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FISCAL DECENTRALIZATION AND ECONOMIC GROWTH: A COMPARATIVE STUDY OF CHINA AND INDIA

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Although there are obvious differences in the political systems of China and India, there are surprising similarities in their respective approaches to decentralization. Both countries face similar design issues with their intergovernmental systems, such as the lack of clear expenditure assignments, high transfer dependency, low revenue autonomy, and soft budget constraints. As a result, there is a lack of aggregate fiscal discipline among sub-national governments, and the quality of sub-national government service delivery is poor in both countries. Poor service delivery and the lack of fiscal discipline threaten the ability of both countries to sustain high rates of economic growth."Decentralization has been regarded as the major institutional framework for the phenomenal industrial growth in the last two decades in China (taking place largely in the non-state non-private sector); and India ushered in a fundamental constitutional reform in favor of decentralization around the same time it launched a major program of economic reform." Pranab Bardhan (2002) Decentralization of Governance and Development.

I. INTRODUCTION

One of the main policy objectives of market-based economic reforms is to improve living standards through economic growth. Decentralization policies are being pursued by many developing countries as part of this general development strategy.[1] Consequently, there has been increasing interest in the economics literature on the potential impact of decentralization on economic development beyond the classical proposition that decentralization should increase the efficiency of the public sector (Oates, 1972). Determining the impact of fiscal decentralization on economic growth is more than merely an academic question, it is an important policy issue potentially affecting the lives of billions of people in developing and transitional countries, particularly in China and India, which are prominent developing countries pursuing market-based reforms and fiscal decentralization.

The manner in which decentralization affects economic growth is indeed a complex issue because of numerous direct and indirect links between the two.[2] As Oates (1993) points out, the static proposition that fiscal decentralization enhances economic efficiency may have a corresponding effect on economic growth over time.[3] On the one hand, the re-allocation of resources implied by decentralization may have little or no effect on economic growth if the intergovernmental fiscal system does not function effectively due to poor design or government capture by local elites.[4] On the other hand, decentralization may improve the allocation of resources in the public sector thus leading to increases in human welfare by, for example, making government more responsive to the needs of local residents. However, these changes may have little or even no appreciable effect on *measured changes* in gross domestic product (GDP).[5]

In recent years, the direct relationship between fiscal decentralization and growth has received a significant amount of attention in the empirical literature, but no consistent empirical patterns emerge from these studies.[6] Whether a direct relationship exists between the two therefore remains an unanswered question. In addition to the direct effect, there are a multiplicity of potential channels through which fiscal decentralization could indirectly affect growth, such as the regional allocation of resources, macroeconomic stability, and corruption.

Regarding the role of macroeconomic stability, it is now well understood that more unstable economies with higher rates of inflation and unemployment generally lead to lower rates of economic growth. Yet, we know much less about the way fiscal decentralization affects macroeconomic stability. Generally speaking the consensus view appears to be that the lack of fiscal discipline among sub-national governments inherent in many decentralized systems leads to greater macroeconomic instability or at least creates obstacles to resolving chronic fiscal imbalances in these countries [Rodden (2002) and Rodden, Eskeland, and Litvack (2003)].[7] However, the empirical evidence on the relationship between fiscal decentralization and macroeconomic stability is not conclusive. For example, Fornasari, Webb, and Zou (2000) find a close correspondence between increases in sub-national deficits and central government expenditures and deficits in the subsequent period. In contrast, Treisman (2000) and Rodden and Wibbels (2002) find no clear relationship between decentralization and the rate of inflation, and Martinez-Vazquez and McNab (2003) find that greater revenue decentralization leads to greater price stability.

Corruption arguably tends to slow the rate of economic growth. Since decentralization brings government closer to the people, which results in greater accountability of government officials to the people they represent, the expectation is that decentralization should result in less corruption. However, decentralization may result in local elite capture [Bardhan and Mookherjee (2002)] and closer interaction between taxpayers and public officials [Prud'homme (1995) and Tanzi (1996)] which, in turn, may result in more corruption. The empirical evidence seems to suggest that more decentralized systems, especially from the revenue side, tend to be significantly less corrupt [Gurglur and Shah (2000), Fisman and Gatti (2002), and Arinkam, (2004)].[8]

In terms of the regional distribution of resources, Qiao, Martinez-Vazquez, and Xu (2004) find that the more uneven the regional distribution of resources due to increased reliance on market forces and decreased reliance on government fiat to affect fiscal equalization has resulted in a higher rate of economic growth in China over the past twenty years.

Although cross country or panel data studies of the type cited above are useful, they can be quite limited in the number of variables they can handle. There is significant institutional diversity and differences in country experiences that are likely to affect the impact of decentralization policies on economic growth, which are difficult to quantify and cannot be captured simply through country dummy variables or country fixed-effects models. As a result, we believe that there is a lot to be learned from case studies. Being able to identify specific traits of the decentralization system that either impinge upon or facilitate economic growth can complement the knowledge and understanding gleaned from econometric studies.

The purpose of this paper is to analyze and compare the decentralization processes in two fast growing emerging economies, namely China and India, with an eye to examining the effect of fiscal decentralization in these two countries on their respective records of economic growth. The choice of China and India is not only because they are the two largest countries in the world in terms of population, but they also have similarities and differences in their respective approaches to decentralization. Our approach in this paper is to examine the current institutional setup of fiscal decentralization in both countries and identify features of the two decentralization systems that may be retarding or contributing to economic growth, in light of the existing knowledge of the impact of decentralization on economic growth.

