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State Capacity, Local Fiscal Autonomy, and Urban–Rural Income Disparity in China

RAN TAO, KAIZHONG YANG, AND MINGXING LIU

Abstract Continued urban–rural income disparity poses a serious policy challenge in China's economic transition. As the Chinese economy booms and the state's fiscal capacity grows, there should be a corresponding increase in the center's capacity to redress urban–rural inequality. However, it seems that the stronger state extractive capacity since the mid-1990s has not translated into better urban–rural disparity outcomes. Based on a panel data set covering 270 prefectures in China between 1994 and 2003, the article evaluates the impact of local fiscal spending on urban–rural income disparity. Findings reveal a strong urban bias in China's local fiscal system under an increasingly centralized fiscal system. The centralized fiscal model has in fact reinforced this tendency and ironically weakened the capacity of the central state in achieving the policy goal of reducing the urban–rural divide.

Keywords state capacity, urban–rural disparity, government capacity, income disparity, fiscal autonomy, government spending

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The market-oriented reforms launched in 1978 have changed the economic landscape of China and have improved the dynamism of both the rural and urban sectors. In the past 30 years, China has transformed itself from a centrally planned economy to an emerging market economy whilst achieving an average GDP growth rate of more than 9 percent. Marketized reform also dramatically reshaped China's countryside. During the early 1980s, agricultural productivity rose steadily with the introduction of the household responsibility system. Rapid rural

industrialization also took off in the second half of 1980s and continued to grow fast in the early half of the 1990s as town and village enterprises (TVEs) evolved quickly to meet a pent-up demand for consumer goods and to take advantage of a pool of cheap rural labor.[1] In the second half of the 1990s, increasing numbers of rural migrants began to find jobs in cities and earn a higher income than they would have if they had remained in the rural areas.

However, the development path China has been taking so far is not without problems. One of the most serious challenges is the continued spatial inequality that has been largely biased against the nation's vast countryside. The urban–rural income disparity bounced from 1.8 in 1984 to 3.2 by 2005.[2] Against the background of an enlarging urban–rural divide, the Chinese government has unveiled ambitious plans in the first decade of the 21st century to help the country's population of 900 million living in the countryside to catch up economically with those in the cities. [3] This is possible because of the rapidly growing state fiscal capacity since the late 1990s. Between 1998 and 2005, China's fiscal revenue grew from RMB 988 billion to RMB 3165 billion, an astonishing annual growth of 17.1 percent in real terms. China's 11th Five-Year Plan, approved in March 2006 and covering the period 2006–2010, calls for stronger support for the rural areas and less developed regions and for improvements in the investment structure from hardware to software investment. Besides a rural tax reform starting from 2002 that will phase out all agricultural taxes and fees by the end of 2006, higher investment in rural infrastructure, subsidies for agricultural production, and improved social services are now becoming the main pillars of the center's new policy framework to create a "new socialist countryside" (社会主义新农村 please insert Chinese characters for this phrase). With stronger state capacity in terms of government revenue, fiscal policy is now expected to be at the forefront of implementing this strategy. In the next few years, more fiscal transfers will flow from the center to help build rural basic infrastructure, strengthen agricultural technology extension, scrap tuition fees and textbook charges for children from poor rural families, and fund the newly set-up rural cooperative medical insurance scheme.

Given the continued urban–rural divide and serious underprovision of public services in rural China, the government's new policies to develop a "new socialist countryside" are certainly laudable. It is expected that the central transfers will help to alleviate the serious shortfall of financial resources in the countryside. However, will more financial resources alone be adequate to address the rural income issue and alleviate urban–rural disparity? In a country as large as China, the center's ability to implement its policies obviously depends on the

effectiveness of the country's local governments. If higher transfers are to address the severe urban–rural disparity, they need to be spent in ways that help to raise farmers' income more rapidly. This further depends on whether local governments in these regions have incentives to do so. Supporting the contention that higher transfers to rural areas would help to reduce urban–rural disparity implicitly assumes that the allocated funds would reach their intended beneficiaries. However, given China's current institutional framework where urban populations have much higher political representation and power in local policymaking, will the center's attempts to improve rural livelihood through more financial resources be fulfilled?

Many debates in the literature abound on whether or not the capacity of China's central state to control the local government has been weakened during the economic transition. According to Huang and Edin, the central government has strengthened the political control over the nomenklatura system, and it is able to implement its policies at the local level.[4] However, other scholars expressed different opinions. For example, a case study on coal production by Wright shows that Chinese state capacity has been gradually eroded with the resistance of a powerful local coalition and that the central government is severely constrained in distributing economic rents between different interest groups.[5] Our research will approach this issue by examining the effectiveness of local governments in China in enforcing the center's redistribution policies.

Based on newly acquired prefectural-level data set between 1994 and 2003, the article aims to empirically assess the degree of urban bias in China's fiscal system at the local level. Moreover, since the higher fiscal capacity of the state in China has been accompanied by a transfer-based decentralization, we attempt to further examine how local government spending has impacted on disparity outcomes been affected by the financing sources of local governments (unclear; please rephrase or omit). In other words, does it make a difference when local government spending is mainly financed by locally generated revenue or when it is mostly financed by upper-level fiscal transfers? Our panel data starting from 1994 is particularly suitable for such analysis because it was since 1994 that China's fiscal system experienced a period of revenue centralization without corresponding changes in spending assignments. This has led to a situation in which increasing share of local spending is financed by upper-level transfers. How these changes have affected the center's redistribution capacity in reducing urban–rural disparity is an important question to answer.

The rest of the article is structured as follows. The next section presents a brief introduction of China's fiscal centralization since 1994,

which is followed by a discussion of the institutional sources of urban–rural disparity, emphasizing the increasingly important role that government fiscal policy is playing to ameliorate or exacerbate urban–rural disparity. We argue that the revenue centralization would reduce local fiscal autonomy and dampen local incentive to serve the rural population. Based on a panel data set that covers 270 prefectures across China, the fourth section first presents some stylized facts of China's urban–rural disparity, local government spending, and local fiscal autonomy between 1994 and 2003. This is followed by a regression-based analysis of the impacts of local government spending and fiscal autonomy on urban–rural disparity. The article concludes by summarizing the main findings and the implications of this research… (please complete.)

