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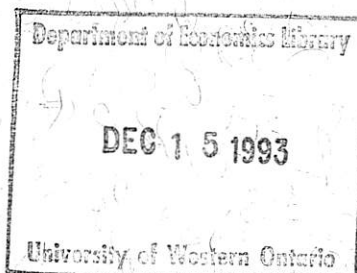
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Paper No. 39

**“Public Finance and China's
Economic Reforms”**

Terry Sicular



The UNIVERSITY of WESTERN ONTARIO

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PUBLIC FINANCE AND CHINA'S
ECONOMIC REFORMS*

by

Terry Sicular

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Observers of China's public finance have commented on two unprecedented developments during the reform period. First, China has experienced persistent budget deficits. Second, the size of the government budget has declined relative to GNP.¹ Many regard these trends as unfortunate; China's government officials view them with considerable concern.

The fact that more than 80 percent of government budgetary revenues comes from the state-owned enterprise (SOE) sector suggests a key to understanding these trends. That key is the financial relationship between the government and the SOE sector. China's economic reforms have altered the financial relationship between the government and the SOE sector, and by so doing have contributed to these trends. To some extent these modifications have been substantive, that is, to some extent the reforms have fundamentally altered the rules governing financial flows between SOEs and the government. To some extent, however, the reforms have simply changed the way in which financial flows between SOEs and the government are classified or counted. Some items formerly counted within the budget are now classified as off budget; certain within-budget revenue and expenditure items now fall under different budgetary categories. As will be shown below, such changes in accounting may explain a significant portion of the apparent increase in budgetary deficits as well as the decline in the size of the budget relative to GNP. Since the official budgetary data do not correct for these accounting changes, they give a misleading picture of real trends in government finance.

Reforms in the financial relationship between the government and the SOE sector have had a second, indirect effect on government revenues and expenditures in that they have affected the underlying economic performance and behavior of SOEs. Taxes on SOE profits are a source of budgetary revenue. SOE losses are largely covered by government subsidies. Reforms changing the incentives for SOEs to earn profits or reduce losses can thus affect government revenues and expenditures.

During the 1980s SOE profits grew, albeit slowly. At the same time, losses of money-losing SOEs rose. The coexistence of growing profits and growing losses in the state enterprise sector seems paradoxical. One reason for this outcome is that some state enterprises were fundamentally viable, and others were not. As the reforms progressed the viable firms prospered and grew, while the non-viable ones sank into the red. A second reason for the concurrent growth in profits of money-making SOEs and in losses of money-losing SOEs is that profits and losses are of secondary concern to SOEs. SOE decision makers are primarily concerned with the amount of funds retained within the enterprise. Certain categories of retained funds are positively related to profits; others are inversely related to profits. The pursuit of retained funds thus has mixed consequences for SOE profits.

The relationship between retained funds and SOE profits or losses is greatly influenced by government tax and subsidy policies. High tax rates on enterprise profits induce SOEs to expand categories of retained funds that are deductible as costs, with negative consequences both for profits and for tax collections. The government's willingness to subsidize SOEs when they lose money reinforces such behavior.

Indeed, the existing structure of taxes and subsidies may create incentives for a subset of SOEs to "go on the dole." This result resembles that of unemployment insurance and welfare payments in the West, which create disincentives to work and so cause certain groups of individuals to remain unemployed. A more detailed theoretical analysis of state enterprise behavior given the post-reform tax and subsidy structure is presented in a separate paper.² That analysis derives conditions under which an SOE will choose to earn profits versus operate at a loss. Different enterprises may lie on different sides of these conditions, in which case the economy will comprise two groups of SOEs, one of which shows profitable performance, the other of which loses money. Different behavior by two distinct groups of enterprises could explain the coexistence of growing profits and growing losses in the SOE sector.

It is worth noting that the SOE sector is a dominant force not only for China's public finance, but also for the economy as a whole. Although the relative importance of the state enterprise sector has declined in recent years, it still accounts for more than 60 percent of economy-wide fixed investment, produces half of China's industrial output, and employs nearly one-fifth of the national labor force. (See table 1.)

Much past research on China's SOEs has focused on state-owned industry, which is perhaps the largest component of the state enterprise sector. Statistics for 1988 show that industrial SOEs accounted for 62 percent of SOE fixed investment, 42 percent of SOE workers and staff, and 73 percent of total SOE profits and profit taxes. An analysis that

ignores SOEs in other branches of the economy, however, would overlook a group of enterprises that has significant impact on the budget.

Although non-industrial SOEs generate only 27 percent of total profits and profit taxes in the SOE sector, they account for more than 80 percent of the losses of all money-losing SOEs. In the late 1980s losses of these non-industrial SOEs were on the order of 40 billion yuan, equivalent to roughly one-fifth of the total profits and profit taxes generated by the state enterprise sector.³

To the extent permitted by the available data, this paper examines the SOE sector in its entirety. Unless stated otherwise, the SOE sector is defined to include not only industrial SOEs, but also state-owned enterprises in non-industrial sectors such as health, education, energy, transport, and commerce. Of particular interest are state-owned enterprises in the commercial sector, which are perhaps the single largest group of money-losing SOEs. In 1986/87 losses of non-grain enterprises under the Ministry of Commerce plus government subsidies on the losses of grain enterprises were equivalent to over one-half of total SOE losses (see below). Indeed, commercial SOEs appear to act as a buffer absorbing the losses of industrial SOEs. During the recession in 1989/91, for example, state commercial enterprises were required to buy unsalable manufactured goods from industrial firms in order to reduce industrial losses.⁴

Section I of this paper begins with a discussion of aggregate trends in government finance. Special attention is paid to the difficulties of accurately assessing the government's financial situation given changes in budgetary accounting practices. Section II

presents an overview of the economic reforms that have affected the financial relationship between the government and SOEs. The effects of these reforms on SOE performance are examined in section III. As mentioned above, the consequences have been mixed: SOE productivity and profits have grown, but so have the losses of money-losing SOEs. Meanwhile, the amount of funds retained by SOEs has risen dramatically. These trends are consistent with the view proposed here that profits are of secondary concern, and retained funds of primary concern, to SOE decision makers. Section IV concludes by discussing the implications of these developments for government finance.

I. Revenues and expenditures

A. Concepts and definitions

China's State Statistical Bureau publishes a wide range of official statistics on government revenues and expenditures. Studies of China's public finance generally rely heavily on these data. The official statistics are, however, problematic. During the 1980s the coverage and definition of the data have changed in several important ways.

Of particular relevance to this study are changes in how the finances of state-owned enterprises are treated in government budgetary statistics. Treatment of SOE finances in government accounts varies considerably among countries.⁵ In some cases the SOE sector is treated as part of the government, so that its revenues, expenditures, and debt are counted as part of total government revenues, expenditures, and debt. In other cases this sector is treated as a separate financial

entity, in which case the budget may capture only certain well-defined financial flows such as tax payments from and grants to SOEs.

Prior to the reforms China used budgetary accounting methods adopted from the Soviet Union in the 1950s. SOE finances were subsumed in the government budget. SOE earnings were considered a component of government budgetary revenues. Most SOE expenditures were financed by government grants, and so SOE expenditures translated directly into government budgetary expenditures.

The reforms have brought change in these accounting practices. SOEs are now treated as separate financial entities: they earn profits, pay taxes on their profits, and in principle retain any after-tax profits. From the perspective of government budgetary accounts, SOE taxes are counted as budgetary revenues, but after-tax profits no longer appear in the state budget. On the expenditure side, SOE outlays are now financed primarily out of retained funds and bank loans, rather than by grants. Only that portion financed by grants and a limited amount of within-budget loans are counted as budgetary outlays.

These accounting changes have reduced the overall size of the state budget: a smaller portion of SOE earnings and expenditures now flows through the budget. The accounting changes have also altered the apparent levels of the budgetary deficit and of government borrowing. The switch to bank financing of SOE capital investments, for example, has reduced government budgetary spending and so has reduced the budget deficit. To some extent then, SOE borrowing has simply replaced government borrowing.

One goal of the reforms is to prod enterprises to behave as financially independent, profit-seeking entities. Treating SOEs as independent on the books is part of this process. From this perspective, change in the accounting relationship between SOEs and the government is necessary. From the perspective of understanding trends in government revenues, expenditures and debt, however, the change in accounting methods creates a problem. Budgetary statistics before and since the reforms are no longer comparable. Few existing studies of recent trends in China's public finance address this problem.

The discussion here interprets the official statistics in light of the changes in treatment of SOE finances. Where possible, budgetary statistics are supplemented with relevant data on SOE finances. Particularly useful in this regard are published statistics on "extra-budgetary" government revenues and expenditures. Extra-budgetary revenues include the retained earnings (retained profits and depreciation funds) of SOEs and the extra-budgetary funds of the government ministries overseeing SOEs.⁶ Retained SOE earnings and the extra-budgetary revenues of their superior ministries account for about 80 percent of total extra-budgetary revenues. These data can be used to ascertain the effect of changes in accounting practices on budgetary trends.

The question of how SOE finances are handled in the budget is not the only issue of concern in interpreting China's budgetary statistics. A second issue is the treatment of capital versus current accounts. Following the Soviet model, Chinese budgetary accounting does not distinguish between capital and current spending (or revenue) items.

Indeed, government borrowing is counted as current revenue, and the repayment of principal on government debt is counted as current expenditure. Such practices may soon change: the central government recently announced that starting in 1992 the budget will be divided into two parts, a regular budget and a construction or capital budget. Debt will be considered revenue only in the capital budget.⁷

A second issue concerns the returns to ownership from state-owned enterprises. Currently SOE payments to the budget are primarily in the form of tax payments. Some Chinese economists believe that the government in fact uses the tax system to collect its returns to ownership. They argue that such behavior undermines efforts to establish a regularized tax system, and that SOE dividend payments should be separated from SOE tax payments. This question has received considerable attention in Chinese academic circles, but as yet no change has occurred in policy.⁸

A third issue is how to account for the effects of government pricing and other policies that "artificially" alter SOE profits and so influence financial flows between SOEs and the government. For example, the government requires certain SOEs to sell their output at below-market planned prices. As a consequence, the profits of these enterprises are reduced. How should budgetary accounting treat the financial effects of this and similar policies?

Chinese accounting practices have not been consistent on this point. Prior to 1986, SOE losses, regardless of their cause, were simply subtracted from total SOE revenues and thus from government revenues. In other words, losses due to price measures such as that

described above simply reduced government revenues from the SOE sector. As part of the effort to make SOEs financially independent, in 1986 the government began to treat losses due to pricing policies as an expenditure item rather than as a reduction in revenue. Instead of deducting such losses from the SOEs remittances to the government, now the government allotted to each enterprise a "price subsidy" to cover such losses. SOE revenues were increased by the amount of the "price subsidies," as were government budgetary revenues.⁹ The result of this accounting change was a one-time increase in reported government budgetary revenues and expenditures.