The rest of the paper is organized as follows. In Section 2 we review the recent experience with economic growth in China and India. Section 3 reviews the salient features of fiscal decentralization approaches in China and India. Section 4 takes a closer look at how the institutional design of fiscal decentralization in these two countries may be impacting their respective economic growth paths. Section 5 concludes.

II. RECORD OF ECONOMIC GROWTH IN CHINA AND INDIA

China's rate of economic growth over the last 25 years of liberalization policies is exceptional. Table 1 shows the rate of growth in output per capita for China as a whole and by province for selected years since 1975. Although there are variations across provinces, these data show that economic growth has been robust and widespread. Between 1980 and 1999, real income per capita in China increased by well over five times. The coastal provinces (the Eastern Region in Table 1) that benefited early from the inflow of foreign direct investment (FDI) have grown the fastest.[9] For example, from 1980 to 1999, output per capita in Jiangsu Province increased nearly16-fold.

Several institutional reforms, which decentralized economic governance and the allocation of resources, contributed to the high rates of economic growth.[10] Economic reforms known as the "production responsibility system" and later the "household contract responsibility system" in the agricultural sector led to substantial income growth in the rural areas. In the mid-1980s, further economic decentralization reforms focused on the development of township and village enterprises (TVEs) in rural areas to increase household income and absorb unemployed farmers. Meanwhile, in the urban areas, reform of the governance of state-owned enterprises (SOEs), allowing profit sharing,

Table 1
Growth Rates of Real Gross Provincial Product Per Capita in China

Province	*1975*	*1980*	*1985*	*1990*	*1995*	*1999*
China	7.40	7.83	13.07	4.03	11.79	7.28
Northern Region	8.09	4.55	10.04	2.27	11.78	6.21
Beijing	11.85	10.90	6.09	3.71	11.81	7.28
Tianjing	2.69	8.48	9.35	3.67	14.06	3.85
Hebei	9.38	1.94	11.25	1.02	13.03	8.41
Shanxi	6.14	0.78	5.41	3.34	9.95	-3.42
Inner Mongolia	9.22	1.16	19.72	3.22	7.98	6.99
North-Eastern Region	7.21	9.19	10.33	1.98	6.67	6.02
Liaoning	7.37	11.28	12.86	1.03	6.39	6.13
Jilin	11.17	5.40	7.38	1.17	4.61	5.91
Heilongjiang	5.23	8.22	8.42	4.27	8.74	5.63
Eastern Region	6.51	7.87	15.01	3.53	14.33	8.29
Shanghai	3.82	7.04	12.29	4.57	13.87	-2.32
Jiangsu	4.80	4.08	17.67	1.48	14.66	9.65
Zhejiang	-4.87	15.06	21.50	3.74	15.94	9.32
Anhui	1.57	1.10	14.85	0.09	13.11	6.63
Fujian	0.55	17.90	16.42	6.37	13.71	6.75
Jiangxi	6.89	2.84	13.44	2.28	16.92	6.79
Shandong	27.44	11.89	11.40	7.58	13.70	9.59
Central South Region	7.53	9.61	14.03	6.15	12.77	7.17
Henan	4.54	13.88	11.91	3.94	13.88	7.22
Hubei	9.95	5.22	14.82	3.17	13.55	7.70
Hunan	8.33	4.08	10.83	8.39	9.35	4.62
Guangdong	9.09	14.64	19.05	8.00	13.33	7.14
Guangxi	4.46	8.10	9.06	4.68	10.18	6.84
South-Western Region	9.63	7.07	12.63	4.22	7.94	5.33
Sichuan+Chongqing	12.72	7.98	14.44	4.09	7.67	4.91
Guizhou	7.68	2.71	6.45	3.28	5.97	6.83
Yunnan	2.78	7.22	11.51	5.35	9.78	5.99
North-Western Region	8.49	7.67	12.97	6.22	7.47	7.03
Shannxi	3.57	6.36	15.13	2.21	8.01	7.69
Gansu	14.76	7.74	11.69	6.20	7.21	7.34
Qinghai	5.27	25.20	2.99	7.48	6.43	6.67
Ningxia	2.08	6.39	14.89	1.23	7.19	7.41
Xinjiang	13.11	5.15	13.38	15.54	7.12	5.44
Mean	7.28	7.92	12.30	4.32	10.56	6.15
Maximum	27.44	25.20	21.50	15.54	16.92	9.65
Minimum	-4.87	0.78	2.99	0.09	4.61	-3.42
Coefficient of Variation	79.0	70.0	36.0	71.0	33.0	46.0

Source: www.ccer.org.cn

retention of profits, and different forms of ownership are thought to have significantly contributed to economic growth. Under this system of increased decentralized economic governance, both private ownership and foreign direct investment (FDI) were allowed in China, and the latter became a powerful engine of economic growth.

