

The Risk of Overdecentralization China in Comparative Perspective

In the context of a growing skepticism about the efficacy of central power and central decision-making, we have recently witnessed the rise of an ideology which sees local initiatives as an economic panacea. In today's world, there is hardly any country that is not talking about moving towards decentralization. In the former socialist countries of Eastern Europe, shifting greater responsibility to local authorities is seen as a way to break the 'grip' of central planning system (Mizsei, 1994; Caiden, 1993; Wallich, 1993). Third World countries are turning to decentralization with the hope that it would help them escape from the traps of economic backwardness and ineffective governance (Lindauer, 1992; Leigland, 1993). The more advanced countries are no exception to this trend either (Rousseau, 1987; Patsouratis, 1990; Pickvance, 1991). Such traditionally centralized countries as France and Great Britain have been experimenting with various forms of decentralization since the early 1980s (Schmidt, 1990). In the name of "new federalism," President Reagan of the United States placed decentralization as one of his top priorities, and the currently Republican-dominated Congress pledges to confer more autonomy on state and/or local governments (Hush, 1993). Even countries like Canada, whose local governments were strong to begin with, are also working on further decentralizing (Painter, 1991). In this world-wide trend, China seems to have been marching ahead of all with an extent of decentralization probably greater than that of any other country. By 1994, the ratio of its central government's revenue to GDP had fallen to 5.1%, probably the lowest in the whole world.¹ This development has prompted some Chinese scholars to question if China has gone "too far" in its decentralization (Wang and Hu, 1994).

Is there a "floor," or lower limit to decentralization? Today, few people doubt that centralization may have an invisible "ceiling" or upper limit, beyond which further centralization will inevitably engender serious economic and political crises. Although it seems intuitively clear that decentralization may also have a limit, a lower limit, this issue has not yet attracted much attention. Given the extended period of centralization in the previous decades, people may still be very much preoccupied with the problems associated with over-centralization, thus not yet ready to think about the

drawbacks of decentralization. Some may even believe that a little excess of decentralization will better help their countries to break away from the centralized days. Such apprehension about centralization is understandable. In most countries, some degree of decentralization is indeed necessary. But this does not mean that the more decentralized, the better. Once a certain line is crossed, decentralization may also give rise to serious crises. While an over-centralized system may result in huge efficiency losses, an overly decentralized system could end up with the dissolution of the system itself. The discussion of the bottom line of decentralization thus is not only of academic interest but of practical importance as well. As for China, the home of one-fifth of the world population, any potential danger of its disintegration should be treated with extreme care. Otherwise, China, its neighbors, and even the whole world may have to pay a high price for such negligence.

The purpose of this article is to explore where the bottom line of decentralization may lie and whether China has crossed it. If we think of the extent of centralization/decentralization as a continuum rather than an either-or proposition, our task is to find out at which point between the polar cases decentralization may be considered to have gone too far. The section I attempts to determine the areas in which centralization is unequivocally imperative, focusing both on the expenditure side and on taxation side. If a system is decentralized to the extent that it incapacitates the central government from properly functioning in these areas, then we may say that decentralization has gone too far. Whereas section I intends to establish conceptually the lower limit for decentralization, the section II tries to estimate in quantitative terms whereabouts the lower limit of decentralization may lie in today's world. The last section uses examples from China to show what consequences over-decentralization is likely to bring about.

Before we move on, a few words about the concept of decentralization may be in order. In this article, decentralization is defined as a diffusion of decision-making authority. Such a diffusion could have two dimensions: first, the balance between government and market, i.e. shifting responsibilities and resources from the governmental to non-governmental sectors; and second, intergovernmental, i.e. shifting responsibilities and resources downwards from the central to local governments. Given the concept's complexity, there can

hardly be any single unambiguous, non-arbitrary measure of the extent of decentralization. The following four measures all are useful, but none by itself gives a clear picture of the power relations that are at the heart of this discussion.

- (1) central government expenditure as a percentage of total government expenditure (CGE/TGE);
- (2) central government expenditure as a percentage of gross domestic product (CGE/GDP);
- (3) central government revenue as a percentage of total government revenue (CGR/TGR); and
- (4) central government revenue as a percentage of gross domestic product (CGR/GDP).²

The first ratio is the most common measure of decentralization used in public finance research. But it is by no means a foolproof indicator. In most developed countries, for instance, this ratio has declined steadily since the 1950s. In the meantime, however, the other three ratios have been more or less on the rise (Gould, 1983; Bird, 1986). Thus, it is possible for a country to undergo a trend towards decentralization in one respect, but centralization in another. Different fiscal indicators suggest different results. A decentralizing trend becomes unmistakable, however, if all the four ratios are simultaneously falling. As we will see later, despite their enthusiastic rhetoric, few countries have moved towards decentralization on all the four fronts.

What Should Not Be Decentralized?

Function Assignment

Even under an ideal situation, it is impossible for subnational governments to undertake all kinds of governmental functions. A system in which decision-making is wholly decentralized is just as inconceivable as a system in which decision-making is wholly centralized. Some governmental functions are better performed by lower levels of government, whereas others have to be carried out by the central government. What is the optimal allocation of government responsibilities? Based upon his tripartite division of the public sector--allocation, distribution, and stabilization, Richard

Musgrave offered a proposal for the assignment of functions in his monumental treatise, The Theory of Public Finance (1959). In his view, governmental functions should be carefully divided among central and local governments so as to ensure allocative efficiency, distributive equity, and macroeconomic stability. His theory has since been widely accepted.

1. Allocation of Public Goods

Due to the non-rival and non-excludable characteristics of public goods, government action is generally believed to be necessary for the efficient provision of collectively consumed goods and services.³ Which level of government should undertake this task? There is virtually universal agreement that local governments should have autonomy in the provision of local public goods. This rule, however, must be modified in light of two constraints:

1) Inter-jurisdictional externalities. Local public goods and services provided by one jurisdiction may affect the utility levels of residents of neighboring jurisdictions. When such a situation occurs, the jurisdiction in effect imposes externalities on others. Whether externalities are positive (e.g. education) or negative (pollution), one expects decision-making at the local level to result in an inefficient allocation of resources, because the spill-over benefits or costs tend to be overlooked by the local residents (Weisbrod, 1964).

2) Economies of scale in production. While many local services, such as police and fire protection, can be provided with full attainment of the economies of scale at the local level, the production of other services may exhibit significant economies of scale, implying that the unit costs of production would decline if several jurisdictions join forces in their production efforts.

The two constraints suggest that wherever inter-jurisdictional externalities and scale economies are present, the supply of local public goods should be determined through some form of inter-governmental cooperation that internalizes the externalities or/and exploits scale economies.⁴ If large numbers of jurisdictions are externally affected and thereby this solution is simply not applicable, then a higher level of government should step in to coordinate local decisions through appropriate subsidies or taxes.⁵

Which level of government is most appropriate for this task? It depends. Generally speaking, the task should be assigned to the first higher

level of government that is able to take account of economies of scale and to internalize interjurisdictional externalities. In any event, as far as efficient allocation can be done at subnational levels, the central government should refrain from unnecessary interventions.

However effective and efficient subnational governments are in providing local public goods and services, they are not in a position to undertake activities that affect all citizens in the nation irrespective of their places of residence. Coming closest to the definition of pure public goods, these activities may be called "national public goods," of which national defense is the best example. National public goods have to be provided by the central government, because subnational governments have neither incentive nor capacity to provide them.

2. Redistribution

According to Richard Musgrave, redistribution refers to "adjustment of the distribution of income and wealth to assure conformance with what society considers a 'fair' or 'just' state of distribution" (1984). Which level of government should bear the responsibility of redistribution? Private redistribution is certainly possible and does indeed go on, both through the agency of nongovernmental charitable institutions and through direct transfers between individuals. There is also some scope for local redistribution, for a community is likely to show more concern for the locally indigent than for the poor elsewhere. However, one has reasons to doubt that decentralized measures can achieve the objective of redistribution.

Since income levels differ between areas, a given reduction in overall inequality can be achieved only if all subcentral governments act in concert to alter the existing distribution of income. Such cooperation, however, is unlikely in a highly decentralized system. To the extent that the reduction of inequality is perceived as a national goal, subnational governments have incentives for strategic behavior, that is, to misrepresent their true preferences for equality. Thus, even if members of all jurisdictions wish a more egalitarian distribution of income and wealth throughout the country, decentralized decision-making may result in no action.

Moreover, in the absence of interregional coordination in distribution, the potential mobility of households and firms tends to restrict the ability of subnational governments to make independent choice about redistributive

adjustment. If a local government, for example, were to undertake a more redistributive policy than its neighbors, it would create compelling incentives for high-income persons to immigrate elsewhere and for low-income households to move into the jurisdiction. Such a measure may end up creating more equality in every individual jurisdiction while exacerbating income disparities between jurisdictions--a result that is hardly desirable from the national perspective. Furthermore, under a decentralized system, the potential mobility of the poor may create a type of externality that is likely to lead to the underprovision of assistance to low-income households everywhere--an even worse outcome. On the other hand, if the people are not allowed to move between regions, the economic efficiency will be hurt.

For those reasons, the redistributive functions of government should be assigned to the central level and the role of subnational governments should be confined to those policies that do not have a significant redistributive impacts.

3. Stabilization

For much of the post-war period, there has been a general consensus that macroeconomic management for stabilization purpose must be largely centralized.

The goals of stabilization are low inflation, full employment, and balanced current account. An important instrument to achieve these goals is fiscal policy--a policy which intends to produce desirable effects and avoid undesirable effects on the national economy through movements in budget aggregates, or more precisely, through managing the amount of government revenue on the one hand and the amount and direction of public expenditure on the other. There is only limited scope for decentralized management of aggregate demand, because subnational governments are generally neither able nor willing to pursue an active stabilization policy.

