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The Evolving Role of Fiscal Policy in Centrally Planned Economies Under Reform: The Case of China

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Abstract

Market-oriented economic reforms in centrally planned economies have altered the functions and objectives of key policy instruments, particularly in the case of fiscal policy. As a result of reform, economic management requires the use of "indirect" levers to regulate the behavior of increasingly autonomous economic agents. In this respect, fiscal policy becomes central and its macroeconomic role is enhanced. This paper studies the recent Chinese experience, reviewing fiscal developments and analyzing the effectiveness and appropriateness of available fiscal instruments in performing their newly enhanced macroeconomic role.

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I. Introduction

One of the most prominent economic developments of this decade--a development with perhaps a modest immediate impact on the world economy but with the potential to have a substantial impact in the future--is the spreading and deepening of market-oriented economic reforms in centrally planned economies (CPEs). Initiated in Yugoslavia and Hungary, boldly pursued in China, and now also being experimented within the Soviet Union, Poland, and elsewhere, these reforms carry the potential to dramatically increase the efficiency of these economies and expand their role in the global economy. 1/

Recognizing that the rigidities inherent in central planning have seriously inhibited the efficient allocation and use of resources and have not provided adequate incentives for productivity gains, CPEs have moved to enhance freedom of choice for economic agents in the decision-making process and strengthen the role of market forces through the gradual removal of administrative controls and the fostering of competition. Even when basic structures, such as widespread state ownership of productive factors, have not been radically changed, reforms have aimed at introducing elements that replicate free-market conditions, inducing economic agents to behave and react as they would in a competitive environment. As a result, the role of central planning has diminished and, in the design of economic policy, more emphasis is being given to the use of indirect levers of macroeconomic management to regulate the behavior of increasingly autonomous economic agents. These systemic changes have altered the functions and objectives of macroeconomic policy instruments, requiring their adaptation to the changing needs.

Although the reform process has affected the whole range of policy implementation, the evolution has been particularly marked in the case of fiscal policy. Under strict central planning, the limited objective of fiscal policy is to administratively allocate resources by directly regulating the rate of capital accumulation and by maintaining household incomes at a level consistent with the availability of consumer

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1/ On the Hungarian reforms, see, for example, Kornai (1980a and 1986), de Fontenay et al. (1982), Marer (1986), and Brada and Dobozi (1988). On the reforms in the U.S.S.R, see Hough (1986) and Goldman (1987); the latter includes a chapter on the Chinese reform and its relevance for Soviet economic reforms. On the general subject of reforms in CPEs, see U.S. Congress Joint Economic Committee (1986), Dembinski (1988), Hardt and McMillan (1988), Littlejohn (1988), and Winiecki (1988).

goods. 1/ Tax policy as such does not fulfill a major function, since the private sector plays only a minor role in the production process and state enterprises are required to remit all their surplus funds to the government. Thus, the primary instrument of fiscal policy under central planning is government expenditure. Government funds are channeled back to enterprises through the financing of investment and working capital and in the form of subsidies. Therefore, in addition to its overall allocative function, the budget plays an important redistributive role by shifting resources among industries, sectors, and geographic regions. The level of expenditure is essentially determined by the quantitative output and investment targets set out in the plan and, during periods of overheating, cutbacks in expenditure are used to reduce inflationary and balance of payments pressures.

Within the reform process, as economic agents are increasingly guided by market signals, macroeconomic management requires the use of indirect levers and thus a consistent set of new policy instruments is needed. Fiscal policy becomes a central component of such a set, with its macroeconomic role therefore enhanced. Despite the rapid growth of literature dealing with the reform process, relatively little attention has been paid to the changing role of fiscal policy and to other fiscal aspects of the reforms. This is so, perhaps, because the focus has been on agricultural and enterprise reforms--the two cardinal elements of economic transformation in CPEs. However, the recent bouts of inflation in China, Hungary, and Poland--with the latter two also experiencing external problems--have highlighted the importance as well as the difficulties in maintaining macroeconomic stability as the reforms proceed. Given the important role that fiscal policy should play within this context, its evolving functions in CPEs deserve to be carefully analyzed, particularly with a view to assessing the extent to which fiscal policy may contribute to the cause and/or to the cure of internal and external imbalances during the reform process. This paper attempts to undertake such an analysis by examining the case of China.

In the new system of economic management emerging in China, the main macroeconomic function of budgetary policies is to provide the Government with an effective policy tool to manage aggregate demand. To achieve this task, it is clear that fiscal instruments should be flexible and, at the same time, provide policymakers with a fair degree of control and with predictable options and results. Flexibility, however, does not imply that policy regulations have to be loose but that the central authorities have to possess the ability to adapt and change the rules, which have to be precise and transparent, in a timely manner in response to evolving circumstances. How well can fiscal policy in China fulfill this role under present circumstances? To answer this question,

1/ See Fetherston (1983) for a discussion of fiscal policy and Wanless (1985) for a discussion of taxation in CPEs; both provide a description of selected country cases.

it is necessary to consider the characteristics of the existing policy instruments, as currently designed and applied, and assess how suitable they are to serve as efficient tools for short-term macroeconomic management.

A second important question regarding the capacity of fiscal policy to fulfill its macroeconomic task relates to whether there are built-in elements in the reform process that tend to create fiscal imbalances. To evaluate this aspect, it is necessary to assess the ability of the emerging system to avoid a deterioration of public finances without implementing policies that negate the basic intent of the reforms. To this end, a review of recent fiscal trends and an analysis of the underlying forces behind those trends are needed.

The purpose of this paper is to provide some answers to these questions and to draw a number of general implications from the Chinese experience. Although it focuses mainly on the analysis of the revenue side, where the nature of the reforms is more unique and their policy implications more complex, it also addresses some expenditure issues, principally in the context of their consistency with the need to maintain macroeconomic balance.

The paper is organized as follows: Section II provides a brief background description of the nature and achievements of the reforms in China. Section III briefly reviews budgetary developments from the beginning of the reforms, also providing some perspective on the structure of China's public finances relative to the revenue and expenditure structure of other countries. Section IV then analyzes, from a forward-looking perspective, the impact of reforms on government finances. Finally, Section V presents some concluding remarks.

II. Economic Reforms in China

For the last ten years, China's economy has been undergoing a profound transformation associated with wide-ranging reforms aimed at decentralizing the decision-making process; increasing reliance on market forces in the goods, capital, and exchange markets; and opening up China's economy to the outside world. The economic, institutional, and sociopolitical characteristics of CPEs are, of course, not uniform, nor have been the approaches to reforms. China has many characteristics that set it apart from most other CPEs, such as its large size and population, its relatively low level of economic development, the relative importance of the rural sector, and the strong tradition of regional autonomy. These factors have exerted considerable influence on China's approach to reform, but there are indeed lessons that can be generalized from the Chinese experience and that are relevant for other CPEs as they, too, proceed with their reforms.

A description of the process of reform in China is beyond the scope of this paper and is, in any case, the subject of an extensive literature of its own. 1/ Some background, however, is necessary to understand the economic and institutional setting within which fiscal policy has evolved in China.

The reforms started in the rural areas with the introduction of the household responsibility system, which gave farmers increased autonomy in deciding the price and product composition of their output. At the same time, measures were taken to allow and legalize the transfer of land use rights--steps meant to encourage investment by farmers in agriculture. 2/ From 1984, the focus shifted to urban areas, with policies to increase autonomy of state enterprises. The objective was to find ways that, while preserving the basic framework of state ownership, could allow the separation of management from ownership. To this end, the authorities moved toward various forms of management contracts, called the contract responsibility system, under which the management of the enterprise undertakes certain contractual obligations vis-a-vis the Government--typically involving minimum output and profit targets--in exchange for greater freedom over investment decisions, price and wage policy, etc. 3/ A further aspect of reforms was the development of nonstate activities, allowing collectives and individuals to own and operate enterprises. By 1987, nonstate enterprises accounted for approximately 40 percent of industrial production. 4/ Parallel to these measures, associated reforms were initiated in prices, taxes, the financial structure, and the foreign trade and exchange systems.