India began pursuing market reforms later than many countries, embarking in earnest on the process only in 1991 in the wake of a balance of payments crisis and, like China, is pursuing a gradualist approach. The Government of India's reform strategy includes a more open economy, greater reliance on market forces, a larger role for the private sector, and a restructuring of the role of government, particularly fiscal decentralization. Since initiating economic reforms in 1991, India has enjoyed robust growth of real GDP per capita, often exceeding 20 percent per annum. As evidenced in Table 2, Andhra Pradesh, Karnataka, and Tamil Nadu are among the major states that are experiencing above average growth of real per capita GDP. The so-called BIMARU states (Bihar, Mahdya Pradesh, Rajasthan, and Uttar Pradesh), among others, have under performed the national economy in terms of growth of real GDP per capita. Like China, there are large regional differences in economic growth rates.

Table 2
Growth Rates of Gross State Product Per Capita in India

Province	*1985*	*1990*	*1995*	*2000*
India	15.2	21.3	17.4	21.3
Andhra Pradesh	14.9	28.6	18.3	29.5
Arunachal Pradesh	34.8	27.3	32.3	2.1
Assam	16.0	4.2	4.8	7.1
Bihar	15.6	11.9	-18.7	48.9
Goa	-0.4	48.7	19.7	56.9
Gujarat	13.7	21.5	34.5	16.3
Haryana	21.8	19.9	6.0	25.6
Himachel Pradesh	6.1	26.1	17.2	32.3
Jammu & Kashmir	6.1	1.7	11.6	10.9
Karnataka	9.4	24.2	28.7	43.2
Kerala	3.7	20.1	26.6	23.1
Madhya Pradesh	6.2	21.9	9.9	10.9
Maharashtra	12.0	27.9	31.6	12.6
Manipur	14.6	10.5	5.4	22.8
Meghalaya	7.3	25.0	6.8	29.4
Nagaland	21.8	13.6	5.8	18.0
Orissa	11.2	-1.2	19.4	11.3
Punjab	21.4	13.5	12.6	20.4
Rajasthan	10.4	43.2	9.9	18.2
Sikkim	28.9	70.7	6.1	34.2
Tamil Nadu	21.6	23.2	30.4	30.6
Tripura	-3.1	32.7	13.9	65.3
Uttar Pradesh	8.3	19.8	6.3	10.7
West Bengal	9.5	12.2	25.4	32.5
Andaman & Nicobar Islands	2.3	3.7	19.9	7.1
Delhi	14.5	17.9	5.0	30.0
Pondicherry	7.1	7.6	-4.3	104.4
Mean	12.4	21.3	14.3	27.9
Maximum	34.8	70.7	34.5	104.4
Minimum	-3.1	-1.2	-18.7	2.1
Coefficient of Variation	69.7	71.7	86.4	77.6

Source: Central Statistical Office.

In contrast to China's earlier policy of the center designating economic development zones, India adopted a more decentralized approach by giving the states primary responsibility for economic development. Some states have taken advantage of this opportunity, while others have not. This raises the very interesting question for future research of whether and to what extent the conduct and performance of state governments explain the differences in economic growth among the states. In addition, it would be interesting to know if the structure of the intergovernmental fiscal system creates perverse incentives that distort state budget policies, which, in turn, result in the lack of sub-national fiscal discipline.

III. FISCAL DECENTRALIZATION IN CHINA AND INDIA

In this study, we contend that the structure of a country's intergovernmental fiscal system plays a crucial role in shaping the conduct and performance of sub-national governments which, in turn, has a potentially important influence on a country's economic growth.[11]

Though both countries exhibit considerable fiscal decentralization by some measures, as discussed in greater detail below, the central governments of both countries limit the budgetary autonomy of regional governments through unfunded mandates, conditional grants, and insufficient revenue autonomy. In both countries, regional governments use extra-budgetary funds to soften their budget constraints, resulting in fiscal profligacy. Finally, both countries let the regional governmental levels decide how to decentralize policy to the local governments. The failure of this approach to lead to greater decentralization to the local level results in poor service delivery. We contend that these structural defects in the intergovernmental fiscal systems of both countries result in fiscal profligacy and inefficient expenditure policies, which may constrain or even jeopardize the continued growth prospects of both countries.

Below we briefly describe China and India's intergovernmental fiscal systems, namely expenditure assignments, revenue assignments, intergovernmental fiscal transfer system, and borrowing autonomy. We also discuss the quality of sub-national expenditures on social and economic development in order to gauge the consequences for economic growth in both countries.

China's Intergovernmental Fiscal System

In contrast to India, China is a unitary country.[12] Intergovernmental relations in China are organized in a strongly hierarchical fashion, giving the system significant federalist features. For example, prefectures and cities report exclusively to the provincial governments, and so on throughout the hierarchy, with each level of government reporting to the next highest level.[13] These hierarchical relations are accentuated by the fact that government officials at all levels of government are appointed, not elected, and the Communist Party exercises tight political control throughout all levels of government.

As previously noted, China is a highly decentralized country by some conventional measures. For example, 70 percent of total public expenditures were allocated by sub-national government budgets in 2003. However, budgetary autonomy at the sub-national level is limited in several important ways.

