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China
Reform of State-Owned Enterprises

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CURRENCY EQUIVALENTS

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Currency Unit = Yuan
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¥ 1.00 = $0.12

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WEIGHTS AND MEASURES

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Executive Summary

Since the early 1980s, China improved productivity through reforms that facilitated the rapid growth of nonstate enterprises. This reduced the share of state enterprises in national output. The state share of industrial output has fallen from 78 percent in 1978 to 34 percent in 1994. However, state enterprises still account for nearly two-thirds of investment in fixed capital, and have saving-investment deficits that generate most of the borrowing requirement of the nonfinancial public sector.

To attain the ambitious objectives of the Ninth Five-Year Plan (1996-2000), China will have to complete the reform of its state enterprise sector. This is a formidable task. At present, state enterprises in industry absorb a disproportionately large share of resources and use them less efficiently than the nonstate sector. As long as their profitability is low and they remain part of the state sector, they will continue to form a large part of the borrowing requirement of the public sector.

The most serious problems of the state enterprises are their misallocation of resources and contribution to macroeconomic instability:

Resources are misallocated for two main reasons. First, because the credit plan and local political authorities rather than markets allocate most investment funds, capital does not always move to sectors where it is most productive. Second, because social services are tied to enterprises, service provision is inefficient and workers cannot easily move from enterprise to enterprise.

Macroeconomic instability is linked to the inflationary effects of financing state enterprise deficits through money creation. Enterprises contribute to the public sector deficit because their relatively low profits finance too small a share of their investment, and their borrowings absorb a disproportionately large share of credit from the state banking system.

Recognizing these problems, the Government launched in November 1993 its 50 Point Program to reform the economy, later followed by the 10,000-1,000-100-10 Program to reform state enterprises. The implementation of the Company Law in 1994 provided a new legal structure for state enterprises. In early 1995, the Government announced that it would "grasp the key enterprises, and enliven the small ones". That is, the Government would focus on the reform and development of the largest 1,000 or so enterprises to make them the backbone of modern Chinese industry. It would restructure small enterprises through mergers, leases, sales, management contracts, the formation of cooperatives, and joint ventures. Tightening financial constraints in 1993-95 spurred incipient restructuring of state enterprises around the country in the form of asset sales, mergers, and even some bankruptcies—evidence that reforms are beginning to take root.

This report argues that the Government of China can accelerate the reform of state-owned enterprises with a pragmatic program that focuses on two elements:

- a *policy framework* that provides strong incentives for state enterprises to improve performance, primarily by restricting automatic access to finance for uncreditworthy companies, promoting competition, and enhancing autonomy in corporate governance; and,

- a *program to reorganize* the state enterprise sector, including the transfer of social services to government, transferring small enterprises to the nonstate sector, restructuring large, viable enterprises, and liquidating nonviable loss-making companies.

The purpose of the program would be to improve resource allocation and reduce the adverse macroeconomic effects of enterprise borrowing.

Resource misallocation

As a group, state enterprises in industry—including manufacturing, energy, power, mining and hydrocarbons—report operating profits of about two percent of GDP. The many state enterprises that are relatively profitable could become the eventual backbone of a modern Chinese enterprise system. However, the financial performance of state enterprises is generally lower than the nonstate sector, and many companies lose money—in 1995 about 44 percent of state companies incurred losses amounting to roughly one percent of GDP. As a consequence, after-tax profits of state enterprises as a group finance only a small share of their investments.

This causes two problems. First, because their after-tax profits are low, state enterprises use a disproportionately large percentage of available credit. In industry, for example, China's industrial state enterprises accounted for 74 percent of all investment in

1994, but produced only 34 percent of output. Second, state enterprises use these resources less productively than the nonstate sector (collectives, town and village enterprises (TVEs), joint ventures, and private firms). The growth rate of total factor productivity in state enterprises, while improving under the stimulus of reform, has been much slower than the nonstate sector during the entire post-1978 reform period. During 1994 and the first 10 months of 1995, the growth rate of state enterprises was less than one-third the growth rate of nonstate firms.

Several policy-related distortions depress the relative financial performance of state enterprises. State enterprises provide *social services*—education, health, and pensions—which in most market economies would be partially borne by the government. Firms have limited autonomy to release *redundant workers*; almost 60 percent of the enterprises surveyed for this report indicated that their redundant workers exceeded 10 percent of their work force, but only 45 percent of enterprise managers reported they had freedom to manage their personnel. With an estimated 15 million redundant workers in state enterprises nationwide, policy is only now changing to facilitate gradual reduction of this burden. Also, the *tax regime* imposes a heavier effective burden of taxation on state enterprises; although income tax rates were equalized for all firms in 1994, foreign funded enterprises pay less because they benefit from tax exemptions given in special economic zones or for export. Finally, *price controls* depress earnings of coal, natural gas, fertilizer, and grain producers, and these sectors have recorded substantial losses, requiring budget transfers.