China's intergovernmental fiscal system

The evolution of China's intergovernmental fiscal system since 1994

The current system of intergovernmental fiscal relations largely reflects the arrangements introduced by a major reform known as the tax sharing system (分税制 please insert Chinese characters for fenshuizhi) undertaken in 1994. In 1993, Wang and Hu warned that China's state capacity was declining, exemplified by two phenomena in the mid-1980s: decreasing ("declining" used several times in the same sentence， yes) share of the national fiscal revenue in the gross domestic product (GDP) and the reduction of the central government's share of the national fiscal revenue.[6] The authors argued that declining state capacity would also lead to widening regional and urban–rural disparities, which eventually would produce social chaos. To address the issue of weak state and weak center, they believe a fiscal reform that can both raise the state's extractive capacity and increase the central share in the total budget is necessary.

A fundamental fiscal reform that aimed to ensure both higher revenue collection as a ratio to GDP and a larger share of the central government in total revenue was put in place- in 1994. These reforms replaced the country's particularistic fiscal-contracting system with a modern tax-assignment system. In contrast to the old system, which had given the central government only a set amount of revenue, the new system designates different categories of taxes to the central and local

governments so that central-government revenues grow along with the economy. With the newly introduced value-added tax, business tax, and income tax, government revenue has been rising very fast since 1994. The government revenue was RMB 500 billion in 1994 and rose to RMB 1000 billion by 1999. It doubled again to RMB 2000 billion by 2003 and further rose to over RMB 4000 billion by 2005 and over RMB 5000 billion by 2007. The total government budgetary revenue as a percentage of GDP has also recovered substantially, rising from a low of 10.7 percent in 1995 to around 20 percent by 2007.

This 1994 system replaced the revenue-sharing arrangements established by a 1980 reform, which had favored local governments and had resulted in the central government's share of total revenue declining sharply from about 40 percent in 1985 to 22 percent in 1993. The implementation of these tax and fiscal reforms, coupled with the construction of a separate tax administration for the central government, quickly raised the central government's share of budgetary revenue—relative to that of the provinces.

Based on the national fiscal data, Figure 1 describes the central share of revenue and expenditure in China's total revenue and expenditure since 1991. The difference between central revenue share and expenditure share can be appropriately considered as the share of central transfers. As shown in the figure, the impact of the 1994 reform on central revenue share was very significant: the central share of revenue jumped from 22 percent to 56 percent within one year. Subsequently, there was some initial decline followed by a gradual rise of central revenue share. Compared to the central revenue share, the central spending share was relatively stable before and after 1994. After 1994, there was an initial small decline from 1994 to 1996, followed by a gradual rise until 2000 when the center strived to boost domestic demand by spending aggressively. Generally speaking, the central transfers increased significantly when the 1994 tax reform was implemented. However, between 1994 and 2000, there was a small decline with regard to the gap between central revenue share and central expenditure share. This gap began to rise more significantly after 2000.

There was also significant revenue centralization at the

subnational level following the center's revenue centralization move since 1994. One important problem in China's intergovernmental fiscal system is that there is a serious lack of a clear assignment of responsibilities among different levels of governments below the province.[7] Such ambiguity leads to a high degree of concurrent and overlapping expenditures among the subnational levels and may easily lead to revenue concentration and delegation of expenditure responsibilities to lower-level governments due to the latter's weak bargaining position. This has been most obvious since the 1994 fiscal reform. The response of provincial governments was to squeeze even larger shares of revenues from lower-level governments and at the same time to assign more responsibilities for expenditure to them. County and township governments suffered most in fiscal terms during this period.

[FIGURE 1 ABOUT HERE]

By comparison, expenditure responsibilities after 1994 became heavier at the subprovincial levels (prefecture, county, and township). The difficulty arose from heavier responsibility for maintaining social stability due to the transfer of SOE ownership from the central to local governments in the 1980s and early 1990s and the ensuing large-scale restructuring in China's state-owned sectors in the late 1990s. Many of the social service and social security responsibilities that had been taken care of by SOEs were now passed to local governments without corresponding resources being set aside to meet these responsibilities.

Many county- and township-level governments, especially those in less-developed regions,[8] had to lay out the bulk of their expenditures on wages for government employees (including employees in local schools and public health institutions). After paying government staff, little was left for local public goods and services. Under such a circumstance, providing redistributive transfers and effective public services to the relatively poor rural population became even less likely. Therefore, the negative impacts of insufficient fiscal resources in poor areas were heavily borne by the poor farmers. In other words, instead of reducing interregional fiscal disparity by channeling more transfers to

relatively underdeveloped regions, the centralization in fiscal revenue after 1994 resulted in a growing divergence in the provision of public services across the country and this was particularly biased against rural areas in less developed regions.

Divergence in virtual local fiscal autonomy

While local governments across China have neither power to set local tax rates nor autonomy in defining their tax bases, this does not mean governments in different localities have access to the same level of locally generated revenue and enjoy similar autonomy in fiscal spending. This is because in China local tax revenues derive mainly from the value-added tax, business tax, as well as the enterprise income tax. Since the bases of these taxes typically cover manufacturing and service sectors, localities (mainly in costal provinces) where the shares of the secondary and tertiary sectors in GDP are relatively high fare above the average in terms of local revenue collections. In contrast, the central and western provinces, which are predominantly agriculture-based, fare poorly. The same holds for the distribution of the personal income tax that has become increasingly important in recent years. The higher the average household income, the higher the personal income tax revenue is. Consequently the richer coastal provinces could collect much higher personal income tax revenue.[9] Moreover, more developed regions can also draw on additional high extrabudget revenue from local public land leasing while less developed regions with lower land values have less access to such revenue.

As a result, the level of locally generated fiscal revenue enjoyed by local governments diverges across regions. Not only do local governments in richer regions have access to higher levels of fiscal resources than their counterparts in less developed regions, they also have higher spending autonomy with lower dependence on upper-level transfers. By contrast, governments in less developed localities with a smaller local tax base need to depend more on upper-level transfers for their spending. The fiscal vertical imbalance thus created needs to be offset by a sufficient quantity of equalizing transfers. However, this did not happen very rapidly. Though the post-1994 transfer system was

redesigned to move away from what had been largely negotiated, ad hoc arrangements toward more rule-based and transparent mechanisms, the more rule-based equalizing general-purpose transfers continued to be a minor part in the center's overall transfers even by the early 2000s. Much of the increase in central transfers came from hundreds of types of earmarked grants allocated in an ad hoc, nontransparent fashion rather than from the general-purpose equalizing transfers.[10] Earmarking transfers, compared to general-purpose transfers, is a more effective way of exerting control over the local government since an earmarked transfer is a relatively discretionary portion in transfers. As a result, the divergence in virtual local fiscal autonomy is exaggerated.