First, China does not have a formal explicit assignment of expenditure responsibilities among the different levels of government. In practice, the actual division of expenditure responsibilities has been determined by sectoral and other specialized laws over the years. These assignments follow, with some noteworthy exceptions, the general principles and international practice of assigning competencies according to the size of the benefit area. In other words, services with a local dimension, such as parks or street lighting, are assigned to local governments while services with a national dimension, such as defense, are assigned to the center. The exception to good expenditure assignment practice lies in the assignment of certain aspects of social security, such as unemployment compensation, to the sub-national level.[14]

The main responsibilities of sub-national government are in the areas of social and economic development. Since there are no specific central government guidelines on the distribution of responsibilities between the provinces and the lower level governments, provinces use a variety of arrangements. In effect the center has declined to establish the distribution of responsibilities between the provinces and sub-provincial governments, and provinces have refused to decentralize down to the local level. Given the population size distribution of the provinces of China, the failure to decentralize down to the local level constrains the ability of government to tailor expenditures to local conditions and circumstances and monitor service delivery at the local level.

Second, the intergovernmental fiscal system does not provide provincial governments with any significant degree of tax autonomy. That is, it does not provide sub-national governments with 'own' taxes that have significant revenue yield or with the authority to change tax rates or other aspects of the tax structure. The revenue assignments introduced by the 1994 Tax Sharing System (TSS) reform distinguish between three categories of taxes: central government own taxes, local government own taxes, and shared taxes between the two levels of government. These categories have evolved over time, and all the major taxes are nowadays effectively shared between the center and sub-national governments. In particular, the center recently increased its share of income taxes. In addition, the TSS reform assigns provincial governments with the discretion to determine revenue assignments at the sub-provincial level.[15]

Third, there is a growing mismatch between expenditure and revenue assignments at the sub-national level. While expenditure assignments have been unchanged for decades and demand for services has increased over time, revenues have been increasingly centralized since the 1994 TSS reform. The central government has designed a system of transfers to address the resulting vertical and horizontal imbalances.[16] Under the current TSS framework, there are three types of general grants from the central government to sub-national governments: (i) the tax rebate; (ii) general purpose unconditional grants; and (iii) special purpose or conditional grants.[17]

The tax rebate represents by far the largest transfer, over half of the transferred funds, while the other half is more or less evenly divided between general purpose grants and specific purpose grants. The tax rebate was introduced with the TSS reform to obtain the acceptance of the reform by the richer provinces.[18] The tax rebate transfer is highly counter-equalizing. The general purpose grants include different forms of unconditional use funds and revenue sharing, and only ten percent of all unconditional grants or approximately 2 percent of all transfers in 2000 are explicitly designed to serve as an equalization grant. On the other hand, several of the other general purpose grants also pursue equalization objectives. The special purpose grants consist of many different types of conditional transfers administered by central government agencies.

Fourth, the ability of the provinces to prioritize expenditures is limited in several significant ways. Sub-national governments are subject to unfunded expenditure mandates; lack the autonomy to make personnel decisions; and have quite limited revenue autonomy. These conditions reduce the overall efficiency of government expenditures. Similarly, mandates on the level of public employment and the like restrain local public officials from using the most cost effective methods for producing and delivering public services. Finally, the relative importance of extra-budgetary funds and the fragmentation of budgets make it more difficult for provincial governments to prioritize the use of public funds. This lower overall level of efficiency in the public sector quite likely constrains China's ability to realize its full growth potential.

India's intergovernmental fiscal system

Like China, India's intergovernmental system has an in-built imbalance between the revenue raising power and expenditure responsibilities of sub-national governments. This imbalance makes the states dependent on intergovernmental fiscal transfers and loans from the central government. We contend that this structural imbalance and other design features of India's intergovernmental fiscal system partly account for the lack of aggregate sub-national fiscal discipline and the low quality of state expenditures which, in turn, constrain India's ability to realize its full growth potential.[19]

In contrast to China, India has a formal explicit assignment of expenditure responsibilities, and the assignments generally follow the principles and international practice of assigning competencies according to the benefit area. The Seventh Schedule of India's Constitution contains the exclusive lists of expenditure responsibilities for the Union and state governments as well as the concurrent responsibilities. Any residual functions not listed in the Schedule are assumed to reside with the Union government. The exclusive state list includes responsibilities closely connected to the life and welfare of the people, such as health, education, irrigation, water supply, sanitation, public order, and local government. The concurrent list includes nearly all matters relating to economic and social development.

There is one drawback to India's formal expenditure assignments. Having more than one level of government share concurrent responsibility for an extensive list of expenditures blurs responsibility and accountability for poor service delivery. In addition, India has left decentralization to the discretion of the individual states. With Karnataka, Kerala, and West Bengal being possible exceptions, the states are not decentralizing to the local level. This may account for the high rate of absenteeism among teachers and health care workers, among other problems with service delivery by the states.

The assignment of tax powers in India is based on the principle of separation. Although both the Union and state governments impose direct and indirect taxes, these are independent of each other and uncoordinated. All income is taxed by the Union government, except for agricultural income which is assigned to the state-level. In addition, the courts have ruled that the definition of goods does not encompass services; consequently, the states cannot include services in their sales tax base. The Union government is able to tax services through its residual powers and the production of goods through excises. In contrast to the concurrent assignment of tax bases used in other federations, the principle of separation practiced in India narrows the tax base by not allowing sub-national governments to use any of the tax instruments reserved to the Union; complicates the administration and enforcement of the tax system; and increases the burden of tax compliance.