Low profitability has been offset with budget transfers and implicit financial subsidies. In 1994, budget transfers (excluding price subsidies) amounted to 1.6 percent of GDP, and implicit financial subsidies—in the form of cheap loans and sporadic default—were estimated to be an additional 1.7 percent of GDP. These transfers and subsidies—although down substantially from previous years—are about equal to the amount state enterprises spend on social services for their workers.

State enterprises have been less productive because the strong incentives that spur superior performance in the nonstate sector are weak in China's state sector. *External incentives* that discipline enterprises, though recently stronger than before, remain lax. First, most state enterprise have access to finance for working capital and credit subsidies regardless of their financial performance, as local governments desire to maintain employment levels and use allocations of credit through the plan to maintain growth. Second, many state enterprises also have competitive advantages relative to the nonstate sector. They have access to capital at interest rates 40-60 percent below the informal market rate. Also, the trade regime produces uneven import competition, with niches where domestic firms face no threat of competition and others where protection is absent altogether. Most imports—85 percent—come in exempt from tariffs; nontariff barriers and quotas are common; and at the same time, companies are required to purchase imports through state-licensed trading companies. Of the large enterprises surveyed in this report, only 39 percent had foreign trading privileges. Finally, the absence of a capital market and a policy that, until recently, has prevented merger with more efficient competitors, have meant that state enterprises could not be competed out of business. Bankruptcy is relatively new and is still at an experimental stage.

Internal incentives rewarding good corporate financial performance are also weak. Policies are unclear on basic questions of corporate governance: Which agency of government should represent the owner's shares on the boards of directors? Who has authority to name corporate officers? Who has authority to dispose of corporate assets? The lack of clarity on these questions has meant that government representatives rarely define clear commercial objectives for managers, that managers cannot be held accountable for poor performance or rewarded for good performance, and that managers lack autonomy in carrying our corporate responsibilities. Among the large firms surveyed for this study, none enjoyed the full control promised in the 14 autonomous rights of corporations promulgated in July 1992. Less than half had freedom to import and export, invest, dispose of assets, engage in mergers or establish joint ventures, or refuse to pay nonregulated government levies. The Government's 10,000-1,000-100-10 Program provides the essential elements to reforming governance, but implementation appears to be slow.

The restrictions imposed through the credit and investment plan are an integral part of the incentive framework that hobbles enterprise performance. By limiting managerial autonomy in basic investment decisions, the credit and investment restrictions direct resources according to criteria other than financial return, so companies cannot invest in the most promising technologies, products, and regional markets. In 1994, for example, planning authorities discouraged investments in "adequately supplied" markets and encouraged investments in favored sectors; this tends to impede competition and vitiate market signals that would otherwise elicit new, more efficient supply.

Enterprise deficits and macroeconomic instability

In recent years, state enterprises in commercial activities have been generating about 2 percent of GDP in profits, but have annually invested 9 percent of GDP. They have thus produced a deficit requiring finance of about 7 percent of GDP—an amount equal to about 60 percent of the borrowing requirement for the total nonfinancial public sector. If the budget transfers, together with implicit price and financial subsidies, are netted against social spending, the state enterprise deficit is even larger. State enterprise deficits are the hard core of the structural deficit of the public sector and are the most difficult to discipline.

In 1990-94, China's overall nonfinancial public sector deficit is estimated to have averaged about 12 percent of GDP. Public sector deficits of this size represent a danger to macroeconomic stability, especially when they are financed by money creation. Seigniorage from currency creation during this period to finance the public sector deficit averaged around 4.5 percent of GDP. In other countries, revenue raised from sustained money creation in amounts comparable to those currently observed in China has led to high inflation.

For this reason, the Government began to reduce the consolidated fiscal deficit in 1994, and change the pattern of finance in the public sector. Rather than relying on monetary financing, the Government has shifted the basis of deficit financing to borrowing from domestic sources, mainly the banking system and bond financing. This has led to a sharp rise in domestic debt. Since domestic debt as a share of GDP is still low—only 5 percent of GDP—and domestic savings are very large, this pattern of finance is sustainable for some time to come and marks an improvement over monetary finance. However, in the medium term, the Government's announced objective of reducing the consolidated public sector deficit is wise and prudent. This objective can only be achieved through reforms of the state enterprises.