1/ See, in particular, Perkins (1988), Harding (1987), and Riskin (1987); all three contain good bibliographies of the recent literature on China's economic reforms. See also Chow (1985), Perry and Wong (1985), Wong (1985), World Bank (1985), U.S. Congress Joint Economic Committee (May 1986), Perkins (1986), Balassa (1987), Rabushka (1987), Reynolds (1987a and 1987b), Bettelheim (1988), and Burki (1988).

2/ The nontransferability of land use rights has inhibited investment in agriculture. For a discussion of agricultural reforms in China, see, for example, Lardy (1983 and 1986), Griffin (1984), Perkins and Yusuf (1984), Walker (1984), Putterman (1985), and Wiens (1987).

3/ For a discussion of industrial reforms in China, see, for example, Byrd (1982), Field (1984), and Tidrick and Chen (1987).

4/ Nonstate enterprises include collective, household, and individual enterprises. Collective enterprises account for most of the nonstate enterprises. The degree of autonomy of collective enterprises vis-a-vis local authorities varies, but generally these enterprises have much greater freedom in decision making, operate in a more competitive market environment, and face harder budget constraints than state enterprises. See World Bank (1989b).

The reforms have contributed to impressive economic growth: real GNP grew by an average of almost 10 percent per annum during 1979-88, compared with about 4 percent during the preceding two decades. Living standards have increased substantially in both rural and urban areas. Exports have diversified and grown rapidly, more than doubling their share in GNP (to over 13 percent). 1/ The rapid growth in incomes has been accompanied by a substantial increase in household savings, allowing a high rate of investment without excessive reliance on foreign borrowing. However, the reforms have also created new problems for macroeconomic management, as decentralization unleashed productive forces that have at times led to expansionary pressures that the Government was not able to immediately control. 2/ Most recently, these pressures have led to a surge in inflation to the highest level experienced in China since 1949. 3/

The Chinese economy is currently characterized by a mixed structure, under which the role of central planning has been substantially reduced, while that of market mechanisms has been expanded. This structure is still evolving and a distinctive feature of the present stage is a "two-track" price system associated with extensive use of bargaining mechanisms. Typically, the producer, that is, the farmer or the enterprise, negotiates with the Government a production quota that has to be sold at regulated prices, but output in excess of the quota can be sold at market prices or at prices negotiated between buyers and sellers within government-guided limits. 4/ In this system, production decisions at the margin are influenced by market signals, even though a substantial proportion of transactions still takes place at regulated prices. 5/ Similarly, China maintains a dual exchange rate system, under which a proportion of foreign trade is transacted at a floating

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1/ For a discussion of China's expanding role in world trade, see, for example, Lardy (1987).

2/ Carver (1986) and Naughton (1987 and 1988) discuss issues of macroeconomic disequilibrium and management in China under reforms. The evolving role of monetary policy in China is examined in De Wulf and Goldsbrough (1986), and Szapary (1989). Wolf (1985) discusses the general framework within which macroeconomic disequilibrium and stabilization can be analyzed in CPEs.

3/ The process of inflation in China is examined in Feltenstein and Farhadian (1987), and Feltenstein and Ha (1988).

4/ A characteristic of this system is the bargaining for low output quotas and high, administratively priced, input quotas.

5/ Currently, approximately 30-40 percent of retail sales takes place at market prices and a similar proportion of sales is subject to state-fixed prices. The rest is subject to "guided" prices; these prices typically move closely in line with market prices. The dual-price system in China's industrial sector is discussed in Byrd (1987) and Wu and Zhao (1987).

rate that is substantially more depreciated than the officially administered exchange rate.

The two-track system has tended to reduce price distortions and increase competition and efficiency. However, it has also constrained the efficient use of macroeconomic policy instruments, because the Government has had to deal with situations where different producers face different input and output prices for the production of the same goods, making it difficult to evaluate gains in efficiency and to predict with some degree of certainty the impact of specific policy measures. The situation is further complicated by the substantial autonomy local governments have in regulating prices, setting production quotas, and controlling inter-regional and foreign trade. 1/ China's leaders are keenly aware of these difficulties and see the present stage of reforms as a transition to a system under which the bulk of prices will be determined by market forces. Meanwhile, the challenge is to adapt and develop the appropriate macroeconomic instruments, such as fiscal policy, needed to govern the allocation of resources and manage the economy under China's evolving economic structure.

III. Budgetary Developments Within the Reform Process

The budgetary developments described here refer to the state budget that consolidates the financial operations of the central and local governments. Local governments are all those below the national level; thus, the budgets of provinces, counties, municipalities, and townships are included. 2/

1. Tax reforms and trends in revenue

Reform of the tax system has been an important part of China's economic reforms. Prior to 1979, enterprises remitted all their surplus funds to the budget and, in turn, the Government undertook to provide finance for their investment and working capital requirements. Enterprises faced a set of administratively determined input and output

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1/ There is a good discussion of the role of local governments in China's economic development in Shirk (1985) and Wong (1985a and 1987).

2/ The presentation of budgetary data follows the format of the International Monetary Fund's *Manual on Government Finance Statistics* and therefore differs from that in national sources. The main differences involve (1) the treatment of foreign and domestic nonbank borrowing that in the national presentation is treated as revenue, while in the Government Financial Statistics format it is considered as financing; (2) the treatment of certain subsidies that are deducted from revenue in the national presentation rather than added to expenditure; and (3) the inclusion of off-budget construction expenditures that are excluded from the national budget presentation.

prices and were not held responsible for their financial results; instead, their main responsibility was to fulfill quantitative output targets established under the plan. Enterprises, therefore, had little incentive to improve efficiency and productivity, or to pursue profits and avoid losses that were covered by the Government.

The enterprise reforms aimed, as discussed above, at increasing productivity by enhancing the enterprises' decision-making autonomy and by making them responsible for their financial results. To attain this objective, it was necessary to allow enterprises to retain a portion of their profits that could be used for investment and for incentive payments to management and labor in the form of bonuses. Therefore, the Chinese authorities began in 1978 to experiment with profit retention schemes and profit taxation for selected enterprises. In light of these experiences, in 1983 the authorities initiated a changeover for all enterprises from profit transfers to income taxation. By 1986, almost all enterprise profits were subject to taxation rather than being fully remitted to the Government.

Profit taxation has undergone several changes since its institution. One of the distinctive features of the current system is the lack of uniformity and the much larger degree of discretion it exhibits compared with the tax systems of market economies. China has a 55 percent income tax rate for medium-sized and large-sized state-owned enterprises and a number of different rates for small, collective, and household enterprises. 1/ However, on top of the regular income tax, an adjustment tax has been applied to compensate for differential profitability due to factors external to the enterprise, such as the structure of administered output prices in relation to the evolution of input costs, particularly raw materials. Since the adjustment tax is designed to serve as an equalizer, it is applied at different rates that vary, sometimes significantly, from case to case, depending on the particular circumstances of the enterprise. A further large element of discretion was introduced into the tax system in 1984 with the inauguration of the enterprises contract responsibility system; under this system the entire tax liability of an enterprise is negotiated on a case-by-case basis. 2/

1/ Mining enterprises involved in oil, natural gas, coal, and mineral production are subject to a progressive resource tax on profits. Collective enterprises are subject to a special profit tax enacted in 1985. It is levied at rates based on a eight-grade progressive scale, ranging from 10 to 55 percent. The tax is collected by, and the revenue from it fully accrues to, the county-level authorities. Many new collective enterprises are exempted from the tax for an initial period that ranges from two to five years.

2/ A detailed description of China's tax system is provided in World Bank (1989a). See also Easson and Jinyan (1987) and World Bank (1988a).

