examine the effect on towns, although they only look at a few case studies areas.

In this policy brief we examine the fiscal reforms—broadly defined—on the fiscal health of township governments and the effect they have had on the rural economy. To meet this goal we first briefly describe a number of the policy changes that have been implemented in most areas of rural China. Next, we examine the impact that the changes have had on the fiscal health and performance of the fiscal systems in China's towns. The effects are examined on a large number of variables that look at different aspects of China's fiscal system, including tax collections, usable fiscal revenues, operating expenditures (both their level and composition), subsidies, extrabudgetary and self-raised funds, debt and capital expenditures. The effects are also examined by province and for rich and poor areas. Finally, we examine a small subset of the ways that the fiscal reforms may have affected the welfare of farmers in China's villages.

The policy brief in its current form has both strengths and suffers from certain shortcomings. To the best of our knowledge, this is the first study to be done on the effect of the fiscal reforms on the township government, using a large, systematically and randomly selected sample of towns for two years, one before and one after the fiscal reforms. The high quality data were collected by enumerators that were well-trained in fiscal accounting principals and executed a uniform survey instrument in 50 nationally representative towns. Although such a study is ambitious and has amassed a great deal of data, it still is important to remember that we only surveyed one out of a thousand villages, so the results, while truly providing a point estimate of the national average, are still based on a relatively small number of observations. In addition, since the reforms have been so recently implemented, it is impossible to try to assess the direct effect on incomes and other measures of welfare. Instead, most of the effects are examining how the accounts of the town's own fiscal accounts and those of villages beneath them have been affected.

3. DATA

The data used in this brief to examine the linkages the fiscal reforms at the town (and village) level were collected in a survey by the authors and their collaborators in 2005. The field work team conducted the data collection effort in 5 provinces, 25 counties, 50 towns and 100 villages. The final dataset can be considered as a nearly nationally representative sample. In each of China's major agro-ecological zones, we randomly selected a sample province. Sample counties and sample towns were also selected randomly.

The survey collected a great deal of information about township and village fiscal affairs. In addition to survey blocks enumerating the basic characteristics of the town and villages, there was a large block of sections on the revenues, operating and capital expenditures, remittances, subsidies, debt, assets and other aspects of each town's budgetary and extrabudgetary activities. Similar data were collected at the village level. The data were collected for 2000 and 2004 in order to have information before and after most of the Tax-for-Fee reforms.

Although we collected two years of data during a single survey, there is good reason to believe the recall data (for 2000) are high quality for most townships. By far most of the data came from the accounting books of the township's fiscal accounting station. If data were missing, supplemental interviews were carried out with a committee of informants, including the town's mayor in charge of fiscal affairs, the director of the fiscal accounting station and one or more accountants that had been in the town in both 2000 and 2004. The village fiscal information came from interviews in the village with the village's accountant. In the few cases (approximately only 3 of the 50 towns) in which it was impossible to collect systematic data, the towns were dropped for those analyses in which the data were not complete.

Table 1a, 1b and 1c summarize basic information of township which includes the total population, labor forces, land areas, number of people working outside, number of township enterprises, and the composition of township GDP. On average, the size of a

township is nearly 28 thousands people with about 1.6 mu of cultivated land per capita. About 15% of people work and live outside of the local area. Primary industry (mainly agriculture) consists of 42% of total GDP. We can see that there exist wide differences across regions in our sample (Table 1b). There is also wide difference between rich and poor (Table 1c).

4. THE FISCAL REFORMS—BROADLY DEFINED

Between 2000 and 2004, China's leaders implemented a wide array of reforms—some which were targeted directly at reforming the fiscal system; others that were targeted at other problems, but which were known to have affected the fiscal system. The most heralded of the reforms were the set of measures that sought to dramatically reduce the fees and taxes that farmers were supposed to pay. After a series of pilot programs, the government first eliminated fees that were collected by the village leaders from farmers. Since the fees (*tiliu* and *tongchou*) originally were mainly to support services that were provided by village and town leaders, the government allowed local leaders to replace a part of the revenues that originally came from the fees with a single agricultural tax that was not to exceed 8.5 percent of the localities agricultural gross domestic product. After being implemented for less than a year, top leaders went further and decided to eliminate this tax itself. By policy, local governments were required to reduce the agricultural tax by 3.5 percent in 2005 and then an additional 2.5 percent in 2006 and 2007, so that nationwide farmers were not obligated to pay any agricultural tax after 2007. Many regional governments (especially in the richer provinces; or at least the richer prefectures and counties in certain provinces) decided that they would eliminate the tax in one single act by not requiring farmers to pay any taxes in the 2005.

In order to allow local governments to continue to meet their fiscal obligations and provide an equal (or even higher) level of public service (as well as for a number of other reasons), in addition to the fee and tax reduction acts, national leaders decided to implement a number of other reforms. One of the most high profile initiatives to cut costs by controlling outlays is exemplified by a series of central governments directive (many of which were announced between the years of 2000 and 2004) that targeted personnel reform in towns across China. Aimed at what was thought to be a bloated, inefficient government (which in some provinces was shown to be absorbing more than 75 percent of expenditures in the form of wages), the reforms pushed local leaders to limit the increase in the officials being paid from government budgetary and extrabudgetary sources. Local governments were asked to freeze and or reduce the number of officials on their payroll. They were also encouraged to eliminate or privatize a number of quasi governmental services. The reforms were targeted at both regular civil servants and support staff and officials in public support units (PSUs or *shiye danwei*, that is those employees that are part of service units such as the agricultural extension system, the irrigation management system, etc.). With a lower payroll, it was thought, more funds would be freed up to fund more investment and provide more services.

In addition to controlling expenditures, Tax for Fee reform was also accompanied by an effort to reassign expenditure mandates and provide subsidies for funding certain services. For example, to replace the revenue lost by the fee and tax reduction acts, local

governments were supposed to receive a certain amount of replacement funds (*zhuanyizhifu*). Some of the replacement funds were supposed to supplement the town's own fiscal resources and add to the amount the disposable funds (*kezhipeicaili*), which is essentially the amount of funds under the nominal control of the town government. Another part of the replacement funds were supposed to be passed through to villages to help them pay local leader salaries and administrative expenses.

In addition, upper level governments, concerned that township governments were not giving enough attention to certain key rural services, directly took over the implementation of services that originally were at least partially funded by the township. By far the most important service that was affected by this reform was rural education. Although most townships were continued to be required to support rural education, instead of making the expenditures from the town's local accounts, township fiscal managers were required hand up part of their fiscal resources which were then managed directly by the county (e.g., salaries for teachers began to be paid directly from the county education bureau, not from township accounts).

Although not as well publicized as the effort to recentralize education from the town to the county, after 2000 there has been a more general push by policy makers to strengthen the role of the county more generally (*yixianweizhu*). Thought to be a way of ensuring that certain expenditures are made in the areas that upper level officials deem to be high priority, the county increases its power by making more of its fiscal support for towns in the form of earmarked transfers (*zhuangxiang butie*). Hence, although a township may appear as if its fiscal position is being strengthened by the increased level of funds that is being shifted from county to town, if the transfers are earmarked, in many cases, there is little or no latitude for decision making by township leaders; the earmarked transfers are essentially being allocated as county controlled expenditures that are being channeled through township fiscal accounts.

Finally, there also were a number of other efforts of policy makers that were targeted at increase the control of upper level governments over fiscal resources being used at the township level. Rules over the earning and use of extrabudgetary and self-raised funds were tightened in an effort to put more transaction inside the budgetary process. In addition, although expenditures of capital funds were greatly increased (thus infusing more fiscally allocated funds into the local economy), in almost all cases these capital construction accounts were run through channels that bypassed the local budgetary system altogether as a way of helping to avoid the diversion of funds.

5. THE IMPACT OF THE FISCAL REFORMS

The previous section demonstrated that the fiscal reforms include a large number of measures that jointly are seeking to reform China's fiscal system so it can better meet the service and capital construction needs of China. As the discussion showed, the fiscal reform package goes far beyond the elimination of fees and taxes. The upper level government is trying to control costs by limiting the hiring of civil servants, support staff and employees in PSUs. It is reassigning expenditure mandates. It is not only seeking to transfer more funds into rural areas, especially poor ones, it is doing so in ways that are consciously limiting the decision making power of township leaders over the funds—by

using earmarked transfers; by limiting the scope of extrabudgetary and self-raised funds and by keeping capital spending outside of the budgetary process. In this section we seek to understand the effectiveness of these policies and try to begin to measure how they have affected the fiscal health of the average townships. In the next section, we look at the effect on townships in different provinces and in rich and poor regions. In the final section, we try to begin understand how the fiscal reforms have affected the fiscal health of villages and the quality of services provided to villagers. The last section concludes

Although the impact of fiscal reform on the health of the township fiscal system is difficult to disentangle due to the complexity of China's taxation, revenue sharing, transfer and expenditure systems, it can be seen that overall the fiscal reforms have not been advantageous to the average township. To show in the next section, we first examine the effect on revenues and expenditures. In the next subsections we then look at the effect of specific aspects of the efforts to reduce revenues and expenditures through expenditure reassignments and personnel reforms; new rules on revenue sharing and earmarked transfers; rules to limit the use of extrabudgetary and self-raised funds; and the increased commitment by the central government to improve rural China's infrastructure. The final subsection summarizes the effects in a single unified accounting system.