Other categories of subsidies, for example subsidies to cover enterprise losses, continue to be deducted from revenues. In principle, these subsidies should also be counted as expenditures. In practice, the government cannot accurately distinguish between enterprise losses due to pricing policies and enterprise losses due to managerial or other factors. Thus official data on price subsidies are not terribly meaningful: they are generated by an accounting rule that simply assigns a certain share of enterprise losses to price policies. More generally, inconsistent treatment of subsidies for losses due to price policies and of subsidies for other types of losses confounds interpretation of China's public finance data.

B. Trends in government revenues and expenditures

Data on government revenues and expenditures appear in table 2. Table 2 presents two sets of data: budgetary data and the sum of budgetary and extra-budgetary funds, hereafter called "total revenues" and "total expenditures." As discussed above, during the 1980s SOE

earnings and outlays were largely shifted from within-budget to extra-budget accounts. The sum of budgetary plus extra-budgetary funds would not be affected by this accounting change.¹⁰

I have adjusted the budgetary data as follows: (1) government borrowing is subtracted from budgetary revenues, (2) repayment of loan principal is subtracted from budgetary expenditures, and (3) both price subsidies and subsidies to cover enterprise losses are consistently treated as expenditure items. These adjustments correct for some, but not all, of the definitional problems mentioned above. A description of these adjustments can be found in the notes to table 2.

Budgetary revenues and expenditures clearly reveal the trends mentioned in other studies, i.e., persistent deficits and the shrinking size of the government budget relative to GNP. The government has experienced a budget deficit in every year since 1978 (table 3). The magnitude of the budget deficit fluctuated in the 1980s. At the start of the reforms in 1979 it rose to over 5 percent of GNP, but was quickly reduced. In the late 1980s it rose again to about 2 percent of GNP.

During the 1980s budgetary revenues and expenditures grew quite rapidly, at rates of about 10 percent a year. Overall economic growth, however, averaged nearly 15 percent a year. Consequently the size of the budget declined relative to the economy as a whole. The ratio of budgetary revenues to GNP fell from over .30 in the late 1970s to about .20 in the late 1980s (table 2).

The series for total government funds (including extra-budgetary funds) presents a different picture. Extra-budgetary funds have grown more rapidly than GNP. Consequently during most of the 1980s the sum of

budgetary and extra-budgetary revenues remained fairly stable, fluctuating between 40 and 45 percent of GNP. A downward trend is only evident after 1987. Furthermore, the government deficit for the sum of budgetary and extra-budgetary funds is considerably smaller than the within-budget deficit. This difference reflects the fact that during the 1980s the government enjoyed an extra-budgetary surplus. (See tables 2 and 3.)

Thus trends in extra-budgetary funds largely offset trends in the budget, at least through 1987 or 1988. Data for the years after 1988 are unfortunately incomplete. The available data suggest that after 1988 the total deficit edged upward and total revenues began to decline relative to GNP. It is possible that these trends were associated with contractionary policies imposed in late 1988 and so were short-term. The government resumed an expansionary policy in early 1992.

C. Composition of revenues and expenditures

During the 1980s trends in total government revenues and expenditures remained fairly steady. The composition of those revenues and expenditures, however, changed in two major dimensions: (1) in the relative shares of extra-budgetary versus within-budget funds, and (2) in the make-up of within-budget funds. Reforms in the financial relationship between SOEs and the government contributed to changes in both these dimensions.

During the 1980s the share of extra-budgetary revenues in total revenues rose from less than 30 percent to about 45 percent (table 4). Extra-budgetary expenditures show a similar increase in relative size. The rising importance of extra-budgetary funds relative to budgetary

funds was in part due to the shift of SOE finances into extra-budgetary accounts. The effects of this reclassification are evident in available data on revenues derived from SOEs. Revenues derived from SOEs contributed between 80 and 85 percent of total government revenues through the 1980s (table 5). In the late 1970s about 80 percent of these revenues were within-budget. By 1987, less than 60 percent of revenues from SOEs were within-budget, and more than 40 percent were extra-budgetary.

Growth in extra-budgetary revenues from SOEs explains most of the increase in the extra-budgetary revenues. Eighty percent of the growth in extra-budgetary revenues between 1979 and 1989 was due to growth in extra-budgetary revenues from SOEs and their superior ministries. If the increase in extra-budgetary revenues from SOEs is subtracted from extra-budgetary revenues, then the share of extra-budgetary revenues in total revenues actually declines from 26 percent in 1979 to only 15 percent in 1989. Moreover, if extra-budgetary revenues from SOEs are added to budgetary revenues, then prior to 1988 the decline in budgetary revenues relative to GNP almost completely disappears (table 5).

Thus the changes in accounting that accompanied China's financial reforms in the early and mid-1980s were probably an important factor underlying not only the change in the composition of aggregate revenues, but also trends in the budget. Data after 1987 are incomplete, but they suggest that from 1988 through 1991 growth in extra-budgetary revenues from SOEs was no longer sufficient to offset the relative decline in budgetary revenues.

The real consequences of the rising importance of extra-budgetary funds is unclear. To some extent this shift may simply have been nominal and so have had little real effect. To some extent the shift may have been associated with a redistribution of funds among the different branches and levels of the government. In this case the change in the composition of total revenues would have had real effects even though its net impact on total revenues was small.

The reforms may have altered the intra-governmental distribution of funds in two ways: first, by changing the distribution of funds between the central, provincial, and local governments, and second, by changing the distribution of funds between the Ministry of Finance and the operational ministries (the Ministries of Agriculture, Industry, Commerce, and so on). Historically, the major share of extra-budgetary funds have accrued to the provincial and local governments. For this reason, some observers have concluded that the shift of resources from within-budget to extra-budget accounts has caused a redistribution of funds away from the center.

Table 6 gives data on the central and provincial/local shares of government expenditures, which shares provide a measure of relative control over funds of different levels of government. These data do not lend strong support to the conclusion that the reforms have caused a redistribution of funds from the center to lower levels. Although the major share of extra-budgetary funds has been provincial and local, during the 1980s their share fell while the center's share rose. Meanwhile, the center's share of within-budget expenditures declined. The net effect of these shifts in the distribution of within- and

extra-budget expenditures was that the central share of total expenditures declined only modestly, from 43 percent in the early 1980s to about 39 percent in the late 1980s.

Expenditure shares are of course an imperfect measure of the center's ability to control and allocate resources. They do not fully capture changes in the central government's ability to redistribute locally collected revenues. Such redistribution was important prior to the reform period. At that time provincial and local governments passed on a large proportion of the revenues they collected to the center, which either spent these funds centrally or reallocated the funds to other regions. During the 1980s the provincial and local governments have apparently gained more control over the use of the funds they collect, and so have become increasingly "revenue entitled."¹¹

Shifts in the distribution of funds between the Ministry of Finance and other branches of the government have probably also taken place. Within-budget funds are apparently under the control of the Ministry of Finance, while extra-budgetary funds pass through other branches of the government. Thus the rising relative importance of extra-budgetary funds may reflect a decline in the influence of the Ministry of Finance and its subsidiary branches at lower levels.

During the 1980s the share of funds controlled by SOEs independently of their overseeing bureaucracies has probably also risen. In principle SOEs have control over their retained profits and other retained funds. The extent to which SOEs have truly gained independent control over these retained earnings is unclear. Evidence on this issue is discussed below.

Funds controlled independently by SOEs are counted in extra-budgetary funds, which include profits and other funds retained by SOEs. Whether or not such funds should be counted as part of total government resources is debatable. Since in practice it is impossible to calculate the amount of funds controlled by SOEs, this analysis treats such funds as part of total government resources.

The second major dimension of change in the composition of government funds is in the composition of within-budget revenues and expenditures. Table 7 reveals that the importance to total budgetary revenues of direct remittances by enterprises declined substantially in 1985, the year in which the tax-for-profit reforms were implemented. In the same year the share of taxes in total budgetary revenues rose from 53 percent to over 80 percent. Since 1985 taxes have been the major source of budgetary revenues.

The composition of tax revenues has changed substantially. As will be described below, the tax-for-profit reform was accompanied by an overhaul of the tax system. In 1985-86 the industrial-commercial turnover tax was replaced by three new types of taxes: product taxes, the business tax, and a value-added tax. (The value-added tax is expected to gradually replace product taxes.) Product taxes are industry-specific or enterprise-specific taxes that are meant to equalize profits among industries (see below). The business tax is a turnover tax on gross receipts in industry and on the gross markup in retail and wholesale distribution, transportation and communications services, and financial and other services.¹²

The major items in budgetary spending have been basic construction (within-budget investment) and subsidies covering enterprise losses due to price policies and other factors. (See table 8.) Basic construction has fallen in relative importance from 35 percent to less than 20 percent of budgetary expenditures. Its decline reflects the results of policies that caused loans and self-finance to be substituted for grants to finance enterprise investment.

Government subsidies have increased in importance. By the late 1980s the sum of price subsidies and subsidies to cover enterprise losses accounted for one-quarter of all budgetary expenditures. This trend confirms the growing burden of government price policies and of money-losing state enterprises on the budget.

Two other categories of spending deserve note. Defense spending has declined substantially as a share of budgetary expenditures during the reform period. Although some defense-related spending is hidden in other categories of spending such as basic construction, science, and government administration, the decline in reported outlays on defense as a share of total spending is substantial. This decline reflects announced policies to streamline the military.¹³ In contrast, spending on science and social services, especially education, has increased in importance.

D. Deficit finance

As mentioned above, during the 1980s the government deficit as calculated using total revenues and total expenditures was relatively small, never exceeding one percent of GNP (table 9). The budget deficit was larger. The consequences of the deficit, whether budgetary or

overall, would depend on how it was financed. Table 9 gives data published by the IMF on the financing of China's budgetary deficit. In the early years of the reform the budget deficit was financed primarily through loans from the central bank. Domestic non-bank borrowing became increasingly important after 1980, when the government began to issue bonds. Foreign loans also grew in importance and by the late 1980s financed about one-third of the budgetary deficit.

IMF analysts state that government borrowing from the central bank to finance the budget deficit contributed to monetary expansion and reserve money growth in the late 1980s, and they conclude that deficit finance was thus a factor explaining the inflation of 1986-88.¹⁴ This conclusion appears to be based on a definition of the deficit that excludes the extra-budgetary surplus. The inflationary impact of any budgetary deficit, however, would depend on how the extra-budgetary surplus was handled. If the extra-budgetary surplus was deposited in the central bank, then the inflationary effects of government borrowing from the central bank to finance the budgetary deficit would have been offset.