Another aspect of tax reform was the introduction, in 1984, of four separate indirect taxes to replace the previous consolidated industrial and commercial tax. 1/ In China, indirect taxes are directly collected from enterprises and, unlike in market economies, they can rarely be shifted forward because of price controls. They are used, in addition to their revenue-generating potential, to compensate for perceived variations in enterprise profitability arising from the incomplete nature of price reforms. Since potential profitability is difficult to evaluate objectively, indirect taxes contain a discretional component that translates into a wide range of rates. 2/ In fact, since many prices are still regulated, the applicable rates of the indirect taxes are determined jointly with the price of the taxable product, with one of the objectives of the tax-cum-price mix being the equalization of profits. 3/ Their cascading nature, however, makes an accurate tailoring of these taxes difficult to achieve.

One of the most salient features of the evolution of government revenue since the beginning of the reforms has been the continuous decline of total revenue as a ratio of GNP, from 34 percent in 1978 to less than 20 percent estimated in the 1988 budget (Table 1). The main reason for this trend has been the steady fall in revenue from the enterprise sector (direct taxation plus remittances). Although part of this fall has been the intended and desirable outcome of the decentralization process, the declining trend also reflects, as discussed in the next section, the unintended tax consequences of the reforms.

Compared with other countries, the level of revenue relative to national income is still somewhat higher in China than in countries with comparable per capita income, although the difference has narrowed considerably since the late 1970s (Table 2). On the other hand, compared to other CPEs, China's revenue level is substantially lower. This reflects, in part, the absence of social security contributions to the budget in China, where retirement benefits--as well as other welfare benefits such as education and health care--are still largely the responsibility of the enterprise sector. Despite the changes brought about by the reforms, China's tax structure still has more in common with the tax structure of CPEs than with that of other countries. Profit taxes still make up a relatively large part of revenue--a characteristic of CPEs where a substantial portion of revenue comes from the socialized enterprise sector. Other characteristics that China shares with CPEs are the very low level--in fact, in the case of China

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1/ The four indirect taxes are the product tax, the value-added tax, the business tax, and the urban maintenance and construction tax. The coverage of some of these taxes has been changed over the years, partly with a view to broadening the tax base.

2/ See World Bank (1989a).

3/ Note that this practice runs counter to the objective of letting profits serve as a guide to resource allocation.

Table 1. China: Government Revenue, 1978-88 1/

(In percent of GNP)

	1978	1979-81	1982-84	1985-87	1988 2/
Total revenue	34.0	30.8	27.8	25.5	19.0
Revenue from enterprises	20.4	17.5	12.9	8.1	5.0
Of which: Profit remittances	(18.9)	(16.5)	(11.8)	(0.8)	(0.3)
Profit tax	(1.5)	(1.0)	(1.1)	(7.3)	(4.7)
Taxes on:					
Income and profits 3/	21.2	18.3	13.8	7.7	5.3
Goods and services 4/	11.2	10.8	10.4	10.9	8.7
International trade	0.8	0.9	1.1	1.8	1.0
Other taxes	--	--	1.5	3.6	2.7
Nontax revenue 5/	0.8	0.8	1.0	1.4	1.3

Source: China, Ministry of Finance.

1/ Total revenue includes nontax revenue.
2/ Calculated by using the original budget estimates and a GNP estimate based on a rate of growth of 11 percent of real GNP and 20 percent in prices.
3/ Including profit remittances.
4/ Includes product, value added, and business taxes.
5/ Excluding profit remittances.

Table 2. International Comparison of Revenue 1/

Country Group	Per Capita Income 2/ (U.S. dollars)	Revenue as a percent of GNP/GDP	Individual Income Tax	Corporate Profit Tax	Taxes on Goods and Services	Taxes on International Trade	Social Security Contributions
			(In percent of total revenue)				
China							
1978	215	34.0	--	60.0 3/	32.9	2.4	--
1988	300 2/	19.0	--	26.2 3/	45.6	5.5	--
Low-income countries	265	16.7	8.3	9.6	26.3	32.6	2.2
Middle-income countries	1,720	25.0	9.7	17.8	24.5	17.8	6.7
Industrial market economies	11,210	33.9	26.6	7.6	25.2	2.1	24.8
Centrally planned economies	...	50-80 4/	1.0-8.0	30-64 3/	13-30	...	0.5-12.5
Hungary	2,020	60.7	1.4	18.0	27.8	5.4	20.1

Sources: International Monetary Fund, Government Financial Statistics Yearbook, 1987; World Bank, World Development Report 1988; and Wanless (1985).

1/ The country composition of the low-income and middle-income countries and industrial market economies is that found in the World Bank's World Development Report 1988; the revenue data for these countries have been derived from statistics in the International Monetary Fund's Government Financial Statistics Yearbook, 1987. These data do not necessarily refer to the same year for all countries; the years range from 1980 to 1986 (depending on the availability of data), but for the bulk of the countries the data refer to 1985-86. The data for centrally planned economies are taken from Wanless (1985) and refer to 1981 or 1982; the countries included are Czechoslovakia, the German Democratic Republic, Poland, Romania, and the U.S.S.R. The data for Hungary have been derived from national sources and refer to 1984-86.

2/ Refers to 1986.

3/ Includes profit remittances.

4/ As a percent of net material product.

the virtual absence--of individual income taxation and the low level of taxes on foreign trade. 1/ In addition, China relies relatively more heavily on domestic indirect taxes than any of the other groups of countries. However, since indirect taxes in China often cannot be shifted through price changes because of price controls, these taxes become akin to a profit tax as their incidence falls fully on the enterprise.

2. Trends in public expenditure

The reforms also had a profound impact on public expenditure which, as a ratio of GNP, fell from 34 percent in 1978 to an estimated 21 percent in the 1988 budget (Table 3). Most of the reduction took place in capital outlays. The decentralization of the decision-making process and the larger profit retention by the enterprises have naturally meant a reduction in the Government's role in financing investment. Consequently, capital expenditure relative to GNP more than halved over the last decade. Concurrently, a growing proportion of investment by enterprises has been financed by self-owned funds and bank loans. Within current expenditure, the level of defense spending has fallen the most as the Government demobilized about one million persons. 2/

Subsidies, after rising substantially in the early years of the reforms, remained broadly unchanged at approximately 6 percent of GNP. There are two types of subsidies provided through the budget in China--consumption and enterprise subsidies. Initially, consumption subsidies rose sharply as the Government provided compensation to urban consumers for price increases arising from the agricultural reforms and the liberalization of agricultural price controls. Subsequently, these subsidies declined as a ratio of GNP, in line with the policy of relying on increases in productivity and wages rather than on subsidies to maintain and enhance living standards. On the other hand, subsidies to cover enterprise losses have increased steadily. Essentially, higher enterprise losses have arisen from the rigidity of administered prices in the face of increasing costs.

In China, as in other CPEs, the level of government expenditure is not a very good indicator of the role of the state in the economy, since the Government, as owner of enterprises, has many other means of command

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1/ It should be noted, however, that efforts have been made to tax individual incomes which have increased substantially as a consequence of the reforms. As a result, receipts from personal income taxes, while still very low, increased in importance in 1988.

2/ Simultaneously, a considerable number of military plants were converted to civilian use. Many of these factories, which were typically located in remote areas in the interior of the country ("third front" factories) for security reasons, were encouraged to relocate to the cities and coastal areas. See Naughton (1988a).

Table 3. China: Government Expenditure, 1978-88

(In percent of GNP)

	1978	1979-81	1982-84	1985-87	1988 1/
Total expenditure	33.8	34.1	29.4	27.1	21.1
Current expenditure	19.1	22.6	21.8	19.6	15.7
Of which:					
Defense	4.6	4.6	3.1	2.1	1.5
Economic services	4.9	4.2	3.2	2.6	1.9
Subsidies	3.2	6.4	7.0	6.1	5.3
To enterprises	(1.0)	(0.9)	(1.4)	(3.0)	(2.8)
Other 2/	(2.2)	(5.5)	(5.6)	(3.1)	(2.5)
Capital expenditure	14.7	11.5	7.6	7.5	5.4

Source: China, Ministry of Finance.