6. IMPACT ON TOWNSHIP REVENUES AND EXPENDITURES

The differences in the amount of total local (*difang*) taxation revenue collected at the township level (*not* including the share of taxes that were collected and submitted upward through the central government's tax sharing system) might lead one to believe the fiscal reforms have benefited (or at least not hurt) the average township (Table 2). Between 2000 and 2004 the amount of local tax revenue collected by the township government increased from 95 yuan per capita to 129 yuan per capita, a rise of 8 percent per year (about equal to the national level of GDP growth). By far the largest increase came from local business taxes, a category that accounts for almost all the rise in local tax revenues (29 yuan of the 34 yuan increase). The revenues from fees and other revenue sources also rose absolutely (from 18 to 26) and in percentage terms (from 19 to 20 percent). Interestingly, although collection of the local part of the value added tax has risen, its share has fallen. In contrast, the fall in revenues from the elimination of the agricultural tax reduced local revenues by 12 yuan.

Although the picture for local tax revenue collection may appear to be positive there are two reasons to not jump to the conclusion that the township fiscal system has benefited. First, it should be noted that part of the increase has come from the agricultural tax category (Table 2). Collections for the average township actually increased between 2000 and 2004. This, however, is not a sustainable source of revenue. Recall that in 2003, the agricultural tax replaced the extrabudgetary revenues that originally came from villager assessments that accrued to the township—*tongchou*). In other words, this tax was one that the initial reforms allowed local officials to increase as a way to offset the effect of the elimination of villager assessments. Hence, the rise in the agricultural tax (by 6 yuan between 2000 and 2004) was only partially enough to offset the fall in *tongchou* revenues, which fell by more than 25 yuan between 2000 and 2004 (see Table 7). More importantly, although the increase in the agricultural tax helps offset the loss of

tongchou revenues in 2004, by policy this source of revenue will disappear by 2007. Unless they are replaced by other tax collections or transfers (which is the plan—and which is discussed below), there will be a sharp new drop in tax revenue collections during 2005 and 2006.

Second, while the tax revenues collections increased between 2000 and 2004, this does not mean that the revenues that are kept by the township rise. In fact, after the county financial bureau takes its share of local tax revenue collections, the revenues left in the control of the township fiscal system actually decline before and after Tax for Fee by 6 percent (from 70 to 66). In fact, except for the business tax (which increased from 9 to 21 yuan) and the land tax (which rose by 0.50 yuan), all other township revenues actually fell.

As township revenue fell between 2000 and 2004, so did township operating expenditures (Table 3). Despite being a time of rapid growth and a period of time when it is likely that there is a rising demand for government services, expenditures from the township budget fell from 142 to 126, a drop of 11 percent. Although the biggest drop was due to a shift of expenditures in education (which are now being made at the county level), there also were drops in payments of wages of retiree salaries and health expenditures. The rises (except for other miscellaneous expenditures, which are made up of allocations to township infrastructure maintenance, agricultural extension, water control, etc) are largest for administrative management. Tellingly, despite the new emphasis on spending for social welfare, by 2004, the increase, on average, was only 3 yuan per capita.

Hence, when looking at the most fundamental indicators of fiscal health, local revenues and local expenditures, we find the both are deteriorating. Revenues fell by 6 percent; expenditures by 11 percent. On average, without accounting for subsidies and other transfers (discussed below), the average township's expenditures (126) are 90 percent higher (almost double) local revenues (66). This fundamental deficit has not closed significantly between 2000 and 2004. Without additional, it will continue to rise as the agricultural tax reduction policy takes effect.

7. EXPENDITURE REASSIGNMENTS AND PERSONNEL REFORMS

When expenditures are broken down by type of expenditure, at first look it appears as if the government's effort to limit the spending of township fiscal resources on wages has been successful (Table 4). The absolute value of spending on wages, according the official breakdowns fell by 56 yuan from 112 yuan per capita to 66 yuan per capita. The share of total expenditures devoted to wages also fell sharply, from 77 percent to 53 percent.

However, a closer examination reveals that, in fact, wage expenditures have almost surely risen. In fact, all of the absolute fall in the wage expenditures can more than be accounted for by the shift of expenditures on teachers salaries from the township budget to the county budget. This accounts for 62 yuan per capita fall, more than the observed decrease in spending on wages. Hence, from this perspective, non-education related wages must have increased.

The conclusion that expenditure on wages have increased are supported by data on the changes in number of employees on the government payroll (excluding those in education). Clearly, according to our analysis, the government's personnel reforms, a key part of the effort of the central government to restore the township's fiscal health, also have failed to limit expenditures. In fact, the amount of expenditures allocated to pay the government's wage bill has risen for at least two reasons. First and foremost, although the central government has spent a lot of time and effort in trying to cut the number of civil servants and other personnel that are supported by local fiscal resources, in fact, a careful analysis of our data show that in most province there has been no progress made in any of the categories except for the locally controlled public-service providing enterprises (for example, the Rural Credit Cooperatives—RCCs, the Agricultural Inputs Corporations—AICs). As seen in Table 5, there has been a fall in the total number of government employees in the average township when looking at all categories (including public enterprises) and all provinces (column 6). The average number of government personnel fell from 124 (row 6) to 98 (row 13), a fall of more than 25 percent. While this might seem like a fairly substantial cut, the picture is less optimistic when excluding public enterprises (such as the RCCs and AICs—column 6). When doing so, the number of government personnel for the average township only fell by 5 percent, from 82 (row 7) to 78 (row 14).

Moreover, the record of personnel reform turns from success to failure when looking the data by province. In fact, it can be seen the only province in which there have been substantial cuts have been in Jiangsu, a province which was far and away the most oversaffed in 2000 (Table 5, column 1). Hence, even after the personnel reforms were successful in cutting the number of employees—those in civil servant administrative positions (from 46 to 36); those in PSUs (from 73 to 49); and those in public enterprises (from 42 to 23), the number of personnel are still the highest in Jiangsu for civil servants and PSU employees and nearly the highest for public enterprises. When looking at all of the rest of the provinces (column 7), and when excluding public employees (which fell largely due to the collapse of the AICs and other commercially-oriented public enterprises), it can be seen that township personnel actually increased on average, from 67 employees per township in 2000 to 71 in 2004. With a rising number of employees (in everwhere but Jiangsu), there will be more pressure on the expenditure side of the fiscal balance sheet to allocate funds to wages.

In addition to increasing number of employees in all provinces except Jiangsu, the wage system reforms for the central government in the late 1990s and early 2000s paradoxically is working against any (even unsuccessful efforts) to decrease the wage bill. According to national government policy, regardless of a government unit's fiscal condition, when there is a nationally dictated increase in the wage rate, all covered employees (mostly civil servants) must be granted the pay increase. As a consequence, according to our data, between 2000 and 2004 the average wage per civil servant rose by more than 35 percent from about 900 yuan per capita to about 1200 yuan per capita. Wages of the employees of the PSUs also rose, albeit by somewhat less. In conclusion, it is easy to see by the share of total township expenditures have increased. After accounting for the shift of the expenditure burden for education from township to county, the failure of personnel reforms to reduce the number of township employees and the rise

in the nationally-mandated wage rate is forcing increasing more of budgetary expenditures to be allocated to wages and away from more direct services.

8. NEW RULES ON REVENUE SHARING, SUBSIDIES AND EARMARKED TRANSFERS

While it is quite clear that the fiscal reform package has not succeeded in terms of either the township's own revenue or expenditure balances (both have deteriorated) or the ability to limit the share of expenditures that go for wages, the impact of the fiscal reforms on the transfer of resources between township and county is more complicated. To analyze how transfers have changed between 2000 and 2004, we need to understand both the direction and nature of the fiscal flows.

