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in Fiscal Equalization Outcomes
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The Role of Provincial Policies in Fiscal Equalization Outcomes in China

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ABSTRACT

In a decentralized economy with wide disparities in the availability of local fiscal resources, national equalization policies play a key role in determining the quality and accessibility to public services of citizens residing in different parts of the country. In addition, in a hierarchically fashioned government structure, the effectiveness of national equalization policies greatly depends on the further degree of vertical decentralization and the equalization effort of intermediate-level governments.

Since the 1994 fiscal reform, China has re-centralized revenue while at the same time further decentralizing expenditure responsibilities. A significant potential advantage of the re-centralization of revenues is that it provides the central government with better means to improve horizontal equity in the allocation of fiscal resources. However, despite the fact that the central government has stepped up its equalization efforts since 2000, it would appear that largely this potential has not been realized in practice. Increasing horizontal disparities in the allocation of fiscal resources is leading to inequitable fiscal outcomes at the sub-national level; in particular, there is a lack of access to basic public services by many residents in poor and rural local jurisdictions. This paper explores one of the possible reasons for this disequilibrium: the extent to which these undesirable equity outcomes can be traced to intermediate-level governments' policies.

In this paper, we use pooled data for central-provincial and provincial-local governments in 2000-01, overall involving over 4000 sub-provincial governments, to assess China's sub-national fiscal equalization practices and outcomes. Our goal is to explain horizontal fiscal disparities between and within provinces, with a special focus on the role played by intermediate-level governments, particularly the provincial governments, on overall equalization outcomes in China. The significant policy implication of our findings is that if the goal of the central government is to improve equity in the distribution of fiscal resources throughout the entire national territory, it will not be enough to improve the design and size of central-provincial transfers. There will be a need to re-structure and control the structure and practices of provincial-local government transfers.

1. Introduction

The performance of the economy in China since the reforms started in the late 1970s has attracted wide attention from academia and practitioners all over the world. After experiencing sustained economic growth, China has become one of the leading economies with increasing competitive power in the global market. Despite these achievements, however, there exist some important challenges in the new economic system that cannot be overlooked since, among other things, they may impose serious constraints to the further development of China's economy.

One of the most important challenges is the significant and growing regional disparities in the availability of fiscal resources to provide basic services. At present, considerable horizontal fiscal disparities between eastern regions and middle and western regions, and also between urban and rural areas, in general pose serious threats to the cohesion of the nation. This continues to be one of the main issues that have been accompanying all the recent reforms.

Increasing transfers from the center through grant allocations can be regarded as one way for sub-national governments to balance their budgets and to address regional fiscal disparities (Bahl and Linn, 1992; Bahl, 1999; Bahl, 2000; Bird and Smart, 2002; Martinez-Vazquez and Boex, 1999; Shah, 1994). However, currently, the intergovernmental transfer system in China has demonstrated limited ability to reduce the existing fiscal disparities. Fundamentally, intergovernmental transfer is one of the areas that have least transparency in China's fiscal system as it still involves considerable bargaining and eventually *ad hoc* decisions. Meanwhile, by design, the system of transfers has very important components that tend to favor richer jurisdictions. For

example, the major component of intergovernmental transfers, the “tax rebate”, which was designed to improve the incentives for tax collections in 1994, still overwhelmingly benefits richer jurisdictions.

More recently, starting in 2002, the central government embarked upon an effort to increase intergovernmental transfers and reduce horizontal disparities. As a result, actually sub-national governments’ expenditure disparities decreased temporarily. However, this effort appears to have been unsuccessful as fiscal disparity has continued to increase again since then. This has brought up the question of why the current system of equalization transfers cannot achieve the desired outcomes.

Currently, there are five levels of governments in China: the center, provinces, cities or prefectures, counties, and townships. Although there are no clear expenditure assignments among the different levels of governments, each government is mainly responsible directly to the next higher order of government and much less to its local residents. The multi-layer government structure and the highly hierarchical intergovernmental relationships make it difficult for the policy objectives of the center to be realized at the sub-national level even if the central government may intervene in local issues at the county and sometimes even at the township government levels.

The particular focus of this paper is on problems caused by this hierarchical structure in the functioning of the system of intergovernmental transfers. At present, all central government transfers have to go through provincial governments before reaching the various layers of sub-provincial governments, even when for those transfers that have been specifically designed for sub-provincial governments. Apparently, the availability of fiscal resources and the behavior of the intermediate level governments, and here we

mean mostly provincial governments, plays an important role in determining the outcome of central government policies. In this process, the extent of the fiscal decentralization, which determines the fiscal resources available to intermediate level governments as well as the behavior of intermediate level governments, should be taken into consideration, albeit it does not appear that they are taken into account in the design of central government policies.

Fiscal decentralization has been one of the most debated topics in the public finance literature. The decentralization of public services is widely accepted as the means of improving the efficiency of the public sector. Not only can lower level of governments better accommodate the preferences of local residents, but also voters at the local level are in a better position than central government to monitor local government behaviors; thus decentralization can solve at least part of the asymmetric information problem (Hayek, 1945; Oates, 1972). In addition, the decentralization of public services is a necessary component of “market preserving federalism,” whereby the role of sub-national governments is aligned with the goals of local economic development and local welfare (Qian and Weingast, 1997). But for these efficiency gains to be realized, sub-national governments need to be responsive to their constituencies. The existence of accountability mechanisms, such as the election of local officials, is widely acknowledged as a necessary condition for effective fiscal decentralization.¹ At present, China’s system of fiscal decentralization lacks effective mechanisms to ensure the responsiveness of sub-national governments to their constituencies.

It is also worth noticing that not everything in decentralization policy, as the international experience well shows, is positive and desirable. Poorly designed

decentralized systems, for example lacking a hard budget constraint for sub-national governments, can lead to waste and macroeconomic instability.² Basic institutional failures in issues such as accountability or the presence of bureaucratic corruption can lead to the capture of government by local elites with overall perverse outcomes.³ Sub-national governments in addition may lack an adequate level of technical and administrative capacity to realize the potential gains from decentralization.⁴ China's current system of fiscal decentralization fits, in general terms, some of the conventional wisdom regarding the desirable features of fiscal decentralization; in particular, it provides sub-national officials with considerable autonomy to provide the "most desirable" mix of public goods and services at the local level. However, there are some other aspects of China's current system that do not fit the mold: at the present time, sub-national government officials are appointed by the higher governments, and, in essence, consequently these government officials are responsible to the higher government instead of to local residents. As we will discuss throughout this paper, this feature of the system can have important undesirable consequences.⁵

Several papers in the fiscal decentralization literature have discussed in the past the role of intermediate level governments in facilitating or impeding the policy objectives of higher levels governments (Bahl and Wallace, 2003; Martinez-Vazquez and Timofeev, 2006). Bahl and Wallace (2003) compare the equalization outcomes of the central governments in China, Russia and USA and those of intermediate level governments in those countries; they conclude that intermediate level governments achieve stronger equalization outcomes. Martinez-Vazquez and Timofeev (2006) look more closely at a larger number of Russia's regions and generally reach the similar conclusion that most

Russian regions are more equalizing vis-à-vis their local governments than the federal government is vis-à-vis the regions.