1/ See footnote 2 to Table 1.
2/ Includes price subsidies on consumption goods (daily necessities) and subsidies to agricultural inputs.

over resources, which is not typically the case in market economies. Nevertheless, some perspective might be gained from an international comparison. As shown in Table 4, the level of expenditure in China is slightly lower than in low-income countries and substantially lower than in middle-income and industrial countries. It is only about one third of the level of expenditure in Hungary, another CPE undergoing important reforms. The difference vis-a-vis the countries other than Hungary is due essentially to the virtual absence of social security and welfare payments from the government budget in China. Compared to Hungary, a further major source of difference is that subsidies and transfers are much higher in Hungary, owing mainly to substantial subsidies to exports to COMECON countries, as well as higher consumer, agricultural, and housing subsidies. In China, however, there are substantial hidden subsidies, for example, in the form of artificially low interest rates and an overvalued administered exchange rate, which are not reflected in the budget.

3. Fiscal policy stance

Prior to the reforms, balanced budgets were emphasized and the government budget recorded small surpluses almost every year for three decades. In the initial years of the reforms, the budget was characterized by large deficits, averaging over 3 percent of GNP per annum (Table 5). Beginning in 1981, the Government felt it should shift emphasis of macroeconomic policies toward stabilization and that budgetary deficits should be controlled. Reflecting this policy, the deficit, while fluctuating from one year to another, fell to as low as 0.5 percent in 1985. However, since 1985, the deficit has been rising again, as there has been a renewed tendency for revenue to fall faster than expenditure as a ratio of GNP.

In the early years of the reforms, more than 80 percent of the deficits were financed by the People's Bank of China, the central bank. In 1981, the Government began issuing bonds and, since then, such bonds have financed an increasing proportion of the deficit. Foreign borrowing has also become a growing source of finance, averaging over 25 percent per annum of the total financing of the deficit during 1986-88. Until recently, government borrowing from the central bank had not significantly contributed to monetary expansion. That has changed since 1987, however, with such borrowing contributing importantly to reserve money growth. Seen against the current increase in inflationary pressure, 1/ the fiscal deficit and its financing have become factors in the inflationary process, bringing the budget into the center of macroeconomic management. This is more significantly so in view of the

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1/ Since 1986, the rate of inflation has risen substantially, with the increase in the retail price index, including both controlled and market prices, reaching approximately 26 percent during the 12 months ended in January 1989. The increase in market prices was even higher.

Table 4. International Comparison of Expenditure 1/

Country Group	Per Capita Income 2/ (U.S. dollar)	Expenditure as a Percent of GNP/GDP	Capital	Current	Social Security and Welfare	Interest Payments	Subsidies and Current Transfers
			(As percent of total expenditure)				
China							
1978	215	33.8	43.5	56.5	--	n.a.	9.3
1988	300 2/	21.1	25.6	74.4	--	1.1	25.1
Low-income countries	265	22.8	21.7	78.3	4.4	8.4	14.0
Middle-income countries	1,720	29.5	21.0	79.0	10.3	11.5	16.4
Industrial market economies	11,210	37.5	6.5	93.5	36.6	11.7	35.5
Hungary	2,020	62.7	14.8	85.2	20.0	1.1	38.9

Sources: See Table 2.

1/ See footnote 1 to Table 2.
2/ Refers to 1986.

Table 5. China: Budget Deficit and Its Financing, 1979-88

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 1/
					(In percent of GNP)					
Budget deficit	-5.2	-3.3	-1.3	-1.4	-1.7	-1.6	-0.5	-2.0	-2.4	-2.1
Financing	5.2	3.3	1.3	1.4	1.7	1.6	0.5	2.0	2.4	2.1
Domestic	4.3	2.9	0.6	1.5	1.5	1.3	0.5	1.4	1.8	1.5
People's Bank of China	(4.3)	(2.9)	(-0.5)	(0.6)	(0.8)	(0.7)	(-0.2)	(0.7)	(1.3)	(--)
Nonbank	(--)	(--)	(1.1)	(0.9)	(0.7)	(0.6)	(0.7)	(0.7)	(0.5)	(1.5)
Foreign	0.9	0.4	0.7	-0.1	0.2	0.3	0.1	0.6	0.6	0.6
					(As percent of total deficit)					
Domestic	82.5	84.9	44.8	102.8	88.5	82.9	97.6	71.7	76.5	72.9
People's Bank of China	(82.5)	(84.9)	(-39.7)	(40.8)	(44.8)	(42.9)	(-51.2)	(38.0)	(56.4)	(--)
Nonbank	(--)	(--)	(84.5)	(62.0)	(43.8)	(40.0)	(148.8)	(33.7)	(20.1)	(72.9)
Foreign	17.5	15.1	55.2	-2.8	11.5	17.1	2.4	28.3	23.5	27.1

Source: China, Ministry of Finance.

1/ See footnote 2 to Table 1.

accommodating stance of credit policy toward enterprises and given the obstacles to implementing restrictive monetary policies. 1/

IV. The Fiscal Impact of Economic Reforms: Analytical Considerations

Against the background of the previous description, one can now analyze the impact that the reforms have had on China's public finances, and assess, with a particular focus on revenue, the potential policy implications of the deepening of the reform process.

Four aspects of the reform's fiscal consequences are discussed in this section. In the area of government revenue, the issues that need examination relate to the factors behind the very slow growth of receipts from the enterprise profit tax and the consequent steady decline in total revenue as a share of national income. The reform, by allowing enterprises to retain a significant proportion of their profits and giving them greater freedom of decision over the use of these profits, necessarily reduces the intermediation role of the budget. Therefore, the decline in revenue relative to GNP has been, to a large extent, intended and has been a natural consequence of the reform process. However, beyond this policy objective, there are additional consequences arising from the reform process that are contributing toward a continuous and unintended reduction in the level of government revenue.

The ways in which the reforms have been implemented seem to have led to the emergence of a long-term elasticity of tax revenue significantly below unity and an erosion of the corporate tax base itself (e.g., the taxable profits of the enterprises). Moreover, the way in which another integral part of the reforms, the growing decentralization of fiscal authority to lower levels of government has been implemented, has tended to reduce the revenue that is transferred to the central government, a development that also has potential implications for macroeconomic management. These three aspects of revenue developments are discussed here in detail. In addition, some expenditure issues associated with reforms are also discussed. A reduction in the intermediation role of the budget necessitates a cut in government spending commensurate with the decline in resources transferred to the budget. The concern in this area is that the use of resources through the budget is being reduced at a slower pace than government revenue and that a possible consequence of the deepening of reforms may be an intensification of this trend.

1/ On the constraints on monetary policy in the context of China's reforms, see Szapary (1989).

1. The low elasticity of tax revenue and the role of the contract responsibility system

An important factor in the reduced income elasticity of revenue is the contract responsibility system that, in most cases, has introduced a degree of regressiveness into the enterprise income tax. As noted, the contract responsibility system for state enterprises was introduced in 1984 to increase efficiency by providing greater decision-making autonomy to enterprise managers. The system, which has been extended to most state-owned enterprises since 1987, involves a contractual agreement between the management of the enterprise and its owner--that is, the central or local government. 1/ The management contracts typically cover a period ranging from three to five years and stipulate a minimum amount of profit to be realized and/or tax to be paid to the Government each year; 2/ profits above the contracted amount--which usually is either the amount of profit realized in the year prior to the signing of the contract or some fixed rate of increase over that amount--are fully retained by the enterprise or taxed at a lower rate. Firms that fail to meet their minimum profit objective must, in principle, pay their minimum tax obligation from self-owned funds. Currently, about 90 percent of medium-sized and large-sized state enterprises operate under the contract responsibility system.

From the fiscal point of view, the expectation was that the contract system would expand the tax base in the longer run through improving enterprise performance. However, the intended results are weakened by the way the tax obligations are set in the contracts. Since below-quota profits are subject to a flat tax and above-quota profits are taxed at a lower (or zero) rate, enterprises retain an increasingly larger portion of their total profits as output and profits expand, resulting, in this manner, in an elasticity of less than unity for the enterprise profit tax. 3/

An actual example could be useful to illustrate the point. A typical contract embodying the type of continuously decreasing average tax rate and the below-unity elasticity implied by the system is provided in the case of the Beijing Broadcast Equipment Industrial

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1/ The central government owns many of the largest state enterprises, but most of the state enterprises are owned by local governments at the provincial, municipal, and county levels.