The biggest reason, of course, for the fact that the township's own fiscal revenues are falling while local tax collection is rising is that a larger share is being handed up to the county government under the revenue transfer system (Table 6). According to our data, in 2000 the township handed up 34 yuan per capita (column 3, row 1). In 2000, almost all of the revenue transfer (32 yuan) was handed up as part of the county-township *local tax collection sharing* agreement (row 2). In 2004, the amount transfers from the township to the county continued to rise, increasing almost 3 times to 93 yuan per capita (column 1, row 1). Most of the rise was due to the absolute increase in the amount remitted through the local tax collection sharing system, rising by 40 yuan per capita from 32 to 72 yuan, accounting for 77 percent of remittances in 2004 (72/93). It is for this reason, primarily, that township governments have not seen their town's fiscal revenues rise after the fiscal reforms.

However, between 2000 and 2004 as part of the effort to reassign expenditures, increasing amounts of fiscal revenues have flowed from township to county through another channel. In 2000, only a small amount—2 yuan per capita—flowed through the second system of upward revenue transfer in which the town hands over its share of mandated expenditures (henceforth called, *mandated upward transfers for expenditure sharing*). In 2004, however, mandated upward transfers for expenditure sharing rose by 19 yuan (from 2 to 21). While in theory these fiscal resources are still being spent on services within the township (in this case mostly for the salaries of teachers in local schools), from a fiscal management point of view, the rise in importance of mandated upward transfers for expenditure sharing represents a weakening of the township's fiscal system, making it more reliant on the decisions made by county bureaucrats.

In part of offset the rising upward transfers, after 2000 counties have begun to transfer increasing amounts to townships through a number of different subsidy and tax rebate programs (Table 6, row 3). During the fiscal reform period county financial managers increased transfers to townships from 58 yuan per capita to 84 yuan per capita. The importance (and increasing importance) can be seen by comparing such transfers to the township's own fiscal revenues (Table 2, panel B). In 2000, subsidies and tax rebates were already large; transfers from above were 83 percent of the township's own fiscal revenues (58/70). In 2004, transfers from above exceeded the level of the township's own income (becoming 127 percent of the township's own fiscal revenue—84/66).

Clearly, the increased flow of county to township transfers has increased the amount of fiscal resources in townships.

However, when analyzed more carefully, it can be seen why township fiscal managers complain that even after the rise of county-to-township transfers they believe they still are not as well off as before. The source of their complaints can be seen by examining the decomposition of the county-to-town transfers in 2004. Although the transfers increased, according to our data, 34 yuan (23+11) of the rise was due to two new subsidies, both paid as part of the fiscal deal that was supposed to compensate townships for the revenue shock that they suffered due to the Tax for Fee reforms. Hence, when taking away these two Tax for Fee subsidies, many township fiscal managers point out that, in fact, the transfers have actually fallen (58 yuan per capita to 50 yuan per capita). Hence, not only have the township's own fiscal revenues fallen, the original level of subsidies have fallen.

As a result, even though township officials admit they have received increased transfers, they claim that 34 yuan per capita is not enough. A combination of both Tax for Fee reform induced falling revenues and subsidies and increased expenditure pressures have put them under additional stress. In addition to the 8 yuan decrease in subsidies, township officials point out that after Tax for Fee reform they have lost 10 yuan from the agricultural specialty tax (Table 2, panel B) and their share of the fees paid by villagers (tongchou) have fallen by 20 yuan (which is not included in the budget, since these used to be accounted for as *self-raised funds*). Township leaders also claim that their post-reform expenditure responsibilities have increased. Between 2000 and 2004 village leaders also lost 14 yuan per capita due to the elimination of villager fees (the *tiliu* part). In response, village leaders often come to townships more frequently when they have expenditure needs (e.g., to repair village irrigation works; bridges; etc.). For all of these reasons, it is argued that the Tax for Fee reforms have in fact exacerbated fiscal stress at the township level.

Finally, while it is difficult to quantify with our data, during our time in rural areas, in many of the places that we visited township leaders also complained that over and above the direct fiscal hit their townships have taken from Tax for Fee reform, the nature of the county-to-townships has also changed and in many ways is making the fiscal management of townships almost an impossible job. Previously a large fraction of the transfers were in the form of lump sum allocations over which township leaders had substantial control when spending. Since 2000, an increasingly large share of county-to-township transfers has been in the form of earmarked transfers. While the transfers indeed are being successfully spent on their originally intended targets, township leaders say this has made managing the rest of the township accounts even more difficult. Without access to more untied funds, the annual juggling of fiscal resources that used to allow townships deal with their chronic deficits and meet their numerous unfunded mandates has become nearly impossible. Hence, from the township's point of view, the increasing power of the county in expenditure allocation, while perhaps increasing accountability of certain fiscal resources, is actually exposing the fiscal imbalances that have built up over the years in which townships have responsibility to implement many policies even though they have insufficient resources either from above or from local sources. They claim some of the recent complaints, such as those about deteriorating

rural clinics, declining attention to infrastructure maintenance, inability to make payments to destitute households, etcetera, are direct consequences of the recent tendency for the county to take direct control of fiscal resources and the chronic disequilibrium of the township fiscal system.

9. RULE LIMITING THE COLLECTION AND USE OF EXTRABUDGETARY AND SELF-RAISED FUNDS

The recent effort to prevent the expansion of extrabudgetary and self-raised funds has begun to also take effect at the township level (Table 7). Although through out most of the reform period since the 1980s, the importance of extrabudgetary funds rose (Wong, 2000), it is clear that between 2000 and 2004, at least at the township level, the expansion has been checked and the number of sources of informal funding has declined. In particular, the level of income in the formal extrabudgetary categories fell slightly from 55 yuan per capita to 53 yuan per capita. Those in the self-raised fund categories, mostly due to the elimination of villager fees, fell from 37 yuan per capita to 10 yuan per capita. Because of this, the relative importance of the formal budgetary system has risen. While desirable from the goal of the government to improve township fiscal management, it should be noted that this also has decreased the ability of township leaders to respond to unfunded mandates and other emergency expenditures. For example, in 2000 at the end of the year when townships were trying to balance their fiscal accounts they used 22 yuan per capita from extrabudgetary funds to supplement their in-budget fiscal resources (called *folding finance from extrabudgetary sources*—see Table 6, row 7). In 2004, township officials were only able to supplement their in-budget fiscal resources by 6 yuan per capita from folding finance sources.

10. RURAL INFRASTRUCTURE INVESTMENT THROUGH THE CAPITAL CONSTRUCTION BUDGET

The effort of the national and upper level governments to increase investment into rural China as part of overall strategy to strengthen the rural economy stands in sharp contrast to the undermining of the operating budget. Between 2000 and 2004, by any measure, investment into China's rural townships has increased sharply (Table 8, column 1 and 5). In 2000 only 77 yuan per capita was being run through the township government for building roads, schools, irrigation and other public goods infrastructure projects. By 2004, the amount rose to 217 yuan, nearly tripling during the fiscal reform period.

The data from the 50 randomly selected townships also show that by far most of the increase in the investment has come from upper level governments. In 2000, only 26 percent of infrastructure investment was transferred from above; the township was responsible for 64 percent of investment (Table 8, columns 6 and 7). By 2004, however, the shares were also reversed (columns 2 and 3). The share of upper level governments rose to 53 percent; while that of the township government fell to 37 percent. With the large rise in total investment and the rising share of upper level governments, the absolute rise in investment from above was large, contributing more than 2/3rd of the rise in infrastructure investment (95 yuan per capita of the 140 yuan per capita rise). Although the share of the township government fell, it should be noted that their absolute

contribution to capital construction rose (by 30 yuan per capita from 49 yuan per capita to 80 yuan per capita), despite the increased fiscal pressure on the operating side of their fiscal accountants.

Although total investment in rural infrastructure rose at the township level, it should be noted that the distribution of funding among different types of projects was not even (Table 8, rows 2 to 7). By far, investment into roads and bridges dominated the rise in investment, accounting for more than half of the investment in 2004 (115/217), and absorbing more than 2/3rd of the increase in investment (93/140). While all other types of infrastructure increased modestly (irrigation; drinking water; clinics; etc.), the investment of the township government into school building and equipment fell, reflecting the transfer of responsibility to the county.

Appendix Tables 1-4 provide basic information on the proportion of funding sources of public goods investment (Table 1), composition of investment by type, rich vs poor (Table 2). Level of per capita debt by rich and poor (Table 4). It is not difficult to see that with the increases in the per capita investment level on public goods between 2000 and 2004, more are coming from above (Table 1). At the same time, there is a shift on the proportion of investment between categories (Table 2). In 2000, majority of investment went to school (62%) while more went to road in 2004 (68%). When comparing the level of per capita debt at township level between 2000 and 2004, and also between rich and poor, there was a slight increase in the level on average during the period. However, there was a big contract between rich and poor with poor has a slightly lower level of debt but rich increased by more than 100%. It is obvious that the reform impacts differ between regions.