The current paper generally follows the approach in Martinez-Vazquez and Timofeev (2006) to analyze the question of whether China's provinces enhance or, on the other hand, deflect the equalization policies of the central government in Beijing. The rest of the paper is organized as follows. In Section II, we briefly review various aspects of the intergovernmental fiscal relations system in China, including revenue and expenditure assignments and intergovernmental transfers. Section III presents an analysis of fiscal disparities at the sub-national level with a focus on provincial governments and search for the reasons behind the disparities in fiscal outcomes at the sub-national level. Section IV presents an empirical analysis of the causes of the varying fiscal disparities across local governments in China. We conclude in the last section.

2. Intergovernmental Fiscal Relation in China

2.1. Expenditure Assignment

Expenditure responsibilities in China are highly decentralized. Fundamentally, *the Budget Law* confers substantial autonomy to each level of sub-national government and quite broad expenditure responsibilities. Fiscal decentralization reforms in China can be associated mainly with expenditure decentralization; it provides local governments with significant local autonomy on various aspects such as the determination of their own spending priorities and the policies on relevant aspects of local budgets. While the central government determines the fiscal relations between the central and provincial governments, the expenditure assignment for sub-provincial governments is at the discretion of the provincial government. Although all sub-national governments at

different levels have many overlapping expenditure responsibilities, in practice the main responsibilities for some basic public services such as basic education and health care are concentrated at the county and below levels of governments; other public services such as social security are concentrated at the provincial and prefecture levels of governments. The actual division of the main expenditure responsibilities among the different levels of government is summarized in table 1.

Table 1 Actual Division of Main Expenditure Responsibilities: 2003

	Central	Provincial	Prefecture	County and under
Total	30	18	22	30
Capital Investment	44	23	22	11
Agriculture Expenditure	12	46	11	30
Education	8	15	18	60
Scientific Research	63	23	9	5
Health Care	3	22	32	43
Social Security	11	39	32	18
Government Administration	19	11	22	48
Public Security and Procuratorial Agencies and Court of Justice	5	25	34	35
National Defense	99	1	0	0
Foreign Affair	87	13	0	0
Foreign Aid	100	0	0	0
Others	29	16	25	31

Source: China Statistical Yearbook and Ministry Of Finance.

Nevertheless, expenditure decentralization in China is not well defined by law or regulations. In general, recent reform have made little progress on bringing clarity to expenditure assignments; practically, there was no apparent improvement both in policy and practice in expenditure assignment between the central government and local governments and among sub-provincial governments from the times when the market-oriented reforms started in the 1970s. Particularly, the 1994 TSS reform, which

built the framework of current fiscal system, restated the pre-reform expenditure assignment and provided only basic guidelines to define expenditure responsibilities between central or local governments. These guidelines illustrate that both the central government and local governments not only have very extensive expenditure responsibilities, but that these responsibilities overlap widely and are very vague. Fundamentally, exclusive responsibilities at the central and sub-national levels are few and far between; while the central government tends to be exclusively responsible for national defense issues, local governments provide basically all local public services, such as urban maintenance and construction expenditures. All the rest of government functions are shared or concurrent responsibilities.

In summary, expenditure assignments in China are far from being transparent and clear-cut, mostly because of the presence of extensive concurrent expenditure responsibilities among different levels of government. Meanwhile, the lack of laws regulating and restricting the behavior of governments and government officials still allows for high levels of administrative discretion in deciding what level of government is responsible and, consequently, the possibility of unfunded expenditure mandates.

It is worth noting, especially in the context of functional expenditure assignments, that local residents' input into the shape and content of local expenditure budgets is limited. Both local expenditure and budget management is conducted without any input from residents through the bureaucratic hierarchy. Although the central government has been increasingly providing guidelines for sub-provincial expenditure management, the current legal system framing China's fiscal decentralization process still gives the provincial governments practically absolute discretion to determine budget management

for all their sub-provincial governments. That is why it is particularly relevant to make provincial governments the centerpiece of our analysis of the role played by the intermediate level governments in reducing or enhancing the equalization policy objectives of the central government.

2.2. Revenue Assignment

Revenue assignments in China follow a highly centralized pattern but are relatively better defined than expenditure assignments. The current system of tax assignments and revenue sharing dates from the 1994 Tax Sharing System (TSS) reform. The legislative power of taxation in China remains centralized. Fundamentally, the current system does not provide sub-national governments any autonomy on either the definition of tax base or the determination of the tax rate for, practically speaking, the vast majority of taxes. Besides the central taxes and shared taxes which are defined by the central government and collected by the central tax agency, the central government has designed a list of taxes as sub-national taxes; these taxes are collected by sub-national tax agencies and are regarded as sub-national taxes.⁶ The only elements of sub-national tax autonomy are the choice of introducing (or not) the banquet tax and slaughter tax, and the selection of tax rates for the urban and township land use tax within maximum and minimum legislated rates. Despite the fact that the 1994 TSS reform did not provide any meaningful tax autonomy to sub-national governments, *de facto* sub-national governments have gained revenue autonomy by developing some other sources of revenues such as: collecting profits from SOEs, levying administrative charges, collecting penalty and confiscatory income charges, user charges for drilling, and so on. Meanwhile, the central authorities have also accepted the use of extra-budgetary revenues as a way to exert local revenue

autonomy. In fact, extra-budgetary revenues are one of the important revenue sources for local governments. Currently, extra-budgetary revenues come from the revenue of administrative units and institutions, revenue of government funds, self-raised funds by township governments, revenues from state-owned enterprises and their administrative departments, etc.

Central taxes include the consumption tax, custom duties, etc.⁷ Shared taxes are shared between the central and sub-national governments, and represent the most significant source of revenues at the sub-national level. Currently, shared taxes include: VAT, income taxes (the corporate income tax, the foreign corporate income tax,⁸ the individual income tax), and the stamp tax on security transactions. The sharing arrangement between the central government and the sub-national governments for the most important taxes are shown in table 2.

Table 2 Revenue Shares of Various Orders of Government, 2003 (in percentage)

Revenues	Central	Subnational
VAT	75	25
Income taxes	60	40
Stamp tax on security transactions	97	3

Source: Ministry Of Finance.

Sub-provincial revenue assignments are at the discretion of provincial governments. Even though there have been some guidelines from the central authorities for the revenue assignment to sub-provincial governments, even the key point stressed in the relevant legal norms is the discretionary role of the provincial government in this matter. This arrangement implies the existence of a variety of revenue assignments at the sub-provincial level. Currently, the general practice in revenue assignments at the

sub-provincial level can be summarized as follows: (1) the revenues from the major or key industries belong to the provincial government; for example, the business tax from the financial sector belongs to the provincial government; (2) taxes with relatively smaller revenue yields, such as the resource tax, urban maintenance and construction tax, and real estate tax, typically are assigned to the prefecture (city), and county governments; (3) revenues from the major shared taxes including the VAT, corporate income tax and individual income tax, business tax and urban land occupation tax are shared by the provincial, prefecture (city), and county governments; (4) it is still common practice that each level of government retains the entire tax revenues coming from the SOEs it owns.⁹

In summary, revenue assignments to sub-national governments have not improved much, and in general regular tax bases for lower level governments are still very limited. In particular, practically all tax bases for county and township governments are weak, especially in the case of poor jurisdictions, and they also tend to differ widely. In addition, local taxes have unstable yields with high collection costs. County and township governments in poor areas have traditionally depended heavily on a variety of charges and fees on farmers and agriculture taxes. More recently, the revenue autonomy of county and township governments has been further reduced due to the “Tax-for-Fee” reforms initiated at the central level with the goal of cutting the tax burden of farmers (Martinez-Vazquez and Qiao, 2006).