Even if calculated so as to include extra-budgetary funds, data on the deficit and deficit finance would still give an incomplete picture. As discussed earlier, during the 1980s government grants to finance SOE investment were largely replaced by bank loans. This policy reduced the level of government expenditures and thus the need for government borrowing. Bank lending to SOEs, however, increased: enterprise borrowing replaced government borrowing. Since the central bank indirectly supported the increased lending to enterprises, monetary

expansion could have occurred even while the deficit remained apparently small.

The State Statistical Bureau publishes data on the amount of SOE investment financed using bank loans versus other sources of finance (table 10). These data document the decline of government grants and the rise of bank loans and other forms of non-budgetary finance in funding enterprise investment. The amount of non-budgetary bank loans increased significantly during the 1980s, rising from less than 10 billion yuan to more than 50 billion yuan between 1981/82 and 1990. In comparison, in the late 1980s the government deficit (including both budgetary and extra-budgetary funds) was less than 10 billion yuan, and the budgetary deficit was less than 40 billion yuan. These figures suggest that if the government had continued to finance this portion of enterprise investment, the deficit would have been substantially larger.

II. Reforms affecting the financial relationship between the SOE sector and the government

Two sets of policies are relevant in analyzing the financial relationship between SOEs and the government. One set of policies influences the underlying profitability of the SOE sector. This set of policies has included (1) price policies that undervalue or overvalue goods produced or used as inputs by SOEs, thus artificially raising or lowering SOE profits, (2) measures barring entry into and competition in sectors traditionally dominated by SOEs, and (3) regulations or plans requiring SOEs to engage in unprofitable behavior. Another set of policies governs explicit financial transfers between SOEs and the government. Such policies include (1) tax and other measures that

determine the share of SOE earnings remitted to the government, and (2) policies regulating enterprise spending so as to increase SOEs' taxable income and/or reduce government subsidy outlays.

A. Policies affecting SOE profitability

Policies enhancing the profitability of state-owned industry are discussed at length in several recent articles by Barry Naughton.¹⁵ Naughton writes that prior to the reforms China's planned price and compulsory procurement system funnelled resources to the predominately state-owned industrial sector. The government set prices so as to overvalue industrial products relative to raw materials, thus enhancing industrial profits. Compulsory procurement and planned allocation minimized the distortionary effects of these price policies on behavior. Barriers to entry prevented non-state businesses from entering high-profit sectors and so creating competition that could erode SOE profits. Since SOE profits went directly into the state budget, this set of policies helped to maintain government revenues at a high level.

Articles by Naughton and also by Christine Wong describe how the reforms have disrupted this system of revenue mobilization.¹⁶ Price reforms have caused the relative prices of industrial inputs to rise. Commercial reforms have allowed markets to develop for beyond-plan products, and a growing proportion of goods are now traded at market prices. Rural reforms have encouraged the growth of collective and private industries that compete with SOEs for resources. The net effect of such measures has been to erode the monopoly status and thus the profitability of state-owned industry. Both Wong and Naughton conclude

that these developments explain the emergence of budget deficits and the decline of government revenues relative to GNP.

While the reforms have undoubtedly affected the performance of China's SOEs, Naughton and Wong's conclusions regarding the consequences for public finance are not entirely correct. First, neither Wong nor Naughton discusses extra-budgetary finance. If extra-budgetary funds are considered, then the fiscal decline largely disappears. Second, the data presented, especially by Naughton, overstate the seriousness of the decline in the profitability of state enterprise. As will be discussed below, the data do not in fact reveal an "overwhelming" decline in industrial profits or profitability. Third, trends in the profitability of state industry may not fully reflect the situation for the SOE sector as a whole. Both Naughton and Wong focus on profitability in state-owned industry; however, high profitability of state industry prior to the reforms was in part sustained by low profitability or even losses in non-industrial state sectors such as commerce and energy. For this reason the effect of the reforms on non-industrial SOEs could be quite different than that on industrial SOEs. A more accurate analysis of the effect of the reforms on state sector profitability and thus on government revenues should consider this possibility.

Finally, Naughton's analysis pays insufficient attention to changes in policies determining the level of financial transfers between SOEs and the government. The reforms have explicitly allowed SOEs to retain a larger share of their profits, and so budgetary revenues would have declined even if SOE profitability had remained constant.¹⁷

Indeed, the structure of taxes and subsidies under the tax-for-profit

system has created a new set of incentives that have influenced SOE behavior and profitability, and so the state budget. Trends in budgetary revenues have therefore been caused not only by the erosion of SOE monopoly status, but also by changes in the financial relationship between SOEs and the government.

B. Policies affecting the financial relationship between SOEs and the government

Policies governing the financial relationship between China's SOE sector and the government have undergone several rounds of reform.¹⁸ A major aim of these reforms has been to provide enterprises and their workers with incentives to increase efficiency and profitability. Prior to the reforms such incentives were minimal. SOE earnings went directly to their superior government agencies, and SOE spending was financed largely by government grants. SOEs retained only a small share of their depreciation funds. The government's allocation of funds among SOEs was not closely linked to enterprise profits or efficiency. Wages were set by the central government and were linked to neither worker nor enterprise performance.

In the late 1970s the government began to experiment with a range of schemes under which enterprises could retain a larger share of their earnings. These experiments culminated in the 'tax-for-profit' reforms. The tax-for-profit reforms were initiated in 1983 and carried out in full during 1984/85.

Under the tax-for-profit reforms, payments of income or profit taxes replaced profit remittance. Enterprises now paid income taxes according to a regularized tax schedule. Large and medium-size SOEs

paid a uniform tax of 55 percent of their profits; smaller SOEs paid taxes according to a graduated, eight-rate scale ranging from 10 percent to 55 percent of profits. In addition, enterprises now paid profit-based taxes called adjustment taxes (tiaojie shui) or product taxes (chanpin shui). The purpose of the adjustment and product taxes was to reduce any excessive deviation in enterprise profit margins from their levels before the tax-for-profit reforms. More generally, the object of the adjustment and product taxes was to equalize profits among enterprises, which profits varied widely due to the inherited price structure, capital structure, and other factors in the partially reformed economic environment. These taxes were necessarily discretionary, and they varied among industries and among firms within industries. Not surprisingly, enterprises negotiated energetically with their superiors to obtain favorable terms on these taxes. Profits remaining after the income, adjustment, and product taxes were to be retained by the enterprises.

In the late 1980s the tax-for-profit system was largely supplanted by a new program called "management contracting." By the end of 1987, 78 percent of large- and medium-scale industrial SOEs had adopted management contracting. The stated goal of the management contract system was to further strengthen the financial accountability and independence of enterprises.

Under management contracting, the management of an SOE signs an agreement with the enterprise's superior agency, usually a bureau of the central or local government. The length of the contract is usually between 1 and 5 years. The terms of the contract can differ among

firms. One type of contract specifies a target level of profits to be earned by the enterprise. For within-target profits, taxes are paid at the uniform income tax rates mentioned above. Profits beyond the target are generally taxed at a different, usually lower, rate. In multi-year contracts of this type, the profit target can increase over time.

A second type of management contract does not set a profit target, but specifies a "quota" of taxes to be paid by the enterprise each year. This tax quota is in lieu of the income and adjustment product taxes. Under this form of management contracting, the level of taxes paid might not be linked to the profits realized by the enterprise. This second type of management contract has become fairly widespread: it is used by 60 to 70 percent of all medium- and large-scale enterprises. Other types of management contracts also exist.¹⁹

Enterprises that fail to meet the profit or tax targets in their contracts are expected to meet their tax obligations by drawing on retained profits and depreciation funds.²⁰ In practice, however, when an enterprise is unable to meet its targets, government bureaus superior to the enterprise have been known to modify the terms of the contract ex post, and banks that lend to the enterprise have been known to absorb some of the loss.

Since the contracts differ among enterprises, so do tax obligations. The uniform 55 percent income tax rate now only applies under the profit-based form of contract, and only to within-target profits. Taxes paid on beyond-target profits, and by enterprises using other forms of contracts, vary widely. In effect, then, the adoption of the management contract system constitutes a move away from earlier

efforts to establish a regularized and uniform structure of enterprise taxation.

Accompanying the tax-for-profit and management contracting reforms have been measures increasing the amount of money that enterprises can retain in the form of depreciation funds. In China enterprises are required to deposit cash into "depreciation fund" accounts in the bank. The magnitude of an enterprise's depreciation fund is determined by centrally set depreciation rates and the size of its capital stock. The government allows enterprises to retain a portion of these funds, which are to be used primarily for the renovation and replacement of their capital stock.²¹ Monies deposited into depreciation fund accounts are considered a cost of production and are deductible from enterprises' taxable income.

Prior to the reforms depreciation rates were low and enterprises could retain only 40 percent of these funds. The remaining 60 percent went to the government. In 1979 the government began to raise depreciation rates and increase the share of depreciation funds retained by enterprises. In 1985 the central government waived its share of depreciation funds, so that enterprises could retain the full amount less any remittances to local governments, or more than 70 percent. By 1987, 100 percent of depreciation funds were apparently left to enterprises as retained funds.²²

These changes in policy have contributed to substantial growth in the amount of depreciation funds that enterprises retain (see below). Indeed, available data suggest that retained profits and retained depreciation funds are of roughly the same magnitude: among industrial

SOEs retained depreciation funds actually exceed retained profits by a significant margin. (See table 11.)

The magnitude of retained depreciation funds highlights their importance. Chinese enterprises are interested in expanding their retained funds, which include both retained profits and retained depreciation funds. Depreciation funds are considered a cost and so deducted from profits; moreover, the size of depreciation funds depends on the amount of investment outlays. Thus there exists a tradeoff between retaining profits and retaining depreciation funds.

Retaining depreciation funds has an advantage over retaining profits: depreciation funds are not taxed. Profits, on the other hand, can be subject to relatively high tax rates. Thus despite the fact that depreciation funds can only be used for certain categories of expenditures, enterprises may prefer to take their earnings in the form of depreciation funds than in the form of profits. Moreover SOEs may deliberately overinvest so as to increase the amount of depreciation funds that they can retain.