11. SUMMARY: TAX FOR FEE AND TOWNSHIP FISCAL HEALTH

Table 8 summarizes in a single table some of the important indicators and shows the two stories of the effect of the fiscal reforms on township fiscal health. On the one hand, the fiscal reforms have undermined, or at least not improved the current budgetary condition of townships. Total fiscal revenues (in-budget; extrabudgetary; self raised funds) is down. Although county to township transfers have risen, township to county transfers also have risen. Even with the additional subsidies associated directly with the fiscal reforms, disposable financial resources at the township level in 2004 is exactly the same as in 2000, despite the fact that there are additional fiscal pressures for townships to deal with (aiding villages that have lost fiscal resources); despite the fact that national rules mandate the wage bill must rise; despite the increased decision making authority over many of the expenditures that were taken over by the county. When looking at the falling level of total current expenditures (from 204 to 186), it is clear that the fiscal reforms have had an adverse effect on the health of the current operating budget in the average township in China.

In contrast, total investment into rural infrastructure by the township has increased sharply. The rise in investment is consistent with the recent survey work by Luo et al.

(2005) and the numbers reported by national leaders. Clearly, the effort to increase investment into rural areas during the period of fiscal reform is working (under the assumption that road construction is helpful for villagers, which according to Zhang et al., 2005, appears to be true).

However, there also are other consequences of the rise in investment. Given the tight fiscal conditions, when increases in investment by upper level have been accompanied by demands for matching funds (as they often are), the way that many townships have dealt with these higher demands is through borrowing. Between 2000 and 2004, the debt of townships has continued to rise. On a per capita basis, this means that on average, debt has risen by 23 percent (from 236 to 290). Given that the average population of each township was around 10000 people, this means that in 2004 the average township in China had debts averaging about 3 million yuan. When asked what are the main reasons for the rising debt, more than half of the townships said that unlike the past (when borrowing to cover township enterprise-related expenses and debts was most common), the top reason for borrowing was for investment into infrastructure projects. Clearly, both current and capital fiscal management in China's townships have come under increased stress as the fiscal reforms have proceeded.

12. FISCAL REFORMS AND THEIR UNEQUAL IMPACTS

As might be expected from such a complicated, all-encompassing set of reforms, the changes in China's fiscal policies have had dramatically different effects on townships in different provinces. They also have had different effects on rice and poor townships. In the first subsection of this section we look at the differences among provinces by comparing the summary fiscal tables. In the next subsection, we examine the differences of the effect of fiscal reform on townships in rich and poor areas. In reading this section, it needs to be remembered that unlike when we were looking at the average effects of the fiscal reforms (which were based on 50 observations), each of the provincial sets of numbers—albeit randomly selected—are only based on 10 observations. Hence, it is possible that individual townships—either due to measurement error or due to a special set of circumstances—may influence the results.

12.1. By Province Differences

Operating Budget Impacts. With the exception of Shaanxi Province's townships, the adverse effect of the fiscal reforms on the operating budget can be seen on the townships of all of the provinces (Table 10). Between 2000 and 2004, the level of total income of all provinces fell (row 1). In provinces with townships that have disparate fiscal revenues per capita in 2000 as Jiangsu (321) and Sichuan (126), after the fiscal reform package was implemented, the revenue per capita fell.

In contrast, total fiscal revenues only increased in one province, Shaanxi Province. For some reason, total fiscal revenues per capita nearly doubled, rising from 124 yuan per capita to 241 yuan per capita. Unfortunately, the dramatic we are not sure if this rise is actually reflecting what is happening across the townships of the entire province. It is possible, of course, that as a poor, northwestern province, the fiscal reforms have been beneficial to township fiscal management or that Shaanxi Province for some reason

decided to improve the fiscal health of the province's townships. However, it is also possible that the changes are due to some change in fiscal accounting technique (although the simultaneous rise of subsidies, extrabudgetary income and self-raised funds may argue against this explanation). It is also possible that we do not have a representative sample (and although our numbers are showing that in our sample of 10 townships there has been a positive effect of the fiscal reforms, this is not representative of Shaanxi as a whole). Because of the uncertainty about these results (they are so different, we are hesitant to claim that they are in fact representative of the situation across most of Shaanxi), in the next subsection (the analysis of the impact of the fiscal reforms on rich and poor townships), we do not include Shaanxi (the influence of Shaanxi on the poor township effects is large, since townships from Shaanxi account for 6 of the 10 poorest townships). We have not eliminated the Shaanxi townships from the analysis as a whole, however, since sensitivity analysis demonstrates that the overall results are fundamentally the same when the 10 Shaanxi townships are included or excluded (that is, we calculated Tables 2 to 9 with and without Shaanxi and almost all of the basic results were unchanged).

The negative effects on the operating budgets of each province's townships can also be seen when examining total current expenditures (row 11). Despite the need for more services, expenditures per capita fell between 2000 and 2004 in Sichuan, Jilin and Hebei. On average, in these three provinces, expenditures per capita fall by 27 percent. Either due to falling total fiscal revenue per capita, and, in the case of Jilin, falling subsidies, townships were unable to spend as much on each of its residents in 2004 compared to 2000. Hence, to the extent that expenditures are providing services for farmers, the fall means that at least in this dimension that there has been a negative effect on the rural population.

Unlike Sichuan, Jilin and Hebei, the townships in Jiangsu and Shaanxi experienced rising (or at least not falling) expenditures per capita. The rise of township expenditure per capita is not surprising in Shaanxi, given the rising income (and rising –to-town subsidies). The case of Jiangsu, while a bit more complicated, also is clear when examining our data. Although total fiscal revenue per capita fell slightly in Jiangsu, townships were able to maintain expenditures in part due to sharply rising county-to-town transfers (rising from 60 to 102).

Capital Budget Impacts. The most consistent result across provinces is the positive effect that the fiscal reforms have had on township-level infrastructure investment (Table 10, row 14). In all five provinces the investment per capita in rural infrastructure rose. In fact, when looking at all of our townships, in less than 5 of them has investment per capita in rural infrastructure fallen.

Although investment per capita has risen in the average township in all provinces, the level of investment in 2004 and rate of rise between 2000 and 204 differs dramatically. For example, the growth rate of investment per capita increases by less than 50 percent in Jiangsu and Sichuan; in contrast, it rises by 250 to 650 percent in Shaanxi, Hebei and Jilin. By 2004, differences in the beginning level of infrastructure per capita (in 2000, highest for Jiangsu—184—and lowest for Hebei—14) and growth rates have made the 2004 levels of investment per capita dramatically different. Whereas Jiangsu, Shaanxi

and Jilin all exceeded 275 yuan per capita, investment per capita levels in Sichuan and Hebei were less than 90, a gap of three to six times.

When examining investment by provinces, we see that the rising township debt problem is mostly one of Jiangsu province (Table 10, row 15). The debt per capita actually fell in all provinces except Jiangsu. Although not shown, our data show that the reason that investment can rise so much in Sichuan, Jilin and Hebei without forcing township officials take on more debt is that the percent of investment from upper level government sources average 62 percent. In Jiangsu, only about 50 percent investment in 2004 was financed through allocations made by upper level governments. With the high matching funds requirements, townships in Jiangsu had to borrow to meet their investment obligations. Shaanxi, again, was the exception. Apparently using their increased level of fiscal resources, townships finance 58 percent of investment per capita into rural infrastructure in 2004; upper level governments only financed 36 percent, the lowest among any of the provinces.

12.2. By Rich and Poor

Despite the negative consequences that the fiscal reforms have had on the average township's fiscal system in China between 2000 and 2004, the evidence is clear that the policies adopted by the leaders have been much friendlier to poor townships than richer ones (Table 11). Regardless if we include Shaanxi (not shown) or drop Shaanxi (as we do in this subsection), when ranking China's township by per capita income and looking at the poorest 10 townships and richest 10 townships, the fiscal reforms can be shown to have improved the fiscal balance sheet in almost all ways (except for extrabudgetary categories—rows 9 and 10) in poor townships and have adversely affect the fiscal balance sheets in the richest townships.

Before proceeding with the analysis, a word of caution is needed. Notwithstanding the differences in effects of fiscal reform on the poorest and richest townships, the reader needs to be reminded that even after these changes, the richest townships have nearly twice as high or higher revenues per capita and expenditures per capita. The poorest townships only exceed the richest townships in investment per capita, but it should also be remembered that this is most likely because much of the infrastructure is already in place and when looking at differences in the quality and quantity of roads, bridges, schools, irrigation, drinking water and clinics, rich townships dominate by a great degree.