Many of the states implemented a destination based VAT on April 1, 2005. The Union government has made a commitment to compensate the states for any loss in revenues from the switch over from the state sales tax to the VAT, to the extent of 100 percent of the loss in the first year, 75 percent of the loss in the second year, and 50 percent of the loss in the third year. It is too early to judge the success of this reform. It may very well be that a sub-national VAT is superior to the previous consumption tax regime of state sales taxes. To the best of our knowledge, only Brazil and Canada have any experience with a sub-national VAT. The experience of Brazil does not bode well for the long-term success of India's sub-national VAT. While Canada, like India, has a mixed system with some provinces using sales taxes and others using a sub-national VAT, tax administration in Canada is much stronger than in India. In addition, while the VAT in Canada seems to work, it is difficult to extrapolate Canada's success to India because the economic conditions are so different.

In the majority of states, the property (house) tax and the octroi, which is a tax levied at the border of a local jurisdiction on all the goods entering its borders, are the most important sources of local tax revenue. However, the revenue productivity of these taxes is low. The property/house tax, in particular, presents a variety of problems that have prevented local bodies from exploiting them to their full potential. The major weaknesses include the absence of an open market in rental and sales transactions; lack of professionally-trained assessors; subjective assessments in a corruption-prone administrative environment; absence of records of landownership and tax mapping; and an increasing number of appeals and litigation cases [Naresh (2004)]. The octroi tax represents a barrier to the physical movement of goods and the development of an integrated national market.

In short, sub-national governments in India lack the authority to implement a broad-based tax on income or consumption. This makes them dependent on fiscal transfers and loan funds to fill the gap between their expenditure responsibilities, which are extensive, and their revenue authority, which is constrained by the principle of separation. We turn now to a description of the transfer system and borrowing authority of the states.

Transfers and loan funds are essentially used by the states to plug the gap between recurrent expenditures and own tax revenue. As discussed in detail below, this method of financing has resulted in a number of problems. Like China, India's transfer system consists of three channels of resource flows from the Union government to the states. First, an autonomous Finance Commission determines the sharing of centrally collected tax proceeds between the Union and state governments, and the distribution of revenues among the states through grants-in-aid. The centrally shared taxes are distributed on a formulary basis and are unconditional. In addition, the Finance Commission distributes deficit grants-in-aid on the basis of post-devolution assessed deficits alone. Such a gap filling approach encourages fiscal profligacy.

Planning Commission loan transfers constitute the second channel of resource flow from the Union government to the states and are meant to provide resources to fund the states' development plans. The Planning Commission provides a package of assistance to the states, which comprises grants and loans, according to the Gadgil formula. According to the present version of the formula, the resource transfers are 30 percent grant funds and 70 percent loan funds to non-special category states; and 90 percent grant funds and 10 percent loans to special category states.[20] The Planning Commission transfers are conditional and distributed on a formulary basis. In recent years, the states have been diverting Planning Commission loans to cover current account deficits. The consequence is a declining share of total expenditure on development projects, such as roads, bridges, schools, and hospitals. As a result of the lack of investment in public infrastructure, India's rapid economic growth in recent years is beginning to strain current capacity, particularly the transportation of people and goods and the supply of electricity.

The third transfer channel is the centrally sponsored schemes that the line ministries of the central government negotiate with their state-level counterparts. The schemes are specific conditional matching and non-matching grants for a variety of activities, such as poverty alleviation, family planning, etc, with the total number of schemes exceeding 200. A part of these funds is passed on to the local governments through the State Finance Commissions. The centrally sponsored schemes undermine the budgetary autonomy of the states by diverting resources from state priorities to national priorities, the inducement being the matching component of these grants.

The states are only entitled to borrow domestically. Under Article 293(3) of the Constitution, the Union government, in principle, plays the role of controller or regulator of state debt, as long as the state has outstanding debt or any debt guaranteed by the Government of India. Given that all states are indebted to the Union government, unrestricted power to borrow is effectively blocked. However, there are at least two channels that allow states to break this prohibition: off-budget borrowings and state guarantees. Thus, states have managed to finance large components of their own and their municipalities' capital budgeting needs for projects such as irrigation systems, power projects, and roads by off-budget borrowing with guarantees [McCarten (2003)].

Turning to the performance of India's intergovernmental fiscal system, public expenditures have failed to deliver basic services. As evidence demonstrates, government schools and health clinics lack teachers, doctors, textbooks and medicines; clean water is unreliable or unavailable; schools do not have access to proper toilets for students and teachers; and roads and transport are inaccessible in many areas.[21] According to international indicators, India lags behind comparable countries in average educational attainment and infant mortality, particularly among the poor [Keefer and Khemani (2004)]. Compared to China, India's literacy rate is 30 percent lower at 61 percent, and the infant mortality rate is twofold [UNESCO (2004)]. In short, India's states have been charged with many responsibilities relating to human and economic development; however, the fiscal condition of the states and the low quality of state expenditures means that they are not achieving satisfactory results.

While the states of India account for nearly half of total public expenditures, thus making India appear to be highly decentralized, local governments' share of total government expenditure is less than 4 percent. Despite their constitutional status, local bodies have not been endowed with the means to deliver services. In fact, responsibility for basic local goods such as water provision, sanitation, and primary education, has not been transferred to local bodies. Given the population size distribution of the Indian states, the lack of genuine decentralization to local bodies is a serious shortcoming of the current system. For example, Kremer et al. (2004) reports that 25 percent of teachers were absent, and only about half of them were teaching during unannounced visits in a sample of government primary schools. The failure of the states to decentralize service provision down to the local level has contributed to the lack of monitoring, transparency, and accountability in providing local goods and services.