They are not able to do so because as long as local economies are open, uncoordinated local stabilization policies would be ineffective. One would expect public expenditures to rise when the rate of unemployment rises, and to be reduced when either the rate of inflation rises. The stimulative effects of local public expenditures, however, would tend to flow out the local economy as the bulk of any new spending is directed to goods produced

elsewhere. Similarly, no cut of a subnational government' spending is large enough to affect the overall level of inflation in the nation.

The inability to affect the overall level of economic activity makes subnational governments fully aware of the danger of bearing the costs of their individual countercyclical efforts without getting back their share of the benefits. Therefore, subnational governments are unlikely to have a strong incentive independently to carry out a stabilization policy unless it is guaranteed that all others will do the same. Voluntary collaboration on macroeconomic management, however, is very difficult to realize, for the incentives of subnational governments are structured in such a way that they all desire to 'free-ride,' namely, relying on whatever stabilization programs are undertaken elsewhere. Thus, if subnational governments are assigned the function of maintaining macroeconomic stability, we may see a negative-sum non-cooperative game of the "prisoner's dilemma" type. As a result, one can expect insufficient levels of public countercyclical activities in a highly decentralized system of decision-making (Oates, 1972).

The above discussion suggests that subnational governments cannot be entrusted with the task of macroeconomic stabilization. Given the fact that cyclical movements in aggregate economic activity are largely national in scope, spending and taxing decision intended to affect the level of unemployment and inflation should be made by the central government. Only the central government is able to internalize spillover effects of uncoordinated subnational activities, and effectively exercise countercyclical policy. Indeed, macroeconomic management nearly everywhere rests with the central government.⁶

To minimize destabilizing effects caused by changes in aggregate subcentral spending, the central government has to regulate subcentral taxation and expenditure in one way or another. Where central allocations form a substantial percentage of subnational government revenue, this is a relatively easy task: controlling the magnitude of these allocations is a ready instrument of macroeconomic regulation. In countries where there are no revenue-sharing grants, the central government has to control subcentral spending indirectly, which is bound to be much more difficult.

To sum up, the theoretically optimal division of labor between various levels of government would assign the function of stabilization solely to the

central government, the function of redistribution largely to the central government, and the function of allocation partially to the central government. As far as the last function is concerned, allocational activities whose benefits are nationwide in scope should be conducted at the national level, whereas other activities should be assigned to governmental units coinciding in size with the group that directly benefits from the service involved.

Tax Assignment

For the reasons to be discussed below, the degree of centralization in taxation should outstrip the degree of centralization in expenditure decision-making.

First, at minimum, the central government should have enough revenue to perform the functions assigned to it. This consideration limits the extent to which revenue power can be devolved. Second, since redistributive tax measures at subnational levels may lead to outmigration of the heavily taxed households, the central government is in a uniquely advantageous position to employ progressive redistributive taxes. To the extent that we desire progressive taxation, we must look primarily to the central government. Third, because the distribution of natural resources is highly unequal across the country, excessive inequality would occur if taxes on deposits of these resources are collected by the local governments. Such taxes are best collected by the central government. Fourth, due to the mobility of labor, capital, and goods across local boundaries, it is undesirable to assign to limited geographical jurisdictions much power to levy and collect taxes that inevitably have national effects. Otherwise, subnational governments may have incentive to target inter-jurisdictional commerce for unfavorable treatment, and to extract revenues from sources for which they are not accountable through exporting the burden of local taxation to outsiders.⁷ In addition, subnational governments' attempts to lure new business into their own jurisdictions may give rise to active tax competition that tends to produce either a generally low level of subnational tax effort or a subnational tax structure with strong regressive features (Oates, 1990b). To solve such problems, a certain degree of uniformity should be introduced to taxes that have spillover effects. Finally, given the substantial economies of scale in tax collection, the central government has a comparative advantage in tax

administration. The unit cost of collecting revenues from most lucrative tax sources would be much lower for national than for subnational governments.

Reflection on these considerations suggests that the central government should be responsible for collecting taxes suitable for economic stabilization, progressive redistributive taxes, taxes on highly mobile bases, and taxes on bases that are distributed highly unequally across the nation. Subnational governments, on the other hand, should be allowed to collect only taxes that are cyclically stable, taxes on relatively immobile bases, and user charges and fees (Musgrave, 1983).⁸

If the rules on function assignment and tax assignment we have discussed above are to be followed, clearly a vertical imbalance will appear: taxation is more centralized than public expenditure, and thereby subnational governments may find it impossible to fulfill their obligations merely with the revenues they raise by themselves. Rather than a bad thing, this disjuncture enables a country to reap efficiency gains from centralized taxation and relatively decentralized expenditure decision-making. Many countries have combined a highly centralized tax system with a system of substantial decentralization in public expenditure, where the ratio of central to total government revenue is higher than the ratio of central to total government expenditure. As for the resulting vertical imbalance, it is commonly remedied by financial transfers from the center to lower levels of government.⁹

The above arguments for centralization in function assignment and tax assignment are not based upon the belief that the central government can better represent the general interest of the population. Rather, centralization is considered imperative in certain key aspects of socio-economic life only because other actors' performance would be inferior.

How Decentralized Is Too Decentralized?

After having discussed the principles for the assignment of expenditure responsibilities to different levels of government and the principles for the assignment of revenues to finance these expenditures, we are now in a position to gauge the limits of decentralization.

It should be noted that the finding of a decentralization trend by itself cannot be taken as evidence of overdecentralization. In an overly

centralized system, some measure of decentralization is expedient. A judgment that decentralization has gone too far has to be related to some norm or concept of correct level. The preceding discussion has defined the proper level of centralization/ decentralization. We know what types of spending should be conducted by the central government and what types of taxes should be collected by the central government. Obviously, if the central government has more revenue than it needs to perform its functions, we cannot say that decentralization has gone too far. If the central revenue is just enough for the central government to play its basic functions but there are no extra funds for it to use fiscal transfers to achieve other desirable goals, the level of centralization is probably already lower than what is proper. When the central government cannot adequately fulfill its primary obligations with its own incomes, then the decentralization has probably gone beyond its lower limit.

This rule of thumb for estimating the lower limit of decentralization is instructive but not operational. It may be useful to go a step further, namely, to define the limit of decentralization in quantitative term. This is by no means an easy task, for countries differ from each other widely in size, population, culture, the form of political system, the stage of economic development, and the degree of urbanization, all of which may affect the optimal degree of centralization/ decentralization of a given country. Apparently, it is impossible to pinpoint where exactly the lower limit of decentralization lies for a specific country at a particular period of time. However, if we compare data from a large number of countries over a long period of time, we may be able to determine a "normal" range of decentralization. Then, if the level of decentralization in a country is found to have fallen below the normal range, we may have reasons to believe that it has crossed the lower threshold.

[FIGURES 1, 2, 3, AND 4 ABOUT HERE]

In what follows, I will try to demonstrate that a normal range of decentralization can be identified and that China is already outside the normal range. Composed of time series data (1973-1992) from 27 countries for which statistics are available, Figures 1 through 4 show:

- 1) Between 1973 and 1992, the ratio of central to total government revenue exceeded 60% in all but three countries (China, the former Yugoslavia and Canada) (Figure 1).¹⁰

2) Between 1973 and 1992, the ratio of central to total government expenditure exceeded 50% in all but four countries (China, the former Yugoslavia, Canada and Brazil) (Figure 2).

3) Between 1973 and 1992, the ratio of central government revenue to GDP exceeded 10% in all but four countries (China, the former Yugoslavia, Bangladesh, and Peru) (Figure 3).

4) Between 1973 and 1992, the ratio of central government expenditure to GDP exceeded 10% again in all but four countries (China, the former Yugoslavia, Bangladesh and Peru) (Figure 4). Bangladesh fell below 10% only in the beginning of the 70's and Peru fell below 10% only for one year. Therefore, only China and the former Yugoslavia were the real exceptions.

5) Between 1973 and 1992, the average ratio of central to total government revenue was higher than the average ratio of central to total government expenditure in 21 out of the 27 countries (compare Figure 1 to Figure 2).

These observations are based upon the data of many countries. These countries are different in size, geographical location, cultures, and the stage of economic development. Some are democratic while the others are not; some have federal systems but the others have unitary systems. Despite all these differences, the data presented in Figure 1 through 4 suggest that, in the contemporary world:

(1) A country's central revenue should not fall below 60% of total government revenue.

(2) A country's central expenditure should not fall below 50% of total government expenditure.

(3) A country's central revenue should not fall below 10% of GDP.

(4) A country's central expenditure should not fall below 10% of GDP.

(5) The ratio of central to total revenue should not be lower than the ratio of central to total expenditure.

If all the five ratios fall below the lower thresholds in a country, then the country can be said to have definitely gone too far in its decentralization. From Figures 1 to 4, we find that some countries were below the standards only in one or two aspects. These countries might have not really exceeded the lower limit of decentralization. For example, Canada's

central government revenue and expenditure were lower than 50% of total revenue and expenditure respectively, but they are higher than 10% of GDP. Peru's central government revenue and expenditure fell below 10% of GDP in the 80's, but the distribution of total revenue and expenditure between the central and subnational governments was fairly centralized. Brazil's central government expenditure was only 31% of the total expenditure in 1989, but its central government revenue reached 95% of the total revenue. Besides, its ratios of central government revenue and expenditure to GDP were very high. Because of the coexistence of incongruous trends, whether decentralization in these countries had gone too far was not very clear.

However, when a country falls below all the five thresholds, there is little doubt that it has exceeded the lower limit of decentralization. According to our data, only two countries belong to this category: China and the former Yugoslavia, both of which appear as exceptions in all the four figures.