The differences in the impact of the fiscal reforms in poor and rich townships appear in nearly every revenue or fiscal resource category (Table 11). Whereas total fiscal revenues rise between 2000 and 2004 in the poorest townships, they fall in the richest (row 1). The beneficial policies also go beyond the revenue effects. Because county to town transfers rise much faster for poorer townships (row 6) and because town to county transfer fall slightly for poorer townships and rise sharply for richer townships (row 4), disposable fiscal resources actually increase for poorer townships and fall for richer ones (row 7).

In part due to the differences in availability of resources, total expenditures also vary between poor and rich townships (row 11). Between 2000 and 2004, expenditure per capita in poorer townships rose from 156 to 180, an increase of 20 percent. During the

same period, expenditures per capita in richer areas fell by 13 percent. As a consequence, although richer townships still spend much more in per capita terms than poorer ones, the gap fell from 119 percent in 2000 to 66 percent in 2004.

Poorer townships also increased their investment per capita increasing more than richer townships (row 14). In 2000, poorer townships only invested 41 yuan per capita into public goods infrastructure, much lower than richer townships (166 yuan per capita). By 2004, however, investment per capita rose to 243 yuan per capita in poorer townships, more than 1/3rd higher than in richer townships (181 yuan per capita). Moreover in part because in making these increases in investment, townships in poorer areas were able to use funds from upper level government (63 percent in poorer areas and 36 percent in richer areas—not shown in Table 10), the debt in poorer areas actually fell (by 42 percent) while debt in the richer townships rose sharply (more than doubling).

Hence, in many ways—both in terms of measures from the current operating budget and in terms of measures from the capital budget—the fiscal reforms have been beneficial for poorer townships. This finding differs sharply from the conclusion about the average township and about the richest townships. Although in nonpoor townships investment per capita into public goods infrastructure has risen, there has been a negative impact on the current operating budget and on the level of debt.

13. REFORMING TOWNSHIP FISCAL MANAGEMENT AND CHINA'S VILLAGES

In assessing the impact of the township fiscal reform on villages we face two problems that limit the richness of our study. First, since the reforms that we are studying primarily affect the fiscal system and linkages between the fiscal system and the outcomes that we are most interested in—for example, rural incomes and productivity—are complicated and almost certainly involve a substantial lag (because a good fiscal system affect rural services and investments which will mostly affect income and productivity over a longer time frame), the reforms are so recent that there really is no way to begin to measure the fiscal reform—farmer welfare relationship directly. Instead, we will limit our analysis to looking at two dimensions of the effect of township fiscal reforms on the village economy: the effect of the township fiscal reforms on village fiscal health; and the effect of the township fiscal reform on farmer satisfaction with the types of investment projects and the quality of the investment projects that have been implemented since the reforms. In doing such an analysis, a second caveat needs to be stated, which also arises due to the complicated nature of the fiscal reforms. In the analysis we are mainly looking at correlations between the way townships have reformed their fiscal system and measures of village fiscal health and farmer satisfaction. In all likelihood when we look at the relationship, there is a chance that there will be omitted variables that are correlated with both the way townships have implemented their fiscal reforms and the outcome variable of interest. Hence, it will be difficult to state with certainty the strength of causality; the careful reader should look on our analysis as demonstrating the correlations among the variables of interest. However, in defense of the analysis, since we are looking at how village fiscal health changes over time as township fiscal health changes over time, some of the omitted variables may be controlled for.

14. VILLAGE FISCAL HEALTH AND FISCAL REFORM

In examining the effect of the fiscal reforms on village fiscal health we examine the effect of six measures of fiscal reform (or its effect on township fiscal health) on three measures of village fiscal health. The six township variables can be broken into three groups. The first two variables are measures of changing township fiscal health, measured as: measure 1—change (in percentage terms) in township expenditure per capita between 2000 and 2004; and measure 2—change in the gap between disposable financial resource per capita and per capita budgetary expenditures between 2004 and 2000. The next two variables are measures of county to town fiscal support policies, measured as: measure 3—change in the share of county to town transfers as a share of disposable fiscal resources between 2000 and 2004; and measure 4—change in the share of town to county transfers of total tax revenue collections between 2000 and 2004. The final two variables are measure of the support upper level policy makers give to townships in form of investment transfers for public goods infrastructure construction, measure as: measure 5—change in the share of total investment from upper level government transfers between 2000 and 2004; and measure 6—change in absolute amount of upper level government transfer for public investment between 2000 and 2004.

In the analysis the effect of changes in the six township fiscal reform measures are examined on three measures of village fiscal health. The three measures are: dependent variable 1—changes in village fiscal revenue per capita; dependent variable 2—changes in village fiscal expenditure per capita; and dependent variable 3—changes in investment per capita in rural infrastructure at the village level. To compare the effects, we rank each of the six township fiscal reform measures and divide the measure into quartiles (so we can, for example, isolate the townships in which expenditure per capita fell the most and those townships in which expenditure per capita rose the most. Using the two extreme quartiles of the township fiscal reform measures, we then examine how the three village dependent variables behave. Table 12 summarizes the results.

When looking at the relationship between changes in the measures of township fiscal health (measures 1 and 2—panels A and B), we see that there is some evidence that when township fiscal health is improving (that is if expenditure per capita is rising or if the township's fiscal resource to expenditure balance is improving), village revenue per capita tend to rise and village expenditure per capita does not deteriorate as much. In other ways, there appears to be some correlation between township fiscal health in terms of the operating budget and village fiscal health in terms of the operating budget. Interestingly, there is no real correlation between the township measures of fiscal health in terms of the operating budget and public investment at the village level.

While we find some evidence (even if it is weak) between the township's fiscal health and village fiscal health, there is almost no discernible relationship between the fiscal relationship between county and township and the village (Table 12, panels C and D). In other words, when the county provides (demands) more or less transfers to (from) the sample townships, there is no pattern of shift in any of the village measures—neither revenues, expenditures or capital investment. If so, this means that at least given our analysis, one of the county's main mechanism of control over townships seem to have little indirect effect on the village's fiscal condition.

Similarly, another measure of county control—investment transfers—also has little effect on the health of the village operating budget (Table 12, panels E and F). This is seen by noting the absence of a pattern between the investment by upper level government (in either percentage terms or absolute amount) and village revenue per capita or village expenditure per capita. The absence of the relationship most likely means that capital accounts in China are managed quite separately than the operating budget.

The separation between the capital and operating budgets is supported by the fact that there is a discernible relationship between investment from above and investment in the village. In villages where the upper level governments invest more, there is more investment in the villages. When the upper level governments play a lesser role, there is less investment. Hence, this seems to be the only way in which upper level governments can stimulate investment; to get more investment, they need to invest. There is no indirect link through improving the township's fiscal health.

15. FARMER SATISFACTION AND THE FISCAL REFORMS

In the farmer satisfaction program we use the information from the household survey part of our survey effort in the 50 townships and 100 villages. In the sample villages we selected randomly 1200 households (12 households per village) and asked them a series of questions about the infrastructure in their village and the result of the infrastructure projects in the village. From their answers we were able to construct a measure of the satisfaction of the average farmer in each village in the infrastructure of the village, including the village's roads, irrigation system, school, clinic and drinking water.

To measure the effect of the fiscal reforms on farmer satisfaction we included two variables: first, a variable measuring the total level of investment into the village; and second, a variable measuring the share of investment that is from the upper level government. In other work (see Liu et al., 2005) it is shown (using the same data set) that when the share of an investment project comes more from above, the control that a village has over the project selection, design, implementation and investment is lower (Table 13). Therefore our hypothesis is other things equal (that is, given the level of the investment from above, which should positively affect satisfaction), when a larger share of the investment comes from above (and the village's stakeholding in the project is less), farmer satisfaction will be lower.

The results of the regression, in fact, confirm the hypothesis that when there is less stakeholding by the village (or when more of the investment's financing comes from above and there is less participation by the village in the project selection, design and implementation), farmer satisfaction falls. In fact, the result is robust whether we control for: a.) the type of project (whether the village had a road, school, irrigation, drinking water or clinic project); b.) the fact whether our respondents were male or female; and c.) if we included a locational dummy (holding constant the effect of the county). In all of the results, we find greater levels of investment (regardless of the source leader to improvements in the village infrastructure and greater farmer satisfaction). Holding this effect constant, however, we find that the sign on the variable measuring the share of the investment that comes from above is consistently negative and significant. This is evidence that China's increasingly top to down approach and the way that it is trying to

recentralize control over fiscal flows does not necessarily lead to the greatest degree of satisfaction.

16. SUMMARY AND CONCLUSIONS

In this paper we set out to accomplish three objectives. First, we wanted to track and describe the way the fiscal reforms have been implemented in China's townships. Second, we have tried to identify the effect that the fiscal reforms have had on the fiscal health of the township. This objective was pursued in three contexts: the effect on the average township; the effect on townships in different provinces; and the effect on townships in poor and rich townships. Finally, we sought to assess the impact that the fiscal reforms had on village fiscal health and farmer satisfaction.