2/ On the characteristics and evolution of the enterprise reforms in China, see Naughton (1985 and 1986), Symposium on Enterprise Reforms in China (1987), and World Bank (1989c).

3/ The tax/contract relationship can be formalized to illustrate the type of problems posed by the contract system and the factors affecting the elasticity of revenue. A formal derivation is presented in Appendix I.

Corporation. The 1987 contract stipulates that a minimum of Y 10.6 billion in profits should be realized, which, regardless of the actual result achieved, will be taxed at the statutory 55 percent enterprise income tax rate. This guarantees to the Government an income tax revenue of Y 5.8 billion. Any excess of profit over Y 10.6 billion would be taxed at the rate of 27.5 percent, therefore reducing the average tax rate below the statutory rate. 1/ The relationship between average, marginal, and statutory rates implied by this characteristic example is depicted in Figure 1. Note that if contracts are strictly enforced, the elasticity of the profit tax actually increases from zero to 0.5 at the quota level; but, although continuing to rise as profit increase above the quota, it remains consistently below unity. 2/

As currently implemented, the contract system not only works toward reducing the tax/GNP ratio--a problem in itself if the level of expenditure is not falling commensurately--but also limits the flexibility in using tax policy for macroeconomic management. Although it could be argued that long-term contracts are beneficial in encouraging efficiency improvements, by fixing contracts for several years, the system has constrained the ability of the central government to introduce new revenue measures in a timely manner, or to alter current ones, in order to meet changing economic circumstances. The loss of flexibility is all the more serious as the decreasing average tax rate embodied in most contracts tends to reduce built-in stabilizers and to introduce a procyclical aggregate demand element into the tax system.

2. Erosion of profits

The second reason for the declining trend in revenue from profit tax--and to some extent from indirect taxes--is related to factors that have had a negative effect on the tax base itself, namely, taxable enterprise profits. While aggregate data on enterprise profits are not available, data on profits of state-owned enterprises with independent accounting, which account for over half of industrial output, declined from 13.5 percent of GNP in 1980 to about 7 percent in 1987. 3/ This

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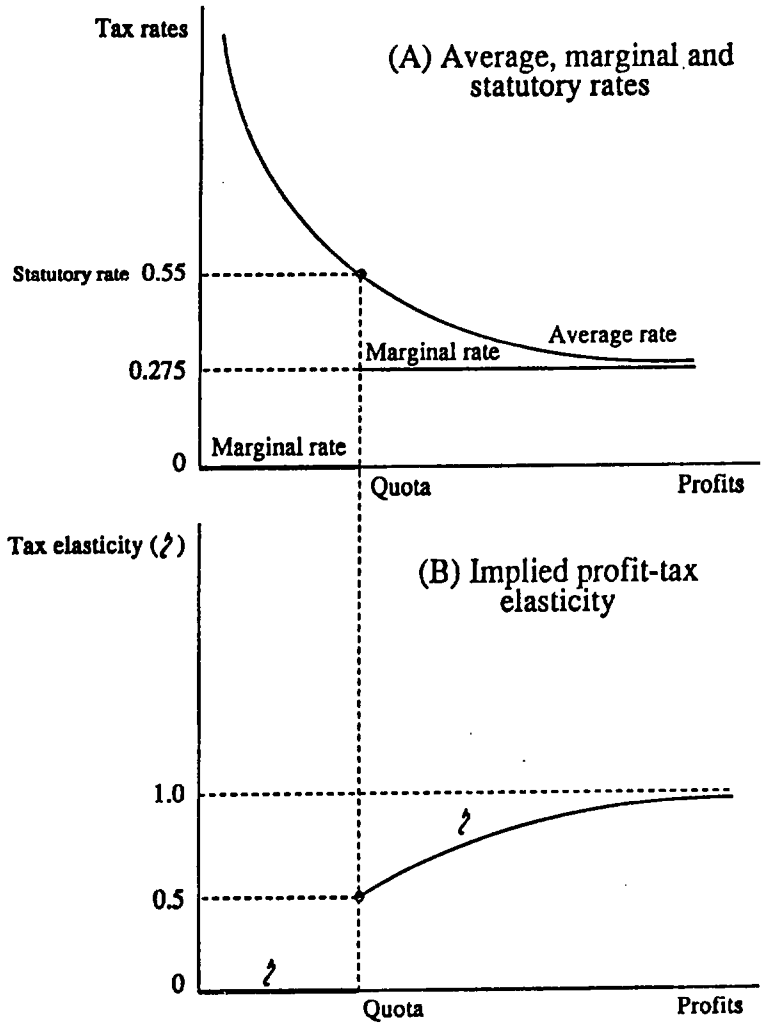
1/ For other examples, see World Bank (1989a).

2/ Clearly, if the contracts are nonenforceable downward--that is, if profits below the quota are only taxed at the statutory rate on realized profits rather than on the quota amount (a practice that seems to take place in some instances)--the elasticity falls from unity below the quota to 0.5 at the quota level.

3/ Source: Statistical Yearbook of China, various issues. A survey of 17 enterprises in three cities (Beijing, Chengdu, Guangzhou) also shows that in 11 of these enterprises, gross profits declined in relation to the value of output between 1983 and 1987 (information obtained by the authors on visits to these enterprises).

Figure 1
Tax Rates Within the Contract System



Note on Figure 1

Since at profit levels below the established quota, the tax liability is constant (and is equal to the statutory rate times the quota), the marginal tax rate is zero over that range, while the average rate falls as profits rise. Given the implied zero marginal tax rate, the resulting tax elasticity also equals zero. At the quota level, statutory and average rates coincide and, for profits beyond the quota, the marginal rate rises to 27.5 percent. Since the marginal rate then remains constant at the 27.5 percent rate, which is lower than the statutory 55 percent rate on quota profits, the average rate continues to fall, converging asymptotically toward the marginal level. Given the one-step increase in the marginal rate, the tax elasticity exhibits a jump from zero to 0.5 at the quota level and rises monotonically thereafter, although it remains always below unity since the marginal rate never exceeds the average.

trend is confirmed by estimates that show that enterprise savings declined from about 19 percent of GNP during 1979-81 to 15 percent during 1985-87; 1/ given the generally regressive taxation of profits, the decline in savings points to a fall in profits. Note that, in the context of the contract system, if taxable profits fall as a proportion of GNP, the tax/income ratio will tend to decline at a compounded exponential rate. 2/

One of the most important factors contributing to the decline in taxable profits is the continuous presence of price controls at the final product level, which has prevented many enterprises from shifting increased costs to prices. These increased costs have arisen from a variety of sources, most importantly from higher input prices (particularly certain types of raw materials whose prices are not tightly controlled), higher depreciation rates arising from a changeover to more realistic accounting practices, increased burden of higher indirect taxes, and a depreciation of the exchange rate. 3/ In addition, the increased autonomy of enterprises in the use of their financial resources, coupled with an accommodating credit policy, has led to a relatively rapid increase in wages and benefit payments, which also has tended to dampen profits. 4/ Finally, China has allowed many enterprises to deduct from pre-tax profits not only the payment of interest on loans but also the repayment of loan principal. This policy has been intended to be a transitory arrangement to put on an even footing enterprises that have to rely on bank loans and those that continue to benefit from budgetary grants to finance investment. The

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1/ Calculated as a residual after deducting from gross domestic saving, state budget and household savings. Gross domestic saving is calculated as gross domestic investment plus or minus the external current account balance. This estimate of savings, however, includes the extrabudgetary surpluses of local governments and is, therefore, not a fully accurate measurement of enterprise savings. (Source: Statistical Yearbook of China, various issues).

2/ See Appendix I for a demonstration.