Urban–rural disparity, urban bias in spending, and local fiscal autonomy

Institutional determinants of urban–rural disparity in China

There is a vast literature that explores the institutional determinants of China's continued or even enlarging urban–rural disparity.[11] According to this literature, the causes of the rural–urban divide in China have changed over time. As part of China's economic reforms since the late 1970s, a series of economic policies has been introduced to reduce the urban–rural divide. These policies included the adoption of the household responsibility system, increases in procurement prices for agricultural products, and a gradual relaxation of restrictions on labor mobility for off-farm employment opportunities both within rural and between rural and urban areas.[12] These policies all helped to alleviate urban–rural disparity, though in somewhat different periods. The introduction of the household responsibility system, combined with rising agricultural procurement prices, helped to account for the rapid rural income growth and a declining urban–rural income disparity in the first half of 1980s. However, the impact of the household responsibility system on rural income growth was basically a level effect that was almost fully exhausted from the mid-1980s onwards.[13]

As to labor mobility, there is an overall trend of relaxation on off-farm employment restrictions throughout the reform period. In spite of insistence that labor mobility restrictions and the *hukou* system have

played a role in sustaining urban–rural disparity in the past decade, this argument proves to be difficult to defend since labor mobility has increased very rapidly since the 1990s owing to a fast-growing urban economy and to the concurrent relaxation of labor-mobility restrictions.[14] With lower labor-mobility restrictions, tens of millions of migrant farmers are now earning much higher incomes in cities than they would have if they had remained on their farm. Since most of the rural migrants have not obtained an urban *hukou* and therefore are still classified as rural in income statistics, the large-scale rural–urban migration has apparently raised the average rural income and helped to prevent urban–rural disparity from growing even higher.[15]

Another candidate for sustained urban–rural disparity is China's highly urban-biased financial sector.[16] Strong government intervention in the financial sector (banks and stock market) to direct more financial resources to China's ill-performing state-owned enterprises was widespread as recently as the late 1990s. With much firmer and more direct control over the country's financial sector then, the state strived to rescue SOEs from bankruptcy by channeling financial resources in the form of policy loans and easy stock market access. Such intervention enabled compensation in state sectors to grow much faster than their productivity and constituted another major push in urban–rural disparity in this period. However, with the large-scale restructuring of SOEs and the commercialization of China's financial sector since the late 1990s, China's SOE financing bias can be expected to decline.[17]

Comparatively speaking, China's fiscal system has continued to exert a more direct impact on urban–rural disparity outcomes. This comes both from the taxation side and spending side. As to the taxation bias, at least after the 1990s, farmers in China paid a significantly higher share of their income in the form of direct tax and fees compared to their urban counterparts.[18] With the introduction of rural tax reform initiated since 2002, there is good reason to believe that the importance of uneven direct tax burdens on urban–rural disparity will decline.[19] However, the role of government spending in shaping urban–rural disparity outcomes has become increasingly important in view of the rapid growth of the state's fiscal capacity in the past decade. In principle, the higher level of

fiscal resources itself means stronger fiscal capacity. This could translate either into more redistributive funds to directly benefit the relatively poor rural population, or into better public goods and services that may indirectly benefit them.

However, stronger state capacity does not necessarily mean higher incentives for local government to serve the rural population. Under China's current political regime, local government officials are appointed rather than elected. This means that in both developed and less developed regions there is no electoral mechanism that would favor the relatively poor rural population who otherwise may benefit through voting given their large number. Under China's current institutional framework, local governments are more responsive to the needs of the urban population that are politically more powerful and economically more affluent. It has been argued that political pressure from the urban population in the reform period has resulted in various transfer programs that promoted income growth disproportionately in the urban.[20] If such urban bias in government spending continues to exist at the local level, stronger state fiscal capacity would not bring about the decline of the urban–rural divide desired by the center.

Fiscal autonomy and the effectiveness of fiscal policy

Our argument goes further than merely assessing the impact of local government spending per se on urban–rural disparity. We attempt to evaluate how the changes in China's intergovernmental fiscal relationships have affected the urban–rural disparity outcomes through their impact on local fiscal autonomy. Such changes of intergovernmental fiscal relationship affect local government incentives as well as their effectiveness in fiscal spending. And this further impacts urban–rural disparity. The perspective is that within China's politically centralized system, there is a general lack of local government accountability to the local population. Nevertheless, there are significant regional heterogeneities with regard to the urban–rural disparity outcomes. We argue that one important determinant of urban–rural disparity is local virtual fiscal autonomy. The effect may come from two channels. The first is more indirect through the impact of fiscal

autonomy on growth. Local governments whose spending is mostly financed by locally generated revenue generally have higher incentives to promote economic growth through effective public goods provisioning.[21] If growth is pro-poor (or pro-rural, say, through labor mobility) and governments with higher fiscal autonomy have more incentives to promote growth, this may help to alleviate urban–rural disparity indirectly. The second channel is more direct. Local governments with higher spending autonomy are more able to support the relatively poor proportion of their local constituency better because local governments generally have better information about local needs than the upper-level government. Higher spending autonomy due to higher share of self-raised revenue, combined with better local information, would result in more effective pro-rural spending and better urban–rural outcomes.[22]

The same logic works for governments in localities where most fiscal resources come from upper-level transfers. Since the fiscal resources originate mostly from central grants rather than the local tax base and a higher share of their fiscal resources faces competition from other localities at the upper level, local governments in these regions have stronger incentives to either engage in showcasing investment that helps to bring political performance to the attention of the upper-level rather than being genuinely pro-rural, or engage in expanding local bureaucracy that helps to cultivate the local political network rather than providing for the rural population. This would in turn enlarge urban–rural disparity when growth is pro-poor. Moreover, because the resources are coming from upper-level governments who have more say on where the money is to be spent, local governments that are more dependent on upper-level transfers generally have little freedom to allocate them into uses that suit local needs most, thus their information advantage is much less utilized in government spending.

We believe that the impact of local fiscal autonomy (or lack of it) through government spending on urban–rural disparity outcome is an important issue for China because the center has begun to command an increasing share of revenue in the past decade and even local governments in richer regions have begun to experience higher fiscal

dependence on upper-level transfers in the past few years. Though one of the claimed aims of revenue centralization is to mobilize more transfers to help the rural people and reduce urban–rural income disparity, such moves may further reduce both the incentives and the effectiveness of local governments to provide pro-rural growth and engage in pro-rural spending. Ironically, the current system of local government accountability, combined with further revenue centralization and lower local fiscal incentives and spending autonomy, may serve to exacerbate urban–rural disparity even though the fiscally more powerful center desires the opposite.