Although farmers certainly have expressed their support for tax and fee reduction through a variety of media, our results show that the fiscal reforms are far more complicated and complex than tax reduction policies. They include a large set of policies that have sought to reassign expenditures, realign responsibilities (for control over resources that flow from county to town and town to county), reduce the importance of extrabudgetary and self raised funds, and increase investment into the public goods infrastructure in rural areas. When assessing the broad impact of these policies on township fiscal health, we find the average township has not fared well. According to most measures of fiscal health, revenues and expenditures are down. Although county to town transfers have risen, the targeted transfers to offset the decline due to the tax and fee reduction policies do not nearly cover the losses of fiscal resources in the system as a whole. In addition, many policies are putting increasing control in the hands of the county financial office—through changes such as increasing requirement to hand up town to county transfers and expenditure reassignments (even though the fiscal resources come out of the township's budget). Hence, overall the fiscal condition of township's operating budget has clearly deteriorated between 2000 and 2004. In short, when counting all of the achievements of the fiscal reforms, improving township fiscal solvency and management is not one of them.

The bright side of the fiscal reforms has come in the area of capital budget management and flows of fiscal resources into new infrastructure investment. Between 2000 and 2004 there has been a veritable explosion of investment into the rural economy, mostly in roads, but also into irrigation, drinking water and to a lesser degree into clinics. The investments have risen largely due to the rising allocation by upper level governments.

While we show that the rising investment from any source increases farmer satisfaction, there are some concerns with the new effort to improve rural infrastructure. First, in many places (and especially in Jiangsu and other richer townships) as investments from above have risen requirements for matching funds apparently have led to an increase in township debt. Second, the increasing reliance investment from above also has a drawback. While any investment from any source is shown to increase the satisfaction of farmers, *ceteris paribus*, when the investments come from above, they appear to reduce farmer satisfaction. Apparently, when villages are less involved with the project selection, design and implementation, the projects leave farmers less satisfied.

While there is reason to be concerned about the overall effect of the fiscal reforms, we do find that they have had less of an adverse effect on poor areas. In fact, whereas there is evidence that the fiscal reforms have hurt projects in the average township, in most provinces and in richer townships, the opposite results are found for poor townships. In the poorest townships in our sample, between 2000 and 2004, revenues and expenditures have risen, public investment has outpaced all other groups of villages and the village's debt has not risen. Hence, in terms of their effect on the poorest villages, the fiscal reforms can not be blamed and they appear to be beneficial.

So what should China do to offset the adverse effects and make the fiscal reforms have a more productive effect on the average township in China? Most fundamentally, China needs to develop a new set of fiscal reforms that are based on principals of sound public finance. The basic tenants of clear assignment of expenditure responsibility need clarification. Each level of government should be given sole responsibility over a circumscribed set of activities. Once this is accomplished, a sufficient set of fiscal resources need to be assigned to the level of government. In other words, revenues (whether collected locally or assigned through transfers) should be given on a regular basis and with the conditions (if any) clearly specified. The differences in implementation conditions and changing rules and responsibilities have diminished the ability of townships to conduct good fiscal management even when resources are available.

A more fundamental set of changes may also be needed in order to overcome the basic contradiction that are keeping upper level leaders from giving local leaders more freedom in conducting their fiscal management. Upper level leaders are afraid lower level leaders will not manage their fiscal resources responsibly. As a result they have sought to recentralize fiscal management. However, according to our results, it is clear that, everything else equal, when the management of fiscal flows is too far removed from the local reality, the outcome is not ideal. Before local leaders can be trusted, however, it seems that changes to local governance institutions are needed (by promoting elections or the development of some other mechanism to allow checks on the behavior of local leaders). If this can be done, for many functions, it may improve the productivity of public finance management if responsibilities and the decision making power over public finance is devolved to local governments. With improved information and better incentives to make the financial resources more effective, it is hoped that China can develop a more responsive and sustainable system of fiscal management.

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Table 1a. Basic characteristics of township – all sample, 2004

Items	Unit	Mean
Total population	Thousand	27.9
Annual net income per capita	Yuan	3083
Total area of cultivated land	Thousand mu	44.6
Total labor force	Thousand	12.2
No. of people working and living outside the town	Number	4096
Number of enterprises in the township (employ 8 people and above)	Number	111
Township Gross Domestic Product	Million yuan	192.6
Percentage share of primary industry	%	42
Percentage share of secondary industry	%	34
Percentage share of tertiary industry	%	25

Table 1b. Basic characteristics of township, by province, 2004

Items	Unit	Jiangsu	Sichua	Shaanx	Jilin	Hebei
			n	i		
Total population	Thousand	42.8	27.1	13.0	22.9	33.5
Annual net income per capita	Yuan	4529	2649	1732	3339	3165
Total area of cultivated land	Thousand mu	66.9	14.1	28.2	53.2	60.4
Total labor force	Thousand	20.6	11.4	7.7	5.8	15.7
No. of people working and living outside the town	Number	8753	5705	1770	1651	1962
Number of enterprises in the township (employ 8 people and above)	Number	103	19	23	123	287
Township Gross Domestic Product	Million yuan	413.6	138.4	45.8	122.0	319.1
Percentage share of primary industry	%	33	39	44	52	44
Percentage share of secondary industry	%	40	31	41	20	39
Percentage share of tertiary industry	%	27	29	15	29	17

Table 1c. Basic characteristics of township, by rich and poor, 2004

Items	Unit	Poorest	Richest
Total population	Thousand	18.8	42.3
Annual net income per capita	Yuan	1963	4976
Total area of cultivated land	Thousand mu	41.5	66.9
Total labor force	Thousand	9	21.9
No. of people working and living outside the town	Number	1948	5266
Number of enterprises in the township (employ 8 people and above)	Number	13	214
Township Gross Domestic Product	Million yuan	66.5	523.4
Percentage share of primary industry	%	49	29
Percentage share of secondary industry	%	34	42
Percentage share of tertiary industry	%	20	29

Table 2. Local Tax Collections and Township Budgetary Revenues per Capita in China, 2000 and 2004.

Panel A. Tax Collections at Local Level (does not include share that is remitted to national government)				
ITEM	2004 ^a		2000 ^b	
	Mean	% of total income	Mean	% of total income
Local Taxation Income	129	100	95	100
Value-added tax	20	16	18	19
Business Tax	42	33	13	13
Income Tax for Enterprises	5	4	6	6
Individual Income Tax	7	5	7	7
Agriculture Tax	26	20	19	21
Agricultural Specialty Product Tax	0	0	13	14
Occupied Land Tax	3	2	1	1
Other Income ^c	26	20	18	20

Panel B. Township Budgetary Revenue Per Capita				
ITEM	2004 ^d		2000 ^e	
	Mean	% of total income	Mean	% of total income
Town Taxation Income	66	100	70	100
Value-added tax	10	16	13	19
Business Tax	21	32	9	12
Income Tax for Enterprises	3	4	4	5
Individual Income Tax	3	5	5	7
Agriculture Tax	14	21	15	21
Agricultural Specialty Product Tax	0	0	10	14
Occupied Land Tax	1	1	0	1
Other Income ^f	14	21	14	20

Notes:

a: The total sample is 50, only 44 samples have complete information and 48 samples have Local Taxation Income data, and the mean is 3628.

b: The total sample is 50, only 43 samples have complete information and 46 samples have Local Taxation Income data, and the mean is 2228.

- c: Other Income includes ear-marked income, city reconstruction tax, contract tax, etc.
- d: The total sample is 50, only 47 samples have complete information and 49 samples have Local Taxation Income data, and the mean is 71.
- e: The total sample is 50, only 44 samples have complete information and 47 samples have Local Taxation Income data, and the mean is 68.
- f: Other Income includes ear-marked income, city reconstruction tax, contract tax, etc.

Table 3. Township Budgetary Expenditure per Capita in China, 2000 and 2004

ITEM	2004		2000 ^a	
	Mean (yuan)	% of total expenditur e	Mean (yuan)	% of total expenditur e
Total Expenditure	126	100	142	100
Education expenditures ^b	12	12	74	44
Sanitation Expenditure ^c	5	4	7	5
Wage for retied worker	6	5	12	10
Social welfare ^d	9	6	7	5
Expenditure for administration management	38	33	24	22
Other expenditure ^e	56	40	17	15

notes:

- a. The total sample is 50, only 47 samples have complete information, 1 missing data in Shaanxi, 2 are missing from Hebei.
- b. Includes expenditure for vocational education, expenditure for middle school, expenditure for primary school, expenditure for preschool education, other education expenditure;
- c. includes expenditure for Sanitation, medical treatment expenditure for administration and public sectors;
- d. includes Expenditure for social relieves, Subsidy expenditure for social security.
- e. Other expenditure includes Basic construction expenditure, Enterprise reform capital, Science and technology three item expenditure, Expenditure for supporting agricultural production, Expenditure for rural development, Expenditures for agriculture, forest, irrigation and weather departments, Expenditure for industry and communication department, Expenditure for city maintenance, Expenditure for culture, gymnasium , broadcasting, Expenditure on public science, Expenditure for taxation department, Set-aside expenditure, etc. In 2004, Expenditures for agriculture, forest, irrigation and weather departments, Expenditure for culture, gymnasium , broadcasting, Expenditure for taxation department, and other expenditure are big part of the "other expenditure", they add up to 33.6% of total expenditure, and in 2000, they are 9.88%.