Despite the existence of hierarchical federal structures capable of imposing hard budget constraints on sub-national governments in India, lines of authority and accountability have become vague across levels of government, resulting in a softening of state budget constraints. Persistent and rising revenue deficits have resulted in a widening of the Gross Fiscal Deficit to 5.1 percent of GDP in fiscal year (FY) 2003-04 (Revised Estimates). The gap-filling methodology of the Finance Commission and other flaws in the design of the intergovernmental fiscal system have contributed to the softening of state budget constraints, and state budgets have slipped from revenue account surpluses into deficit positions, resulting in steady debt accumulation and deteriorating fiscal condition of the states.

The fiscal condition of the states, in turn, is having a negative impact on the composition of state expenditures. State expenditures are characterized by rising non-development expenditure and stagnant development expenditure as ratios of GDP. State budgets are dominated by committed or non-discretionary expenditure on wages, interest, and pensions. In point of fact, a large share of total state recurrent expenditures goes to wages (39 percent), pensions (11 percent), interest on debt (26 percent), and subsidies to SOEs. The amount of subsidies provided by the states through their budgets is difficult to quantify as they are shown under several headings, besides their implicit nature in under-pricing of public services [Government of India (2000)]. Non-developmental expenditure continues to rise, with interest payments comprising more than 25 percent of revenue receipts in FY 2003-04 (Revised Estimates), despite the savings achieved under the Debt Swap Scheme. The resulting inflexibility in state budgets stymies efforts at expenditure restructuring, and the result is a poor quality of public services.

In the following section, we address the basic but fundamental question regarding the extent to which decentralization in China and India has been an agent for growth, or, alternatively, whether the current fiscal decentralization design is hurting the possibilities for faster economic growth in these two countries.

IV. IMPACT OF DECENTRALIZATION ON ECONOMIC PERFORMANCE

There are some striking similarities between China and India's systems of fiscal decentralization, but there are significant differences, too. These differences tend to be more pronounced in the formal structure of the respective intergovernmental systems and much less so with respect to the actual conduct and performance of sub-national governments. Both systems can be characterized as lacking genuine fiscal decentralization beyond the second tier of government (i.e., provinces or states), the result being poor service delivery at the local level (third tier of government). The two systems are characterized by the lack of budget discipline but of a different kind and with different consequences. In China, there is still widespread use of extra-budgetary funds and off-budget accounts, which reduce the overall efficiency of public expenditures due to a lack of proper prioritization. In China also, the high incidence of sub-national government ownership of enterprises operating in private markets has provided these governments with potential additional opportunities to operate with a soft budget constraint.[22] In India, sub-national governments face a soft budget constraint due to gap-filling intergovernmental fiscal transfers, diversion of capital grants to cover recurrent budget deficits, contingent liabilities, and borrowing through SOEs. As a result, many states are running large budget deficits, resulting in a rising sub-national debt, which possibly threatens macroeconomic stability.

Both systems have some problems with expenditure assignments, although these problems are much more significant in China than in India in terms of assigning expenditure to the appropriate level of government. It is interesting to note that in both systems the intermediate level of governments has almost complete discretion to arrange the expenditure responsibilities of lower level governments, which in combination with discretion to set revenue assignments at the local level has put many local governments in both countries in a desperate situation of fiscal distress.[23]

Neither of the two systems provides adequate revenue autonomy at the sub-national level, but India's system clearly performs better on this score. The intergovernmental transfer systems in China and India are in need of reform, but again China's system is not as well developed in terms of equalization grants and overall effectiveness. The central governments of both countries use conditional grants to promote national priorities, thereby undermining the budgetary autonomy of sub-national governments.

Perhaps the most significant institutional difference between the intergovernmental fiscal systems of the two countries is that India is a democracy and China is not. The lack of democratic elections and horizontal accountability in China means that sub-national government officials are more likely to look to pleasing their superiors in the vertical hierarchy of government in an effort to get promoted than to look after the genuine interests and needs of the residents of their jurisdictions. In India, there are democratically contested elections at the local level, but the lack of authentic budget autonomy makes political accountability almost meaningless because practically all decisions of any real consequence are made by state authorities. Thus, India's system also lacks accountability at the local level, though for different reasons.

How does all of this impact the prospects for continued economic growth in the two countries? This is a difficult question and one that we can only hope to approximate. Here are some issues that should be highlighted:

(i) The most serious problems facing China's intergovernmental system are the lack of political accountability, heavy reliance on extra-budgetary funds, unfunded mandates, and insufficient revenue autonomy. Together, these problems are likely to undermine the overall efficiency of government expenditures and potentially slow down the rate of economic growth. On the other hand, the most serious threat to continued economic growth in India is the lack of fiscal discipline and the resulting debt accumulation by sub-national governments that threatens macroeconomic instability and results in the low quality of government services and inadequate infrastructure.

While economic growth is generally believed to be a good measure of progress in raising living standards, this need not be the case in every instance. Economic growth can be accompanied by growing levels of industrial pollution, job related injuries, and destruction of natural habitat. In other words, economic growth as measured by national income accounts may result in growing levels of human misery, depending on the quality of economic growth and the distribution of goods and services.