[TABLE 1 ABOUT HERE]

Table 1 further reveals the differences between these two countries and the rest. The 1980's was an era of decentralization; every country tried to show how enthusiastic it was for decentralization. But rhetoric for change does not mean real change. Probably nobody was more forceful in advocating decentralization than President Reagan of the United States and Prime Minister Thatcher of the Great Britain. People might have expected drastic changes in the two countries. However, the reality speaks otherwise. Between 1980 and 1989, the ratios of federal revenue and expenditure to total government revenue and expenditure went down somewhat in the United States, but they stayed about the same as percentages of GDP. In the Great Britain, public finance actually became more centralized during the years in which Thatcher was Prime Minister. Among the 26 countries included in Table 1, some (India, South Africa, Canada, Mexico and Finland) became more centralized (i.e. "+" signs in all "change" columns), some moved towards decentralization in certain aspects but stayed the same or even moved towards centralization in the others. Only five countries showed movements towards decentralization in all the four aspects (i.e. "-" signs in all "change" columns). Within the five countries, Iran, Argentina and Peru could not be said to have fallen below the lower limit of decentralization, because not all of the four ratios were below our standards. For example, because Iran had started with a highly

centralized system, it remained fairly centralized by 1989 after a remarkable movement towards decentralization. Argentina's decentralization was most phenomenal among all the countries in this period, but by 1989 none of the four ratios we use to measure the degree of decentralization fell below our thresholds. China and the former Yugoslavia, however, again distinguished themselves from others. Not only their decentralization covered all the four dimensions, but all the four ratios had fallen below their lower limits by 1989. The former Yugoslavia went the furthest. By 1989, its federal government could only control 4% of its GDP and 20% of the total revenue and expenditure. It is hard to imagine how such a financially weak government could perform its duties. In fact, it could not. And sure enough, only a year later, in 1990 the country disintegrated. The example of the former Yugoslavia effectively demonstrates what could happen to an excessive decentralized system.

The Case of China

The previous section suggests that China has probably gone past the lower limit of decentralization. Central control over financial resources has declined to a degree analogous to that observable in the former Yugoslavia of the early 1980's. Is there any reason to get alarmed about the trend? Some see ominous signs. They suggest that China is already on its way to national breakup in the fashion of the former Yugoslavia (Friedman, 1993; Goodman and Segal, 1994). Others sharply disagree. In their view, decentralization is China's receipt for economic success. While admitting that some problems have arisen from a weak central government, they see no reason for China to change its course (Chung, 1995; Montinola, Qian, and Weingast, 1995).

Indeed, no one can deny that decentralization has been instrumental in generating high economic growth in China over the past 16 years. But it should be noted that Yugoslavia once also "produced spectacular economic and income growth... matching and sometimes surpassing those of Japan and South Korea" (Denitch, 1990).¹¹ There may be "little evidence to support many of the cataclysmic predictions about China's breakup" (Huang, 1995), but it is not prudent to overlook possible political consequences of excessive decentralization, how remote they may seem at present. Even if the worst scenario would never materialize, the drive for decentralization may give rise

to many grave negative effects when it is carried to extremes. What would happen once a system becomes over-decentralized? Can the central government still effectively exercise its power? These are the questions I will try to answer in this section. We have reason to believe that excessive decentralization may significantly weaken the central government's capacity to perform the functions it is expected to perform. The result will be a series of economic, social and political crises. The situation in China seems to have confirmed this conviction.

1. The Provision of Public Goods and Services

Due to the shortfall of revenue, Chinese central government cannot adequately provide national public goods and services. Examples are abundant. Suffice it to point out the following three.

1) Infrastructure

China's industrial infrastructure in general is deficient. Take railroad and highway transportation. The United States is about the same size as China, but the mileage of its railroad is more than five times longer than China's and highway six times longer. One may argue that the United States is not a good comparison for China because it's too advanced. Then, let's look at India. India is at about the same stage of development as China is and has an area of only one third of China's. From Table 2, we can see that India's railroad and highway are much longer than China's. The deficiency of railroad and highway has become a bottleneck in China's economic development, which is admitted by both government officials and economists.

[TABLE 2 ABOUT HERE]

In China's context, the shortage of transportation facility may even lead to serious social and political problems. This is confirmed every year during the Chinese New Year when millions of anxious passengers packed all major train stations and the railroad transportation gets strained. Long before the spring season of 1996, the central government had issued directive after directive requiring local governments to adopt every possible measure in order to control the flow of passengers during the period of Spring Festival. The basic reason for the central government to do so was its fear that when passengers became impatient, they might turn into rioters. Such

administrative maneuvers are not going to solve the problem, however, if China's transportation capacity remains falling behind ever-growing demands.

There are also local railways and highways that are not national public goods. In the past few years, some provincial governments have made big investment to improve the local conditions of transportation. But because railroads and highways have strong externalities, these government often try to prevent people from "free-riding" by setting up toll gates to collect use charges. The result is an excessive number of toll posts set up along these roads, which severely damage the efficient use of them. Although the central government has repeatedly laid injunctions upon local governments to remove these toll posts, the number of toll posts has been on the rise. It is hard for the central government to enforce its regulations because the money to build the roads are from local funds.

2) Environment

China has been developing at the expense of ecological balance and the environment. According to a report by Ecological Environmental Research Center under the Chinese Academy of Science, China's current ecological situation was poor to start with and has been getting worse in the recent years except for some localized improvements. It asserts that China now faces a dangerous ecological crisis (Chinese Academy of Science, 1990). The area affected by acid rain, for instance, has been expanding from 1.75 million km² in 1985 to 2.8 million km² in 1993.¹² The expansion of acid rain coverage area not only threatens China's economic ecology and the health of its population, but also causes dissatisfaction and protests from such neighboring countries as Japan and Korea.

[TABLE 3 ABOUT HERE]

At the same time as the environment is degenerating, the fund for pollution control has not increased accordingly (see Table 3). Among all sorts of pollution control funds, probably only two, namely, "capital construction fund" and "environmental protection subsidy fund" come from the government budget. "Technical updates and transformation fund" and "retained profits" come from extrabudgetary income, and "loans" from the bank. From Table 3, we can see that governmental budgetary allocations on pollution control accounted for only 0.12% of GNP in 1985, and since then the ratio has never exceeded the 1985 level. In 1993 it fell to 0.08%. The present total

cost of pollution is already estimated higher than 100 billion yuan, or nearly 2.5% of GDP.¹³ If the central government doesn't make efforts to control pollution and only relies on local governments and enterprises to solve the problem, the worsening of the Chinese environment will not only result in ecological disasters but also significantly slow down economic growth in the near future.

3) National Defense

A far more serious problem is that China's central government seems unable to feed the country's armed forces.

In current prices, China's defense budget seems to have increased over time, except for the two years right after the conflict with Vietnam (1980 and 1981). Measured in 1978 prices, however, China's defense budget has hardly increased at all in the last 16 years (see Figure 5). As a consequence, the PLA's share of the national budget dropped sharply from 16.0 percent in 1980 to 8.6 percent in 1986. Subsequently it fluctuated around 8.5 percent for eight years until 1994 when it reached 9.5 percent (see Figure 6). Since China has also seen a drastic decline in the ratio of state budget to gross domestic product (GDP) in the same period, defense budget as a proportion of GDP may serve as a more telling measure of China's expenditures on the PLA. Figure 6 clearly demonstrates that this ratio has dipped throughout the whole reform period except 1979, the year of the Sino-Vietnamese war. Thus, officially China spends only a little more than 1.2 percent of GDP on its armed forces at present as compared with 4.7 percent in 1978.

[FIGURES 5 AND 6 ABOUT HERE]

Although, in addition to the official defense budget, there are "hidden sources" of defense expenditures, the PLA has practically no control over much of them. Whether these expenditures go up or down, they cannot help alleviate the PLA's financial difficulties (Wang, forthcoming). Indeed, "the overriding financial fact in the development of the PLA throughout the Deng period has been inadequate funding" (Joffe, 1994). The PLA's budget covers at most only 70 percent of PLA's spending, not enough to meet even the minimum requirements of the armed forces (Hyer, 1992). The lack of funds has "hindered the PLA's modernization efforts and preparedness not only in terms of equipment, but also in basic necessities such as adequate food, clothing, and housing" (Bickford, 1994). In order to help compensate for budgetary shortfalls, the

PLA has been forced to engage in various kinds of economic activities with the express purpose of earning money. While the money earned through those activities might have helped to make up the shortfall in military appropriations, the ways in which such funds were raised were absolutely running at cross-purposes with China's intention to strengthen its national security. Most observers agree that the deep involvement in the economy of the PLA has significantly weakened its military cohesion and professionalism (Skebo, 1992; Joffe, 1994; Goodman, 1994; Ding, 1994). No matter how profitable the PLA's economic activities are, their overall impact on the armed forces has been negative: they inhibited the enhancement of China's military capabilities rather than strengthened its security. Few countries in the world allow their armies to enter the realm of business and/or compel their armies to raise part of their own operational funds, because they know that the cost of such an option outweighs the gain. Providing funding for national defense is the primary responsibility the central government has to take in every country. It is ominous that the central government of China cannot do it.¹⁴

2. Redistribution

The shortfall of central revenue has weakened the central government's capacity to redistribute income nationwide. This can be seen from several aspects.

1) From Section I, we know that the function of redistributing income and wealth should be undertaken by the central government. However, in China, those expenditure categories of redistributive nature are normally under the control of subnational governments. These categories include "culture, education and public health funds", "pension and social welfare funds" and "price subsidies" (see Table 4). Such a phenomenon is rare in other countries.

[TABLE 4 ABOUT HERE]

2) Section I and II also suggest that the ratio of central to total government revenue should be higher than the ratio of central to total government expenditure. A surplus from this gap will enable the central government to help poor provinces' economical development and therefore reduce disparities in income, public services and infrastructure between provinces. However, as Table 5 indicates, the ratio of central to total government

revenue is usually lower than the ratio of central to total government expenditure in China. This was the case in six out of nine years in the period between 1985 and 1993.