The negative impacts of fiscal centralization and spending decentralization financed by central transfers on local governance outcomes have been analyzed extensively in the scholarly literature on fiscal federalism. According to Weingast,[23] any centralization through redistributive fiscal policy will lead to negative local incentives to promote growth and mobilize resources; on the other hand, the actual fiscal arrangements between the center and the localities are usually based on political negotiations rather than on rule-based formula, which renders the center's decision on transfer discretionary.[24] Careaga and Weingast[25] further argue that local governments that raise their own revenue have incentives to provide market-enhancing public goods, while governments that rely heavily on revenue-sharing from the central government are more likely to use resources to engage in patronage and rent seeking. There are also cross-country studies that show expenditure decentralization (the share of subnational governments in total government spending) will promote per capita delivery of different forms of infrastructure and reduce corruption. However, this effect was stronger when there was greater revenue decentralization (measured by dependence of subnational governments on self-generated revenues rather than fiscal transfers).[26] All in all, the mechanisms of a centralized fiscal system work both against economic growth (by lowering local fiscal incentives to promote growth through efficient public goods provisioning) and the effectiveness in pro-rural (or poor) transfers and public services may reasonably work in China (pl. check this sentence for clarity and meaning—this revision is very good). In the following

section, we will test these hypotheses using empirical data from Chinese prefectural-level cities.

Urban–rural disparity and local fiscal spending: an empirical evaluation

Data

Our data on urban and rural income comes from three different sources. Urban disposable income and rural net income between 1999 and 2003 come from the *China Statistical Yearbook for Regional Economy* published by the National Bureau of Statistics.[27] Rural net income information before 1999 is obtained from a data set provided by the Ministry of Agriculture.[28] Urban disposable income information before 1999 derives from the *50 Years of New China Cities* published by the National Bureau of Statistics.[29] Though from different sources, the data turns out to be fairly consistent with each other and with the national-level data provided by the National Bureau of Statistics.

Our fiscal data comes from the *Statistical Material for Prefectures, Cities, and Counties Nationwide* published by the Ministry of Finance.[30] This data set covers county-level finance for every county-level administrative unit, including counties, county-level cities, and urban districts from 1994 to 2003. Since our urban and rural income data is only at the prefectural level, we aggregate the fiscal data from county to prefecture level. At present, there are 333 prefectural-level administrative units in China. However, since there are always some prefectures (mainly in western China, including all prefectures in Tibet) that have not provided their fiscal nor income statistics, we are only able to obtain data for 260–70 prefectures. To be more specific, the data we have are for 263 prefectures between 1994 and 1997, 269 prefectures for 1999–2000, and 270 prefectures for 2001–2003.[31]

Stylized facts

Urban–rural income disparity and economic development Table 1 presents the urban–rural income ratios using the National Bureau of Statistics national urban–rural income data as well as our data aggregated by prefectural incomes weighted by the corresponding urban

and rural populations. Since price levels have changed over time we use official provincial consumer price indices to express urban and rural incomes for subsequent years in 1994 prices. Note that separate indices are available for rural versus urban areas in each province. We use these separate indices so that deflation factors which differ between urban and rural areas within provinces as well as among provinces can be taken into account. The urban–rural income ratios are calculated by dividing urban and rural incomes in 1994 prices.

[INSERT TABLE 1 ABOUT HERE]

As shown in Table 1, since the inception of reforms in 1978, China's urban–rural disparities have exhibited a marked cyclical pattern: the declines in early years were followed by a period of increases up to 1995. Agricultural growth and rural industrial expansion in the 1980s significantly raised farmers' income. As a result, urban–rural income disparity first dropped from 2.6 in 1978 to 1.8 in 1984 but bounced back to 2.9 by 1995. This was followed by a renewed but short-lived decline in the mid-to-late 1990s when the government raised procurement prices for agricultural produce while at the same time urban growth slowed down. In 1997, the urban–rural income ratio dropped to 2.2, a 38-percent decrease compared to that in 1994. Since 1998, this disparity quickly picked up again and bounced back to a historical high of 3.2 by 2005.

The urban–rural disparity based on our data displays a very similar trend compared to that based on the National Bureau of Statistics national data though our data only covers 260-70 prefectual units out of the national total of 333. There was a decline in urban–rural disparity from 1994 to 1999 and a rise afterwards for both ratios. The differences in urban–rural disparity between the bureaus national data and our data are attributed to the prefectures that are absent in our data. These administrative units are mostly located in western China which probably had on average lower disparity in early years such as 1994 and 1995, but higher disparity in later years since 2001.

Based on our prefectural data, we show urban–rural disparities for coastal and inland regions from 1994 to 2003. As shown in Table 1,

China's urban–rural gap is not regionally uniform. The less developed inland regions on average had higher urban–rural income disparity than the more developed coastal regions. In 1994 and 2003, the urban–rural income ratio in inland regions was well above three as opposed to the coastal regions, which was less than three. Both the coastal and inland regions experienced a decline in urban–rural disparity between 1994 and 1998, which was subsequently followed by a significant rise. Overall, the urban–rural income disparity in inland regions on average is much higher than that in coastal regions.

Local government expenditure Next, let us look at local government expenditure. Table 2 shows China's local government expenditure as a share local GDP and the per capita government expenditure from 1994 to 2003. As shown in the table, both the local expenditure/GDP share and per capita expenditure increased after the 1994 tax reform. Comparatively speaking, inland regions had a higher local expenditure relative to GDP, but much lower and slower growth of per capita local government expenditure. Table 2 also gives the government expenditure on agricultural support as a share of total local government expenditure. There was a very significant decrease for both coastal and inland regions, indicating an increasingly urban-biased fiscal policy from 1993 to 2004. This is partly because local tax revenues increasingly began to come from nonagricultural taxes such as local business tax and personal income tax, thus local government had more incentive to provide spending in nonagricultural sectors that generated most of the local taxes. Compared to coastal regions, inland regions experienced a more dramatic reduction of their share of agriculture support expenditure. This may be partly explained by their lower fiscal capacity which resulted in a higher percentage of their spending on the urban population and government staffs.

[INSERT TABLE 2 ABOUT HERE]

Figure 2 further shows the number of fiscal dependents as a share of the local population (1/10,000). Fiscal dependents in China

include both government administrative and public service units staffs such as those in local public schools and health institutions. Discounting the period between 1997 and 1999, the overall growth was steady. Between 1995 and 1999 major restructuring of local state enterprises took place. Employees in many local SOES were no longer fiscal dependents when these SOEs were privatized. Since SOE restructuring was particularly significant in the coastal regions, the drop in this ratio was higher there. Starting from 1999, the ratio again began to rise steadily. Since the largest category of local expenditure in China comprises wages, bonuses, and retirement benefits,[32] this figure indicates that local government spending has become more urban-biased in the past decade.