It is generally accepted that sub-national revenue autonomy is a fundamental ingredient in decentralization because it increases efficiency, and accountability or transparency in government’s actions (Mello and Sab, 2000). Revenue autonomy also tends to offer the best solution to vertical imbalances and promotes credit worthiness

among sub-national governments.¹⁰

2.3. Intergovernmental Transfers

Although currently there are hundreds of transfer programs in China, the intergovernmental transfers from the central to provincial government can be grouped into two main types.¹¹

(i) General Transfers

a. Shared Taxes.

At present 25% of VAT revenue is transferred to sub-national governments. Income taxes, including enterprise income tax, foreign enterprise income tax, and individual income tax, were 100% shared by sub-national governments before recent reforms. The base revenue for the income tax is the minimal income tax revenue that the central government set in the reform, on the basis of total provincial income tax revenues in 2001. Starting in 2001, income taxes have become shared taxes, with 60% of income taxes in 2001, and 50% since 2002, being transferred to sub-national governments.

b. Tax Rebates

Tax rebates have two parts. First, 30 percent of the increased VAT and consumption tax over the preceding year in a province is returned to that province as a tax rebate. Second, the difference between the base revenue and the provincial shared part of income taxes is reimbursed to the provincial government by the central government. The rebate rates for local governments at different levels are generally determined by the provincial governments, and they vary across provinces. Most provincial governments retain the major part of tax rebates from the central government. The purpose of tax rebates was to smooth out the 1994 TSS reform by keeping the pre-reform interests of all stakeholders

protected and to encourage revenue growth.

c. The General-Purpose Transfer.

The general-purpose transfer is calculated on the basis of the gap between standard revenues and standard expenditures, with coefficients that adjust for the size of the gap. Standard revenue is estimated by using the tax bases and standard tax rates, and standard expenditure is calculated by using a myriad of expenditure categories, including spending on administrative services, public safety, education, city maintenance, social assistance, and heating. The purpose of general-purpose grants is to equalize resources across provinces. The general-purpose transfer is the only formula-driven transfer.

The general-purpose transfer to province i is

$$(\text{Standard expenditure of province } i - \text{standard revenue of province } i) \times \beta$$

Where *standard expenditure* equals standard wage expenses, standard administrative expenses, agriculture development and administrative expenditures plus other expenditures; *standard revenue* equals standard local own taxes, standard local shared taxes, tax rebate plus revenue returned minus remittances to the central government; and β is determined *ex post* as the ratio of funds available for transfer, divided by the size of the gap.

Standard wage expenses are derived from standard wages, the number of civil servants, and a regional wage level. Standard administrative expenses include personnel and operating costs for fully funded units, such as government administration, police and security, and other government agencies, and lump-sum costs for units that receive only partial funding from the budget. Agriculture development and administrative expenditures are expenditures for agriculture and related departments. Other expenditures

include only price subsidies. The amounts for the tax rebate, revenue returned, and remittances to the central government are the actual amounts as determined by the central government.

d. Revenue Returned.

Revenue returned is the intergovernmental transfer dealing with problems inherited from the pre-TSS system, particularly the problems of poor provinces. Before the TSS reform, 16 provinces, mainly minority-heavy and poor, received subsidies from the central government. This transfer was designed particularly for those provinces, to ensure that every province would have total nominal revenue not less than that of 1993. The purpose of this transfer was to fill the gap before and after the TSS reform in order also to smooth out the reform process in 1994.

(ii) Special Transfers

There are several categories of special transfers. The major ones include the following:

a. Transfer for Minority Regions.

This was established in 2000 with funding of US\$12 million to support the development of minority regions. This transfer comes from two sources: one is directly from the central budget, with a yearly growth rate equal to that of central VAT revenue; the other is 80 percent of the increased central VAT revenue collected from minority regions. The transfer was designed to fill the fiscal gap for minority regions, which are less developed in general.

b. Transfer for Increasing Wage Expenditure of Public Sectors.

The purpose of this transfer is to fill the fiscal gap in the middle and western

provincial governments caused by the increased wage standards of public sector employees.

c. Transfer for Rural Tax-for-Fee Reform and for Abolition of the Agriculture Tax.

China formally started a rural “Tax-for-Fee” reform in 1999 with the abolishment of the agriculture tax taking place more recently. These reforms decreased local revenues, particularly for the county and lower-level governments, leaving a significant fiscal gap for almost all of them. The purpose of this transfer has been to fill the fiscal gap caused by the rural “Tax-for-Fee” reform and the abolition of the agriculture tax. The transfer is generally provided to county governments passing through the provincial governments.

d. Specific-purpose Grants.

There are hundreds of specific-purpose grants. These transfers typically respond to high-priority emergencies, such as the fiscal stimulus packages, bailouts for local government social protection programs, and partial payments for increases in pension benefits.

The general structure of the transfers is shown in table 3.

Table 3 Structure of Intergovernmental Transfer from the Central to Provincial Governments: 2004 (Billion Yuan)

	Without Shared Taxes		With Shared Taxes	
	Amount	%	Amount	%
Total	1017.70	100	1487.21	100
General Transfer	492.09	48.35	961.60	64.66
Shared Taxes			469.51	31.57
Tax Rebates	404.97	39.79	404.97	27.23
The general-purpose transfer	74.50	7.32	74.50	5.01
Revenue returned	12.61	1.24	12.61	0.85
Special Transfer	525.61	51.65	525.61	35.34
Transfer for minority regions	7.69	0.76	7.69	0.52

Transfer for increasing wage expenditure of public sectors	98.25	9.65	98.25	6.61
Transfer for rural fee-to-tax reform and for abolition of the agriculture tax.	52.33	5.14	52.33	3.52
Other Special Transfer	367.34	36.10	367.34	24.70

Source: Ministry Of Finance.

Similar to the assignment of expenditure responsibilities, sub-provincial intergovernmental transfers are at the discretion of provincial governments. Currently, the basic framework of sub-provincial transfers is similar to that of the central government even though there is significant diversity in structure across provinces because of differences in the availability of fiscal resources and also because the provincial governments use their discretion to pass on smaller or larger shares of the funds received from the central government.

2.4. Main Features of Current Intergovernmental Fiscal Relations

a. Significant Vertical Imbalances

As expenditures are highly decentralized and tax revenues remain highly centralized, significant vertical imbalances have developed over time. This is shown in table 4. Although this share has fluctuated over time, it is significant that in 1994 and 2003 the share of sub-national expenditures financed by own revenues were grossly the same, 57 percent.

Table 4 Share of Sub-National Expenditures Financed With Own Revenues: 1994-2003. (Billion Yuan)

Year	Sub-national Own Revenues	Sub-national Expenditures	Own Revenues as % of Expenditures
1994	231.2	403.8	57.24
1995	298.6	482.8	61.83
1996	374.7	578.6	64.76
1997	442.4	670.1	66.02
1998	498.4	767.3	64.96
1999	559.5	903.5	61.92

2000	640.6	1036.7	61.79
2001	780.3	1313.5	59.41
2002	851.5	1528.1	55.72
2003	985.0	1723.0	57.17

Source: China Statistical Yearbook 2004.

b. Significant Horizontal Disparity in Own Resources

Current revenue assignment generates significant horizontal fiscal disparities. This is particularly true among the geographically divided eastern coastal region, central region, and western region; the eastern coastal region of China is relatively richer than the central and western regions.¹² In fact, the 1994 TSS reform led to higher regional disparities in sub-national own revenues. This growing gap has been mainly the result of differential rates of growth in overall fiscal capacity. The coefficient of variation for per capita own revenues has increased over time and stood at 1.17 in 2003, as shown in table 5.