[TABLE 5 ABOUT HERE]

In fact, Table 5 exaggerates the percentage of central revenue because one fourth of its revenue is debt income. If adjusted according to international conventions, the percentage of the central revenue will be even lower. Because the central government doesn't have enough income to cover its expenses, it can hardly redistribute income and wealth by using fiscal transfers.

[TABLE 6 ABOUT HERE]

3) With the shrinking of the financial power of the central government, the total amount of central transfers has been declining. This trend is clear as shown in Table 6. In 1981, 17 out of the 29 provincial units had a financial surplus. Shanghai then had to turn over to the center 90% of its income, and many of the other provinces had also to hand in 50%--70% (Beijing, Tianjin, Liaoning, Jiangsu, Zhejiang and Shandong). Meanwhile, for the twelve deficit provinces, subsidies from the central government could be as high as two to eight times more than these provinces' own incomes. But since then the provinces with financial surpluses have been turning over less and less money to the center, and the amount that they submitted to the central coffer accounted for an increasingly smaller percentage of their incomes. By 1991, except for Shanghai, which still turned in 47% of its income to the center, no other provinces with financial surpluses was turning in more than 20% of their incomes to the center. By this time, the number of provinces that were running deficits had increased to twenty.¹⁵ But except for Tibet and Jiangxi, central subsidies to the provinces with deficits had all decreased sharply. As the amount of money the center was getting from surplus provinces and the amount it was giving to deficit provinces all decreased, the center's function as a redistributor was also weakened.

4) Because the central government is not financially strong enough to redistribute income and wealth effectively between the provinces, the already serious problem of regional disparities has been aggravated (Hu and Wang, 1996).

[TABLE 7 ABOUT HERE]

Table 7 gives six different indices of regional disparities in China in 1990. The three regions display great variance in their levels of economic development (I, GNP per capita; V, labor productivity), in their potential for future development (II, fiscal expenditure per capita; III, investment per capita; IV, government investment per capita; and VI, literacy rate), and in their quality of life (VII, the ratio of doctor to population). The gap appears to be large (Max/Min and coefficients of variation).

[TABLE 8 ABOUT HERE]

Table 8 shows the changing patterns of regional disparities over time. In the early years of reform, while the relative gap (max./min.) was narrowing down, the absolute gap (max.-min.) was growing. After 1990, however, both relative and absolute gaps began to widen at an accelerated pace. By 1994, GDP per capital in China's richest province, Guangdong, was 4.2 times as high as that of the poorest province, Guizhou. And the absolute gap reached nearly 5,000 yuan. China's decentralization drive seems to have worsen regional disparities.

Some people hypothesize that the contrast between the dynamic coastal regions and the slow interior is likely to tear China apart, for poor interior provinces may feel left out, while prosperous coastal provinces may feel they are dragged down by the rest of the country.¹⁶ If China is to avoid national discord born of regional anomalies, the government must help backward regions to catch up more advanced ones. The possibility of potential conflicts between regions is a reason why China's Ninth Five-Year Plan (1996-2000) gives priority to narrowing regional disparities. Unless the center's ability to perform the function of redistribution is to be enhanced, however, the gaps are unlikely to narrow.

3. Stabilization

Another problem with a financially weak central government is that it may be effectively stripped of one of its instruments for maintaining macro-economic stability--fiscal policies. Section I suggests that the function of maintaining macroeconomic stability should rest exclusively with the central government, because the market will not stabilize itself and local governments are not in a position to manage aggregate demand. The central government may use taxation and public expenditures to regulate aggregate demand and thus

achieve the goal of stabilizing the macroeconomy. When the economy is growing too fast, the central government may increase tax rates and cut public spending to contract demand; when the economy is slowing down, the center may decrease tax and increase public spending to expand demand. If a government actively uses fiscal policies to adjust aggregate demand, we should be able to see a positive relationship between the ratio of government revenue to GDP and the growth rate of the GDP, and a negative relationship between the ratio of government expenditure to GDP and the growth rate of GDP. But when we test these two hypothetical relationships by subjecting China's data from 1978 to 1993 to a linear regression analysis (see Figures 7 and 8), we find that both relationships are negative and the coefficients of correlation in both cases are very small ($R^2=0.029$ and $R^2=0.003$). These results indicate that in the past 17 years, governmental revenue and expenditure has been decreasing in China whether the economy was growing fast or slowly. In other words, the central government has failed to utilize fiscal policies for the purpose of stabilization. This is not to say that the central government didn't try, but only that under the "eating in separate kitchen" fiscal system, the central government could not do as much as it wanted to.

China's system of fiscal responsibility left taxation only useful for collecting revenue but lost its function of demand management. Theoretically, setting the tax base and the tax rate was still within the power of the center, but in fact, provincial governments could change both as they desire, as long as they turned in the amount of money that was agreed in their negotiations with the center. Within the provincial jurisdiction, tax cut and tax exemptions were all decided by the local department in charge. The local governments effectively took the control of tax base and tax rates. Thus, if they ignored the macroeconomic situation and abused this power to maximize local interests, the macroeconomy was unlikely to be stable. Even if the local governments did not abuse their power, the fiscal responsibility system was still not good for the stability of macroeconomy. This was because the logic this system operated on is that when the economy was growing rapidly, the ratio of central revenue to GNP would decrease and when the economy was slowing down, the ratio would increase. Rather than counter-cyclical, this logic was strongly pro-cyclical (Ma, 1994).

Because the system of "eating in separate kitchen" tied up the hands of the central government, the Chinese economy has fluctuated violently in the past decade, even though the average economic growth rate has been high. This was a result of the central government's inability to perform its duty of maintaining economic stability.

Conclusion

Everything has its limit. Once the limit is crossed, then a good thing may turn bad. Decentralization and centralization are no exception. If a central government takes into its hand everything that local governments can do, then it has gone too far in centralization. This is the fundamental problem of the traditional centrally planned economy. Therefore, to reform a centrally planned economy, decentralization is a must. However, decentralization does not mean to decentralize without limitation; and adopting market economy doesn't mean to deny the necessary roles of government. We say this because there are certain things that the market cannot handle and have to be done by government, and there are certain things that local governments cannot accomplish and have to be done by the center. If decentralization gets to a point where things ought to be done by the center are in local governments' hands and things ought to be done by the government are handled by the market, then we would only see the disadvantages of decentralization instead of the advantages.

There is no doubt that the Chinese economy has benefited from decentralization in the past decade. At the beginning of the economic transition, reform did mean decentralization because the reform could not take off the ground if the government stayed overcentralized. However, after more than 15 years of decentralization, it is time for China to institutionalize the relationships between the government and market on the one hand and between the center and the provinces on the other. It is foolish and irresponsible to continue pushing for further decentralization when decentralization has approached or already passed its lower limit. Rational reformers must carefully weigh the pros and cons of decentralization and

centralization and make institutional arrangements accordingly. Only then will Chinese economy be on the road to health and sustainable development.

Table 1: Changes in the Degree of Centralization (%), 1980-1989

Country	CGR/GGR			CGE/GGE			CGR/GDP			CGE/GDP		
	1980	1989	Change	1980	1989	Change	1980	1989	Change	1980	1989	Change
Developing Countries												
China (1978-1992)	46	39	-7	47	41	-6	14	5	-9	15	8	-7
Yugoslavia	27	19	-8	30	18	-12	8	4	-4	9	4	-5
Korea	82	76	-6	67	63	-4	18	18	0	17	17	0
Thailand	95	95	0	93	95	+2	15	19	+4	20	16	-4
India	69	71	+2	52	59	+7	12	15	+3	13	19	+6
Indonesia	98	97	-1	93	97	+4	21	17	-4	22	19	-3
Iran	96	94	-2	98	95	-3	22	13	-9	36	17	-19
Egypt	100	100	0	86	86	0	47	35	-12	46	37	-9
Ethiopia	98	98	0	99	99	0	19	25	+6	25	34	+9
Kenya	94	93	-1	89	94	+5	24	23	-1	28	32	+4
South Africa	85	89	+4	72	92	+20	23	29	+6	22	32	+10
Argentina	75	59	-16	64	55	-9	21	13	-8	23	15	-8
Brazil	80	95	+15	62	31	-31	22	92	+70	20	35	+15
Mexico	80	85	+5	75	91	+16	16	19	+3	18	24	+6
Peru	85	77	-8	87	86	-1	17	6	-11	19	11	-
Developed Countries												
Australia	78	72	-6	77	70	-7	25	27	+2	26	25	-1
Austria	75	74	-1	74	77	+3	35	35	0	37	39	+2
Belgium	94	93	-1	90	93	+3	43	42	-1	50	47	-3
Canada	47	48	+1	49	50	+1	18	19	+1	20	22	+2
Japan	65	65	0	49	48	-1	28	27	-1	14	13	-1
Finland	70	72	+2	68	70	+2	27	31	+4	28	29	+1
France	91	88	-3	90	89	-1	40	41	+1	40	42	+2
Germany	63	64	+1	61	63	+2	29	29	0	30	29	-1
Spain	89	85	-4	85	84	-1	24	30	+6	27	33	+6
United Kingdom	85	86	+1	82	86	+4	35	36	+1	38	35	-3
United States	63	60	-3	65	64	-1	21	21	0	23	23	0

CGR: Central government revenue
GGR: General government revenue
CGE: Central government expenditure
GGE: General government expenditure

GDP: Gross domestic product

Source: IMF, Government Finance Statistics, 1991.

Table 2. Railroad and Highway in China, India and US (km)

	Railroad	Highway
China	53,800 (1993)	1,14,000 (1995)
India	61,850 (1986)	1,970,000 (1989)
US	270,312 (1991)	6,365,590 (1991)

Source: People's Daily, October 5, 1994, January 22, 1996; CIA, The World Factbook, 1992, pp. 22, 156, 359.