The negative effect of profit taxes on the level of profits has been raised in a recent paper by Penelope Prime. Prime points out that Chinese enterprises have an incentive to inflate their outlays on wages, bonuses, investment, and housing so as to reduce their accounting profits and thus their tax liability. Since the government subsidizes money-losing enterprises, SOEs may inflate such outlays to the point where they report losses.²³ This is an important observation, and I examine it more closely in a separate paper.²⁴

C. Policies regarding money-losing enterprises

Government's efforts to encourage SOEs to increase their efficiency and profitability have been undermined by the lack of harsh measures towards money-losing enterprises. It is generally acknowledged that enterprises in China's state sector are not fully responsible for their losses. Although China has recently adopted bankruptcy legislation, the government has rarely closed down money-losing SOEs. More commonly, the government merges money-losing enterprises with profitable enterprises or simply allows them to continue to operate with government subsidies.

One reason for such lenience has been hinted at above: the government cannot easily distinguish between losses caused by government pricing and other policies, and losses caused by poor management or lack of worker effort. A second reason is that the closing of SOEs would have wider consequences. SOEs employ large numbers of urban workers. The closing of SOEs would cause urban unemployment, which would create new financial demands for welfare outlays and would undoubtedly have social and political repercussions.

The government has made efforts to encourage money-losing enterprises to reduce their losses. For SOEs that historically have lost money such as coal mines and grain marketing enterprises, the government instituted management contracts with target levels of losses. The government guaranteed a subsidy sufficient to cover the target loss. If actual losses were smaller than the target loss, then the enterprise could retain a share of the loss reduction. If losses exceeded the target, then the government imposed a penalty on the enterprise, for

example, a portion of the excess losses might be held against future earnings, or the enterprise might be required to reduce its outlays on bonuses and worker welfare. Despite such measures, the losses of money-losing enterprises have continued to increase (see below).

III. Enterprise performance in the wake of the reforms

Evidence on the economic performance of SOEs indicates that the reform measures discussed above have influenced SOE behavior in several ways. First, SOEs have shown signs of improved productivity and have maintained their profitability. While total SOE profits have grown, however, so have the losses of money-losing state enterprises. Second, during the reform period the retained funds of SOEs have grown substantially. This growth in retained funds provides support for the view that profit maximization is not the primary goal of China's SOEs. Third, during the reform period enterprise spending on employee welfare and investment has increased rapidly. SOEs have financed these outlays both from retained and borrowed funds. In response to the rapid growth in spending on employee welfare and investment, the government has implemented an array of regulations to control SOE access to and use of funds. These regulations, however, have had limited success.

A. SOE productivity and profitability

A careful study of the productivity of industrial SOEs by Jefferson, Rawski and Zheng finds that the multifactor productivity of state-owned industry rose during the reform period. Their study estimates that productivity growth in this sector averaged 2.4 percent a year between 1978 and 1988, a significant improvement over the stagnant productivity record prior to the reforms.²⁵ These findings are at odds

with the conventional belief that state industry has performed poorly during the reform period.

In a recent paper Barry Naughton points out that trends in productivity and profitability can differ. He writes that despite evidence of improved productivity for state-owned industry, there is "overwhelming evidence of deteriorating profitability in the state sector."²⁶ In support of this conclusion, Naughton presents data on the profit rate of state-owned industry, calculated as the ratio of enterprise profits plus income taxes to their total capital. He presents data for 1980 and 1989: in 1980 the profit rate was 25.2 percent, and in 1989 the profit rate was only 16.8 percent.²⁷

The data in table 12 raise questions about Naughton's strong statement regarding state sector profitability. Table 12 gives profit rates calculated using data from sources published by the State Statistical Bureau and Ministry of Finance. Profit rates are calculated as the sum of SOE profits and income taxes divided by the net value of SOE fixed assets (guding zichan jingzhi). Naughton's measure of fixed assets appears to include working capital, and the second series in table 12 includes working capital in the denominator. The profit rates in this second series are identical to those quoted by Naughton.

The first two series show that profit rates for industrial SOEs rose slightly in the late 1970s, declined slightly in the early 1980s, and then remained more or less unchanged through 1985. Profit rates then dropped in 1986, remained constant for three years, and dropped again in 1989. The magnitude of the overall decline during the reform period depends very much on one's choice of beginning and end years.

Naughton compares 1980 and 1989, which gives the largest decline. The magnitude of the decline is substantially smaller if one compares 1977 with 1988.

The first three columns in table 12, and Naughton's analysis as well, exclude non-industrial SOEs. The last column in table 12 includes non-industrial SOEs, which are relevant to this analysis. Non-industrial SOEs appear to be less profitable than industrial SOEs, as including non-industrial SOEs reduces profit rates noticeably. With the exception of several outlying years, the rate of profit for all within-budget SOEs, industrial and non-industrial, remained between 0.25-0.28 for most of the 1980s. In 1977-79 and in 1985 profit rates were higher than average; in 1989 profit rates were lower than average.

Whether or not these numbers reveal a trend is debatable. One could perhaps argue that profit rates declined from above 0.30 in the late 1970s to 0.25-0.26 in the 1980s. Even so, this trend is insufficiently strong to justify a conclusion of "overwhelming evidence of deteriorating profitability in the state sector." One could alternatively argue that during the 1980s SOE profitability remained more or less constant, and that during certain episodes (1977-79, and 1985) profit rates were higher than usual, while during other episodes (1989-91) profit rates were lower than usual. If the latter view is correct, then an analysis of episodes would be more appropriate than the analysis of a trend in interpreting these data.

B. Profits and losses

Profit rates are only one indicator of enterprise performance. Another indicator is the level of profits. Data on the level of pre-tax profits (profits plus income taxes) for within-budget SOEs appear in table 11. Between 1979/81 and 1988/90 (three-year averages are used to smooth yearly variation), profits plus taxes of these SOEs grew at an average rate of 8 percent per year. In real terms the increase in SOE pre-tax profits was substantially lower. During this period the price level rose at an average annual rate of 7 to 8 percent.²⁸ At best, then, pre-tax profits rose one percent a year in real terms.

During the 1980s growth in SOE pre-tax profits fluctuated considerably from year to year. In some years pre-tax profits rose substantially (1984-85, 1987-88); in other years they declined (1986, 1990). Slow growth or decline in pre-tax profits appears to have been associated with contractionary government policies during the retrenchment periods of 1986 and 1989-90.

While total SOE pre-tax profits have been growing, albeit slowly in real terms, so have the losses of money-losing state enterprises. Between 1980 and 1988 losses of money-losing SOEs grew at an average annual rate of nearly 18 percent. Available evidence for later years (1989-1991) indicates that the recent retrenchment has caused additional, abnormally large growth in SOE losses. Losses of money-losing enterprises have increasingly cut into total SOE pre-tax profits: in 1980 these losses were equivalent to 13 percent, and in 1988 they were equivalent to 24 percent, of SOE pre-tax profits. A

significant portion of SOE losses appear to be covered by government budgetary subsidies. (See table 13.)

Losses of money-losing industrial SOEs grew 12 percent a year between 1980 and 1988, more slowly than the losses of all SOEs. This would imply that the losses of non-industrial SOEs grew at rates exceeding 18 percent a year. Available data on losses for commercial SOEs show their losses growing more than 20 percent a year between 1983 and 1990. These figures indicate that the growth in SOE losses has been concentrated in the non-industrial sectors.

Table 14 presents available data on the number of money-losing SOEs and average losses per enterprise. For most of the mid- to late 1980s, between 10 and 13 percent of industrial SOEs (independent accounting units) lost money. The proportion of money-losing industrial SOEs began to increase in 1989 and jumped in 1990, when one in four operated in the red. Partial information for 1991 suggests that this trend has continued: a recent report states that in 1991 58 percent of within-budget industrial SOEs lost money.²⁹ The recent jump in the proportion of money-losing enterprises may be the result of the 1989-91 retrenchment and so short-term in nature.³⁰

Despite the recent growth in numbers of money-losing SOEs, over the longer term most of the increase in total SOE losses is explained by rising losses per enterprise. During the late 1980s and early 1990s the average loss per money-losing industrial SOE rose markedly, from 222,000 yuan in 1984 to more than 1.5 million yuan in 1989 and 1990. These figures thus suggest that over time a group of roughly 10,000 SOEs has experienced ever-increasing losses, while most other SOEs have

continued to earn profits. Trends in total SOE profits therefore may mask differences between two distinct groups of SOEs--those that make positive profits, and those that operate in the red.

C. Retained funds

If one considers the enterprises' own objectives, then weak growth in profitability and profits and rapid growth in enterprise losses are not terribly surprising. State enterprises are more likely to be concerned about the funds that they retain than about their profits or losses.

Western economists usually assume that firms maximize profits. This assumption rests on beliefs about the institutional characteristics of Western economies: firms are privately owned, owners receive the after-tax profits of the firms, and firms operate on behalf of their owners. For China's SOEs the government is the owner; however, the financial relationship between SOEs and the government differs from the usual relationship between a firm and its owners. In principle the Chinese government receives tax payments from enterprises; after-tax profits remain with the enterprises.³¹ Consequently the enterprises, or to be more precise, the employees (managers and workers) of the enterprises, are the residual claimants of enterprise earnings. One fairly widely accepted criterion of ownership is that the owners receive the residual earnings accruing to assets.³² By this criterion the employees of China's SOEs are effectively becoming the owners of their enterprises. In addition the reforms have expanded the degree to which managerial decision-making is carried out within the SOEs. Under these

circumstances, SOE behavior is likely to be increasingly motivated by the interests of its employees.

Certain other features of China's SOEs tend to reinforce SOE concern about employees. The employees of SOEs are largely permanent: most workers and managers spend their entire working lives with the same enterprise. Enterprises often employ the children of their current and past employees. The enterprise and its employees thus constitute a stable, identifiable community. Managers show considerable concern for the social welfare of the enterprise community. SOEs almost always provide their employees with a wide range of community services such as schools, health care, pensions, and housing.

Research based on extensive interviews with the managers of Chinese enterprises lends support to the view that China's SOEs act so as to maximize their retained funds. Andrew Walder writes³³

The goal, in short, is to retain as much as possible of annual revenues, and secure maximum discretion in their use...Being the director of an enterprise is like being a mayor in a second respect--he is acutely concerned with "public opinion." The citizens under his jurisdiction evaluate him according to the success of his tenure by *their* standards--how their incomes fare, how much housing is built, how well the factory's services are run...Directors who fail to deliver higher bonuses, or new housing units, or to upgrade the quality of meal services, will be faced constantly with low-grade labour problems: absenteeism, breakdowns, tardiness, high rates of lost and wasted materials.

If SOEs behave so as to promote the social welfare of the employee community, then they will want to expand the funds that they can retain and use internally. Such funds include retained after-tax profits and retained depreciation funds. Spending on employees, including wages and

bonuses as well as outlays on housing, education and welfare for workers, are also retained in the sense that they are distributed to enterprise employees and so remain within the community.