3/ The nominal effective exchange rate depreciated by about 45 percent between the third quarter of 1983 and the third quarter of 1988. Furthermore, since 1987, an increasing proportion of the transactions has been carried out at foreign exchange transaction centers where the rate, which is more freely affected by market forces, is much more depreciated than the administered rate (in November 1988, the rate at the adjustment centers was about Y 7 per U.S. dollar, compared with the administered rate of Y 3.72 per U.S. dollar).

4/ Real unit labor costs in industrial enterprises rose by close to 13 percent during 1983-87 (Source: Statistical Yearbook of China).

practice has had the effect of reducing the taxable income of enterprises, as reliance on loans to finance investment has increased under the reforms and a growing number of loans have become due.

3. Regional decentralization

In a country of China's size, regional decentralization is dictated by efficiency considerations and the Chinese authorities have viewed the regional decentralization of fiscal powers as an integral part of the reform process. However, the direction in which such decentralization is moving affects the buoyancy of tax revenue and tends to erode the amount of revenue transferred to the central government. In China, local governments, mostly provincial and city governments, are responsible for the collection of virtually all major taxes. The revenue thus collected is shared upward with the next level of government. 1/ The sharing arrangements are not uniform; they are subject to negotiation and may vary from one case to another. Over the years, the revenue-sharing arrangements have undergone many changes, but, since the inception of the reforms in the late 1970s, the trend has been toward granting local governments a greater degree of fiscal authority and allowing them to retain more revenue. 2/

This process of regional decentralization has tended to depress revenue collection, particularly after the introduction of the contract responsibility system for enterprises. Although tax policy and statutory tax rates are nominally set at the national level by the central government, local governments are responsible for the negotiation of management contracts with the enterprises they own. Within the framework of these contract negotiations, local authorities have the power to set effective tax rates through the establishment of quota profits and the rate of taxation of above-quota profits. Furthermore, given the sharing rules, local authorities have a clear stake in keeping as much financial resources as possible within their territory to finance their own preferred projects and are not keen on sharing revenue with the higher levels of government. This objective is often pursued through generous tax treatment granted within the framework of management contracts. In this way resources remain within the local government's jurisprudence and local authorities can then tap these resources through "voluntary" contributions from enterprises to local projects--contributions which, of course, are not shared with the

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1/ Typically, cities share with the provincial government and the latter shares with the central government. However, some cities, for example, Chongqing, Shanghai, and Tianjin, share all or part of their revenue directly with the central government.

2/ On the evolution of fiscal relations between the center and the provinces, see Donnithorne (1983), Ferdinand (1987), and Oksenberg and Tong (1987).

central government. Thus, while the effective "tax burden" of the enterprises is not reduced and may, in effect, be significantly higher than implied by its tax obligations, explicit tax revenue, and particularly the budgetary revenue of the central government, is eroding.

To address this problem and to provide incentives for local governments to collect and remit taxes, recent revenue-sharing arrangements, introduced mostly since 1988, are based on contracts that feature a quota arrangement, somewhat akin to the system of management contracts with enterprises. Under this system, local governments contract to remit to the higher level of government a predetermined amount of revenue and retain all or part of the revenue above the quota. Typically, as with enterprises, the quota is calculated as the revenue remitted in the year prior to the signing of the contract plus a fixed increment. 1/

The new revenue-sharing contracts between the central and local governments further weaken the center's control over, and flexibility in, the use of fiscal policy for macroeconomic purposes. This is so for two main reasons. First, the relatively low level of incremental revenue transfer that these contracts appear to set leaves increased amounts of resources in the hands of local governments compounding, as far as central government revenue is concerned, the revenue-depressing effects of the enterprise contract responsibility system. 2/ Second, the fixed increment featured in the quota arrangement implies that the revenue transmitted to the central government is not influenced by the underlying economic conditions, which affect only the revenue accruing to the local governments. Since the latter do not see themselves as

1/ For instance, the contract with Guangdong Province sets the amount of revenue to be transmitted to the central government during 1988-90 as the revenue transmitted in 1987 augmented by 9 percent each year. In some cases, the revenue to be transmitted is fixed in nominal terms for a number of years, as in the case of Shanghai.

2/ Since the national budget consolidates all levels of government, taxes collected by local governments, but not remitted to the center, boost overall budgetary revenue. However, local governments do not tend to maintain budgetary surpluses (among other reasons, to avoid worsening their future bargaining position with the central government) and, therefore, increases in retained revenue, particularly if they arise after the budget has been approved, tend to generate higher local expenditure (which is difficult to control at the central level) and do not contribute to the improvement of the consolidated balance.

having overall demand management responsibilities, 1/ the quota arrangement tends to impart a procyclical bias to the fiscal system, a bias that, again, is compounded by the declining average tax rate on enterprise profits under the contract management system.

Local governments can also expand their revenue base by setting up locally owned enterprises. When local governments are allowed to retain a higher proportion of the revenue they collect, there is added incentive for them to set up enterprises even if, from a global point of view, the creation of such enterprises may represent a misallocation of resources. 2/ The establishment of enterprises shielded from nationwide competition is possible because local governments maintain power to restrict the inflow of goods from other provinces and they can also preempt the use of inputs produced in their own province. 3/ This, of course, creates serious distortions in the allocation of resources from a national perspective. Finally, the quota arrangement could exacerbate the differences between poor and rich provinces, putting pressure on the central government to transfer more resources to less advanced provinces even as its own revenue base is eroding.

4. Expenditure issues

Although the decline in government expenditure as a proportion of national income has been significant, viewed against the built-in factors that depress the elasticity of government revenue, there is a question whether the pace of spending reduction is consistent with future macroeconomic balance. The decline in the level of government expenditure has been constrained by three factors: (1) the incomplete nature of price reforms, which has resulted in increased enterprise losses financed through budgetary subsidies; (2) a perceived need to increase consumer subsidies as a way to compensate urban dwellers for the price hikes resulting from agricultural reforms and to avoid, in this manner, the strengthening of a constituency against the continuation of the reforms; and (3) the limited success of the Government in transferring investment responsibilities to enterprises in proportion with the increase in their retained earnings.

In addition to addressing these issues, the probable expenditure consequences of further reforms also need to be considered against the

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1/ The behavior of local governments is motivated primarily by local interests and not necessarily by macroeconomic considerations at the national level. Local governments see themselves as being able to influence the level of economic activity in their province but not the general level of prices in the country or the overall balance of payments.

2/ Shirk (1985) and Naughton (1988c) make the same point.

3/ There is a discussion of the considerable barriers to entry in China in Naughton (1988d).

forces that are at work toward reducing the buoyancy of tax revenue. Despite the temporary halt in the pace of price reform announced in late 1988, the progressive liberalization of the goods markets--so that the bulk of transactions will be carried out at market prices--remains the core objective of the reform drive. Given a generalized downward stickiness of prices, exacerbated by the current state of excess demand, the readjustment of relative prices following any significant price liberalization is likely to result in an increase in the price level. 1/ Such an increase could affect budgetary expenditure in several ways. First, higher commodity prices will raise government expenditure on goods and services, as well as capital spending, which will be affected by higher input prices. Second, price reform is likely to be accompanied by wage reform, which will increase the Government's wage bill. Third, the demand for consumer subsidies will probably rise in order to mitigate the impact of the price increases. 2/ Finally, the price reform may also have an effect on the amount of subsidies to loss-making enterprises, although the balance of this effect cannot be assessed a priori; while the freeing of prices will allow many enterprises affected by price controls to become profitable, higher input prices and wages are likely to aggravate the situation of others, increasing pressures for higher subsidies. All told, while the liberalization of prices is expected to raise efficiency and hence should contribute to a strengthening of public finances in the long run, in the short to medium term it is likely to intensify the upward pressures on expenditure.

In addition to price reforms, further enterprise and welfare reforms are under way. These encompass mainly the areas of housing, unemployment compensation, and pensions. Although it is difficult to estimate precisely their budgetary impact, it is safe to predict that they will tend to put additional pressure on government expenditure. Further pressure on expenditure will come from the need to increase capital spending to relieve major bottlenecks in transportation, energy, and agriculture. Against these prospects, streamlining the tax system and the revenue-sharing arrangements to enhance the elasticity of

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1/ In the presence of a dual-track price system, the impact of price liberalization on the general level of prices depends on certain characteristics of the markets. For a theoretical discussion of these issues, see Roemer (1986).