Table 5 Per Capita Disparities in Overall Own Revenues: 1990-2003

Year	Max (in Yuan)	Min (in Yuan)	Average (in Yuan)	C.V.
1990	1179.66	8.11	217.54	1.03
1991	1431.94	28.32	266.30	1.01
1992	1308.63	47.81	259.47	0.96
1993	1725.50	67.24	349.56	0.90
1994	1250.89	90.34	242.02	0.92
1995	1551.66	89.58	305.34	0.97
1996	1976.53	100.00	378.90	1.00
1997	2281.88	118.95	421.14	1.04
1998	2600.41	142.86	489.52	1.05
1999	2849.06	178.64	545.70	1.07
2000	2899.51	104.75	602.65	1.02
2001	3776.16	232.35	734.02	1.12
2002	4362.78	273.72	805.05	1.17
2003	5179.59	301.85	921.59	1.17

Source: China Statistical Yearbook 2004.

As table 6 shows, the largest differences are for personal and corporate income taxes,

with coefficients of variation at 1.77 and 1.67, respectively; for example, Shanghai collects 42 times more personal income taxes per capita than Hunan Province.

Table 6 Provincial Disparities across Major Taxes: 2003 (Yuan per capita)

Region	VAT	Business Tax	Agriculture Tax	Corporate income tax	Individual Income Tax
Beijing	517	1811	4	644	393
Tianjin	447	636	4	235	124
Hebei	102	97	37	42	27
Shanxi	155	111	12	43	26
Inner Mongolia	95	153	29	30	23
Liaoning	203	283	17	85	56
Jilin	113	130	38	44	29
Heilongjiang	154	121	43	28	29
Shanghai	995	1942	1	854	420
Jiangsu	245	280	36	125	54
Zhejiang	331	470	12	228	98
Anhui	58	72	42	30	13
Fujian	156	243	3	106	61
Jiangxi	54	101	37	23	17
Shandong	138	159	46	73	29
Henan	60	78	39	30	16
Hubei	76	96	39	36	19
Hunan	54	90	27	20	18
Guangdong	294	523	10	214	119
Guangxi	59	99	14	27	21
Hainan	78	198	6	32	34
Chongqing	79	149	20	28	25
Sichuan	55	103	24	28	17
Guizhou	50	81	13	22	14
Yunnan	89	103	11	49	19
Tibet	35	149	0	27	11
Shaanxi	86	138	18	35	19
Gansu	70	92	20	20	14
Qinghai	98	137	9	23	15
Ningxia	87	188	13	29	22
Xinjiang	130	206	16	27	33
Max	995	1942	46	854	420
Min	35	72	0	20	11
Average	167	292	21	104	59
C. of V.	1.16	1.52	0.69	1.77	1.67

Source: China Statistical Yearbook 2004.

c. Serious Regional Disparities in Public Service Inputs

Table 7 shows disparities in expenditures per capita across provinces from 1990 to 2003. The increasing trend in expenditure disparities, which was temporarily stopped for several years starting in 1998 as several intergovernmental transfer programs were newly introduced by the central government, has continued to expand since 2000. In 2003, public expenditures per capita in the best-off province were 8.5 times larger than those for the worst-off province and the coefficient of variation across provinces was 0.77.

Table 7 Expenditure Disparities for Provinces in Per Capita Terms: 1990-2003

Year	Max (in Yuan)	Min (in Yuan)	Average (in Yuan)	C.V.
1990	613	99	251	0.57
1991	664	102	280	0.56
1992	729	112	296	0.56
1993	958	122	372	0.57
1994	1452	157	444	0.69
1995	1837	226	538	0.71
1996	2348	278	632	0.72
1997	2806	308	698	0.77
1998	3211	347	811	0.76
1999	3620	409	943	0.76
2000	3635	225	1075	0.70
2001	4387	532	1383	0.73
2002	5307	655	1620	0.75
2003	6361	741	1792	0.77

Source: China Statistic Yearbook, various years

Regional disparities in expenditures per capita are presented for the majority of expenditure items in sub-national budgets (see table 8). For some items, the disparities are more pronounced; for example for public health expenditures the differences between the highest and lowest provincial expenditures in 2003 were over 13-fold and the coefficient of variation was 0.8. In contrast, the disparities between maximum and

minimum values for “public administration” per capita expenditures were only three-fold with the coefficient of variation 0.4.

Table 8 Public Expenditures Per Capita for Selected Budget Items across Provinces: 2003 (in Yuan)

Region*	Capital Investment	Education	Health	Public Administration	Agriculture
Beijing	494.3	678.5	340.8	268.4	179.8
Tianjin	518.4	470.5	151.4	173.5	79.5
Hebei	61.4	175.9	51.5	99.0	45.2
Shanxi	111.2	203.4	61.3	137.1	79.0
Inner Mongol	328.3	228.4	71.8	191.9	149.4
Liaoning	161.6	233.6	59.8	147.9	104.0
Jilin	117.8	198.6	59.7	115.5	80.5
Heilongjiang	101.6	212.6	60.5	128.3	116.6
Shanghai	1430.4	767.8	213.0	261.8	138.8
Jiangsu	102.6	241.8	75.0	144.7	89.0
Zhejiang	135.3	350.9	97.0	203.5	127.9
Anhui	74.0	131.9	26.7	80.0	50.9
Fujian	107.4	266.5	59.4	105.1	77.8
Jiangxi	79.7	151.5	35.4	84.5	55.2
Shandong	69.8	196.3	43.4	123.1	67.7
Henan	52.0	135.7	31.2	86.0	37.3
Hubei	51.2	148.4	40.4	95.1	47.3
Hunan	77.1	135.2	25.3	88.8	54.3
Guangdong	302.8	333.5	92.5	220.6	120.7
Guangxi	82.4	162.9	43.3	95.4	61.6
Hainan	165.9	182.6	57.3	129.6	86.5
Chongqing	204.7	137.2	34.6	117.7	54.3
Sichuan	86.2	125.2	36.1	108.7	55.8
Guizhou	81.8	155.4	44.7	112.0	63.7
Yunnan	161.1	212.9	74.8	126.7	112.0
Shaanxi	125.4	179.8	45.3	127.2	78.8
Gansu	126.7	182.7	45.3	120.3	79.3
Qinghai	553.2	236.6	99.2	208.3	140.2
Ningxia	350.8	237.5	77.2	133.3	149.0
Xinjiang	330.9	274.2	94.2	197.1	120.0
Max	1430.4	767.8	340.8	268.4	179.8
Min	51.2	125.2	25.3	80.0	37.3
Average	221.5	244.9	74.9	141.0	90.1
C.V.	1.2	0.6	0.8	0.4	0.4

Source: China Statistic Yearbook 2004. (*Tibet is excluded)

d. High Dependency on Intergovernmental Transfers

In some recent years, the fast growth of the central government's fiscal resources provided the means for introducing several intergovernmental transfer programs. However, the intergovernmental transfer system is still characterized by a lack of stability and predictability. The 1994 TSS reform tried to build a framework of intergovernmental transfers in China and was only partially successful at that. A positive aspect of the reform was to try to provide, for the first time in China, a rules-based mechanism for transfers, moving away from the *ad hoc*, negotiated transfers of the past. Another objective of the reform was to improve its capacity to redistribute fiscal resources across jurisdictions through increasing the central government's share in total revenues. Although intergovernmental transfers finance a significant part of local expenditure (see table 9), the framework for intergovernmental transfers between the central and provincial governments has not yet been well developed. In addition, not much has been done in developing a transfer framework at the sub-provincial level. The discretionary nature of central grant allocations has led to extensive negotiations and rent-seeking by sub-national authorities, tying up valuable administrative resources.