As mentioned earlier, the amount of funds an enterprise retains is different from, but related to, its level of profits. Certain forms of retained funds, in particular, retained profits, are positively related to profits. Employee bonuses and "benefits fund" (fuli zijin) spending are financed out of retained after-tax profits. Other forms of retained funds, for example, depreciation funds, non-productive investment, and wages, are considered costs of production and so are inversely related to profits.

If the goal of state enterprises during the reform era was to maximize their retained earnings, then they succeeded tremendously. Retained profits and depreciation funds grew very rapidly during the 1980s. SOE retained profits grew at an average annual rate exceeding 20 percent a year between 1980 and 1988. Depreciation funds of industrial SOEs (independent accounting units only; data on depreciation funds for SOEs in other sectors are not available) more than tripled during the same period. Since the share of depreciation funds retained by the enterprises increased, retained depreciation funds probably grew at rates in excess of 20 percent a year. (See table 11.)

SOE spending on employees also increased. Such spending has taken several forms. Wage payments and outlays on non-productive investment, a large share of which is spent on items that benefit employees such as housing, education, and welfare, are forms of spending that are considered costs. These expenses are non-taxed. Bonuses and "benefit

fund" expenses are financed out of after-tax retained profits. In addition, enterprises have covert methods of diverting funds to their workers. So as to sidestep government restrictions on wage and bonus payments, SOEs reportedly classify cash payments to workers as "management expenses" or "production funds." In-kind payments to workers can also be disguised: for example, enterprises have been known to classify investment in housing as "productive" investment.³⁴ Walder quotes a factory manager as saying³⁵

In recent years the factory benefits fund hasn't been enough, so we overspent our benefits fund every year, and took the difference out of the reserve fund. So the reserve fund has in reality turned into a benefits fund...Sometimes we work the (employee welfare) expenses into our costs of production, which is not really legal.

Table 15 presents available data on different forms of employee-related spending by SOEs. These statistics include only reported spending on employees, and so may understate the true level of such spending. Reported wage and bonus payments have increased at an average rate of 14 percent per year (1980-1990), outpacing growth in SOE profits. Growth in bonus payments, which are subject to fewer restrictions than wage payments, has been especially rapid. Bonuses have grown at an average rate of 21 percent a year (1980-90). Outlays on non-productive investment have also risen substantially. Between 1981 and 1990 such investment grew at an average annual rate of 14 percent. Since the formal labor force of SOEs has grown slowly during the 1980s, spending per worker has risen noticeably.

D. Investment

Data on SOE fixed investment appear in table 10. The rate of growth in SOE investment between 1981/83 and 1989/91 averaged 18 percent a year. Nearly half of this increase in investment was financed using extra-budgetary and retained funds.

Enterprise investment can be divided into productive and nonproductive investment. As mentioned above, non-productive investment is largely used to benefit enterprise employees by, for example, building housing. Productive investment is used to maintain, renovate, and expand the productive capital stock. During the reform period both types of investment have risen, but in the late 1980s productive investment has grown more rapidly than non-productive investment (tables 10 and 15). (To the extent that nonproductive investment is reported as productive investment, the share of non-productive investment may be higher than these statistics indicate.)

A variety of motives drive enterprise investment. As mentioned earlier, the amount of money that enterprises can deposit in depreciation funds depends on the size of their capital stock. Investment enlarges the capital stock and so allows an SOE to retain more depreciation funds. Investment is also attractive because it provides a means of increasing future welfare spending, especially when current spending is subject to restrictions.

Indeed, the managers and employees of an enterprise are likely to regard the enterprise's capital stock as a form of community wealth. They have some control over this wealth, and they expect to benefit from this wealth in the future. Recent experiments in China with

shareholding reforms have in some cases allocated substantial blocks of enterprise shares to enterprise employees. In designing future ownership reforms the government probably has little choice but to consider the interests of the SOE employees, because these employees are in a position to undermine the reforms through work slowdowns and by theft or destruction of enterprise assets.³⁶

Finally, enterprise investment is driven by the fact that the managers of SOEs face incentives to expand the size of the enterprises. As Andrew Walder notes, "the larger the enterprise...the higher the manager's rank in the local hierarchy of officialdom, and the greater his associated privileges. Moreover, the larger the factory, and the more indispensable the output to local ministry production plans, the easier it will be for the pleas to superiors to be heard: for more investment, for bank loans, for price or tax breaks," and so on.³⁷ Thus growth is, in and of itself, a goal, and investment is the means to achieving this goal.

E. Regulations controlling SOE spending

Chinese economists and policy makers have expressed considerable concern over the effects of uncontrolled enterprise spending on macroeconomic stability. In order to stem the growth in enterprise spending, the government has implemented a wide array of measures regulating enterprise access to and use of funds.

First, enterprise access to external funds in the form of bank loans is restricted. In order to control bank lending, the government sets credit quotas. The central government decides a nationwide credit quota, which quota is then disaggregated by region, by bank, and by

category of loan. In this way the policy makers hope to direct the overall amount and also the direction of bank lending. Credit quotas have been used most aggressively during contractionary periods such as 1986 and 1989-91. Credit quotas are often accompanied by planned allocations of production inputs and investment materials. In recent years the government has also tried to contain the demand for loans by raising interest rates.

As the data in table 10 attest, these measures have not been terribly effective in controlling enterprise access to external funds. During the reform period SOE borrowing has increased at rates of 15 to 20 percent a year. (Note that growth in SOE borrowing during the early 1980s reflects in part the reforms substituting loans for budgetary grants.)

Contractionary government policies are evident in these data. Growth in within-budget finance slowed when the government adopted contractionary measures and tightened credit controls in 1985-86; however, non-budgetary loans for investment and working capital loans continued to increase. Working capital loans rose by 55 percent in 1986 alone. Similarly, in the late 1980s within-budget finance of SOE investment declined. Domestic loans for investment also declined in 1989, but resumed growth in 1990. Working capital loans, which had been declining in 1987 and 1988, rebounded in 1989-90. The counter-cyclical movement in working capital loans suggests that banks may use working capital loans to temporarily meet enterprise demand for funds during periods when credit rationing is tight.

Reasons why the government has been unable to control enterprise borrowing are several. One reason is that the government has difficulty controlling the actions of banks at the local level. Local banks are subject to "dual management," that is, they receive instructions both from the center via higher levels in the banking system and from the local government. While the central government wants to contain lending, local governments want to expand credit so as to promote local development. Several studies point out that local banks frequently comply with the wishes of the local, rather than central, leadership.³⁸

Rationing of materials no longer serves as a check on SOE spending, as most producer goods can now be purchased on the market (albeit at higher prices). Nor has the demand for investment been moderated by increases in interest rates. The enterprise demand for credit appears to be insensitive to interest rates. The lack of response to interest rates has several possible explanations. First, enterprises are concerned with retained funds, not with profits. Second, inflation has reduced the real effect of past increases in interest rate. Third, lax enforcement of loan repayment and the deductibility of both loan interest and principal repayments from taxes have further lowered the effective cost of borrowing. Under these circumstances borrowing is relatively advantageous.

The government sets guidelines and restrictions regulating how state enterprises spend the funds they acquire. Limits on enterprise payments to their employees have been in place from the start of the reforms. Over time the government has altered these limits in step with broader enterprise and financial reforms. In the late 1970s and early

1980s when the government adopted reforms allowing enterprises to retain a share of their profits, enterprises were permitted to use a portion of retained profits for worker bonuses and worker welfare. The government, however, set limits on the size of bonuses. In 1981, for example, the government required that bonuses not exceed two months of the regular wage bill for that year.³⁹

With the implementation of tax-for-profits in 1983-84, bonus policies were redesigned. Ceilings on bonuses were removed. In order to discourage excessive bonuses, the government instituted a bonus tax.⁴⁰ As of 1987, the bonus tax was calculated as follows: bonuses up to the level of four months' wages were untaxed. An additional month's bonus was taxed at 20 percent, a second additional month's bonus at 50 percent, a third additional month's bonus at 100 percent, and further bonuses at 200 percent.⁴¹ As before, basic wages were still set centrally and so remained independent of enterprise performance.

In 1985 the government began to tie total wage payments, including bonuses and basic wages, to the economic performance of the enterprise. This policy was tried first, on an experimental basis, in a limited number of large- and medium-size SOEs. The rules used to tie wages to enterprise performance varied among firms.⁴² One approach linked the enterprise's total wage bill to the amount of taxes and profits it remitted to the government.⁴³ Another approach linked increases in the total wage bill to total profits of the enterprise. For example, one source mentions that in 1988 for certain enterprises the total wage fund (including bonuses) could increase by 0.7 percent for each one percent increase in profits.⁴⁴

The tied-wage method is apparently still in experimental stages. As of 1988 only 30 percent of large- and medium-size SOEs used this approach. Other enterprises have apparently continued to operate under the earlier policies described above.⁴⁵

The government regulates enterprise outlays on investment as well as spending on employees. SOEs must submit investment plans to higher levels for approval. Capital construction projects, especially those involving investment in new capacity, are apparently subject to close control and supervision. Spending from enterprise depreciation funds, however, is less closely monitored. In principle, depreciation funds are intended for the maintenance and replacement of capital. In actuality, these funds are often used for new investment or expansion projects. Since investment in new capacity is difficult to distinguish from renovation, enterprises can and do label new investment as "renovation and replacement." Official Chinese publications on use of depreciation funds acknowledge this problem.⁴⁶

In-depth scholarly studies of enterprise behavior generally conclude that government control over enterprise use of both retained profits and depreciation funds is weak.⁴⁷ The data on enterprise spending cited above provide additional support for this conclusion.

IV. Implications and conclusions

The goal of this paper has been to analyze recent trends in China's public finance. The paper began by describing those trends. The task of describing recent trends in government revenues and expenditures is complicated by changes in government accounting practices, and in particular by changes in how SOE revenues and

expenditures are treated in government accounts. Accounting changes severely diminish the usefulness of published data on budgetary revenues and expenditures. The sum of budgetary and extra-budgetary funds provides a more consistent measure of government revenues and expenditures through the 1980s.

According to this measure, during most of the reform period government revenues and expenditures have grown in step with the rest of the economy, and the government deficit has been small. These conclusions are at odds with other studies that have warned of fiscal decline and ballooning deficits. Those analyses are flawed in that they confine their attention to budgetary trends.

This is not to say that the reforms have been free of fiscal problems. Indeed, several difficulties have arisen during recent years. First, difficulties have arisen due to changes in the intra-governmental distribution of government resources. The share of revenues passing through the Ministry of Finance has shrunk during the reform period: fiscal resources are increasingly going to operational ministries. In addition, shifts in the intra-governmental distribution of funds may have weakened the central government relative to provincial and local governments.