Table 4. Township Budgetary Expenditure per Capita in China by Function of Expenditure, 2000 and 2004.

ITEM	2004 ^a		2000 ^b	
	Mean (yuan)	% of total expenditure	Mean (yuan)	% of total expenditure
Total Expenditure	126	100	141	100
Expenditures on Salaries and Wages	66	53	112	77
Office Expense Expenditures	24	21	19	13
Special expenditure	12	10	6	4
Other ^c	23	16	3	5

a: The total sample is 50, only 49 samples have complete information.

b: The total sample is 50, only 45 samples have complete information.

c: Other includes subsidy for individual and family, maintain, etc.

Table 5. Average Number of Personnel in Government Positions and Government-run Enterprises in China's Townships, 2000 and 2004

	JS	SC	SX	JL	HB	Total, all five provinces	Total, four provinces excl. JS
2000							
Civil servants (in administrative slots)	46	26	21	24	26	28	24all up...
Employees in public service units	73	27	24	35	24	37	28
Government representative offices	20	19	10	9	18	15	14
Other partially supported government civil servants	0	1	6	0	0	1	2
Public service-providing enterprises	42	30	28	102	10	42	43
All	180	103	89	171	78	124	110
All excluding enterprises	138	73	60	68	68	82	67
2004							
Civil servants (in administrative slots)	36	26	22	23	24	26	24
Employees in public service units	49	23	27	41	28	34	30
Government representative offices	22	21	9	15	15	16	15
Other partially supported government civil servants	0	2	8	1	0	2	3
Public service-providing enterprises	23	19	24	27	6	20	19
All	130	91	91	107	72	98	90
All excluding enterprises	107	72	67	80	66	78	71

Note: JS= Jiangsu, SC= Sichuan, SX= Shaanxi, JL= Jilin and HB= Hebei.

Table 6. County-to- Township and Township-to-County Transfers in China's Fiscal System, 2000 and 2004

ITEM	Unit: Yuan	
	2004 ^a	2000 ^b
<i>Township-to-County Transfers</i>	93	34
Local Tax Collection Sharing	72	32
Mandated Township-to-County Transfers for Expenditure Sharing	21	2
<i>County-to-Township Transfers</i>	84	58
Subsidy to Compensate for Fee Elimination Reform	23	0
Subsidy to Compensate for Loss of Agricultural Tax Revenue	11	0
Supplemental Funds Shifted from Extrabudgetary Funds	6	22
Township Disposable Fiscal Resources^c	119	119

a: The total sample is 50, only 44 samples have complete information.

b: The total sample is 50, only 43 samples have complete information.

c: Disposable fiscal resources equal to Local Taxation Income minus township-to-county transfers,
plus county-to-township transfers.

Table 7. Township Extrabudgetary Fund Revenues and Revenues from Self-raised Funds in China, 2000 and 2004

ITEM	2004		2000 ^a	
	Mean (yuan)	% of total income	Mean (yuan)	% of total income
Total extra-budgetary Income	53		55	
Total Self-raised income	10	100	37	100
Tongchou (Township Share of Villager Assessments)	0	3	20	53
Tiliu (Village Share of Villager Assessments)	0	0	14	38
Other ^b	10	97	4	10

a: The total sample is 50, only 48 samples have complete information, 2 missing data.

b: Other includes donation, family planning, etc.

Table 8. Township Investment into Public Goods Construction in China, 2000 and 2004.

ITEM	2004		2000 ^a	
	Mean	% of total	Mean	% of total
Total	217	100	77	100
Road & bridge	115	53	22	29
Schools	19	9	26	34
Irrigation	31	14	11	14
Drinking water	17	8	8	10
Clinic	4	2	1	1
Others ^b	31	14	9	12

a: The total sample is 50, only 48 samples have complete information, 1 missing data in Shaanxi, 1 in Hebei.

b: Others include electricity, office building, green for grain, telephone, cable television, broadcast and so on.

Table 9. Summary of Township Fiscal Health, Including Summary of Operating Budget, Capital Budget and Debts in China, 2000 and 2004

Unit: Yuan/capita

ITEM	2004	2000
1 Total Township Fiscal Revenues ^a	182	211
2 Local Taxation revenue	129	95
3		
Town Taxation revenue	66	70
4 Township-to-county transfers	93	34
5 Mandated Township-to-County Transfers for Expenditure Sharing	21	2
6 County-to-township transfers	84	58
7 Township disposable fiscal resources ^b	119	119
8 Supplementary funds shifted from extrabudgetary funds	6	22
9 Total extra-budgetary revenue	53	55
10 Total Self-raised funds	10	37
11 Total Current Expenditure ^c	186	204
12 Total Budgetary Expenditure	126	142
13 Total Extra-budgetary Expenditure	59	62
14 Total Public investment expenditure	217	77
15 Total township debts	290	236

Notes:

a. Row 1 = 7+9+10, or Total Township Fiscal Revenues is equal to Disposable Financial Resources plus Extrabudgetary Revenues plus Revenues from Self-raised Funds

b. Row 7 = 1-4+6, or Disposable Financial Resources is equal to Total Township Fiscal Revenues minus Town-to-County Transfers plus County-to-Town Transfers.

c. Row 11 = 12+13, or Total Current Operating Expenditures is equal to Total Budgetary Expenditures plus Extrabudgetary Expenditures.

Table 10. Summary of Township Fiscal Health, Including Summary of Operating Budget, Capital Budget and Debts by province in China, 2000 and 2004

Unit: Yuan/capita

ITEM	2004					2000				
	JS	SC	SX	JL	HB	JS	SC	SX	JL	HB
1 Total Township Fiscal Revenues ^d	317	71	241	141	111	321	126	124	258	130
2 Local Taxation revenue	210	75	200	44	107	132	68	131	68	51
3 Town Taxation revenue	116	40	22	37	57	113	47	79	67	11
4 Township-to-county transfers	161	54	109	12	87	23	32	69	8	54
5 Mandated Township-to-County Transfers for Expenditure Sharing	16	11	0	5	51	0	0	0	0	12
6 County-to-township transfers	102	45	64	105	82	60	44	41	124	44
7 Township disposable fiscal resources ^b	151	66	157	137	102	169	81	103	183	40
8 Supplementary funds shifted from extrabudgetary funds	12	5	20	0	0	38	1	9	0	38
9 Total extra-budgetary revenue	150	2	35	4	10	140	17	14	0	16
10 Total Self-raised funds	15	3	50	0	0	12	29	7	75	74
11 Total Current Expenditure ^c	336	78	201	137	107	329	123	131	169	148
12 Total Budgetary Expenditure	171	72	165	133	94	202	82	115	169	109
13 Total Extra-budgetary Expenditure	166	6	35	4	13	127	41	15	0	38
14 Total Public investment expenditure	276	88	350	323	48	184	68	61	43	14
15 Total township debts	457	343	231	60	213	192	403	237	64	227

Notes:

a. Row 1 = 7+9+10, or Total Township Fiscal Revenues is equal to Disposable Financial Resources plus Extrabudgetary Revenues plus Revenues from Self-raised Funds

b. Row 7 = 1-4+6, or Disposable Financial Resources is equal to Total Township Fiscal Revenues minus Town-to-County Transfers plus County-to-Town Transfers.

c. Row 11 = 12+13, or Total Current Operating Expenditures is equal to Total Budgetary Expenditures plus Extrabudgetary Expenditures.

d. JS= Jiangsu, SC= Sichuan, SX= Shaanxi, JL= Jilin and HB= Hebei.