China is clearly out performing India in terms of economic growth. However, the expectation would be that democratic elections, as in India, should result in a higher quality of economic growth than in a country like China that does not provide for democratically elected leaders. The fact is that current methods of national income accounting do not allow us to make reliable comparisons and come out with a definite conclusion on whether China's economy is out performing India's or vice versa in terms of the twin criteria of quality of life and economic growth.

Frankly speaking, much more is known about the effect of macroeconomic instability on economic growth than the effect of political accountability on the quality of pubic expenditures. Both China and India have serious problems with a lack of fiscal discipline among sub-national governments. However, the threat of a fiscal crisis does not seem to be imminent because government borrowing is largely from domestic markets as opposed to international markets. Furthermore, both countries enjoy high rates of domestic savings and high tolerance for government debt accumulation in the domestic credit markets.

(ii) The lack of clear expenditure assignments in both China and India is leading to poor service outcomes in education and health and slowing down human capital development which may constrain future economic growth.

The lack of formal explicit assignments in the case of China and the use of fully concurrent assignments in the case of India are defended as being more flexible and allowing the intermediate level of government to adapt to the peculiar characteristics of the local entities below them. However, the lack of formal explicit assignments also has disadvantages, which would appear to outweigh the advantages. One disadvantage is that intermediate level governments can push down expenditure responsibilities to the lowest levels of government without adequate funding and assign responsibilities to local governments that appear to lack the capacity or have no comparative advantage in delivering the assigned responsibilities. In addition, the inability of many local governments in both countries to deliver basic social services increasingly makes central governments play the role of rescuer, weakening fiscal discipline and responsibility.

The important issue is that substandard social services provided in many local governments in China and India is resulting in lower rates of human capital accumulation in terms of health and education and therefore very likely will lead to lower rates of economic growth, especially in the long run.

(iii) The fulfillment of capital expenditure responsibilities assigned to the local level is compromised in both countries by the lack of financing, and this has a negative effect on the long run rate of economic growth.

Local governments in China and India are, correctly, responsible for financing the needed infrastructure to deliver the services assigned to them. However, in China sub-national governments are not allowed to borrow and in reality many local governments lack the liquid resources to undertake the required investments. In India, state governments are allowed to borrow, but many of them use these funds to cover deficits in their recurrent budgets. Due to the vast unmet needs for capital infrastructure in both countries, it is likely that economic growth is less than it would have been if local governments had been given the revenue and expenditure autonomy to pursue local objectives and priorities.

V. CONCLUDING THOUGHTS

China and India's intergovernmental fiscal systems formally differ in significant ways. However, in terms of the actual performance of sub-national governments there are remarkable similarities in these two countries.

India is a democracy with contested elections at the local level; in China, on the other hand, local officials are appointed by the center. This is a big difference in the two systems, which should have clear consequences in terms of the degree of horizontal accountability at the local level in the two countries. Unquestionably, there is little accountability at the local level in China; however, there is very little accountability at the local level in India as well. In India, local officials do not have effective control over their budgets because all expenditure responsibilities and revenue assignments at the local level are decided by the states.

Another example of a significant formal difference in the two systems is their respective approaches to sub-national borrowing and budget deficits. In China, local governments cannot run a deficit and officially cannot borrow. In India, sub-national governments can run deficits on both the current and capital accounts and may borrow from domestic sources with the approval of the central government. Nonetheless, in terms of budget discipline at the sub-national level, actual performance in both countries is very similar. We have seen that in India there is a considerable problem with budget deficits and debt accumulation at the sub-national level. In China, there are also problems with *de facto* deficits through government arrears, using SOEs for off-budget borrowing, and the like. The rate of debt accumulation by sub-national governments in both countries may threaten macroeconomic stability in the medium run and thus threaten the potential for continued economic growth.

It would seem rather paradoxical that two decentralization systems being so formally different may end up performing so similarly. The explanation, we believe, is due to the fact that for a decentralized system of governance to work well it is necessary to fulfill a rather demanding list of requirements, including: political accountability, administrative flexibility, expenditure and revenue autonomy, hard budget constraints, fiscal discipline, and so on. When one or several of these fundamental elements fails, the overall performance of the decentralization system can be quite poor. The decentralization systems in China and India suffer from different fundamental flaws, but these flaws lead to quite similar consequences.

In conclusion, neither country is fully using the potential of fiscal decentralization to improve the allocation of resources and thereby achieve their respective growth potentials. Although both countries are experiencing high rates of economic growth, the rates and quality of growth may have been even higher with appropriate reforms of their intergovernmental fiscal systems. Both China and India's approaches to reform of their intergovernmental fiscal systems has been piecemeal and gradual. The advantage of a slow transition, in contrast to the "big-bang" approach to economic reform adopted in some countries, may be increased acceptance by sub-national governments and central government ministries. The main problem with the current reform approach of China and India is the lack of a comprehensive strategy linking in a logical way the different elements of the intergovernmental fiscal systems. Developing such a strategy is complicated, and perhaps it has not been politically feasible. However, gradualism in implementation should not be seen as contradicting the goal of putting in place a coherent system that rationally links the major elements of the system.