Table 3. Pollution Control Funds, 1985--1993, (billion yuan)

	1	2	3	4	5	6	1/GNP	2+3/GNP
1985	2.21	0.51	0.49	0.06	0.06	0.32	0.26%	0.12%
1988	4.25	0.96	0.66	1.21	0.01	0.83	0.30%	0.12%
1989	4.35	0.95	0.63	1.46	0.11	0.75	0.27%	0.09%
1990	4.54	0.09	0.68	1.34	0.11	0.75	0.26%	0.04%
1991	5.97	1.40	1.02	0.72	0.21	0.56	0.30%	0.12%
1992	6.47	1.40	1.09	1.79	0.22	0.60	0.27%	0.10%
1993	6.93	1.31	1.07	2.09	0.32	0.62	0.22%	0.08%

Note: 1, Total; 2, "capital construction fund"; 3, "environmental protection subsidy fund"; 4, "technical updates and transformation fund"; 5, "retained profits"; 6, and "loans".

Source: Chinese Statistics Yearbook 1993, p.822; Chinese Statistics Yearbook 1994, p.668

Table 4. Percentages of main items in expenditure by levels of government (1990)

Category	% of total exp.	% of cntrl gvn't	% of local gvn't
Capital Constr.	21.02	75.66	24.34
Tech. updates	2.62	8.52	91.48
New prod. deve.	1.84	73.91	26.09
Agri. prod.	3.71	7.37	92.63
Agri. admin.	2.72	12.63	87.37
Indus. admin.	1.22	31.90	68.10
Commer. admin.	0.14	11.49	88.51
Cul. edu. heal.	16.59	8.12	91.88
Sci. admin.	1.29	56.68	43.32
Pen. & welf.	1.57	0	101.05
Gov. admini.	8.78	8.75	91.25
Armed Police	0.88	100	0
Price subsidies	11.03	10.52	89.48
National defense	8.41	100	0
Repay. of loans	5.52	100	0
Geo. prospecting	1.05	100	0
Others	11.61	---	---
Total	100.00	36.5	63.5

Source: China Finance Statistics, 1950-1991; China Statistics Yearbook, 1994.

Table 5. Percentage of central and local government revenue and expenditures of the total (1985--1993)

	Central government		Local government	
	revenue	expend.	revenue	expend.
1985	37.9	45.3	62.1	54.7
1986	40.6	41.3	59.4	58.7
1987	38.2	42.1	61.8	57.9
1988	39.8	39.2	60.2	60.8
1989	37.5	36.4	62.5	63.6
1990	41.3	39.8	58.7	60.7
1991	38.2	39.5	61.8	60.5
1992	39.7	41.4	60.3	58.6
1993	33.3	37.0	66.7	63.0

Source: Chinese Statistics Yearbook 1994, p.220.

Table 6: Interregional Transfer in China, 1981-1991

Region	Volume of Transfer (100 Mi.)			Transfer as % of Revenue		
	1981	1985	1991	1981	1985	1991
Beijing	34.27	19.45	9.04	.6977	.3709	.1007
Tianjin	25.72	21.24	10.62	.6398	.4406	.1828
Hebei	10.79	3.49	2.00	.3166	.0773	.0201
Shanxi	2.23	-10.56	-4.13	.1132	-.4226	-.0568
Inner M	-12.19	-22.82	-27.22	-2.9303	-2.0088	-.6909
Liaoning	52.82	28.33	10.09	.6647	.3324	.0625
Jilin	-5.15	-12.83	-16.66	-.4804	-.5921	-.2667
Heilongjiang	-10.23	-7.21	-15.33	-.6541	-.1927	-.1618
Shanghai	155.26	139.52	90.36	.9051	.7683	.4709
Jiangsu	40.02	38.47	15.11	.6272	.4322	.1055
Zhejiang	17.22	20.85	23.94	.5015	.3579	.1974
Anhui	5.26	-3.72	-30.74	.2546	-.1233	-.5668
Fujian	.25	-5.54	-8.43	.0172	-.2209	-.1209
Jiangxi	-.85	-8.54	-14.13	-.0645	-.4371	-.2795
Shandong	26.35	16.23	1.02	.5079	.2403	.0071
Henan	8.39	-.58	-3.59	.2451	-.0119	-.0343
Hubei	13.93	6.66	-4.44	.3712	.1325	-.0467
Hunan	10.01	-.90	-5.71	.3188	-.023	-.0594
Guangdong	11.41	2.56	9.61	.2782	.0367	.05
Guangxi	-3.01	-9.57	-14.42	-.231	-.4742	-.2346
Sichuan	2.55	-5.40	-14.51	.0787	-.0919	-.0978
Geizhou	-6.96	-9.38	-10.26	-1.2429	-.6469	-.2249
Yunan	-3.04	-9.29	-11.04	-.2396	-.3389	-.1106
Tibet	-4.93	-10.89	-14.82	8.5	18.15	-23.1562
Shannxi	-2.94	-7.20	-13.14	-.2186	-.3547	-.2426
Gansu	1.79	-7.52	-11.34	.1378	-.4563	-.2836
Qinghai	-4.44	-7.69	-9.44	-4.1111	-3.2042	-1.0739
Ningxia	-3.17	-6.94	-8.90	-2.2014	-2.3849	-1.0723
Xinjiang	-13.17	-20.13	-26.06	-7.9818	-2.3766	-.9845

Source: Ministry of Finance, Zhongguo Caizheng Tongji, 1950-1985 [China Finance Statistics], Beijing: Zhongguo caizheng jingji chubanshe, 1988; Zhongguo Caizheng Tongji, 1950-1991 [China Finance Statistics], Beijing: Zhongguo caizheng jingji chubanshe, 1992.

Table 7: Indices of Regional Disparities, 1990

Province	I	II	III	IV	V	VI	VII
China	100	100	100	100	100	100	100
East							
Beijing	309	408	470	581	150	114	303
Tianjin	222	266	268	339	135	114	223
Shanghai	369	411	454	597	167	111	260
Jiangsu	124	96	143	80	127	100	93
Zhejiang	125	114	166	78	118	99	92
Fujian	100	109	95	88	109	99	84
Shandong	100	80	105	90	120	99	83
Guangdong	152	116	171	176	151	109	90
Liaoning	155	212	175	225	89	114	165
Central							
Hebei	85	82	79	75	83	100	86
Jilin	103	157	101	112	71	110	142
Heilongjiang	117	134	123	159	69	109	144
Anhui	69	58	59	50	80	84	70
Jiangxi	71	69	49	51	70	98	90
Henan	66	53	64	52	79	99	76
Hubei	95	80	70	72	98	100	113
Hunan	73	72	52	46	78	107	84
Shanxi	90	114	111	127	66	107	130
West							
I. Mongolia	84	141	80	98	57	101	132
Guangxi	63	77	43	40	91	107	75
Sichuan	68	68	55	63	74	101	85
Guizhou	50	63	37	46	76	82	77
Yunnan	68	109	59	56	96	80	80
Tibet	71	203	116	125	42	42	93
Shannxi	73	89	82	87	81	96	105
Gansu	67	91	67	85	81	77	93
Qinghai	94	169	128	178	76	76	131
Ningxia	84	141	117	142	74	87	125
Xinjiang	107	137	154	202	82	104	154
Max/Min	7.38	7.75	12.70	14.93	3.97	2.71	4.33
Coeff. of var (%)	64	67	82	98	32	15	47

I: GNP per capita;
II: Budgetary and extrabudgetary expenditure per capita;
III: Investment per capita;
IV: Government investment per capita;
V: Labor productivity;
VI: Literacy rate;
VII: Doctor/population.

Source: Chinese Statistics Yearbook 1991, pp. 36, 85, 145, 413, 774.

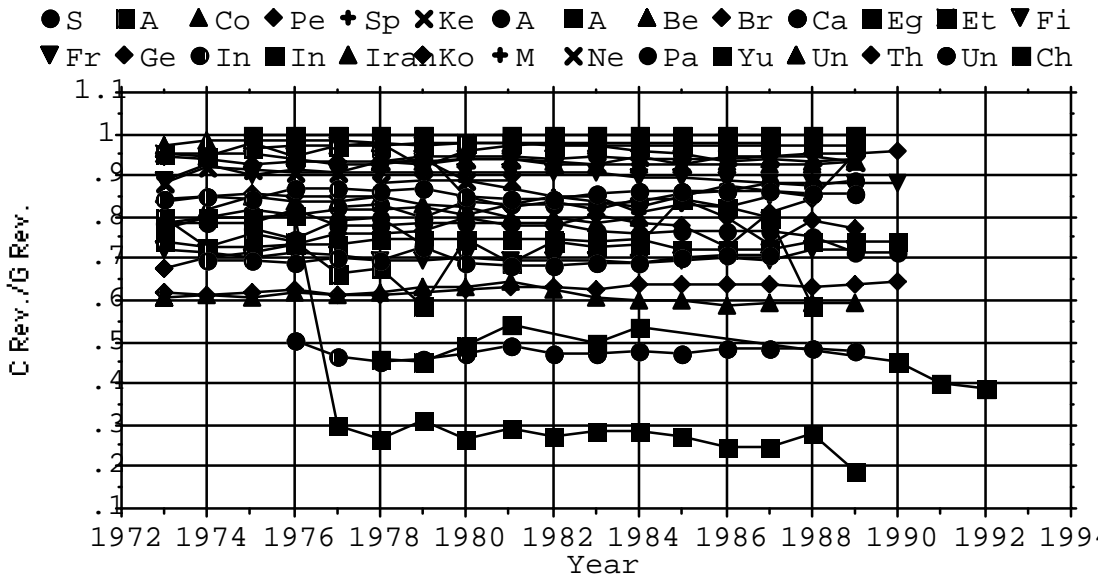
Table 8: Regional Disparities in GDP Per Capita: 1978-1994
(in current price)

	1978	1985	1990	1991	1992	1993	1994
No. of Provinces*	26	27	27	27	27	27	27
Average (yuan)	341	758	1,431	1,595	1,874	2,514	NA
S.D. (yuan)	112	212	421	498	650	971	NA
Max. (yuan)	677	1,378	2,452	2,823	3,575	4,938	6,380
Min. (yuan)	175	418	794	890	1,009	1,232	1,536
Coeff. of Var. (%)	32.7	28.0	29.4	31.2	34.7	38.6	NA
Max./Min.	3.9	3.3	3.1	3.2	3.5	4.0	4.2
Max.-Min. (yuan)	502	960	1,658	1,933	2,566	3,706	4,844

* Shanghai, Beijing, and Tianjin are excluded.