Table 9 Intergovernmental Transfer as % of Sub-national Government Expenditures (Billion Yuan)

	Sub-national expenditures	Intergovernmental transfer	
		Amount	%
1994	404	239	59
1995	483	253	52
1996	579	267	46
1997	670	280	42
1998	767	329	43
1999	904	399	44
2000	1037	475	46
2001	1313	612	47
2002	1528	735	48

2003	1723	806	47
2004	2059	1018	49

Source: Ministry Of Finance.

Generally speaking, it is a reality that the central government retains control over the most productive tax bases; this is typically justified in terms of the inherent advantage in administering broad-based taxes on income and consumption. Consequently, there is an imbalance between the expenditure responsibilities of sub-national governments and their revenue assignments. This necessitates an equalization effort in the form of intergovernmental transfers. A dependence on transfers is not unusual in other decentralized countries and may help reduce vertical fiscal gaps. However, a high transfer dependency may contribute to problems with fiscal profligacy.¹³ The current intergovernmental transfer system in China points in the wrong direction for addressing existing problems with vertical imbalances. This has contributed to a dependency mentality among sub-national governments and to lax fiscal discipline in budget execution. Increasing revenue autonomy at all levels of sub-national government should help address existing vertical imbalances, but this may be only part of the solution; providing incentives to sub-national governments to use that revenue autonomy will also be needed. Meanwhile, the overall operation of the transfer system leaves China's intergovernmental system with significant fiscal disparities. These disparities are due to the relatively low importance of equalization transfers, the fact that per capita overall transfers are positively related to per capita GDP, and more importantly, the regional disparities in economic wealth and consequently in tax bases and revenues.

The more serious consequence of the existing high regional disparities is that basic public services are not guaranteed and are often inadequate in poor jurisdictions. As we

discussed in the previous section, many basic key public services (primary, secondary, and vocational education, health, social security) have been assigned to local governments at the county and township levels. Thus, it is important to ask what the impact of fiscal decentralization reform, including increased revenue autonomy, on regional equity will be. Coming up with the right policy response should be facilitated by the better understanding of how the current decentralization mechanism impacts regional equity. In addition, the system of intergovernmental transfers is one of the least regulated fields in China's fiscal system. The current intergovernmental transfer programs were introduced through various approaches, often *ad hoc* and subject to negotiation between different levels of government. Leaving the process to these influences risks the distortion of desirable properties of the intergovernmental transfers and the rest of the decentralization system, including their equity and efficiency objectives. The lack of properly regulated procedures also exposes the system to arbitrariness and even corruption. These issues acquire greater relevance at the sub-provincial level, because of the discretion the current systems grant to upper-level governments to design their own transfer systems. Currently, provincial governments could easily use their hierarchical position to detain or deviate central government transfers that have equalization or other objectives at lower levels of government.

This is all especially relevant as the current system does not necessarily align the objectives of the central and provincial governments regarding equalization and equity. In particular, the provincial governments may have different incentives in accomplishing the equalization goals of the central government. In addition, the fiscal resources available to provincial governments, as determined by the current fiscal decentralization process,

impose further constraints to their own equalization policies. Thus, given the significance of fiscal disparities and their impact on the delivery of basic public services, it is important to determine to what extent provincial government actions contribute to or go against central government equalization objectives.

3. Analysis of Fiscal Disparities at the Sub-national Level

Overall, China's transfer system has been working effectively in reducing disparities across provinces when these disparities are measured by the difference in variation in revenues per capita and expenditure per capita: the variations in per capita revenue are much larger than the variations in expenditure per capita. The question remains whether this level of equalization is adequate and how it percolates through the vertical structure of government.

In any country with three or more layers of governments that are hierarchically interlinked, when the central government makes transfers to the local governments, they have to go through the intermediate level of governments, regional or provincial or state governments. By making transfers, the central government is aiming to reduce the vertical and horizontal disparities among governments. However, whether or not the intended equalization policy can be backed up by the efforts from the intermediate level governments and therefore achieve desired outcomes is in question. Governments can be seen as economic agents, who have their own preferences and objectives (Zhang, 2005). If the intermediate governments are of Leviathan nature, then they will make more efforts in budget maximization (Brennan and Buchanan, 1977, 1978, 1980). In these circumstances, whether or not the equalization policy originated from the center can be put into practice or even be reinforced will depend on whether or not this policy is

consistent with the objectives of the intermediate level governments. If they are consistent, then the equalization policy is more likely to achieve good results; otherwise the policy will not be implemented well. Alternatively, if the governments are governed by bureaucrats of the type described by Niskanen, then the government officials need to see if implementing the equalization policy is conducive to achieving higher discretionary budgets (Niskanen, 1968, 1971, 1975, 1994).

The Communist Party of China has a strictly hierarchical structure, and generally higher-level governments determine the appointment, promotion and dismissal of lower level government officials. Since there are no elections, local government officials are not accountable horizontally to the public. Instead, local government officials are generally accountable vertically to higher-level officials in the hierarchy, who control their appointments, promotions, and political careers. It is then logical to expect that local government officials will try all means to please their superiors in the hierarchy. According to Edin (2003), the principal criteria for evaluating public officials include political integrity (*de*), competence (*neng*), diligence (*qin*) and achievements (*ji*). Among them, achievement is the most important criterion, accounting for 60 to 70 percent of evaluation of the performance. The reason is that the other three criteria are often based on the subjective assessment of higher-level governments, unlike the achievement criterion, which is more objective and verifiable, and therefore more comparable and more incontrovertible. This gives higher-level governments greater information advantages in evaluating officials. Under the strategy of “*fa zhan shi ying dao li*” (which means ‘development is what really counts’), which the Communist Party of China has been advocating for the objective of catching up with developed countries, GDP

maximization has been included in the central government's policy agenda for years. That is why economic growth becomes one of the most important criteria that higher-level governments use in assessing local officials' achievements.¹⁴ In this context, local government officials' strategy of pleasing higher-level government can be safely summarized in the objective of growing local economies. In order to achieve higher economic growth, the provincial governments, when allocating the transfers from the center to sub-provincial governments, might sacrifice the equalization goal of the center and allocate resources so that higher economic growth at provincial level can be achieved.

To illustrate how fiscal conditions change before and after intergovernmental transfers, table 10 below shows the shares of various tax categories and transfers in total revenues.

**Table 10 Percent Share of Own Revenues and Transfers in Total Revenues:
1994-2003¹⁵**

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Own Revenue	37	30	34	34	46	45	46	29	32	33
PIT					4	4	4			
CIT		3	4	5	5	6	8			
Urban										
Construction Tax	4	4	4	4	0	12	4	3	3	3
Business Tax	13	11	11	12	13	3	13	12	13	13
Agriculture Tax	6	5	6	6	5	5	5	4	5	5
Other	14	7	9	7	19	14	13	11	11	11
Shared Revenue	12	9	10	10	10	9	10	25	17	15
VAT	12	9	10	10	10	9	10	9	9	9
PIT								5	3	2
CIT								11	5	4

Transfers	51	61	57	56	44	46	44	46	52	52
General Transfer	38	28	27	25	22	19	19	17	21	21
Special Transfer	13	33	30	25	22	27	25	29	31	31

Source: Ministry of Finance.