Second, difficulties have arisen due to the pattern of SOE behavior. Evidence on SOE performance suggests that SOEs behave so as to increase the funds retained within the enterprise community, not to maximize profits. Retained funds include retained profits as well as depreciation funds and certain types of spending on employees. The existing tax and subsidy system makes retaining funds in the form of

profits unattractive and encourages SOEs to concentrate their efforts on expanding depreciation funds and spending. These incentives have led to SOE over-spending on investment and on employee welfare, to the point where some SOEs operate at a loss.

SOE behavior of this sort has contributed to observed trends in the composition of government revenues and expenditures. Not surprisingly, government revenues from profit-based taxes have grown slowly. Government spending on subsidies to cover enterprise losses have ballooned. Both these items are within-budget. Retained profits and depreciation funds are components of extra-budgetary revenues. SOE efforts to increase their retained funds thus divert funds to extra-budgetary accounts, and so explains in part the rising importance of extra-budgetary funds.

The issues raised above hold implications for government policy. First, the Chinese government must adopt a consistent and meaningful system of government revenue and expenditure accounts. Current accounting practices produce data that is difficult to interpret and often misleading. The fact that China's policy makers continue to base key policy decisions on these data is, to say the least, disturbing.

Second, efforts should be made to prompt SOEs to act as profit-maximizing agents. This point has been raised in other studies, but differences of opinion exist as to the urgency of such measures. Some studies claim that during the reform period China's SOEs have experienced dramatic declines in profitability. The evidence presented here does not support this view. Rather, it shows that SOE profitability has on average shown modest growth during the reform

period, with episodes of above-average and episodes of below-average performance.

Differences of opinion also exist as to the correct approach to changing SOE behavior. One view is that problems in SOE behavior are the result of the tax and subsidy system, and that SOEs can be made to behave more efficiently by modifying the structure of taxes and subsidies. Another view is that SOE behavior is the result of the system of state ownership, and that fundamental ownership reforms are required.

The findings of this paper perhaps shed some insight on this debate. They suggest that modifications of the tax and subsidy system are indeed necessary. At the very least, a reduction in the rate of tax on enterprise profits would increase the weight that SOEs place on profit performance and reduce incentives to divert earnings to investment and employee spending. It is possible that under lower profit taxes some SOEs that have operated at a loss would find that they can retain more funds if they operate at a profit. If so, then a reduction in the rate of profit taxes could increase tax collections from some enterprises. The government should also place a maximum limit on subsidies to money-losing enterprises. The absence of clear limits encourages SOE over-spending.

As for the question of ownership, one could argue that a de facto ownership reform has already occurred. Due to the tax-for-profit and related reforms, effective ownership has shifted to the SOEs' employee communities. This de facto change in ownership has had some positive

effects on SOE performance: they now care about profits. Profits are, however, only one argument in the SOE objective function.

The effects of carrying out explicit reforms in ownership are difficult to predict. Much depends on the precise form of those reforms. If explicit ownership reforms awarded a large stake of ownership to the enterprise employees, and if the tax and subsidy system remained unchanged, then they would probably have little effect. For ownership reforms to substantially change SOE behavior, a major share of ownership must be vested in actors external to the enterprises. In addition, the ownership reforms should be accompanied by modifications in the system of taxes and subsidies. High profit taxes combined with ready subsidies would induce even a neoclassical firm to perform poorly.

NOTES

1. See, for example, World Bank (1990a, pp. 62-71); Prime (1991); Wong (1991); and Naughton (1992).
2. See Sicular (1992).
3. Trends in SOE profits and losses are discussed in more detail below.
4. Author interviews, Sichuan province, 1990.
5. See Ramanadham (1991, pp. 779-908).
6. See Ministry of Finance General Planning Committee (1989, pp. 201-202). Extra-budgetary revenues also include (1) revenues of local governments (for example, local fees, surtaxes, assessments, and revenues collected from local enterprises and institutions), and (2) the extra-budgetary earnings of government administrative units and institutions (for example, road tolls, income from real estate management, and surtaxes on vehicle sales).
7. Yu (1992).
8. See, for example, China's Tax System Editorial Committee (1988, pp. 40-41).
9. Available information indicates that the government uses a formula to calculate the amount of money it gives to enterprises to compensate for losses due to the pricing system. This formula does not compensate enterprises on a dollar for dollar basis. In order to encourage economizing behavior by enterprises, the government determines a target level of compensation. If actual losses due to pricing exceed that amount, they are borne by the enterprise, while any saving is retained by the enterprise.

To the extent that enterprises are not fully compensated for losses due to government pricing policies, then price subsidies continue to reduce enterprise revenues (or increase enterprise losses).

10. This is not to say that the extra-budgetary data are problem-free. Problems with the extra-budgetary data are discussed in the footnotes to table 4.

11. See Lardy (1978); World Bank (1990b, pp. 92-93).

12. A detailed explanation of these different taxes, and more generally of the Chinese tax system, can be found in World Bank (1990b, pp. 22-32).

13. For a discussion of trends in military spending, see Chen (1990).

14. Blejer et al (1991, pp. 24-25).

15. See Naughton (1991; 1992).

16. Wong (1991, especially pp. 694-697).

17. This point is made by Wong (1991, p. 697).

18. The discussion in this section summarizes information from Tidrick and Chen (1987); "Contemporary China" Series Editorial Department (1988); and World Bank (1990a and b).

19. World Bank (1990b, p. 11). Almanac of China's Economy Editorial Committee, (1988, p. IV-37) also mentions different types of contracts (e.g., shangjiao jishu chengbao, shangjiao lirui tizeng baogan, qiye jingying zirenzhi, etc.), and gives the numbers of enterprises using each type of contract in 1987. This source does not, however, explain the content of each type of contract.

20. World Bank (1990b, p. 11).

21. Historical depreciation rates for SOEs can be found in Ministry of Finance General Planning Committee (1989, pp. 124-25). New 1985 regulations regarding SOE depreciation funds are given in Ministry of Finance Office of Regulations and Laws (1988, pp. 39-56). This source gives a detailed list of depreciation lifespans by type of capital asset.
22. Tidrick and Chen (1987, p. 85) describe the way in which depreciation funds are handled in enterprise finances. "Contemporary China" Series Editorial Committee (1988, pp. 17-20) discusses reforms in policies governing enterprise depreciation funds. This source and Zhang (1990, p. 47) give information on the proportion of depreciation funds retained by enterprises.
23. Prime (1991, especially pp. 181-182).
24. Sicular (1992).
25. Jefferson, Rawski, and Zheng (1992).
26. See Naughton (1992, p. 34).
27. He does not indicate what measure of capital is used in this calculation, but it is probably the original value of fixed assets (guding zichan yuanzhi). See Naughton (1992, p. 27).
28. The price increases are calculated using the national retail price index and the urban cost of living index (from State Statistical Bureau (1991a, p. 230). Three-year averages for 1979-81 and 1988-90 are used to smooth out year to year variations.
29. Liu (1992). The percentage is for state-owned within-budget industrial enterprises. This source states that in 1988 only 8.5 percent of these enterprises were losing money.

30. The proportion of SOEs losing money is a more reliable indicator than the absolute number of money-losing SOEs because, due to mergers and reclassification of enterprises by ownership status, the total number of SOEs has fluctuated from year to year.

31. In actual practice, enterprises continue to remit some retained profits to the government. Moreover, the government has been known to adjust SOE taxes and add or subtract fees in light of actual profit performance. Nevertheless, the reforms have brought about a change in perception from one where all SOE earnings go to the government and the government then reallocates funds to SOEs, to one where SOEs retain residual earnings.

32. See Grossman and Hart (1986) and Weitzman and Xu (1992).

33. Walder (1989). The quote is taken from p. 251.

34. World Bank (1990a, p. 60).

35. Walder (1989, pp. 250-51). Words in parentheses are inserted for clarification.

36. Some of these issues are discussed in the context of Eastern Europe by Lipton and Sachs (1990).

37. Walder (1989, p. 250).

38. See, for example, World Bank (1990a, pp. 96-101); Zhou and Zhu (1987); and Hussain and Stern (1991).

39. He (1988).

40. He (1988).

41. World Bank (1990a, footnote 32, p. 60); and Almanac of China's Economy Editorial Committee (1988, p. IV-37). The second source states that the bonus tax rates were revised in 1987. Prior to that time,

bonuses of up to 4 months of underlying salaries were tax-exempt, an additional month was taxed at 30 percent, a second additional month at 100 percent, and a third additional month at 300 percent.

42. State Commission on System Reform (1990, p. 250). This source lists the names of different rules, but does not explain what they mean.

43. State Commission on System Reform (1990, p. 250).

44. World Bank (1990a, p. 165).

45. He (1988, p. 32). The tied-wage policies were apparently revised in 1989. See Almanac of China's Economy Editorial Committee (1990, p. II-48); State Commission on System Reform (1990, p. 250).

46. See, for example, Ministry of Finance Office of Regulations and Laws (1988, pp. 39-40).

47. See, for example, Tidrick and Chen (1987, pp. 80-81).

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Table 1
 Indicators of the Importance of the
 State-Owned Enterprise Sector
 (percentages)

	<u>Percent of Total Fixed Investment</u>	<u>Percent of Gross Value Industrial Output</u>	<u>Percent of Total Retail Sales</u>	<u>SOE Staff and Workers as a Percent of Labor Force</u>
1978	--	77.6	54.6	18.6
1980	81.9	76.0	51.4	18.9
1985	66.1	64.9	40.4	18.0
1988	61.4	56.8	39.4	18.4
1989	61.3	56.1	39.4	18.3
1990	65.6	54.6	39.6	18.2
1991	67.4	52.8	40.2	18.3

Sources:

State Statistical Bureau (1990, p. 29; 1991b, pp. 16, 19, 69, 90; 1992, pp. 17, 20, 71, 93).

State Statistical Bureau Office of Fixed Asset and Investment Statistics, (1987, p. 5).