Table 11. Summary of Township Fiscal Health, Including Summary of Operating Budget, Capital Budget and Debts by RICH and POOR in China, 2000 and 2004

ITEM	Unit: Yuan/capita			
	Poorest		Richest	
	2004	2000	2004	2000
1 Total Township Fiscal Revenues ^a	116	113	298	361
2 Local Taxation revenue	54	56	232	163
3				
Town Taxation revenue	26	32	123	125
4 Township-to-county transfers	45	46	169	42
5 Mandated Township-to-County Transfers for Expenditure Sharing	20	12	29	0
6 County-to-township transfers	103	56	93	70
7 Township disposable fiscal resources ^b	111	66	157	191
8 Supplementary funds shifted from extrabudgetary funds	0	13	10	42
9 Total extra-budgetary revenue	4	6	137	129
10 Total Self-raised funds	1	41	4	41
11 Total Current Expenditure ^c	180	156	299	342
12 Total Budgetary Expenditure	119	88	169	223
13 Total Extra-budgetary Expenditure	62	67	130	119
14 Total Public investment expenditure	175	47	181	166
15 Total township debts	106	185	430	206

Notes:

a. Row 1 = 7+9+10, or Total Township Fiscal Revenues is equal to Disposable Financial Resources plus Extrabudgetary Revenues plus Revenues from Self-raised Funds

b. Row 7 = 1-4+6, or Disposable Financial Resources is equal to Total Township Fiscal Revenues minus Town-to-County Transfers plus County-to-Town Transfers.

c. Row 11 = 12+13, or Total Current Operating Expenditures is equal to Total Budgetary Expenditures plus Extrabudgetary Expenditures.

Table 12. Correlations between Measures of Township Fiscal Reform and Village Fiscal Health in China, 2000 and 2004

			Unit: Yuan	
Measures	Quartile	Village fiscal indicators	2004	2000
Panel A: Impact of Percentage Change in Expenditure per Capita between 2000 and 2004 (ranked from lowest to highest and grouped into quartiles)				
Measure 1	Lowest Quartile	Village revenue per capita	112	120
	(range of variable:	Village expenditure per capita	51	63
	-76 to -42)	Village investment per capita	131	36
	Highest Quartile	Village revenue per capita	72	40
	(range of variable:	Village expenditure per capita	34	34
	32 to 190)	Village investment per capita	325	52
Panel B: Impact of percentage change in the gap between disposable financial resource per capita and per capita budgetary expenditures between 2000 and 2004 (ranked from lowest to highest and grouped into quartiles)				
Measure 2	Lowest Quartile	Village revenue per capita	110	115
	(range of variable:	Village expenditure per capita	45	56
	-177 to -3)	Village investment per capita	334	33
	Highest Quartile	Village revenue per capita	126	87
	(range of variable:	Village expenditure per capita	56	58
	33 to 233)	Village investment per capita	268	25
Panel C: Impact of percentage change in the share of county to town transfers as a share of disposable fiscal resources between 2000 and 2004 (ranked from lowest to highest and grouped into quartiles)				
Measure 3	Lowest Quartile	Village revenue per capita	121	97
	(range of variable:	Village expenditure per capita	39	45
	-70 to -8)	Village investment per capita	136	40
	Highest Quartile	Village revenue per capita	53	85
	(range of variable:	Village expenditure per capita	35	45
	77 to 165)	Village investment per capita	153	92
Panel D: Impact of percentage change in the share of town to county transfers of total tax revenue collections between 2000 and 2004 (ranked from lowest to highest and grouped into quartiles)				
Measure 4	Lowest Quartile	Village revenue per capita	74	75
	(range of variable:	Village expenditure per capita	26	39
	-87 to -6)	Village investment per capita	176	42
	Highest Quartile	Village revenue per capita	63	87
	(range of variable:	Village expenditure per capita	43	51
	82to 338)	Village investment per capita	216	71
Panel E: Impact of percentage change in the share of total investment from upper level government transfers between 2000 and 2004 (ranked from lowest to highest and grouped into quartiles)				
Measure 5	Lowest Quartile	Village revenue per capita	75	43
	(range of variable:	Village expenditure per capita	24	30
	-57 to 0)	Village investment per capita	70	71
	Highest Quartile	Village revenue per capita	90	109
	(range of variable:	Village expenditure per capita	28	37
	74 to 100)	Village investment per capita	115	15
Impact of percentage change in absolute amount of upper level government transfer for public investment between 2000 and 2004 (ranked from lowest to highest and grouped into quartiles)				
	Lowest Quartile	Village revenue per capita	29	34

Measure 6	(range of variable: -34 to 9)	Village expenditure per capita	21	24
		Village investment per capita	103	61
	Highest Quartile	Village revenue per capita	75	75
	(range of variable: 101 to 757)	Village expenditure per capita	46	53
		Village investment per capita	336	53

Notes:

Measure 1—change (in percentage terms) in township expenditure per capita between 2000 and 2004.

Measure 2—change in the gap between disposable financial resource per capita and per capita budgetary expenditures between 2004 and 2000

Panel A: Impact of Percentage Change in Expenditure per Capita between 2000 and 2004 (ranked from lowest to highest and grouped into quartiles)

Measure 3—change in the share of county to town transfers as a share of disposable fiscal resources between 2000 and 2004.

Measure 4—change in the share of town to county transfers of total tax revenue collections between 2000 and 2004.

Measure 5—change in the share of total investment from upper level government transfers between 2000 and 2004.

Measure 6—change in absolute amount of upper level government transfer for public investment between 2000 and 2004.

Table 13. Regression Results Explaining Farmer Satisfaction as a Function of Total Investment and Share of Investment Financed from Upper Level Governments in China, 2004

Explanatory variables	Dependent variable: Measure of Satisfaction of the Average Farmer in Village on Public Goods Service (satisfied=1, No=0)			
	Model 1	Model 2	Model 3	Model 4
Total investment level	0 (3.25)***	0 (2.70)***	0 (3.58)***	0 (3.84)***
The share from above	-0.102 (2.07)**	-0.124 (2.46)**	-0.118 (1.94)*	-0.169 (2.18)**
District dummy	~	Province	County	Town
Gender Dummy (Male=1)	~	Yes	Yes	Yes
Project dummy	Yes	Yes	Yes	Yes

Appendix Tables

Table 1. Per Capita Investment on Public Goods

Unit: Yuan or %

	ITEM	2004				2000 ^a			
		Mean	% from high gov.	% from Township	% from village	Mean	% from high gov	% from Township	% from village
1	Total	217	53	37	10	77	26	64	10
2	Road & bridge	115	60	30	10	22	23	57	20
3	Schools	19	43	53	4	26	16	83	1
4	Irrigation	31	32	58	10	11	48	31	21
5	Drinking water	17	67	18	15	8	45	49	6
6	Clinic	4	58	42	0	1	11	89	0
7	Others ^b	31	45	43	12	9	24	75	1

a: The total sample is 50, only 48 samples have complete information, 1 missing data in Shaanxi, 1 in Hebei.

b: Others include electricity, office building, green for grain, telephone, cable television, broadcast and so on.

Table 2. Per Capita Investment on Public Goods: Rich v.s. Poor, 2004 and 2000

ITEM	2004		2000	
	Mean	% of total	Mean	% of total
Richest				
Total	181	100	166	100
Road & bridge	123	68	37	17
Schools	9	5	102	62
Irrigation	14	7	11	7
Drinking water	21	8	12	5
Clinic	6	5	1	1
Others ^a	8	6	21	8
% from high gov	40		6	
% from TS	40		86	
% from village	20		8	
Poorest				
Total	243	100	41	100
Road & bridge	100	35	11	17
Schools	13	6	3	62
Irrigation	6	3	18	7
Drinking water	30	11	3	5
Clinic	5	2	1	1
Others ^a	88	43	4	8
% from high gov	50		84	
% from TS	48		14	
% from village	2		2	

a: Others include electricity, office building, green for grain, telephone, cable television, broadcast and so on.

Table 3. Per Capita Debt at Township Level, 2000 and 2004

Unit: Yuan

ITEM	2004		2000	
	Mean	% of total	Mean	% of total
Total township debts	290	100	236	100
Loan from RCC	32	13	36	17
Loan from other banks	25	12	20	12
Loan from legal entities	80	20	31	10
Loan from individuals	35	13	29	13
Loan from informal financial institution	8	2	4	2
Loan from upper level organizations	44	16	51	19
Defaulting wage (delaying payment)	30	10	20	10
Other	37	14	45	17
Estimated % to be repaid	47		60	

Table 4. Per Capita Debt at Township Level, Rich v.s. Poor, 2000 and 2004

Unit: Yuan

	Poorest		Richest	
	2004	2000	2004	2000
Total township debts	108	118	430	206
Loan from RCC	27	33	71	74
Loan from other banks	20	27	40	0
Loan from legal entities	1	2	211	64
Loan from individuals	9	8	36	7
Loan from informal financial institution	0	0	3	8
Loan from upper level organizations	3	4	19	11
Defaulting wage (delaying payment)	16	12	28	11
Other	31	33	24	30
Estimated % to be repaid	56	44	45	28