2/ These two issues should, however, be qualified. The principal purpose of wage reform in an ongoing process of economic reform is to bring market forces to bear on the labor market and on production efficiency. Under these circumstances, a wage reform, though expenditure augmenting for the budget in the short run, enhances productivity and hence is likely to have a positive impact on revenue in the long run. Moreover, a wage reform should, eventually, result in a reduction of consumption subsidies as real wages rise.

revenue becomes crucial to prevent the emergence of serious fiscal imbalances that could undermine continuation of the reforms.

V. Concluding Remarks

The process of economic reform in centrally planned economies is closely watched in the world and increasingly discussed in the literature. It has brought about promising developments in CPEs and has given rise to great expectations within and outside the socialist world. Together with the achievements, the reforms have also brought risks and challenges that demand a constant effort to monitor experience and find new approaches. Meeting these challenges requires the development of new policy instruments, or the adaptation of existing ones, in order to manage the economy under the changing circumstances that arise directly from the reforms.

The central elements of economic reforms in CPEs have been the granting of greater decision-making powers to enterprises and individuals and the enhancement of the role played by market forces within the basic framework of socialist ownership. These changes impose on the policymaker the need to develop adequate instruments of indirect control over the behavior of increasingly autonomous economic agents. Among these instruments, fiscal policy plays a vital role, given its power both to control aggregate demand and to affect resource allocation. To fulfill its role within the new environment, fiscal policy needs to be refashioned as it becomes an indirect lever of economic management rather than merely a tool for the administrative allocation of resources. As in market economies, fiscal policy now has a major role to play in managing aggregate demand, especially to avoid imbalances that could derail the reform process.

In this paper, we have analyzed the evolution of fiscal policy in China with the objective of trying to answer two questions: how well can fiscal policy fulfill its new macroeconomic role and whether there are built-in elements in the reform process that tend to create fiscal imbalances. With respect to the first question, it is clear that fiscal instruments, particularly on the revenue side, have been transformed *pari passu* with the changes in the economic system. However, serious conflicts are still present, particularly with regard to the revenue impact of the enterprise contract responsibility system and the revenue-sharing system set up between the center and China's provinces. Both systems are, in themselves, valuable reform instruments that have infused the Chinese economy with a dynamism often lacking in other CPEs. However, the ways in which these systems have been put into practice have weakened the ability of the central government to use fiscal policy for macroeconomic management purposes.

Problems with the current practices arise largely from the high degree of discretion they entail. As the experience with the contract responsibility system has shown, the centerpiece of the system is the case-by-case negotiation of taxes between the Government and the enterprises. This is likely to lead to taxation rules that vary from one enterprise to another and which may be very costly to change once the long-term contracts are signed. The regional revenue-sharing arrangements, by leaving increased resources in the hands of local governments and by increasing their powers to effectively set tax rates, have eroded the command of the center over the mobilization of resources and have reduced its capacity to predict the outcome of policy measures. In short, the predominance of bargaining that leads to discretionary tax policies and the way in which decentralization of fiscal authority has been implemented have reduced the flexibility of the system and weakened the effectiveness of taxation as a macroeconomic policy instrument.

Bargaining has been the means by which compromises have been reached between the need to introduce new policy instruments and the impact of these instruments on conflicting regional, sectoral, and enterprise interests. However, the discretion entailed in the bargaining process detracts from the benefits of the reforms because it makes fiscal policy less predictable and less effective. Also, discretion in the form of case-by-case negotiation of taxation tends to validate distortions that could ultimately negate the benefits of reforms. Moreover, granting greater decision-making powers to enterprises and strengthening market forces will not lead to more efficient allocation of resources if decisions at the level of the firm continue to be made in an environment of soft budget constraint. Since discretion is bound to soften the budget constraint, it therefore works against allocative efficiency.

With respect to the second question, that is, the impact of reforms on the evolution of fiscal accounts, the Government is confronted with a policy conflict. The objective of allowing enterprises to retain and freely dispose of a larger portion of their earnings has meant, necessarily, less fiscal revenue for the Government. While the appropriate level of government revenue is difficult to assess in an economy undergoing such profound transformation, the success of the reforms necessitates the maintenance of macroeconomic stability, which requires a degree of stability between revenue and expenditure. The need to maintain such fiscal discipline sets the broad framework within which the financial consequences of reform must be fitted. The Government needs, therefore, to either divest itself further of spending responsibilities or redress the erosion of revenue elasticity that has arisen from the manner in which the reforms are being implemented. While there is still scope for the Government to relinquish spending responsibilities, there is increasingly limited room to reduce the level of expenditure further. Ways must therefore be found to enhance the elasticity of government revenue.

It will be difficult, however, for the Chinese authorities to prevent the continuous decline in the revenue/GNP ratio within a system in which a large portion of incomes--that is, individual incomes in both rural and urban areas--is only lightly taxed or not subject to taxation at all, while the effective tax rate on those incomes that are taxed is subject to case-by-case bargaining. One way to reverse this trend would be to increase the tax burden of enterprises across the board. Such a measure, however, is not in the spirit of the reforms, since enterprises already carry a major portion of the country's tax burden. 1/ An alternative response, which would be much more consistent with the objectives of the reforms, is to reduce the discretionary elements of tax policy. This could be achieved by subjecting all enterprises to a flat uniform income tax rate and by allowing only after-tax profits to be subject to negotiation and contracting between state enterprises and their owners. Such contracted "tax" liability would be similar to the payment of dividends to shareholders, in this case the Government. As long as the contracting system is in use, another approach could be to rebase the quota, that is, to adjust each year the quota profit to reflect the previous year's realized profit. If such an adjustment were made, the decrease in the tax revenue/GNP ratio implied by the current practice of fixing a constant quota profit for several years could be avoided. 2/ Another response would be to broaden the tax base by finding alternative revenue sources, such as taxation of those sectors--like agriculture and households--that have gained from recent policies. Raising indirect taxes does not offer an alternative solution so long as the incidence of these taxes cannot be shifted owing to price controls.

As regards the revenue-sharing arrangements between the center and provinces, one problem is that they rely excessively on bargaining which leads to a large degree of nonuniformity of treatment. A more important issue, however, is that the system, by leaving more resources in the hands of local governments, may encourage local authorities to use their power to restrict competition and thus lead to the establishment of noneconomic industries. The obvious solution here lies in reducing trade and entry barriers to increase competition.

An issue often debated in China is the appropriate level of fiscal balance during the reform process. As mentioned before, prior to the reforms, balanced budgets were emphasized. However, the level of tolerable fiscal imbalance during (and after) the reforms is not necessarily the same as the level prevailing in the pre-reform system. Indeed, at least in the early stages of the reforms, the negative

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1/ In addition, there has been a tendency for a "clawback" of enterprise profits through surcharges on "extra" profits and taxes on extrabudgetary receipts. Such surcharges and ad-hoc taxes are, of course, inimical to the spirit of the contract system.

2/ For a demonstration of this point, see Appendix I.

macroeconomic consequences of deficits might be offset by changes in the behavior of households, which are themselves reacting to the change in incentives. Before the reforms, household income grew relatively slowly; income has grown faster under the reforms, however, and the Government has been willing to give greater freedom in its disposition. This has resulted in a voluntary decision on the part of households to save a greater proportion of their income. 1/ In fact, the sharp rise in the household demand for money in recent years, which partly reflects increases in voluntary savings, has allowed the Government to reap the benefits of seigniorage and finance a higher budget deficit than it would otherwise have been able to do without putting additional pressure on aggregate demand. However, the appropriateness of the fiscal balance cannot be abstracted from the stance of overall demand management policies. Clearly, if credit policy toward enterprises remains as accommodative as it has been in recent years, the room for financing budget deficits is reduced. In this context, it is necessary to mention a factor that presently works toward widening the budget deficit. There is a built-in asymmetry in the current system, in that enterprises that have benefited from reforms and have seen their profits rise are taxed less and less as a result of the declining average tax rates implied under the management contracts, while enterprises incurring losses because of price controls or other reasons have their losses covered by the budget. In other words, the budget seems to lose out on account of both profitable and nonprofitable state-owned enterprises.