Recent initiatives and new experiments

Beneath the surface of national policies, a fast flow of new initiatives and experiments heralds important changes in Chinese industrial organization. The Government has strengthened external incentives. Budget transfers to state enterprises are declining, implicit subsidies through the financial system are falling, and tight credit policies toward state enterprises have reduced their access to automatic roll-over finance. Subsidies to industrial enterprises through the budget and financial system were cut from 5.3 percent of GDP in 1993 to 3.3 percent of GDP in 1994. Also, the specialized banks, under the Commercial Bank Law passed in 1994, have greater autonomy to make loans, autonomy enhanced by a steady reduction in the scope of the credit plan. This, together with tighter credit after mid-1993, began to reduce access to finance for some poorly performing enterprises. Consequently, municipalities increasingly experimented with bankruptcies, and divestiture of small enterprises—often to managers, workers, and government officials. Some 474 enterprises have been identified for bankruptcy under the new Bankruptcy Law adopted in 1994. Programs in Shandong, Hebei, Sichuan, and Heilongjiang (see Chapter 1) have already produced evidence of improvements in output and efficiency, reductions in government subsidies, increases in government revenues, and improvement in debt repayment records. Also, pension pooling and new housing arrangements are becoming more common. Perhaps most indicative of change, several million workers have been released from state enterprises, and most have been reabsorbed into dynamic nonstate enterprises. These trends would undoubtedly accelerate with a fully supportive national policy framework.

Recommendations

The Government's objectives of reform are to:

- transform today's state enterprises into modern corporations that are more profitable and more productive, so as to contribute to faster growth of productivity in the whole economy; and,

- reduce the borrowing requirement of the state enterprise sector, so as to contribute to macroeconomic stability. This is the only way the structural deficit of the public sector can be reduced.

There are two ways to achieve these twin objectives. Reforms can improve enterprise profitability and productivity, increase the share of investment financed from retained earnings, and thus reduce the borrowing required under partial or full sovereign guarantee. Also, reforms can transfer enterprises to the nonstate sector through merger sales, the creation of cooperatives, and other mechanisms; this would transfer risk from taxpayers to those willing to accept it—entrepreneurs, in exchange for profit opportunities, and workers, in exchange for higher wage opportunities. The program announced at the Eighth National Peoples' Congress in March 1996 contains elements of

both reform strategies. Successful implementation requires two levels of action: it would establish a *policy framework* that harnesses market forces to promote enterprise reform, and a specific *reorganization program.*

Policies

Two clear principles should form the foundation of the policy framework. First, *external incentives* should improve economic performance by establishing market-based discipline. Second, *internal incentives* through improved governance would reward shareholders and managers if enterprises perform well and penalize them if enterprises perform poorly.

External Incentives: Competition and Financing. Enhancing external discipline would entail:

- *promoting competition* in product and capital markets by removing policy-related barriers to new competition, especially between provinces, and restrictions on the entry of foreign companies; and,

- *phasing-out noncompetitive access to finance and subsidies*, by transforming implicit subsidies through the financial system into explicit subsidies in the budget, and by phasing out the credit-investment plan during the Ninth Five-Year Plan.

Several measures could be taken in the near term that would *spur competition*. These include eliminating barriers to entry and exit across provinces, removing obstacles to entry of nonstate firms into wholesale and retail distribution, and permitting entry of domestic and foreign private investment into basic industries and infrastructure provision (e.g., telecommunications, oil and power generation), subject to sector regulations. To avoid putting domestic state enterprises at a market disadvantage, the tax incentives granting foreign direct investment a "better-than-national" treatment ought to be phased out. Similarly, tax incentives that discourage cross-provincial competition, such as VAT and income tax derivation rules that allocate receipts to the home tax jurisdiction, ought to be changed so as to allocate to the jurisdiction of economic activity. Phasing out interest rate discrimination by class of ownership—in combination with the progressive phase-out of the credit plan—would allow firms to compete on a level playing field. This measure should be combined with the transfer of social expenditure responsibilities to the government. Rationalizing the tariff and trade regime—including the phase out of exemptions to tariffs, transforming the import tariff exemption for exports to a modern drawback scheme, and converting nontariff barriers to tariffs—would increase competitive pressures on domestic industry. Extending trading rights to all domestic and foreign companies could be done in a year and would help create more trade competition.

Phasing out noncompetitive access to finance as well as implicit subsidies is essential to reform. The experience during 1994-95 has shown that reducing subsidies and access to noncompetitive finance will stimulate decentralized, market-driven reform. In the near term, essential measures include rationalizing interest rates, phasing out directed credit through the specialized banks, permitting creditworthy companies access to capital markets (subject to eligibility requirements) and eliminating provincial quotas for share and bond issues. Price controls, especially on energy, have generally benefited downstream state enterprises and constitute an important implicit subsidy—and source of losses for up-stream firms; prices should gradually be deregulated. Subsidies should be phased out, except where necessary for purposes of regional equity or income distribution; and these necessary subsidies should be financed through the budget.