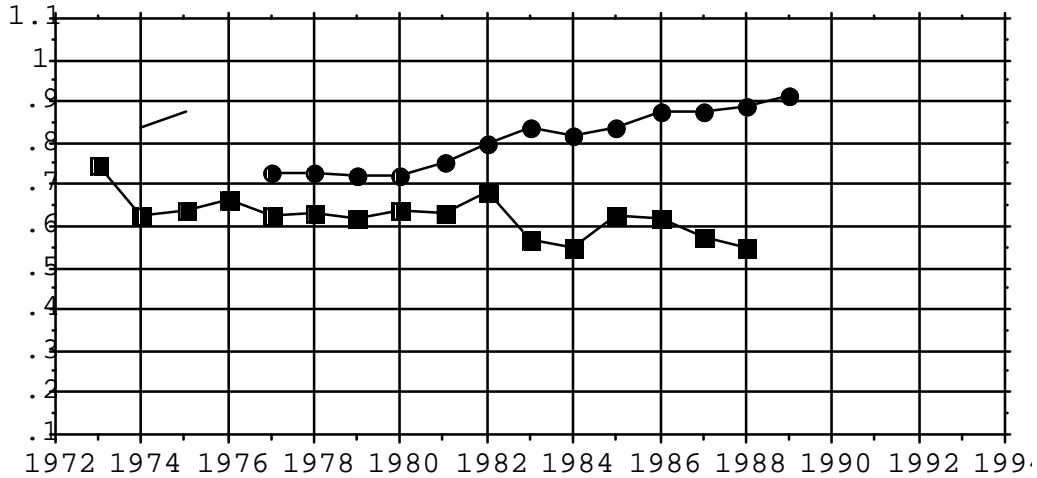
Source: Hu Angang and Wang Shaoguang, Zhongguo diqu chaju baogao
[A Study of Regional Disparities in China], Shenyang:
Liaoning People's Press, 1996, p. 16.

Figure 1 Central Revenue/Total Revenue



Source: IMF, Government Finance Statistics Yearbook, various years;
State Statistics Bureau, China Statistics Yearbook, 1994, pp.

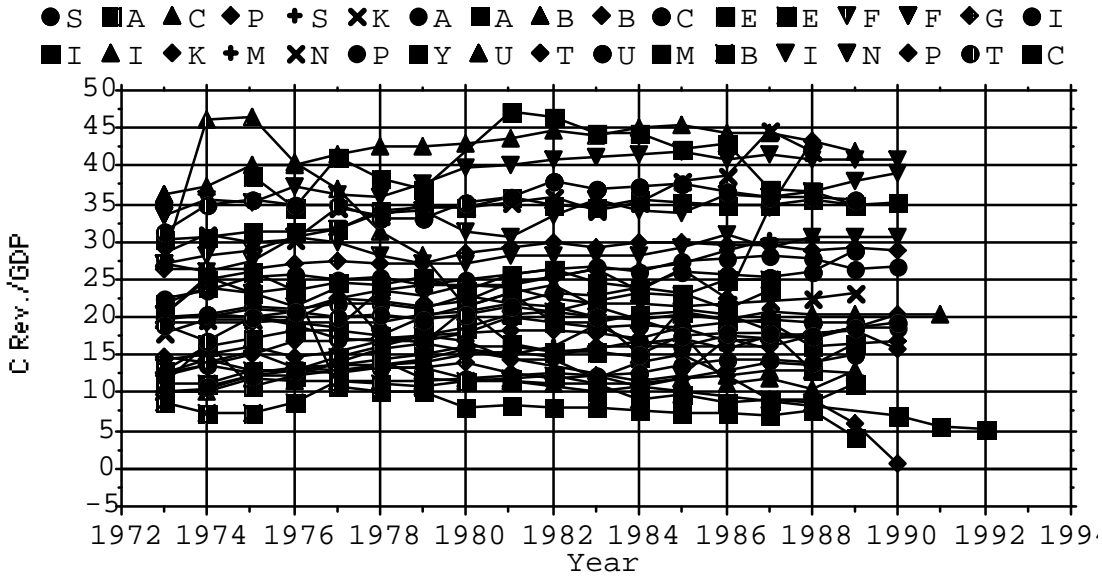
32, 213.



Source: IMF, Government Finance Statistics Yearbook, various years;
State Statistics Bureau, China Statistics Yearbook, 1994, pp.

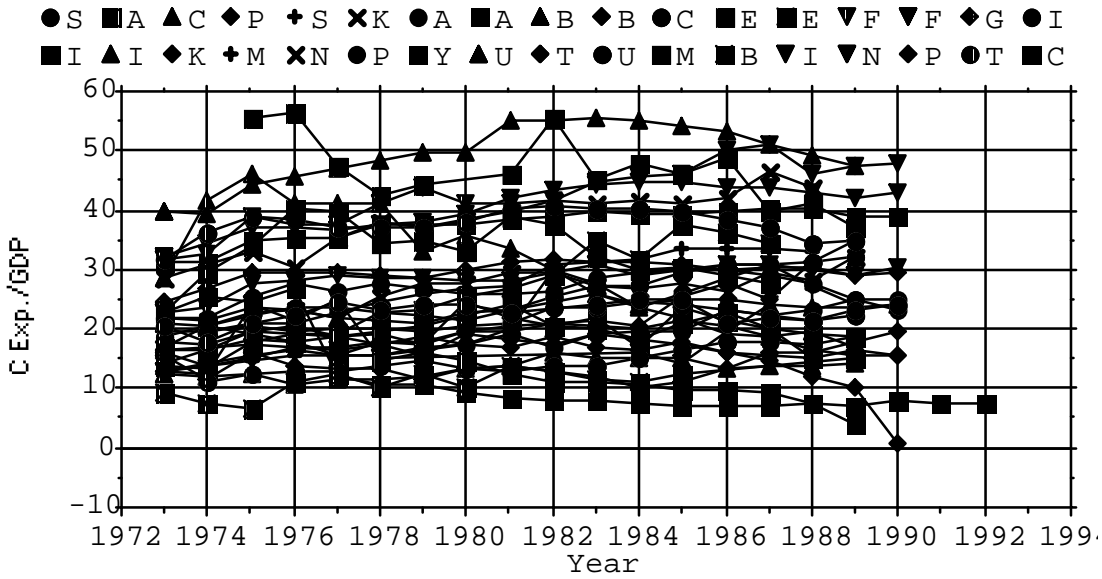
32, 213.