[INSERT FIGURE 2 ABOUT HERE]

Central fiscal strength and local fiscal autonomy Figure 3 further shows the changes in local virtual fiscal autonomy, defined as the share of locally generated fiscal revenue in total local spending. It is interesting to observe that for the nation as a whole, there was a small increase in local (prefectural) fiscal autonomy between 1994 and 1998. It was only after that period that this index began to decrease. This could be explained by a faster growth of local taxes such as local business tax and personal income tax after the 1994 tax reform. The rise of this share could be largely attributed to the rise inland while this share in coastal regions more or less leveled. This is because a large portion of central revenues was committed as tax rebates and earmarked transfers that favor coastal regions. Therefore, inland regions did not receive much transfer (though their local tax revenue such as local business tax also grew very fast). However, local fiscal autonomy for the whole nation began to decline after 1998 when local governments in inland areas started to receive more transfers while local tax revenues in these regions grew at a slower pace. Starting from 2001, fiscal autonomy in all regions began to drop as central transfers increased faster than locally generated revenue.

[INSERT FIGURE 3 ABOUT HERE]

Regression-based results

To better analyze the impacts of government spending and fiscal autonomy on China's urban–rural disparity, we employ regression-based empirical analysis using a panel data model. Our empirical specification is as follows:

$$DISPARITY_{it} = \alpha \ln GDPPC_{i,t} + \beta_1 GE_{it} + \beta_2 GE_{it} * FISAUTO_{it} + \omega' X_{it} + \nu_i + \tau_t + \varepsilon_{it}$$

where the dependent variable $DISPARITY_{it}$ is the urban–rural income ratio in prefecture i in year t. $GDPPC_{i,t}$ is local per capita GDP. GE_{it} is a set of variables representing local fiscal expenditure. *FISAUTO* is the local fiscal autonomy variable, or in other words, the share of local government spending financed by locally generated revenue. X_{it} represents other control variables such as local population size and urbanization ratio (urban population as a share of local population). v is the unobserved prefecture-specific effect, τ is the time-specific effect, and ε is the error term.

For our purpose, the three key coefficients are α, β_1, and β_2. α can be understood as the effect of economic growth on urban–rural disparity. When it is negatively significant, economic growth is pro-rural. β_1 is the impact of local fiscal policy on urban–rural income disparity and its interpretation depends on the variable used. To evaluate the impact of overall fiscal policy, we estimate β_1 for per capita government expenditure (per capita govexp) and government expenditure as a share of local GDP (govexp/GDP), and fiscal dependents as a share of local population (fiscal dependent/pop). Such estimation will help us to identify whether local government spending is overall urban-biased. To evaluate the impact of government agriculture-support fiscal policy, we estimate β_1 for government agricultural support expenditure as a share of total local expenditure (agrisuppexp/govexp). This will help to identify

whether government expenditure to support agriculture will help to reduce urban–rural disparity by boosting rural income growth.

β_2, the coefficient for GE_{it}*$FISAUTO_{it}$, is another key coefficient in our equation. In the interaction between the fiscal expenditure variables and local fiscal autonomy, we assume that the impact of government expenditure in exacerbating or ameliorating urban–rural disparity depends on local fiscal autonomy. As hypothesized in the previous section which contended other things being equal, higher local fiscal autonomy tends to reduce local incentives to showcase or hire public employees in spending and promote local government incentive to use their money more effectively, resulting in more accurate urban–rural disparity outcomes. Therefore, β_2 is expected to be negative. In our model, we have two alternative definitions for fiscal autonomy. Fisautonomy1 is defined as the share of locally generated revenue in total local government spending. However, in view of fiscal surpluses or deficits that may lead to distortions, we defined Fisautonomy2 as the share of locally generated revenue in total local government spending minus government deficits. Using the two alternative definitions of fiscal autonomy will help to test the robustness of our empirical estimations. Since there is no reason to assume that fiscal autonomy itself affects urban–rural income disparity directly, we do not include *FISAUTO* separately in our estimation equations.

Table 3 provides the descriptive statistics of the key variables. To facilitate clarity, the variables are expressed in their original values.

[INSERT TABLE 3 ABOUT HERE]

Tables 4 and 5 show the empirical results using fiscal autonomy 1 and fiscal autonomy 2 respectively. We use values in logarithms for all variables except the fiscal autonomy variables so that the coefficients can be viewed as elasticities. In both estimations, we controlled prefecture-specific dummies and time (year) dummies. Since all of our independent variables except local population and urbanization ratio may suffer from endogeneity, we also estimate our equations using the lagged values of the potentially endogenous variables as instruments. In

addition, the prefecture-specific dummies and year dummies also help somewhat to address this endogeneity issue. For example, the effect of local political structure can be controlled by the dummies.

The coefficients for per capita GDP are invariably negative and significant, indicating that economic development will help to reduce urban–rural income disparity. In other words, economic growth is overall pro-rural. A possible explanation is that with the development of TVEs in rich regions, the rural population can benefit from the off-farm employment. In view of the extensive literature on the positive impacts of fiscal autonomy on economic growth, we can reasonably infer that higher fiscal autonomy may help to reduce urban–rural disparity indirectly through its positive impacts on economic growth. In all the regressions, given the level of per capita GDP, the coefficients of urbanization ratio and population size are insignificant.

The coefficients for government expenditure as a share of GDP (govexp/GDP), per capita government expenditure (per capita govexp), and fiscal dependents as a share of local population (fiscal dependents/pop) are all positive and statistically significant in Tables 4 and 5. This indicates a strong urban bias in China's local government spending. Though the coefficients for agricultural support expenditure as a share of total local government spending (agrsuppexp/govexp) is negative (or pro-rural), it is statistically insignificant. It means that the declining fiscal support for agriculture has a limited impact on urban–rural disparity.

The more interesting findings come from the coefficients of the interaction terms between our fiscal policy variables with fiscal autonomy variables. As our estimation shows, these coefficients are all negative and statistically significant. The opposite signs of the fiscal policies and their interactive variables are consistent with our hypotheses. Moreover, these results are quite robust when the different measures on fiscal autonomy are tested. These results together imply that though China's local fiscal spending is highly urban biased, higher local fiscal autonomy will marginally reduce such urban bias. Or in other words, local fiscal autonomy helps to strengthen the pro-rural impacts of government expenditure in supporting agricultural and rural

development.