Table 2
Government Revenues and Expenditures
(billion yuan, percent)

	<u>Adjusted Revenues</u>		<u>Adjusted Expenditures</u>		<u>Revenues as percent of GNP</u>	
	<u>Budgetary</u>	<u>Budgetary + Extra-budgetary</u>	<u>Budgetary</u>	<u>Budgetary + Extra-budgetary</u>	<u>Budgetary</u>	<u>Budgetary + Extra-budgetary</u>
1976	93.93	121.46	96.89			
1977	101.34	132.47	98.24			
1978	124.60	159.32	123.59		35	44
1979	125.78	171.06	146.37		31	43
1980	129.32	185.06	144.52		29	41
1981	129.55	189.66	135.32		27	40
1982	139.88	220.16	147.56	221.01	27	42
1983	159.41	256.18	168.94	256.53	27	44
1984	183.22	302.07	193.52	305.00	26	43
1985	226.77	379.77	231.02	368.52	26	44
1986	244.68	418.41	262.30	420.13	25	43
1987	257.58	460.46	276.91	460.99	23	41
1988	280.37	516.45	310.83	525.36	20	37
1989	326.38	592.26	359.20		20	37
1990	351.60	622.47	390.73		20	35
1991	363.42	648.42			18	33

Notes:

- Budgetary revenues are adjusted as follows: price subsidies (pre-1986) and subsidies for SOE losses are added in; government borrowing in the form of domestic bonds and foreign loans is subtracted out.
- Budgetary expenditures are adjusted as follows: (1) price subsidies are added in for years before 1986; (2) repayment of debt principal is subtracted out; and (3) subsidies for enterprise losses are added in.
- Data on subsidies for SOE losses are incomplete. Various issues of State Statistical Bureau, Zhongguo tongji nianjian, give data on these subsidies, but only from 1986 onward. Ministry of Finance General Planning Department (1989) gives a 1985 number of 50.702 billion yuan. This number appears to include price subsidies. Wu Jinglian gives the same 1985 number and a number of 12.49 for 1978. I assume the 1978 number also includes price subsidies, as otherwise it exceeds SOE losses. In estimating subsidies of enterprise losses, I subtract price subsidies from both these numbers and calculate the ratio of these subsidies to actual losses, for which data are available. I assume that the ratio of subsidies to losses is constant at the 1978 level prior to 1978. I assume that the ratio of subsidies to losses is constant at the 1985 level from 1979-1984. Thereafter, the numbers are taken from published sources.
- Data on debt principal repayment are not generally available. World Bank (1990b) gives interest payments for 1987 and 1988. Interest payments constituted 30% and 42% of total debt expenditures for these two years. Based on these numbers, I assume that in other years 65% of total debt expenditures was principal repayment.

Sources:

- State Statistical Bureau, Zhongguo tongji nianjian, various issues.
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Table 3
The Government Deficit
(billion yuan, percent)

	<u>Adjusted Deficit (Surplus)</u>		<u>Deficit as percent of GNP</u>	
	<u>Budgetary</u>	<u>Budgetary + Extra-budgetary</u>	<u>Budgetary</u>	<u>Budgetary + Extra-budgetary</u>
1976	2.96			
1977	(3.10)			
1978	(1.01)		(0.28)	
1979	20.59		5.15	
1980	15.19		3.40	
1981	5.77		1.21	
1982	7.68	.86	1.48	0.16
1983	9.53	.34	1.64	0.06
1984	10.30	2.93	1.48	0.42
1985	4.25	(11.25)	0.50	(1.31)
1986	17.61	1.72	1.82	0.18
1987	19.33	.53	1.71	0.05
1988	30.46	8.91	2.17	0.64
1989	32.82		2.06	
1990	39.13		2.25	

Sources:

Table 2.

State Statistical Bureau (1991a, p. 31).

Table 4

Extra-Budgetary Revenues and Expenditures

(billion yuan)

	<u>Extra- Budgetary Revenues</u>	<u>Extra- Budgetary Expenditures</u>	<u>Extra- Budgetary Surplus</u>	<u>Extra-Budgetary Revenues as Percent of Total Revenues</u>
1976	27.53			23
1977	31.13			24
1978	34.71			22
1979	45.29			26
1980	55.74			30
1981	60.11			32
1982	80.27	73.45	6.82	36
1983	96.77	87.58	9.19	38
1984	118.85	111.47	7.37	39
1985	153.00	137.50	15.50	40
1986	173.73	157.84	15.89	42
1987	202.88	184.08	18.80	44
1988	236.08	214.53	21.55	46
1989	265.88			45
1990	270.86			44
1991	285.00			44

Notes:

1. Extra-budgetary data here and elsewhere are not adjusted. The information needed to make such adjustments is unavailable.

2. In 1982 the central government instituted more comprehensive statistical reporting practices for extra-budgetary funds. Improved reporting therefore explains part of the growth in extra-budgetary funds in 1982-1985.

Extra-budgetary revenues from SOEs include revenues from SOEs and their superior ministries.

Sources:

Table 2.

State Statistical Bureau (1991a, pp. 222-223).

Table 5

SOE Sector Contributions to Government Revenues

(billion yuan)

	<u>Adjusted Budgetary Revenues from SOEs</u>		<u>Extra-Budgetary Revenues from SOEs</u>		<u>Percent of Total Budgetary + Extra-Budgetary Revenues from SOEs</u>	<u>Budgetary Revenues + Extra-Budgetary SOE Revenues as a Percent of GNP</u>
	<u>Value</u>	<u>Percent of total</u>	<u>Value</u>	<u>Percent of total</u>		
1978	109.86	88	25.26	73	85	42
1979	111.34	89	34.43	76	85	40
1980	114.06	88	44.21	79	86	39
1981	113.72	88	47.49	79	85	37
1982	124.32	89	65.63	82	86	40
1983	139.44	87	80.40	83	86	41
1984	156.45	85	99.07	83	85	41
1985	180.59	80	125.27	82	81	41
1986	201.03	82	139.99	81	82	40
1987	206.69	80	162.58	80	80	37
1988			181.00	80		
1989			210.38	79		

Note: Budgetary revenues from SOEs are adjusted to be consistent with the adjusted budgetary revenues series in table 2. Price subsidies (pre-1986) and subsidized enterprise losses are added to the published budgetary revenues from SOEs.

Sources:

Table 2, 4.

Ministry of Finance General Planning Department (1989, pp. 22-23).

State Statistical Bureau (1991a, pp. 31, 222).

Table 6

Central and Local Government Shares of
Budgetary, Extra-Budgetary, and Total Expenditures

(percent)

	<u>Budgetary Expenditures</u>		<u>Extra-Budgetary Expenditures</u>		<u>Total Expenditures</u>	
	<u>Central</u>	<u>Provincial and Local</u>	<u>Central</u>	<u>Provincial and Local</u>	<u>Central</u>	<u>Provincial and Local</u>
1981	54.0	46.0				
1982	49.9	50.1	30.9	69.1	42.5	57.5
1983	49.7	50.3	34.3	65.7	43.5	56.5
1984	47.8	52.2	37.7	62.3	43.6	56.4
1985	45.3	54.7	40.9	59.1	43.4	56.6
1986	41.3	58.7	40.6	59.4	41.0	59.0
1987	42.1	57.9	40.3	59.7	39.6	60.4
1988	39.2	60.8	39.3	60.7	39.2	60.8
1989	36.4	63.6	39.0	61.0	37.5	62.5
1990	39.8	60.2				

Note: These data are not adjusted.

Source: State Statistical Bureau (1991a, p. 221).

Table 7
Composition of Adjusted Budgetary Revenues

(percent)

	<u>Composition of Adjusted Budgetary Revenues</u>			<u>Composition of Budgetary Tax Revenues</u>					
	<u>Direct Enterprise Remittances</u>	<u>Tax Revenues</u>	<u>Other Revenues</u>	<u>Enterprise Income Taxes</u>	<u>Customs Taxes</u>	<u>Industrial-Commercial Tax</u>	<u>Product Taxes</u>	<u>VAT Tax</u>	<u>Business Tax</u>
1978	56	42	2	10	6	76	0	0	0
1979	54	43	3	8	5	79	0	0	0
1980	53	44	3	8	6	79	0	0	0
1981	49	49	3	7	9	78	0	0	0
1982	47	50	3	7	7	79	0	0	0
1983	42	49	10	8	7	74	0	3	0
1984	37	52	11	8	11	53	11	5	3
1985	2	89	9	5	10	0	28	6	10
1986	2	85	13	5	7	0	26	11	12
1987	2	83	15	5	7	0	25	12	14
1988	2	85	13	4	6	0	20	16	17
1989	2	84	14		7				
1990	2	80	18		6				
1991	2	82	16						

Notes:

1. Adjusted budgetary revenues are taken from table 2. The components of total revenues are also adjusted so as to be consistent with adjusted total revenues. In particular, direct enterprise remittances have been adjusted so that subsidies are counted as expenditures. Published data for direct enterprise remittances are consistent with this definition starting in 1985. For earlier years I have adjusted the published data by adding price subsidies and estimated subsidies for enterprise losses.

2. After the second stage of the tax-for-profit reforms most enterprises paid taxes on their income and no longer remitted earnings directly to the government. Direct remittances only continued for a few SOEs that were not included in the tax-for-profit reforms and for a few enterprises that adopted the profit contracting system (lirui baogan). See State Statistical Bureau (1991a).

3. Starting in the mid-1980s the government phased out the industrial-commercial tax and replaced it with the VAT, product, and business taxes. The product tax is an industry-specific tax used to equalize revenues across industries. The business tax (yingye shui) is a turnover tax on gross receipts for retail distribution, construction, transport services, and communications, and on gross markup for wholesale distribution. See World Bank (1990b).

Sources:

Table 2

Ministry of Finance General Planning Department (1989, pp. 40-41).

State Statistical Bureau (1991a, pp. 212, 213, 224).

World Bank (1990b, pp. 22-32).

Table 8
Composition of Adjusted Budgetary Expenditures
(percent)

	<u>Basic Construction</u>	<u>Agriculture</u>	<u>Science, Welfare, Education & Health</u>	<u>Defense</u>	<u>Government Administration</u>	<u>Enterprise Subsidies</u>	<u>Other</u>
1978	37	6	11	14	4	10	17
1979	35	6	11	15	4	13	19
1980	29	6	12	13	5	17	19
1981	24	5	14	12	5	21	16
1982	21	5	15	12	6	24	18
1983	23	5	15	10	6	25	18
1984	25	5	15	9	7	21	17
1985	25	4	15	8	6	21	16
1986	26	5	16	8	7	22	17
1987	23	5	16	8	7	24	20
1988	20	5	17	7	8	25	17
1989	17	5	17	7	8	27	18
1990	19	6	17	7	8	25	18

Notes:

1. Starting in 1985 some grants to enterprises for basic construction were changed into grants to the Bank of Construction, which then lent the money to enterprises according to budgetary plans. Grants to the Bank of Construction are included in budgetary accounts. Starting in 1988 the government established the Central Basic Construction Fund system which handles loans for special investment items. These loans are also included in budgetary accounts. Thus budgetary spending includes within-budget loans for certain categories of investment spending. See State Statistical Bureau (1991a).