Figure 3: Central Revenue/GDP

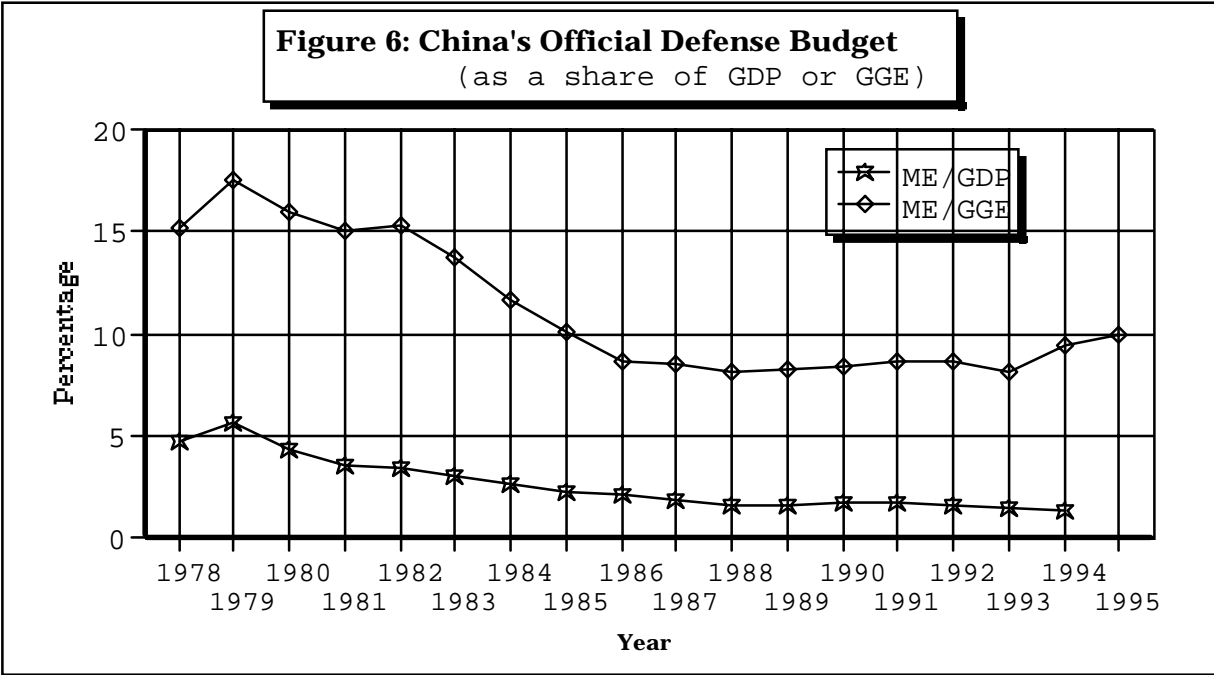
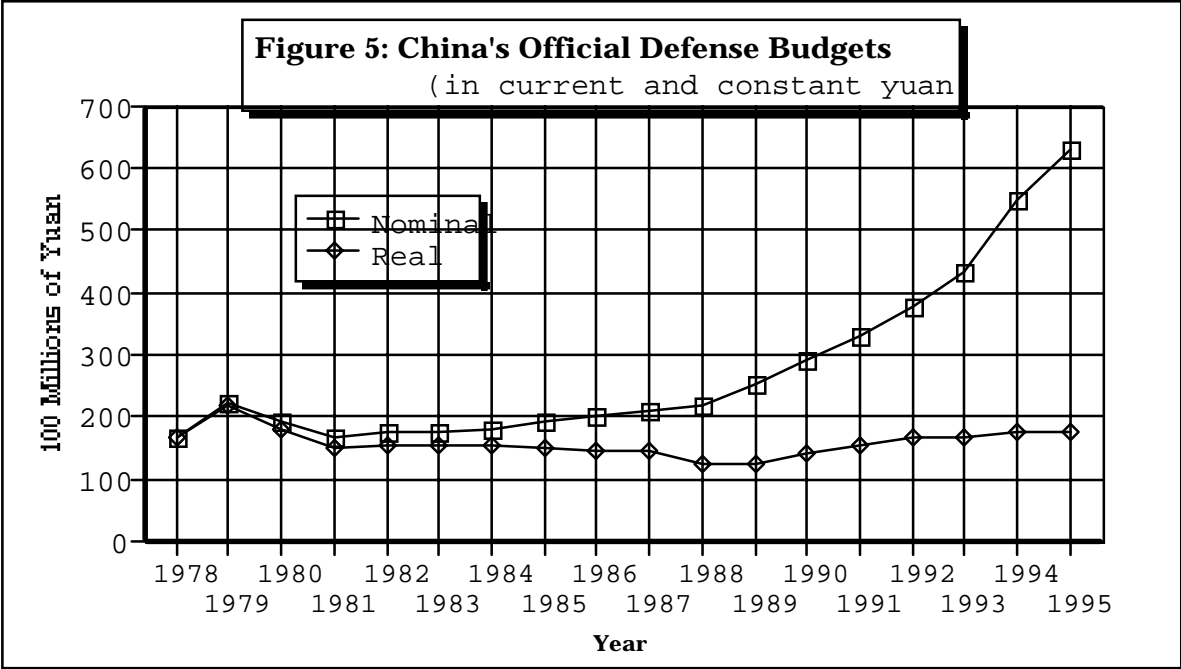


Source: IMF, *Government Finance Statistics Yearbook*, various years;
 State Statistics Bureau, *China Statistics Yearbook*, 1994, pp.
 32, 213.

Figure 4: Central Revenue/GDP



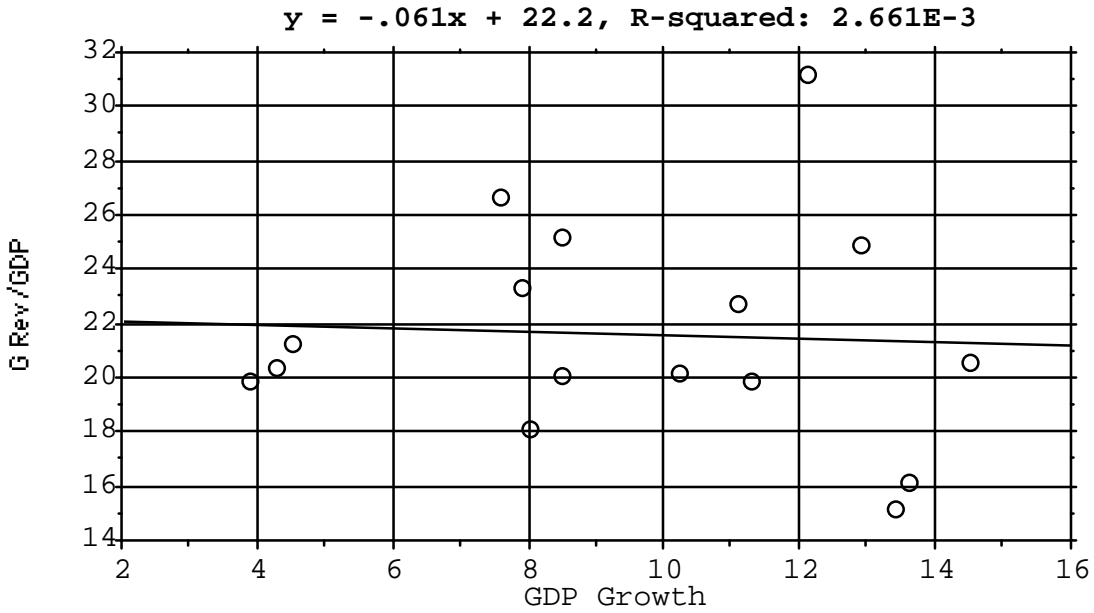
Source: IMF, *Government Finance Statistics Yearbook*, various years;
 State Statistics Bureau, *China Statistics Yearbook*, 1994, pp.
 32, 213.



GDP: Gross Domestic Product
 GGE: General Government Expenditure

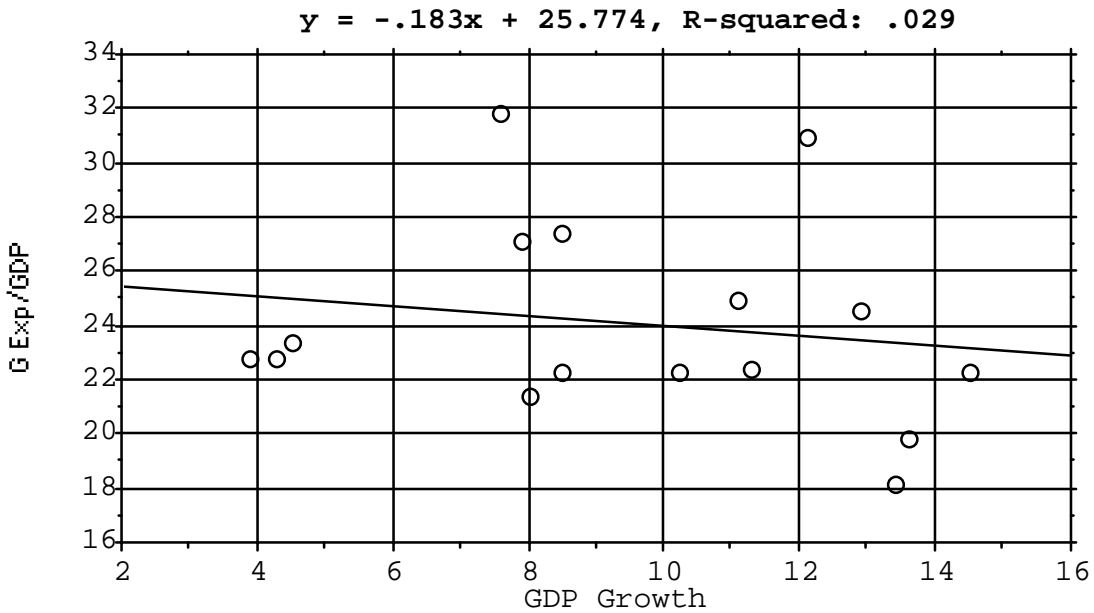
Source: State Statistics Bureau, *China Statistics Yearbook, 1994*, pp. 32, 217, 231; *People's Daily*, March 13, 1995.

Figure 7: Correlation between G Rev./GDP and GDP Growth Rate, 1978-1993



Source: State Statistics Bureau, China Statistics Yearbook, 1994, pp. 32, 213

Figure 8: Correlation between G Exp./GDP and GDP Growth Rate, 1978-1993



Source: State Statistics Bureau, China Statistics Yearbook, 1994, pp. 32, 213

Endnotes

¹ See Jingji Ribao [Economic Daily], June 2, 1995.

² For the sake of convenience, our discussion assumes that there are just two levels of government, "central" and "local" (provincial and below). "No important insights are lost with this assumption" (Rosen, 1985).

³ A large literature has tried to develop "incentive mechanisms" which would maintain voluntariness in the provision of public goods but which would control or even eliminate free-riding. But these incentive schemes have not had much real world success.

⁴ Coase's famous paper (1960) on social cost implies that intervention by a higher level of government is not always needed if only a few parties are externally affected and negotiation costs are not prohibitive. However, it is usually difficult for such "private" bargaining to reach an agreement because each party would take great pains to conceal its true preference with regard to such goods or services, hoping that others will bear as much of the costs as possible. At the end nothing may get done (Olson, 1965).

⁵ Since Pigou, economists have generally accepted that taxes on negative externalities and subsidies for positive externalities are needed to attain an efficient allocation of resources (Adams, 1993).

⁶ Edward Gramlich (1987) contends that decentralized government has some role in countercyclical policy. The way in which lower levels governments can operate stabilization policy is for governments to build up their asset stocks in good years and run down these assets in bad years, or to borrow in bad years and repay in good years. Such rainy day' funds may enable subnational governments to make some contribution to an effective countercyclical policy, but the existence of such funds does not change the incentive structure of subnational governments. The collective action problem would continue to exist. As a result, the scope for decentralized stabilization policy is at best very limited. The primary responsibility for this function should still rest with the central government (Oates, 1990a).

⁷ Examples are most natural resource levies, preretail stage sales taxes, and to some extent, nonresidential real property taxes that fall mainly on nonresidents.