NOTES

1. Decentralization policies encompass combinations of political decentralization (the devolution of power with democratically elected local officials), administrative decentralization (the devolution of decision-making powers concerning the employment and compensation of local public employees), and fiscal decentralization (the devolution of expenditure responsibilities and autonomous sources of revenues to local jurisdictions). Although the focus of this paper is fiscal decentralization, we also consider the impact and significance of political and administrative decentralization.
2. An earlier literature exploring the determinants of fiscal decentralization identifies the level of development as an important factor. See, for example, Bahl and Nath (1986). More recently, the line of causation is reversed, with research focusing on the potential role of decentralization on economic growth and the level of development; see, for example, the discussion in Martinez-Vazquez and McNab (2003). There is likely to be a simultaneous determination or bi-directional process between decentralization and the level of development, which needs to be taken into account in any statistical estimation process. Our interest in this paper is on the effect of decentralization on economic growth.
3. More recently, in the literature on market preserving federalism, Weingast (1995), Qian and Weingast (1997), and Cao, Qian, and Weingast (1999), among others, contend that decentralization may also promote and protect the development of private markets.
4. See, for example, Prud'homme (1995), Tanzi (1996), Rodden and Rose-Ackerman (1997), and Bardhan and Mookherjee (2002) for interesting discussions of these issues.
5. The national income accounts change by the same amount regardless of the consumer efficiency of an increase in government expenditures.
6. See, for example, Xie, Zou, and Davoodi (1999), Zhang and Zou (1998), Lin and Liu (2000), Thiessen (2003), and Martinez-Vazquez and McNab (2003) for recent studies of the effect of fiscal decentralization on economic growth.
7. It must be noted that in those countries where macroeconomic instability predated decentralization, for example, in Argentina and Brazil, decentralization may have made the solutions more complex but never impossible [Dillinger, Perry and Webb (2000)]. However, the presence of a soft-budget constraint at the local level of government in many countries continues to represent a threat to macroeconomic stability and therefore potentially to economic growth [Bahl (1999) and Stein (1999)].
8. The empirical evidence is not unanimous in favor of decentralization, however. Treisman (2000) finds corruption to be higher in federal (as opposed to unitary and supposedly more centralized countries).
9. See Bahl and Martinez-Vazquez (2005).

10. See Yao and Zhu (1998). By decentralized economic governance, we mean here the adoption of market institutions and privatization of the means of production in lieu of centralized economic planning and public ownership of resources. Clearly, privatization and the adoption of free markets can be regarded as another form of decentralization, particularly for countries in transition from planned socialism to a market economy.
11. In this paper we use the generic term sub-national governments to refer to all decentralized levels of government, either at the intermediate level (e.g., states, provinces, and the like) or the local level (e.g., counties, districts, municipalities, and the like). When necessary we distinguish between the states or provinces and local governments.
12. Below the central government there are 31 provincial level units below which there are 331 prefectures of which 236 are cities, 2,109 county-level units of which 427 are cities, and 44,741 townships.
13. Some countries use a bi-furcated vertical arrangement of government relations whereby the central governments deals directly and separately with intermediate level and local level governments, for example, Ukraine, Poland, or the United Kingdom. A hierarchical vertical arrangement would seem to make more sense for a country of the size and diversity existing in China. However, nothing other than practical convenience and administrative ease should stop China's central government from selectively using a bi-furcated approach, for example, for certain types of transfers. For whatever reasons, China's central government has been extremely reluctant to try this approach.
14. The inability of many local governments to finance the social safety net has led in recent years to widespread pension arrears and defaults that have forced the central government to intervene with subsidies.
15. The current arrangements at the sub-provincial level can be roughly grouped into three categories [Shi (1998)]: provincial governments that pass through all local taxes and rebates to sub-provincial levels; those that keep a portion of local taxes and rebates; and those that retain a relatively large portion of all local taxes and rebates.
16. For example, per capita tax revenues in 2003 were 5,391 yuan in Shanghai and 323 yuan in Guizhou Province, an over 16-fold difference in revenues per capita between the richest and poorest province. The disparities in expenditures per capita are less pronounced than is the case for revenues per capita, proof that the system is somewhat equalizing, but still are considerable. Budgetary expenditures per capita in 2003 were 6,361 yuan in Shanghai, and 741 yuan in Henan Province.
17. See Zhang and Martinez-Vazquez (2003).
18. In essence, the tax rebate sends back to the provinces the amount of VAT and excise taxes that otherwise would have gone to the sub-national governments had the tax assignments prevailing under the contracting system (prior to the 1994 TSS reform) remained in place and remitted in accordance with the derivation principle.
19. There are, of course, other factors that may account for poor service quality including the mismatch between needs and available resources and the leakage of resources due to mismanagement and corruption.
20. The 30:70 (90:10) grant to loan division is based on an historical ratio of the investment funds, which are financed by loans, and maintenance costs, which are financed by grants.
21. See Peters (2000), Kremer et. al (2004), and Keefer and Khemani (2004).
22. For example, sub-national owned enterprises have been allowed to borrow from official banks and to default on these loans. The lack of budget transparency and the extensive use of extra-budgetary funds make it entirely possible that some of those borrowed funds have been used by the sub-national governments outside the uses for which they were intended.
23. See World Bank (2002) for the case of China and Bahl et al. (2005) for the case of India.

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