From table 10 we can see that intergovernmental transfers again have been taking on an increasing role for sub-national finance in recent years.

In order to see if, at the aggregate level, the provinces are strengthening or weakening the equalization efforts of the center, in table 11 we separate for 2001 the total variation in per capita revenues measured by the square coefficient of variation and the mean log deviation into *within* province variations and *between* province variations.

Table 11 Disparities in Per Capita Revenue of Local Governments Within and Between Provinces, 2001¹⁶

	Own Revenue	Plus Transfers
Grand mean	298.34	660.24
Grand Median	187.89	483.26
Grand Maximum	5022.27	7178.09
Grand Minimum	16.20	56.81
Square Coefficient of Variation (I ₂)	1.69	1.18
Between Provinces	1.51	0.96
Within Provinces	0.18	0.21
Mean Log Deviation (I ₀)	0.0245	0.0100
Between Provinces	0.0151	0.0078
Within Provinces	0.0094	0.0021

Source: Ministry of Finance.

Table 11 shows that if the total variation in per capita revenues is separated into the ‘between’ province variations and the ‘within’ province variations, the disparities within provinces are smaller than the disparities between provinces. This suggests that the main

cause of regional disparities comes from the disparity across provinces. However, while intergovernmental transfers reduce disparities in the availability of fiscal resources between provinces, the disparity within provinces seems to increase after transfers, as measured by the square coefficient of variation. This may in turn suggest that there could be un-equalizing effects of intergovernmental transfers at the sub-national level, specifically at the provincial government level.

Note that table 11 uses national level data and that because of confounding effects across provinces (i.e., some of the provinces' behavior may be equalizing and that of other provinces may not be), table 11 may not provide a clear picture of how fiscal disparities change as a consequence of individual province's actions. Therefore, we try to compare disparities before and after transfer for selected provinces.

Table 12 Coefficients of Variation of Per Capita Local Revenue in Selected Provinces in Own Revenues and Total Revenues after Transfers, 2001

Province	Own revenue	Plus transfers
Beijing	0.50	0.33
Tianjin	0.72	0.58
Hebei	0.50	0.67
Shanghai	0.36	0.36
Anhui	0.48	0.47
Jiangxi	0.42	0.38
Shandong	1.50	1.45
Hainan	0.31	0.33
Sichuan	1.02	1.64
Gansu	1.93	1.87
Qinghai	1.44	0.79
Ningxia	0.72	0.67
Mean	0.83	0.81
Median	0.50	0.58
Minimum	0.31	0.33
Maximum	1.93	1.87

Source: Ministry of Finance.

The results in table 12 indicate that there were at least three provinces in 2001 where fiscal disparities actually increased after we take into account the impact of transfers. These provinces are Hebei, Hainan and Sichuan. In addition, for other provinces in the sub-sample in table 12, the changes in disparities are very limited before and after transfers. Therefore, in general, it seems that the hypothesis that provincial government policies may add to disparities, that is, that they are not acting in an equalizing manner, cannot be rejected.

The figures in table 12 reveal two other important things. First, there are significant differences across provinces in the variation in revenues per capita. Even after transfers are taken into account, the coefficient of variation of per capita revenues ranges from a minimum of 0.33 to a maximum of 1.87, almost a six-fold difference, and the mean value of the coefficient remains at a relatively high value of 0.74. Second, it does appear that provincial governments exert very different efforts in using their transfer systems in an equalizing manner. In most cases the reduction in coefficient of variation is rather small, and as we just observed above, in the case of three provinces there is actually an increase in variations.

4. Empirical Analysis

In this section, we attempt to explain the differences in equalization efforts of provincial governments. We consider a set of explanatory variables capturing regional fiscal and other characteristics. The aim is to examine how these factors may affect the equalization efforts of provincial governments, where effort is measured by the existing disparities in per capita fiscal resources, as obtained in the previous section. Specifically, the dependent variable is defined as the ratio of the disparity before and after the transfers.

The question is how much of the variation in this ratio across provinces can be explained by fiscal and other structural and institutional variables. In the following paragraphs we discuss the set of explanatory variables.

First, we expect that initial inequality in own-source revenue at sub-provincial level should be an important factor in determining both the need for and political feasibility of an equalization policy. Larger fiscal disparities within a province should lead to more awareness and more explicit efforts by provincial authorities to address the problem.

The second and third explanatory variables considered are the relative levels of decentralization as measured by revenue and expenditure decentralization. As we discussed earlier, the extent of decentralization will affect the capability of provincial governments to implement their own equalization policies and carry forward the policies of the central government. When sub-provincial governments are assigned a larger share of revenues to finance their public services, *ceteris paribus*, there would be more fiscal resources available to richer sub-provincial governments and less to those that are relatively poorer and therefore disparities will tend to rise. On the other hand, when provincial governments are assigned a larger share of responsibilities in providing public services, *ceteris paribus*, fiscal disparities will tend to be less pronounced.

Fourth, another potential determinant of the extent of intra-provincial equalization outcomes is the availability of fiscal resources in each province, measured by the sum of total revenues and transfers in each province in per capita terms. In addition, it may make a difference whether these resources at the provincial level come in the form of own revenues versus transfers from the central government. According to the well-known “fly-paper effect” in the local public finance literature empirically validated in several

countries, revenue from transfers may be spent at the level where these revenues are first received; if this hypothesis also holds for China, a larger share of funding coming from transfers will lead to less equalization. However, raising revenues for equalization purposes within the province may imply a higher sacrifice and be a less popular policy than redistributing resources using transferred funds from the central government. Therefore, more fiscal resources mean that provincial governments have higher capabilities to implement equalization policy. In conclusion, the larger the proportion of resources coming from central government transfers may lead to more or less equalization depending on whether the “price effect” of the “flypaper effect” is dominant.

Fifth, we employ provincial per capita Gross Domestic Product (GDP) to control for the availability of tax bases and also for possible income demand effects for higher regional redistribution policies.

The data set corresponds to observations for 31 provinces, for which data are available, in 2000 and 2001. Our variables are either from China City, Prefecture, County Fiscal Statistics (2001-2002) or from China Statistical Yearbook (2001-2002). The basic statistics of the data are reported in table 13.

Table 13 Summary of Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
Disparity	62	1.34	0.32	0.62	2.28
Rev. Dec	62	0.79	0.12	0.46	0.94
Exp. Dec	62	0.66	0.11	0.33	0.85
Initial Disparity	62	1.06	0.65	0.31	4.41
Per capita GDP	62	848.31	547.74	281.85	3067.44
Fiscal Resource	62	728.40	736.88	277.00	3917.24

We use pooled OLS regressions to estimate the following equation:

$$disp = \beta_0 + \beta_1 disp_0 + \beta_2 revdec + \beta_3 expdec + \beta_4 pgdp + \beta_5 resource + \varepsilon$$

where *disp* is the ratio of disparities before and after transfers; *disp₀* denotes the initial level of disparity; *revdec* and *expdec* are level of decentralization as measured by the revenue and expenditure decentralization shares, respectively; and *resource* denotes the fiscal resources available.

Table 14 reports the pooled OLS estimates for the impact of the potential determinants on the ratio of disparities before and after transfers.