⁸ As far as benefit taxes and user charges are concerned, they are appropriate revenue sources for all levels of government, but particularly attractive for highly decentralized levels of government. However, charges are an appropriate source of revenue only when the service offered to the community is divisible and when the benefits go mainly to the payer. They are inappropriate for services aimed at poorer section of society, or which are intended to be redistributive, or which constitute pure public goods, or which produce general as well as individual benefits. Charging may also encourage an inefficient underuse of public facilities.

⁹ Some argue that such an arrangement has the disadvantage of inducing inefficient expenditure by disguising and distorting the real cost of local services. This may not be true. As Oates (1972) points out, if only part of local revenues come from the central government, subnational governments wanting to expand the supply of public goods will still have to finance the marginal units of public goods entirely from their own revenues.

¹⁰ The "debt income" in the Chinese budgetary data has already been subtracted so that the data are comparable to those of other countries.

¹¹ Between 1954 and 1964, Yugoslavia's gross material product (GMP) increased by an average of 8.6% a year, and from 1965 to 1975, average annual GMP growth increased 6.4%. As a result, gross national product (GNP) per capita in current prices increased from less than US\$ 100 immediately after the war to US\$1,600 in 1975 (World Bank, 1979).

¹² See New China News Agency, Beijing, January 9, 1995.

¹³. See Xinwen Zhiyou Daobao [Press Freedom Guardian], January 20, 1995.

¹⁴ Chinese leaders have just begun to appreciate this insight. In 1994, they issued four directives to curtail the PLA's free-wheeling business activities. It was reported that, by the end of the year, regional and combat troops had completely pulled out their soldiers from business, and in the meantime, efforts had also been made to bring all PLA enterprises under a centralized management. See Hsin Pao (Hong Kong), March 24, 1995, p. 21; Reuter, Beijing, March 28, 1995.

¹⁵ Hainan, a province that was set up in 1987, is not included in Table 6.

¹⁶ It is not true that only coastal provinces have been benefiting from China's economic reforms. In fact, all of China has been growing at high rates, although the performance of the inland provinces may not be as

spectacular as that of the coastal ones. For instance, income growth in Xinjiang, in the northwestern China, expanded the fastest at 115.7 per cent from 1985 to 1991. Other inland provinces also saw relative big income growth, with Yunnan rising 107.8 percent, Shaanxi 67.9 percent, Ningxia 65.7 percent, Guizhou 55.3 percent, Gansu 55.1 percent, Sichuan 50 percent, and Tibet 39.4 percent.

References

- Adams, Roy D. and Ken McCormick, "The Traditional Distinction between Public and Private Goods Needs to be Expanded, Not Abandoned," Journal of Theoretical Politics, No. 1 (1993), pp. 109-116.
- Bickford, Thomas J., "The Chinese Military and Its Business Operations: The PLA as Entrepreneur," Asian Survey, Vol. XXXIV, No. 5 (1994), 460-474.
- Bird, Richard M., Federal Finance in Comparative Perspective (Canadian Tax Foundation, 1986).
- Caiden, Naomi, "The Roads to Transformation: Budgeting Issues in the Czech and Slovak Federal Republic 1989-1992," Public Budgeting and Finance, (1993), pp. 57-71.
- Chinese Academy of Science, Guoqing yu Juece [Nationals Conditions and Public Policy] (Beijing: Beijing Publishing Company, 1990).
- Chung, Jae Ho, "Central-Provincial Relations," in Kuan Hsin-chi, ed., China Review 1995 (Hong Kong: The Chinese University Press, 1995).
- Coase, R.H., "The Problem of Social Cost," Journal of Law and Economics, No. 3 (1960), pp. 1-44.
- Denitch, Bogdan, Limits and Possibilities: The Crisis of Yugoslav Socialism and State Socialist Systems (Minneapolis: University of Minnesota Press, 1990).
- Ding, Arthur, "Military Production and Defense Budget in the People's Republic of China," a paper presented at the 5th Annual AEI Conference on the People's Liberation Army, Staunton Hill, 17-19 June 1994.
- Friedman, Edward, "China's North-South Split and the Forces of Disintegration," Current History, No. 575 (1993), pp. 270-274.

-
- Goodman, David S.G. and Gerald Segal, eds., China Deconstructs: Politics, Trade and Regionalism (London: Routledge, 1994).
- Goodman, David, "Corruption in the People's Liberation Army," a paper presented at IISS/CAPS conference "Chinese Economic Reform: The Impact on Security Policy," Hong Kong, July 8-10, 1994.
- Gould, Frank, "The Growth of Public Expenditures: Theory and Evidence from Six Advanced Democracies," in Charles Lewis Taylor, ed., Why Governments Grow: Measuring Public Sector Size (Beverly Hills: Sage Publications, 1983).
- Gramlich, Edward M., "Federalism and Federal Deficit Reduction," National Tax Journal, No. 40 (1987), pp. 299-313.
- Hu Angang and Wang Shaoguang, Zhongguo diqu chaju baogao [A Study of Regional Disparities in China] (Shenyang: Liaoning People's Press, 1996)
- Huang, Yasheng, "Why China Will Not Collapse," Foreign Policy, No. 99 (1995).
- Hush, Lawrence W., "The Federal, and the State and Local Roles in Government Expenditures," Public Budgeting & Finance, (1993), pp. 38-55.
- Hyer, Eric, "China's Army Merchants: Profits in Command," China Quarterly, (1992), pp. 1101-1118.
- Joffe, Ellis, "The PLA and the Economy: The Effects of Involvement," a paper presented at IISS/CAPS conference "Chinese Economic Reform: The Impact on Security Policy," Hong Kong, July 8-10, 1994.
- Joint Economic Committee, Congress of the United States, ed., China's Economic Dilemmas in the 1990s: The Problems of Reforms, Modernization, and Interdependence (Armonk, NY: M.E. Sharpe, 1992).
- Kan, Shirley, "China's Arms Sales: Overview and Outlook for the 1990s," in the Joint Economic Committee, China's Economic Dilemmas in the 1990s.
- Leigland, James, "Decentralizing the Development Budget Process in Indonesia: Progress and Prospects," Public Budgeting and Finance, (1993), pp. 85-101.
- Lindauer, David L. and Ann D. Velenchik, "Government Spending in Developing Countries: Trends, Causes, and Consequences," World Bank Research Observer, No. 1 (1992), pp 59-78.
- Ma, Jun, "Macroeconomic Management and Intergovernmental Relations in China," unpublished paper, World Bank, 1994.

-
- Montinola, Gabriella, Yingyi Qian, and Barry R. Weingast, "Federalism, Chinese Style: The Political Basis for Economic Success in China," World Politics, No. 48 (1995), pp. 50-81.
- Mizsei, Kalman, ed., Developing Public Finance in Emerging Market Economies (Prague: Institute for EastWest Studies, 1994).
- Musgrave, Richard A., "Who Should Tax, Where, and What?" in C.E. McLure, ed. Tax Assignment in Federal Countries (Canberra: Center for Research on Federal Financial Relations and International Seminar on Public Economics, 1983).
- , Public Finance in Theory and Practice, 4th edition (New York: McGraw-Hill, 1984).
- Oates, Wallace E., Fiscal Federalism (New York: Harcourt Brace Jovanovich, Inc., 1972).
- a, "Public Finance with Several Levels of Government: Theories and Reflections," Working Paper Series, No. 90-20, Department of Economics, University of Maryland, 1990.
- b, "Decentralization of the Public Sector: An Overview," in Robert J. Bennett, ed., Decentralization, Local Governments, and Markets: Towards a Post-Welfare Agenda (Oxford: Oxford University Press, 1990).
- Olson, Mancur, The Logic of Collective Action (Cambridge, Harvard University press, 1965).
- Painter, Martin, "Intergovernmental Relations in Canada: An Institutional Analysis," Canadian Journal of Political Science, Vol. XXIV, No. 2 (1991), pp. 267-288.
- Patsouratis, Vassilis A., "Fiscal Decentralization in the EEC Countries," Public Finance, Vol. XXXV, No. 3 (1990), pp. 423-439.
- Pickvance, Chris and Edmond Preteceille, eds., State Restructuring and Local Power: A Comparative Perspective (London: Pinter Publishers, 1991).
- Pommevihne, Werner W., "Quantitative Aspects of Federalism: A Study of Six Countries", in W.E. Oates, ed. The Political Economy of Fiscal Federalism (Lexington, MA: D.C. Heath,).
- Rosen, Harvey S., Public Finance (Homewood, Illinois: Richard D. Irwin, Inc, 1985).
- Rousseau, Mark O. and Raphael Zariski, eds, Regionalism and Regional Devolution in Comparative Perspective (New York: Praeger, 1987).

-
- Schmidt, Vivien A., "Unblocking Society by Decree: The Impact of Governmental Decentralization in France," Comparative Politics, (1990), pp. 459-481.
- Skebo, Robert J., et al, "Chinese Military Capabilities: Problems and Prospects," in the Joint Economic Committee, China's Economic Dilemmas in the 1990s.
- Wallich, Christine I. and Ritu Nayyar, "Russia's Intergovernmental Fiscal Relations: A Key to National Cohesion," Challenge, (1993), pp. 46-52.
- Wang, Shaoguang and Angang Hu, Zhongguo guojia nengli baoqao [A Report on the Capacity of the Chinese Government] (Hong Kong; Oxford University Press, 1994).
- , "Regional Disparities and the Intervention of the Central Government," Hong Kong Social Science Report, No. 1 (1995), pp. 149-193.
- , "China's Defense Expenditure," China Quarterly, forthcoming.
- Weisbrod, Burton, External Benefits of Public Education (Princeton: Princeton University, Industrial Relations Section, 1964).
- World Bank, Yugoslavia: Self-Management Socialism and the Challenge of Development (Baltimore: Johns Hopkins University Press, 1979).