Systemic reforms in CPEs involve a delicate balancing of conflicting goals where considerations of economic efficiency, social equity, ideology, and political interests are bound together in a complex relationship. A central issue to which no satisfactory solution has yet been found in practice is how to eliminate the soft budget constraint for enterprises that now operate with greater autonomy but within the basic framework of state ownership. Fiscal policy can and must play a crucial role in hardening the budget constraint, but for this a compromise has to be found to solve the conflict between decentralization of decision making for efficiency purposes and maintenance of macroeconomic control and flexibility. Clearly, decentralization of decision making does not mean decentralization of macroeconomic instruments, which have to remain under the control of the central authorities. The need to adopt more transparent fiscal rules, while also keeping degrees of freedom to accommodate changing developments, seems to be the evident lesson to learn from the Chinese experience as other centrally planned economies also undertake market-oriented economic reforms.

1/ Household savings have grown rapidly since the start of the reforms. Qian (1988) has found that in rural areas, where welfare benefits are lacking and there are greater opportunities to invest, such as in housing, the savings rate is much higher than in urban areas.

Taxation and the Contract System: A Formalization

The tax/GNP relationship that emerges from the contract system can be formalized to provide a framework to analyze the factors affecting the elasticity of revenue. Denoting the tax liability of enterprises at time i by T_i, we have:

$$T_i = \alpha_b \bar{\pi}_i^* + \alpha_m(\pi_i - \bar{\pi}_i^*) \qquad i = 0 \ldots n \qquad (1)$$

where $\bar{\pi}_i^*$ is the quota profit for period i and π_i the realized level of profits in that period; α_b is the tax rate that applies to quota profits (usually $\alpha_b = 0.55$) and α_m the tax rate applied to over-quota profits. In general:

$$\alpha_m = 0 \qquad \text{for} \quad \Pi < \bar{\Pi}^*$$

$$0 \leq \alpha_m < \alpha_b \qquad \text{for} \quad \Pi \geq \bar{\Pi}^*$$

Taking i = 0 as the base year and assuming that the quota is based on the level of profits realized in the year immediately preceding the signing of the contract (Π_{-1}) and that, for the n periods of the contract, a constant rate of growth for quota profits (ζ) has been agreed, we have:

$$\bar{\Pi}_0^* = (1 + \zeta)\Pi_{-1} \qquad \zeta \geq 0 \qquad (2)$$

$$\bar{\Pi}_1^* = (1 + \zeta)\bar{\Pi}_0^* = (1 + \zeta)^2\Pi_{-1} \qquad (2a)$$

$$\bar{\Pi}_2^* = (1 + \zeta)\bar{\Pi}_1^* = (1 + \zeta)^3\Pi_{-1} \qquad (2b)$$

and, therefore,

$$\bar{\Pi}_i^* = (1 + \zeta)^{i+1}\,\Pi_{-1} \qquad i = 0 \ldots n \qquad (3)$$

If both realized profits (π) and GNP, or total income (y), also grow at a constant rate (ϕ and β, respectively), they could be expressed as:

$$\Pi_i = (1 + \phi)^{i+1} \Pi_{-1} \tag{4}$$

$$y_i = (1 + \beta)^{i+1} y_{-1} \tag{5}$$

where

$$\zeta \gtreqless \phi \gtreqless \beta.$$

After the proper substitutions, we can write the general form of the tax/GNP ratio as:

$$\frac{T_i}{y_i} = \left[(\alpha_b - \alpha_m) \left(\frac{1 + \zeta}{1 + \beta} \right)^{i+1} + \alpha_m \left(\frac{1 + \phi}{1 + \beta} \right)^{i+1} \right] \frac{\Pi_{-1}}{y_{-1}} \tag{6}$$

From equation (6) we observe that the tax/GNP ratio increases or falls depending on the relationship between the growth rates of income and profits (β and ϕ) and the contracted rate of increase for the quota (ζ). The T/y ratio remains constant only if $\zeta = \phi = \beta$. However, if the profit/income ratio does remain constant (i.e., profits and income grow at a similar rate, $\phi = \beta$), but the contracted growth in the quota (ζ) is different from the economy's growth rate, equation (6) becomes:

$$\frac{T_i}{y_i} = \left[\alpha_m + (\alpha_b - \alpha_m) \left(\frac{1 + \zeta}{1 + \phi} \right)^{i+1} \right] \frac{\Pi_{-1}}{y_{-1}} \tag{7}$$

which falls when $\zeta < \phi$. 1/ That is, the tax/income ratio falls if the contracted rate of quota increase is lower than actual profit growth, falling exponentially with the length of the contract. While it is

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1/ In addition, as discussed in Section IV, if the profit/GNP ratio falls, taxes as a proportion of income will tend to decrease even if $\zeta = \phi$ and $\alpha_m = \alpha_b$. However, given the contractual structure, the decline is much faster.

impossible to assert with certainty that in all contracts $\zeta < \phi$, there is strong evidence from discussions with the Chinese authorities and representatives of enterprises that this is indeed the most common case. In addition, since the quota profit is usually specified in nominal terms, the regressivity of the profit tax becomes more pronounced as the rate of inflation increases.

Assuming that $\zeta < \phi$ does not necessarily lead to a decreasing tax/income ratio. The decreasing ratio arises from the combination of the assumption that $\zeta < \phi$ and the practice of setting the quota profit increase in relation to a given constant base (equation (3)) rather than rebasing every year in order to reflect the previous year's actual performance. If such an adjustment were made, the tax/income ratio would not depend on the relative sizes of ζ and ϕ. Therefore, as long as the present contracting system is in use, decrease of the tax/income ratio could be avoided by shifting from a constant to a moving base in the setting of the contracts.

To demonstrate this point, let the tax liability established in the tax contract be, as in equation (1):

$$T_i = \alpha_b \bar{\pi}_i' + \alpha_m (\pi_i - \bar{\pi}_i') \qquad i = 0 \ldots n \qquad (8)$$

where, as before, π_i is the realized level of profits and $\bar{\pi}'$ is the contracted quota. However, unlike $\bar{\pi}^*$ in (1), $\bar{\pi}$ is determined as a given rate of increase over realized profits in the previous period (and not over a constant base).

For such a moving base, equations (2)-(2b) become:

$$\bar{\Pi}_0' = (1 + \zeta)\, \Pi_{-1} \qquad (9)$$

$$\bar{\Pi}_1' = (1 + \zeta)\, \Pi_0$$

$$\bar{\Pi}_2' = (1 + \zeta)\, \Pi_1$$

and, given the assumption about realized profits embodied in equation (4), the general form for the quota profits becomes

$$\bar{\Pi}_i' = (1 + \zeta)\ \Pi_{i-1} = (1 + \zeta)\ (1 + \phi)^i\ \Pi_{-1} \tag{10}$$

and the general form for the tax/income ratio will now be:

$$\frac{T_i}{y_i} = \left[(\alpha_b - \alpha_m)\ (1 + \zeta) + \alpha_m\ (1 + \phi) \right] \frac{(1 + \phi)^i}{(1 + \beta)^{i+1}}\ \frac{\Pi_{-1}}{y_{-1}} \tag{11}$$

which now depends on the relative growth rates of profits and income and not on the relative growth rates of quota versus realized profits. For a constant profit/income rate ($\phi = \beta$), which is the case previously depicted by equation (7) we have:

$$\frac{T_i}{y_i} = \left[\alpha_m + \frac{(\alpha_b - \alpha_m)\ (1 + \zeta)}{(1 + \phi)} \right] \frac{\Pi_{-1}}{y_{-1}} \tag{12}$$

which is constant over time, independent of the relationship between ζ and ϕ.

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