Table 14 Regression Results for Within Province Changes in Fiscal Disparities

	(1)	(2)	(3)	(4)
Dependent Variable: Ratio of Disparities before and after Transfers				
Rev. Dec	1.19 (2.63)**	0.979 (2.23)**	0.708 (2.19)**	1.056 (2.45)**
Exp. Dec	-1.158 (2.90)***	-1.508 (4.44)***	-1.48 (4.38)***	-1.172 (3.10)***
Per Capita GDP	-0.390 (1.91)*			-0.362 (1.87)*
Fiscal Resource	0.339 (2.02)**	0.061 (0.92)		0.0332 (2.09)**
Initial Disparity		0.151 (2.77)***	0.147 (2.71)***	0.145 (2.73)***
Constant	1.256 (3.22)***	1.366 (3.72)***	1.609 (6.35)***	1.198 (3.23)***
Observations	62	62	62	62
R-squared	0.29	0.34	0.33	0.37

In order to interpret the estimated coefficients correctly, we must note that the definition of our dependent variable (the ratio of disparities before and after fiscal

transfers) means that variables that take a positive coefficient, or which contribute to an increase in the ratio, should be interpreted as contributing to a decrease in disparity (i.e., provinces with higher scores in the explanatory variable are undertaking higher equalization efforts, *ceteris paribus*.) Of course, exactly the reverse holds for variables that take on a negative estimated coefficient.

The empirical results in table 14 suggest that provinces with a higher extent of revenue decentralization are more likely to conduct fiscal equalization, while, also *ceteris paribus*, provinces with a higher extent of expenditure decentralization tend to exert lower levels of equalization. As we can see from the results for these two variables in different regression specifications in table 14, the coefficients for revenue decentralization range from 0.71-1.19, with t- statistics over 2, meaning the results are significant at the 95% significance level. The coefficients for expenditure decentralization range from 1.16-1.5, with t-statistics over 2.90 or significant at the 99% level. These results are consistent with our real prior expectations: when sub-provincial governments have more freedom to collect their own revenues, not only are they more likely to have higher pre-transfer disparities, but it is also more likely that the provincial and sub-provincial governments will engage in stronger equalization efforts. In addition, when sub-provincial governments have more expenditure responsibilities, or when a smaller share of the provincial consolidated budget is spent by the provincial government, there is more scope for disparities because of the lower ability by the provincial governments to implement equalization policies. These results are robust to different specifications.

The results in table 14 also show that provinces with higher initial disparities in local

governments' own revenues tend to undertake more equalization. In the current economic system, even though the objective of economic growth has been given higher priority, the equity objective has become more prominent at least in the central government's policy agenda. Either because of those factors or just out of simply more awareness, provinces with initial higher disparities tend to exert higher efforts toward equalization. We can see from table 14 that the magnitude of the coefficient is around 0.15 and statistical significance is at the 99% level.

Provinces that have more fiscal resources available also tend to make more efforts in equalization. More resources, measured by the sum of own revenues and transfers, enable provincial governments to try harder to promote equalization. The coefficients for this variable in the regressions range from 0.06 to 0.34 with statistical significance at the 95% level.

Another variable we are interested in is the level of development as measured by per capita GDP. The negative and significant coefficients for this variable in table 14 shows that relatively richer provinces tend to undertake less equalization. This may be because localities in richer provinces are generally operating in fairer conditions so the pressure to implement equalization policies there is not as pressing as the case of relatively poorer provinces. The coefficients of this variable in the different regression specifications are around 0.4, and significant at the 90% level.

In summary, it would appear that the extent of equalization efforts by provincial governments could be partially explained by a combination of fiscal resources available and initial conditions. Poor provinces with high initial disparities generally tend to equalize more; and when there are more fiscal resources available, provinces are more

likely to undertake fiscal equalization. We must note, that there are several other likely factors explaining equalization behavior across provinces since our estimated equations are only able to explain less than one-third of the variation in the dependent variable.

5. Conclusion

This paper examines to what extent provincial governments in China strengthen or weaken equalization policy objectives of the central government. In general, and with the exception of three provinces, we find that provincial government policies do not add to fiscal disparities. However, we also find that inter-provincial fiscal disparities still remain high after central government's equalization policies. Similarly, within provinces, there are significant differences of the "within variation" of revenues per capita, and the mean value of the coefficient of variation is still quite high. We also find that provincial governments exert quite different efforts in using their transfer systems in an equalizing manner. The extent of equalization efforts by provincial governments is only in part explained by a combination of initial conditions (how pronounced disparities are to start with) and the availability of fiscal resources at the provincial level. Poor provinces with high initial disparities generated from own revenues generally tend to equalize more; provinces are also more likely to undertake fiscal equalization when fiscal resources are more readily available.

The main reason for existing fiscal disparities in China, no surprise, is the difference in the availability of fiscal resources. Although the central government should continue to play the main role in improving regional equity in the allocation of fiscal resources, central policies also need to recognize that the intermediate-level governments also play key roles in the achievement of this objective.

The findings in this paper show that although current sub-national intergovernmental transfer systems generally do not play against national equalization objectives, they do not help significantly in reducing regional disparities. In order to improve equity in the distribution of fiscal resources throughout the entire national territory, it may be necessary to exert some form of control over the structure of intergovernmental transfers and to monitor the actual practices of intermediate-level government in this matter.

References:

- Bahl, Roy. 1999. *Fiscal Policy in China: Taxation and Intergovernmental Fiscal Relations*. Washington, DC: The 1990 Institute.
- _____. 2000. *Intergovernmental Fiscal Transfers in Developing Countries: Principles and Practice*. Urban and Local Government Background Series 2. Washington, DC: The World Bank.
- Bahl, Roy and J. Linn. 1992. *Urban Public Finance in Developing Countries*. New York: Oxford University Press.
- Bahl, Roy and Christine Wallich. 1992. *Intergovernmental Fiscal Relations in China*. World Bank Working Paper, WPS 863.
- Bahl, Roy. and Jorge Martinez-Vazquez. 2003. Fiscal Federalism and Economic Reform in China, in *Federalism and Economic Reform, International Perspectives*, Jessica Wallack and T. N. Srinivasan (ed.), Cambridge University Press.
- Bahl, Roy and Sally Wallace. 2003. Fiscal Decentralization, the Provincial–Local Dimension, *Public Finance in Developing and Transitional Countries*, James Alm and Jorge Martinez-Vazquez (ed.), Edward Elgar.
- Bardhan, P. K., 2002. Globalization and Limits to Poverty Reduction. Department of Economics, University of California, Berkeley. Processed.
- Bardhan, P. and D. Mookherjee. 2000. Capture and Governance at Local and National Levels. *American Economic Review*, 90 (2), 135—39.
- Bardhan, P. and D. Mookherjee. 2006. Accountability and Decentralization of Infrastructure Delivery in Developing Countries, *Economic Journal*, forthcoming.
- Besley, Timothy, and Stephen Coate. 2003. Centralized versus Decentralized Provision of Local Public Goods: A Political Economy Analysis. *Journal of Public Economics*. 87(4): 2611-2637.
- Bird, Richard and M. Smart. 2002. Intergovernmental Fiscal Transfers: International Lessons for Developing Countries. *World Development* 30 (6): 899–912.
- Brennan, G. and J. M. Buchanan. 1977. Towards a tax constitution for Leviathan. *Journal of Public Economics* 8(3): 255-73.
- _____. 1978. Tax instruments as constraints on the disposition of public revenue. *Journal of Public Economics* 9: 301-18.
- _____. 1980. *The power to tax: Analytical foundations of a fiscal constitution*.