[INSERT TABLE 4 ABOUT HERE]

[INSERT TABLE 5 ABOUT HERE]

Though the empirical evidence is largely supportive of our theoretical hypotheses, it is necessary to mention the limitations of these findings. First, our analysis only estimates the current-year impacts of independent variables on dependent variables. However, government spending, especially in the form of local public goods and services such as infrastructure and education, may well have impacts lasting beyond one year.[33] Second, using the lagged values of potentially endogenous variables as instruments for these variables is still an imperfect way of controlling for endogeneity. Given the data limitation and the difficulty of finding good instruments that can be regarded as a truly exogenous shock to the instrumented variables, our choice of instruments can only be regarded as second best.

Conclusion

In the past decade of the 21st century, the extractive capacity of the Chinese state has grown fast. With more resources at hand, the central government has sought to invest in rural areas in the form of central transfers to address the issue of enlarging urban–rural disparity. Though there is no doubt that the center's move would help to address the serious financial shortfall in less developed regions, we argue in this article that stronger extractive capacity of the state alone is not enough to effectively strengthen state capacity in income redistribution and to alleviate the problem of urban–rural divide in China. Our contention is that this has to do with the urban bias in local government spending and lack of local support for the politically weak rural population. Moreover, as local governments became more dependent on upper-level transfers due to revenue centralization, the effectiveness of fiscal spending to promote rural income via increasing transfers may be discounted.

Therefore, to promote farmers' income by effectively providing their needed public goods, further fiscal and political reforms are necessary. Local governments will need greater fiscal autonomy so that they have better incentives and means to promote local economic growth and serve the relatively poor rural people more effectively. Political reform to enhance local governments' accountability by meaningful local participation, particularly the participation of the rural population, is also necessary to rectify the strong urban bias in China's fiscal system.

References

Besley, Timothy, and Stephen Coate. *Centralized versus Decentralized Provision of Local Public Goods: A Political Economy Analysis*.

Journal of Public Economics Volume 87, Issue 12, December 2003, Pages 2611-2637 Bernstein, Thomas P., and Lü Xiaobo. "Taxation without Representation: Farmers, the Central and Local State in Reform China." *The China Quarterly*, no. 163 (2000): 742–63.

Careaga, Maite, and Barry R. Weingast. "Fiscal Federalism, Good Governance, and Economic Growth in Mexico." In *Search of Prosperity: Analytic Narratives on Economic Growth*, ed. Dani Rodrik, 399–435. Princeton, NJ: Princeton University Press, 2003.

De Brauw, Alan, Jikun Huang, and Scott Rozelle. "The Sequencing of Reform Policies in China's Agricultural Transition." *Economics of Transition* 12, no. 3 (2004): 427–65.

Edin, Maria. "State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective." *The China Quarterly*, no. 173 (2003): 35–52.

Estache, Antonio, and Sarbajit Sinha. *Does Decentralization Increase Public Infrastructure Expenditure?* World Bank Policy Research Working Paper no. 1457. Washington, D.C.: World Bank, 1995.

Fedelino, Annalisa, and Teresa Ter-Minassian. "Intergovernmental Fiscal Relations in China." Paper prepared for the Conference on Economic Challenges in Asia, Stanford, June 2006.

Fisman, Raymond, and Roberta Gatti. "Decentralization and Corruption: Evidence across Countries." *Journal of Public Economics* 83, no. 3 (2002): 325–45.

Huang, Yasheng. “Central–Local Relations in China During the Reform Era: The Economic and Institutional Dimensions.” *World Development* 24, no. 4 (1996): 655–72.

Kanbur, Ravi, and Xiaobo Zhang. “Which Regional Inequality? The Evolution of Rural–Urban and Inland-Coastal Inequality in China from 1983 to 1995.” *Journal of Comparative Economics* 27, no. 4 (1999): 686–701.

Khan, Azizur R., and Carl Riskin. “Income Inequality in China: Composition, Distribution and Growth of Household Income, 1988–1995.” *The China Quarterly*, no. 154 (1998): 221–53.

Ministry of Finance. *Statistical Material of Finance for Prefectures, Cities, and Counties Nationwide, 1994–2003* (pl. provide author and title in pinyin). Beijing, Caizhengbu Quanguo Dishixian Caizheng Tongjiziliao ， 1995-2004 Place: publisher, year?

Morduch, Jonathan. “Reforming Poverty Alleviation Strategy.” In *Economic Policy Reform: The Second Stage*, ed. Anne Krueger, page range. Chicago: University of Chicago Press, 2000. This is all the information the author provides –we have no original book, but the working version of the paper

National Bureau of Statistics. *Collection of Data for China’s Fifth Population Census in 2000* (Guojia Tongjiju 2000 nian Diwuci Quanguorenkou Pucha Zhuyaoshuju pl. provide author and title in pinyin). Beijing: China Statistical Press, 2002.

National Bureau of Statistics. *50 Years of New China Cities* (Guojia Tongjiju Xinzhouguo Chengshi Wushinian pl. provide author and title in pinyin). Beijing: China Statistical Press, 1999.

National Bureau of Statistics. *China Statistical Yearbooks* (Guojia Tongjiju , Zhongguo Tongjinianjian pl. provide author and title in pinyin). Beijing: China Statistical Press, various years.

National Bureau of Statistics. *China Statistical Yearbook for Regional Economy* (Guojia Tongjiju , Zhongguo QuyujingjiTongjinianjian pl. provide author and title in pinyin). Beijing: China Statistical Press, 2000–2004.

Park, Albert, Sangui Wang, and Guobao Wu. “Regional Poverty Targeting in China.” *Journal of Public Economics* 86, issue 1 (2002): 123–153.

Sicular, Terry, Yue Ximing, Björn Gustafsson, and Li Shi. “The Urban–Rural Income Gap and Inequality in China.” *Review of Income and Wealth* 53, no. 1 (2007): 93–126.

Shih, Victor, and Qi Zhang. “Who Receives Subsidies: A Look at the County-Level before and after the 1994 Tax Reform.” Paper presented at the conference “Paying for Progress: Public Finance, Human Welfare, and Inequality in China,” Institute for Chinese Studies, Oxford, 21–3 May 2004.

Tao, Ran, and Mingxing Liu. “Urban and Rural Household Taxation in China: Measurement, Comparison and Policy Implications.” *Journal of the Asia Pacific Economy* 10, no. 4 (2005): 486–505.

Tsui, Kai-yuen. “Decomposition of China’s Regional Inequalities.” *Journal of Comparative Economics* 17, no. 3 (1993): 600–27.

Tsui, Kai-yuen. “Local Tax System, Intergovernmental Transfers and China’s Local Fiscal Disparities.” *Journal of Comparative Economics* 33, no. 1 (2005): 173–96.