2. Enterprise subsidies equal the sum of price subsidies and subsidies for enterprise losses. See the notes to table 2 for a discussion of the data on subsidies.

Sources:

Table 2.
State Statistical Bureau (1991a, pp. 215-216, 224).

Table 9

The Financing of the Budgetary Deficit

(percent)

	<u>Foreign Loans</u>	<u>Domestic Non- Bank Borrowing</u>	<u>Central Bank Loans</u>
1979	17.5	0.0	82.5
1980	15.1	0.0	84.9
1981	55.2	84.5	-39.7
1982	-2.8	62.0	40.8
1983	11.5	43.8	44.8
1984	17.1	40.0	42.9
1985	2.4	148.8	-51.2
1986	28.3	3.7	67.9
1987	29.4	40.7	29.9
1988	31.8	36.5	31.8
1989	44.0	81.9	-25.9

Note: These figures are calculated using IMF estimates of the budget deficit, which in turn are based on IMF adjusted series for Chinese government revenues and expenditures. The IMF adjustments may differ from those in this paper.

Source: Mario Blejer (1991, p. 20).

Table 10

Financing of SOE Fixed Investment and Working Capital

(billion yuan)

	<u>SOE Fixed Investment</u>						Working Capital Loans to SOEs ^a	Total Non-budgetary Domestic Loans to SOEs ^b
	<u>Total Value</u>	<u>By source of finance:</u>						
	<u>Within Budget</u>	<u>Domestic Loans</u>	<u>Foreign Funds</u>	<u>Extra-budget & Internal Funds</u>		<u>Other</u>		
1981	66.75	25.75	9.06	3.61	28.33			
1982	84.53	26.54	13.69	6.01	38.29			
1983	95.20	33.68	13.57	6.58	41.36			
1984	118.52	41.80	18.25	6.98	51.49		62.20	80.45
1985	168.05	40.30	38.71	8.86	67.94	12.25	72.86	111.57
1986	197.85	43.85	45.00	12.83	76.03	20.15	113.15	158.14
1987	229.80	47.22	56.44	16.84	109.31		92.10	148.54
1988	276.28	40.52	66.85	24.77	111.88	32.26	69.16	136.01
1989	253.55	33.87	52.87	25.74	108.53	32.54	148.17	201.04
1990	281.86	38.54	68.95	26.60	123.01	34.76	196.92	265.87
1991	355.82						168.64	

Notes:

a. This series gives the annual increase in outstanding working capital loans at year end. The sources list separately loans for "fixed investment," to "private and collective businesses," and to "industrial production enterprises," "commercial enterprises," "material supply bureaus and industrial supply and marketing enterprises," and "construction enterprises." I assume that all loans other than those for "fixed investment" and to "private and collective businesses" are working capital loans to SOEs.

b. This series equals the sum of working capital loans and domestic loans for fixed investment.

Sources:

State Statistical Bureau Office of Fixed Asset and Investment Statistics (1987, p. 14).

State Statistical Bureau (1990, p. 666; 1991a, pp. 148, 642; 1992, pp. 20, 36).

Table 11
Profits and Retained Funds of SOEs
(billion yuan)

	Total Profits and Income Taxes of Within-Budget SOEs	Of which:				For Industrial SOEs Only*		
		Income Taxes and Remitted Profits	Percent	Retained Profits	Percent	Total Profits and Taxes	Retained Profits	Depreciation Funds ^b
1978	106.48	103.73	97	2.75	3	na	na	na
1979	106.43	97.78	92	8.65	8	na	na	12.18
1980	105.16	90.76	86	14.40	14	na	na	13.71
1981	105.08	88.27	84	16.81	16	na	na	14.73
1982	107.03	85.42	80	21.61	20	na	na	15.94
1983	115.20	86.12	75	29.08	25	na	na	18.10
1984	130.36	94.79	73	35.57	27	na	na	20.85
1985	169.37	123.19	73	46.18	27	na	na	24.70
1986	154.04	105.11	68	48.93	32	na	22.83	28.73
1987	184.66	130.81	71	53.85	29	na	26.53	32.42
1988	221.56	151.50	68	70.06	32	na	32.36	37.94
1989	223.35					177.31	30.89	43.49
1990	172.25					150.31	22.42	48.28

Notes:

a. These data are for industrial SOEs that are independent accounting units, and so exclude data for industrial production that was administratively located in non-industrial units such as hospitals or universities. Industrial accounting units produced 96 percent of the gross value of industrial output of industrial SOEs, and accounted for 73 percent of all SOEs producing industrial output in 1988. See Jefferson, Rawski, and Zheng (1992).

b. Depreciation funds are the total amount, including that portion retained by SOEs and that portion remitted to higher levels. The retained portion rose from about 50 percent in 1978 to 100 percent by 1987. (See the discussion in the text.)

Sources:

Ministry of Finance General Planning Department (1989, pp. 137, 145).

State Statistical Bureau (1987, pp. 314-315; 1988, pp. 379-80; 1989, pp. 326-27; 1990, p. 443; 1991a, pp. 407-08; 1992, p. 38).

Jefferson, Rawski, and Zheng (1992, p. 245).

Table 12
Profit Rates of SOEs^a

<u>Year</u>	Industrial SOEs, Independent Accounting <u>Units</u>	Industrial SOEs, Independent Accounting <u>Units, II^b</u>	Industrial SOEs, <u>Within-Budget</u>	All Within- Budget <u>SOEs</u>
1976	0.29	0.19	0.28	0.25
1977	0.32	0.21	0.31	0.30
1978	0.36	0.24	0.34	0.33
1979	0.36	0.25	0.36	0.31
1980	0.36	0.25	0.36	0.28
1981	0.34	0.24	0.34	0.26
1982	0.33	0.23	0.32	0.25
1983	0.33	0.23	0.32	0.25
1984	0.34	0.24	0.33	0.26
1985	0.34	0.24	0.35	0.31
1986	0.30	0.21	0.30	0.25
1987	0.29	0.20	0.29	0.26
1988	0.29	0.21	0.29	0.27
1989	0.25	0.17	0.26	0.24

Notes:

a. Except where noted, the profit rate is equal to the sum of enterprise profits and income taxes divided by the net capital stock (original value of the capital stock minus depreciation). The definition of independent accounting units is given in the notes to table 11. "Within-budget" SOEs are those that are included in the budgetary planning process.

b. This series is calculated using a different denominator, net capital stock plus a measure of working capital (dinge liutong zijin nianping yu'e), and it is consistent with the numbers given in the Naughton article discussed in the text.

Sources:

State Statistical Bureau (1991a, p. 27; 1992, p. 38).

Ministry of Finance General Planning Department (1989, pp. 122, 137-38).

State Statistical Bureau Office of Industrial, Transportation and Communications Statistics (1990, p. 66).

Table 13
Losses of Money-Losing SOEs
(billion yuan)

<u>Year</u>	<u>Total SOE Losses</u>	<u>Losses of Industrial SOEs^a</u>	<u>Losses of Commercial SOEs^b</u>	<u>Budgetary Subsidies for Enterprise Losses</u>	
				<u>Total</u>	<u>Share of Actual Losses</u>
1976	16.48	7.69			
1977	14.07	6.07			
1978	11.53	4.21			
1979	11.68	3.64			
1980	14.08	3.43			
1981	12.64	4.60			
1982	19.69	4.76			
1983	23.99	3.21	7.25		
1984	19.99	2.66	9.14		
1985	25.89	3.24	8.13		
1986	41.71	5.45	9.47	32.48	0.78
1987	48.17	6.10	10.21	37.64	0.78
1988	52.06	8.19	14.13	44.65	0.86
1989		18.02	23.05	59.89	
1990		34.88	33.67	57.89	
1991				50.64	

Notes:

a. Includes only independent accounting units at or above the township level. These data are taken from the same source as the data on total SOE losses, and are a component of total SOE losses.

b. Includes losses of supply and marketing co-ops, which were on the order of 500 million yuan or less, and losses of SOEs in the grain marketing system due to state price policies, which are probably not counted in the series on total SOE losses and losses of industrial SOEs. The data on losses of commercial SOEs are taken from a different source than the data for total SOE losses and industrial SOE losses, and its coverage appears to be different.

Sources:

Ministry of Finance General Planning Department (1989, pp. 17, 146).

State Statistical Bureau Office of Industrial, Transportation and Communications Statistics (1991, p. 66).

State Statistical Bureau Office of Commerce and Materials Statistics (1990, p. 304; 1992, p. 295).

Table 14

Number of Money-Losing Industrial SOEs and Their Average Loss

<u>Year</u>	<u>Money-losing Industrial SOEs</u>		<u>Average Loss per Enterprise (yuan)</u>
	<u>Number</u>	<u>Percent</u>	
1984	11,969	na	222,324
1985	6,749	9.5	480,664
1986	9,221	13.1	590,934
1987	9,459	13.0	645,311
1988	7,912	10.9	1,035,389
1989	11,785	16.0	1,528,978
1990	20,603	27.6	1,692,763

Note: Includes only industrial SOEs that are independent accounting units at or above the township level.

Sources:

State Statistical Bureau Office of Industrial, Transportation and Communications Statistics (1990, pp. 66, 97; 1991, p. 97).

Table 15

Spending on Employees by SOEs

Year	Year-end Number of Staff and Workers ^a (10,000s)	Wages and Bonuses ^b Total (bill. yuan)	Non-Productive Investment ^c (billion yuan)		Wages and Bonuses per Worker (yuan)	Non- productive investment per worker (yuan)
			Total	Housing		
1978	7451	46.87			629	
1979	7693	51.95			688	
1980	8019	62.79			783	
1981	8372	66.04	23.71	13.16	789	283
1982	8630	70.89	30.84	46.99	821	357
1983	8771	74.81	32.67	16.71	853	372
1984	8637	87.58	38.62	16.89	1,014	447
1985	8990	106.48	55.61	24.85	1,184	619
1986	9333	128.85	60.18	24.29	1,381	645
1987	9654	145.93	62.71	25.70	1,512	650
1988	9984	180.71	73.12	29.23	1,810	732
1989	40408	205.02	62.19	25.35	2,028	615
1990	40346	232.41	77.18	37.02	2,246	746

Notes:

a. Changes in the number of staff and workers reflect in part changes in the number of enterprises classified as state-owned.

b. Wages and bonuses include wage-based government subsidies to workers and overtime pay.

c. Non-productive investment includes investment in cultural, living, and welfare facilities and construction for non-material production.

Sources:

State Statistical Bureau (1991a, pp. 105, 124-25, 148).

State Statistical Bureau Office of Fixed Asset and Investment Statistics (1987, pp. 15-16).