Cambridge: Cambridge University Press.

Brueckner, Jan K, 1999. Fiscal Federalism and Capital Accumulation. *Journal of Public Economic Theory*, 1(2), 205-24.

Edin, M. 2003. State capacity and local agent control in China: CCP cadre management from township perspective. *The China Quarterly*(35-52).

Hayek, F. A. 1945. The Use of Knowledge in Society. *American Economic Review* 35: 519-30.

Martinez-Vazquez, J. and Jameson Boex. 1999. *The Design of Equalization Grants: Theory and Applications*. Washington DC: The World Bank.

Martinez-Vazquez, J., & Zhang, Z. 2002. *The System of Equalization Transfers in China*. International Studies Program Working Paper: Andrew Young School of Policy Studies, Georgia State University.

Martinez-Vazquez, J. and Andrey Timofeev. 2006. *Regional-Local Dimension of Russia's Fiscal Decentralization*. International Studies Program Working Paper 06-16, Andrew Young School of Policy Studies, Georgia State University, Atlanta, Georgia; and *Journal of Comparative Economics* (forthcoming).

Martinez-Vazquez, J. and Baoyun Qiao. 2006. Local Public Finance in China: Challenges and Policy Options, World Bank working paper.

de Mello, Luiz R. and Sab, Randa. 2000. Government Spending, Rights, and Civil Liberties. IMF Working Paper No. 00/205 Available at SSRN: <http://ssrn.com/abstract=880854>

Niskanen, W. A. Jr. 1968. The peculiar economics of bureaucracy. *American Economic Review*, 58(2), 293-305.

_____. 1971. *Bureaucracy and representative government* (Vol.). Aldine-Atherton: Edward Elgar Press.

_____. 1975. Bureaucrats and politicians. *Journal of Law and Economics*, 18(3), 617-643.

_____. 1994. *Bureaucracy and public economics*: The Locke Institute.

Oates , Wallace E. 1972. *Fiscal Federalism* , New York, NY: Harcourt Brace Jovanovich.

_____. 1993. Pollution Charges as a Source of Public Revenues, *Economic Progress and Environmental Concerns*, H. Giersch, (ed.), Berlin, Germany: Springer-Verlag, pp. 135-152.

Prud'homme, Remy. 1995. The dangers of decentralization, *World Bank Research*

Observer, 10 (2): 201-220.

Qian, Yingyi and Barry R, Weingast. 1997. Federalism as a Commitment to Preserving Market Incentives. *The Journal of Economic Perspectives* 11: 83-92.

Seabright, P. 1996. Accountability and Decentralization in Government: An Incomplete Contracts Model. *European Economic Review*, 40:61-90.

Shah, A. 1994. *Reform of Intergovernmental Fiscal Relations in Developing and Emerging Market Economies*. Policy Paper 23. Washington, DC: The World Bank.

Tanzi, Vito, 1994. *Corruption, Governmental Activities, and Markets*. IMF Working Paper, IMF, Washington DC.

_____. 1995. *Fiscal Federalism and Decentralization: A Review of some Efficiency and Macroeconomic Aspects*. Annual World Bank Conference on Development Economics 1995, World Bank, Washington, DC.

_____. 2000. *The Role of the State and the Quality of the Public Sector*, IMF Working Papers 00/36, International Monetary Fund.

Treisman, Daniel. 1999. Political Decentralization and Economic Reform: A Game Theoretic Analysis, *American Journal of Political Science*. 43(2): 488-517.

_____. 2000a. The Causes of Corruption. A Cross-National Study,” *Journal of Public Economics*, 76 (3): 399-458.

_____. 2000b. *After the Deluge: Regional Crises and Political Consolidation in Russia*. Ann Arbor: University of Michigan Press.

_____. 2000c. “Decentralization and inflation: Commitment, collective action, or continuity”, *American Political Science Review*, 94 (4): 837-857.

Wang, Rong. 2002. Political dimensions of county government budgeting in China: A case study. Institute of Development Studies, Brighton, Sussex BN1 9RE, England.

Zhang, Li. 2005. *Two Essays on Government Behavior*. Ph.D. Dissertation, Georgia State University.

¹ See, for example, Seabright (1996).

² For similar warnings on the potential failures of decentralization policies see Prud’homme (1995) and Tanzi (2000).

³ On local elite capture issues see, for example, the discussion in Bardhan and Mookherjee (2000) and Bardhan (2002). On local versus central government corruption, Tanzi (1995), Prudhomme (1995), Bardhan and Mookherjee (2000, 2006), Besley and Coate (1999), Brueckner (1999), and Treisman (1999,

2000a, 2000b, 2000c).

⁴ See Bahl and Linn (1992).

⁵ This is not a well-researched area in China's fiscal federalism. For a recent case study of several local governments that highlights the importance of the lack of accountability at the local level see Wang (2002).

⁶ This list includes the urban maintenance and construction tax, vehicle purchasing tax, agriculture and animal husbandry tax, tax on special produces, contract tax, housing property tax, educational surcharge, stamp tax, pollution charge, urban and township land use tax, farmland occupation tax, resources tax, land appreciation tax, vehicle and vessel utilization tax, fixed asset investment tax, slaughter tax, banquet tax, and others.

⁷ Central taxes include customs duties, consumption tax, profit remittances by centrally owned enterprises and rail transportation, headquarters for banks and insurance companies, export rebates of enterprises engaged in foreign trade.

⁸ China's corporate tax system treats domestic and foreign investment enterprises separately to attract foreign investment.

⁹ In 2002, the MOF started a reform to re-assign revenues from the corporate income tax between the central government and sub-national governments in which the income tax from some centrally owned enterprises is shared by the central government and the provincial governments where the income originates. However, taxes from the majority of SOEs still go to the level to which the enterprise belongs.

¹⁰ See, for example, the discussion in Bahl and Martinez-Vazquez (2003).

¹¹ See Martinez-Vazquez and Zhang (2002) for an extensive discussion of China's transfer system.

¹² The east region includes Beijing, Tianjin, Hebei, Liaoning, Shanghai, Shandong, Zhejiang, Fujian, Guangdong, and Hainan, while the central region includes Heilongjiang, Jilin, Shanxi, Henan, Hubei, Hunan, Jiangxi, and Anhui, and the western region includes Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia, Xingjiang, Inner Mongolia, and Guangxi.

¹³ The international experience is varied. For example, in the case of Canada a smaller vertical gap can be attributed to the fact that the Provinces have access to all the major broad-based taxes: there are no constitutional rules on exclusive use of certain bases by different levels of government. The provinces are also able to set their own rates. Currently, provinces raise most of their funds from own-source revenues, and overall federal transfers account for only 13 per cent of total revenues of the provinces. However, transfer dependency varies greatly among the provinces, from 10-12 percent in the high-income provinces to nearly 40 per cent in the low-income provinces

¹⁴ Or, alternatively, with more revenue collection, it's easier for local government officials to achieve objectives which the central government uses to assess their performance.

¹⁵ In this table, we construct with the shares of different tax categories and transfers in total revenue in per capita terms, where the total revenue is the sum of own revenue, shared revenue and transfers. Note that since 2001, the personal income tax and corporate income tax have become shared taxes between the

center and the provinces.

¹⁶ In this table, we look at the variations in per capita revenue before and after transfers for the counties in each province. We calculate the grand mean by taking all counties across the country which are available. In calculating the within- and between-province variations, we compare the total variations for all the counties in a province with the provincial mean and the provincial mean with the grand mean, respectively.