Wang Shaoguang, and Hu Angang. “Zhongguo guojia nengli baogao” (A study of China’s state capacity). Hong Kong: Oxford University Press, 1993.

Wei, Shangjin and Tao Wang. “The Siamese Twins: Do State-Owned Banks Favor State-Owned Enterprises in China?” *China Economic Review* 8, no. 1 (1997): 19–29. (note: highlighted parts are changes made after checking the internet; pl. confirm that changes are correct. Great. thanks

Weingast, Barry. “The Performance and Stability of Federalism: An Institutional Perspective.” In *Handbook of the New Institutional Economics*, ed. Claude Menard and Mary Shirley, 149–72. Place of publication: Boston Kluwer Academic Press, 2004.

Wong, Christine. “Central–Local Relations Revisited: The 1994 Tax Sharing Reform and Public Expenditure Management in China.” *China Perspectives*, no. 31 (2000): 52–63.

World Bank. *China National Development and Sub-national Finance: A Review of Provincial Expenditures*.Washington, D.C.: World Bank, 2002.

Wright, Tim. “State Capacity in Contemporary China: Closing The Pits and Reducing Coal Production.” *Journal of Contemporary China* 16, no. 51 (2007): 173–94.

Wu, Ximing, and Jeffrey M. Perloff. “China’s Income Distribution, 1985–2001.” *The Review of Economics and Statistics* 87, no. 4 (2005):763–775.

Yang, Dali. “Economic Transformation and Its Political Discontents in China:

Authoritarianism, Unequal Growth, and the Dilemmas of Political Development." *Annual Review of Political Science* Vol,9, (2006): 143–64.

Yang, Dali. "State Capacity on the Rebound." *Journal of Democracy* 14, no. 1 (2003): 43–50.

Yang, Dennis Tao. "Urban-Biased Policies and Rising Income Inequality in China." *The American Economic Review, Papers and Proceedings* 89, no. 2 (1999): 306–10.

Yang, Dennis Tao, and Cai Fang. *The Political Economy of China's Rural–Urban Divide*. Working Paper no. 62. Stanford: Center for Research on Economic Development and Policy Reform, Stanford University, 2000.

Zhang, Xiaobo. "Fiscal Decentralization and Political Centralization in China: Implications for Regional Inequality." *Journal of Comparative Economics* 34, no. 4 (2006): 713–26.

Zhou, Qiren. *Chengshihua nongdi zhuanrangquan he zhengdi zhidu gaige* (Urbanization, rural land transfer and land requisition reform). CCER Policy Briefing no. 4. Beijing: Peking University, 2004.

Notes

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[1] Alan De Brauw, Jikun Huang, and Scott Rozelle, "The Sequencing of Reform Policies in China's Agricultural Transition," *Economics of Transition* 12, no. 3 (2004): 427–65.

[2] For the recent empirical research on China's urban–rural income gap, see Terry Sicular, Yue Ximing, Björn Gustafsson, and Li Shi, "The Urban–Rural Income Gap and Inequality in China," *Review of Income and Wealth* 53, no. 1 (2007): 93–126.

[3] In the process of China's transition, the central government has to use its fiscal power to alleviate the increasing inequality and rising social tensions. See Dali Yang, "Economic Transformation and Its Political Discontents in China: Authoritarianism, Unequal Growth, and the Dilemmas of Political Development," *Annual Review of Political Science* Vol.9, (2006):

143–64; Dali Yang, “State Capacity on the Rebound,” *Journal of Democracy* 14, no. 1 (2003): 43–50.

[4] Yasheng Huang, “Central–Local Relations in China during the Reform Era: The Economic and Institutional Dimensions,” *World Development* 24, no. 4 (1996); Maria Edin, “State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective,” *The China Quarterly*, no. 173 (2003): 35–52.

[5] Tim Wright, “State Capacity in Contemporary China: Closing the Pits and Reducing Coal Production,” *Journal of Contemporary China* 16, no. 51 (2007): 173–94.

[6] Wang Shaoguang and Hu Angang, “Zhongguo guojia nengli baogao” (A study of China’s state capacity) (Hong Kong: Oxford University Press, 1993).

[7] World Bank, *China National Development and Sub-national Finance: A Review of Provincial Expenditures* (Washington, D.C.: World Bank, 2002).

[8] The local tax base in most less developed regions is mainly the agricultural sector. Apparently, drawing resources from rural areas through agricultural taxes and various fees imposed on farmers among the already poor rural population tends to enlarge urban–rural disparity. However, compared to taxation on manufacturing and service sectors, the collection costs of agricultural taxes are much higher and may lead to strong resistance from farmers and even social unrests. In the least developed regions, collections of agricultural taxation turned out to be particularly difficult since farmers there are extremely poor. See Thomas P. Bernstein and Lü Xiaobo, “Taxation without Representation: Farmers, the Central and Local State in Reform China,” *The China Quarterly*, no. 163 (2000): 742–63; Xiaobo Zhang, “Fiscal Decentralization and Political Centralization in China: Implications for Regional Inequality,” *Journal of Comparative Economics* 34, no. 4 (2006): 713–26.

[9] Annalisa Fedelino and Teresa Ter-Minassian, “Intergovernmental Fiscal Relations in China” (paper prepared for the Conference on Economic Challenges in Asia, Stanford, June 2006).

[10] Christine Wong, “Central–Local Relations Revisited: The 1994 Tax Sharing Reform and Public Expenditure Management in China,” *China Perspectives*, no. 31 (2000): 52–63; Kai-yuen Tsui, “Local Tax System, Intergovernmental Transfers and China’s Local Fiscal Disparities,” *Journal of Comparative Economics* 33, no. 1 (2005), 173–96.

[11] Dennis Tao Yang. “Urban-Biased Policies and Rising Income Inequality in China,” The *American Economic Review, Papers and Proceedings* 89, no. 2 (1999): 306–10; Azizur R. Khan and Carl Riskin, “Income Inequality in China: Composition, Distribution and Growth of Household Income, 1988–1995,” *The China Quarterly*, no. 154 (1998): 221–53; Ravi Kanbur and Xiaobo Zhang, “Which Regional Inequality? The Evolution of Rural-Urban and Inland-Coastal Inequality in China from 1983 to 1995,” *Journal of Comparative Economics* 27, no. 4 (1999): 686–701.

[12] Dennis Tao Yang, “Urban-Biased Policies and Rising Income Inequality in China.”

[13] Though there was another round of agricultural procurement price rise in the mid-1990s, this was concurrent with rising prices in China's grain market in the same period. The state grain sector, in competing with private business in the grain market, had to offer higher grain procurement prices. Therefore, it was the rising grain market prices rather than the rising government procurement prices that helped to account for a short period of declining urban–rural income disparity between 1994 and 1997. Starting from the early 2000s, China has witnessed rapid liberalization in the agricultural market, which renders the role of government pricing instruments even less important with respect to changes in rural income and urban–rural disparity. See De Brauw et al., "The Sequencing of Reform Policies in China's Agricultural Transition."

[14] According to the 2000 National Population Census, there were already 121 million migrants (defined as all individuals who had migrated out of their place of residence and looked for employment for at least six months in the past year) by 2000, of whom 90 million were found in urban areas (88.4 million of these had originated from rural areas). National Bureau of Statistics, *Collection of Data for China's Fifth Population Census in 2000* (Guojia Tongjiju , 2000 Nian Diwuci Quanguo Renkou Pucha Zhuyaoshuju) (Beijing: China Statistical Press, 2002).

[15] It has been argued that the impacts of urbanization on the rural–urban gap might be measured in a biased way. The migration of farmers from the rural to the urban areas may lead to increasing disparity, but total welfare might move in the opposite direction. That is the so-called "cream-skimming" effect, see Ximing Wu and Jeffrey M. Perloff, "China's Income Distribution, 1985–2001," *The Review of Economics and Statistics* 87, no. 4 (2005): 763–75. However, in China only a very limited number of migrants obtained urban *hukou*. In China's statistical system, the 120–50 million migrant workers who already earn most of their income in cities are still counted as rural residents in calculating urban and rural incomes. Therefore, the urban–rural disparity would be much higher if there had not been so many rural–urban migrants who earned quite a significant income from cities and who boosted the per capita rural income significantly.

[16] Shangjin Wei and Tao Wang, "The Siamese Twins: Do State-Owned Banks Favor State-Owned Enterprises in China?," *China Economic Review* 8, no. 1 (1997): 19–29.

[17] Though this does not necessarily imply that China's financial system is becoming less pro-urban since there might still be overall higher rates of return in urban investment, it has more to do with market forces rather than explicit governments policies or urban-biased institutions. After all, here we are analyzing the impacts of institutional factors rather than the market forces that may impact urban–rural disparity in China.

[18] Ran Tao and Mingxing Liu, "Urban and Rural Household Taxation in China: Measurement, Comparison and Policy Implications," *Journal of the Asia Pacific Economy* 10, no. 4 (2005): 486–505.

[19] A caveat is that in the same period implicit taxation through low compensation land requisition in urban expansion and transport networking may

have actually increased, but we will not discuss this issue here.

[20] Dennis Tao Yang, "Urban-Biased Policies and Rising Income Inequality in China"; Dennis Tao Yang and Cai Fang, *The Political Economy of China's Rural-Urban Divide*, Working Paper no. 62 (Stanford: Center for Research on Economic Development and Policy Reform, Stanford University, 2000).

[21] An important reason for local government to choose growth-promoting public goods is that they will ultimately foster growth and push out the budget constraint, but this incentive is lost when these additional revenues flow to the common national pool rather than the local government.

[22] It needs to be mentioned here that by more effective spending we mean higher cost-effectiveness in spending but not necessarily higher spending. Similarly, pro-rural spending does not necessarily mean spending in rural areas since spending in cities may also benefit rural population by attracting more rural migrants into cities.

[23] Barry Weingast, "The Performance and Stability of Federalism: An Institutional Perspective," in *Handbook of the New Institutional Economics*, ed. Claude Menard and Mary Shirley, 149–72 (Boston , Kluwer Academic Press, 2004).

[24] Timothy Besley and Stephen Coate, *Centralized versus Decentralized Provision of Local Public Goods: A Political Economy Analysis*. Journal of Public Economics Volume 87, Issue 12, December 2003, Pages 2611-2637 .

[25] Maite Careaga and Barry R. Weingast, "Fiscal Federalism, Good Governance, and Economic Growth in Mexico," in *Search of Prosperity: Analytic Narratives on Economic Growth*, ed. Dani Rodrik, 399–435 (Princeton, NJ: Princeton University Press, 2003).

[26] Antonio Estache and Sarbajit Sinha, *Does Decentralization Increase Public Infrastructure Expenditure?*, World Bank Policy Research Working Paper no. 1457 (Washington, D.C.: World Bank, 1995); Raymond Fisman and Roberta Gatti, "Decentralization and Corruption: Evidence across Countries," *Journal of Public Economics* 83, no. 3 (2002): 325–45.

[27] National Bureau of Statistics, *China Statistical Yearbook for Regional Economy*. Beijing: China Statistical Press, 2000–2004. (Guojia Tongjiju , Zhongguo Quyujingji Tongjinianjian)

[28] The Ministry of Agriculture ,MOA has a separate statistical reporting system by which each county reports annual farmers' net income. We aggregate the rural income from counties to prefectural level. The per capita rural net income within a prefecture is calculated by averaging per capita rural income of each county within a prefecture weighted by the county's rural population.

[29] National Bureau of Statistics, *50 Years of New China Cities* (Guojia Tongjiju , Xinzhongguo Chengshi Wushinian. Beijing: China Statistical Press, 1999.

[30] Ministry of Finance, *Statistical Material of Finance for Prefectures, Cities, and Counties Nationwide, 1994–2003* (Beijing, Caizhengbu Quanguo Dishixian Caizheng Tongjiziliao ， 1995-2004

[31] We need to mention here that in China the county (or district in cities) and the township governments are the two main levels of governments that directly allocate spending to rural localities. However, prefectural-level cities also play some role in fund allocation. We choose to use the prefectural level data here since complete data concerning urban and rural income is available at the prefectural level only. Moreover, our fiscal data covers the revenue and expenditure for all levels of government including the county, the township, and the prefectural cities.

[32] Victor Shih and Qi Zhang, "Who Receives Subsidies: A Look at the County-Level before and after the 1994 Tax Reform" (paper presented at the conference, "Paying for Progress: Public Finance, Human Welfare, and Inequality in China," Institute for Chinese Studies, Oxford, 21–3 May 2004).

[33] According to Sicular et al., the extent of education as a household characteristic contributes substantially to the urban–rural income gap. We also believe that urban–rural disparity in government education investment is an important factor in shaping urban–rural disparity, so it applies to public investment in health, infrastructure, and many other types of public investment. We want to mention that public investment in education will impact on income in the long run, but our data structure limits our capacity to carry out such long-run analysis. See Sicular et al., "The Urban–Rural Income Gap and Inequality in China."