The medium-term program would depend on how rapidly these measures are enacted. Some elements of the reform process can only be undertaken as part of a medium-term program. The specifics of improving the trade regime, for example, should be coordinated with efforts to accede to the World Trade Organization (though China's national interest in a more efficient, internationally competitive industry should drive the timetable for implementation). Reforms in the financial sector have to be part of a larger strategy to improve the way capital is allocated in the economy. Other elements can be free-standing, such as establishing the legal foundations for a national market through proscriptions against restrictions on interstate commerce, and establishing a neutral, transparent and enforceable regime governing foreign investment.

Internal Incentives: Improving Governance. Implementing the 10,000-1,000-100-10 program will allow the Government to make clear demands on state enterprises for improving returns to investment, and accord management sufficient autonomy and authority, with ex post accountability to achieve those results. This would entail:

- *implementing the new accounting system*, with public disclosure of independently audited balance sheets and income statements for all state enterprises above a predetermined size, with the

objective of completing income statements for 10-20,000 enterprises in the first period;

- *accelerating the incorporation of enterprises* under the new Company Law, regardless of financial performance; this will make profits and losses more transparent, establish book values of assets, and clarify ownership;

- *consolidating government representation to replace line bureaus.* Municipal governments should appoint full-time directors who report to the mayor;

- *setting clear commercial objectives* through state representation on the board of directors; the main objective should be to maximize the value of the company's assets;

- *using the board of directors to hold management accountable* for achieving enterprise objectives, and to reward and penalize them in accordance with performance; and,

- *granting management maximum autonomy* in its decision-making and some sharing in corporate profits.

During the first phase, *implementing the new accounting principles for the 10,000 enterprises and incorporating state-owned commercial units should be a national priority.* The absence of reliable financial information on enterprise performance inhibits debt restructuring efforts with creditors, impedes adequate valuation procedures when divesting small firms, and prevents holding management of large firms responsible for performance. Reliable financial information is necessary for banks to evaluate loan applications, and for firms to enter into business with other partners; it is necessary for enterprises that want to be listed on stock exchanges; it is necessary for authorities to collect taxes.

Another priority should be clarifying the agency to represent the Government on the boards of directors and limiting the ability of other agents outside the boards to influence naming of corporate officers. Finally, *the Government should complete the transfer of the 14 autonomous rights for all enterprises*, subject to the phased abolition of the credit and investment plans.

In the medium term, the program would extend audited accounting to most firms. Also, by a specific date, legal incorporation should be required of all businesses, public or private, with defined corporate charters, assets, liabilities, and ownership.

Program of State Enterprise Reorganization

Beyond supportive policies that harness market forces to the task of restructuring, the Government could adopt a program to reorganize the 102,200 state enterprises in industry and several thousand more outside of industry. The program would entail changes that apply to all enterprises:

- *Appointing leading agencies* at central and municipal level to promote and coordinate asset evaluation, the divestiture programs for small, and the restructuring programs for large firms. For currently noncompetitive sectors, such as electric power, telecommunications or oil and gas, the respective ministries might oversee the restructuring programs. The State Economic and Trade Commission for the competitive sectors could be strengthened by giving it greater authority and more resources to spur change.

- *Transferring pension, health and education responsibilities to municipal governments,* perhaps with compensatory fiscal transfers from the national government; as national pension and health programs are created, these would be merged with municipal programs.

- *Providing income maintenance for finite periods* to displaced workers in the pilot companies, while the municipalities put in place an unemployment insurance program.

Municipal and national programs will have to assume a greater role in financing and administering health, education, and pension programs. The program would accelerate ongoing efforts in the 50 experimental cities to transfer the social responsibilities from firms to municipal programs. Resources from the sale of assets might be used to restructure the debt overhang, including unfunded pension liabilities; the central government would provide supplementary funding if necessary as an incentive to stimulate the process.

Housing subsidies should be phased out—either by converting them into wages and raising rental prices, or by selling property rights to workers, or by some other means. The largest component of social costs is housing (direct subsidies amount to 16 percent of the wage bill and indirect subsidies are another 21 percent). As long as housing remains linked to jobs, labor mar-

kets cannot develop. Such a use of state assets not needed for productive processes can ease the financial restructuring of overindebted enterprises and protect social needs.

Priority 1,000 Enterprises and other Large Firms

The Government has selected about 1,000 state enterprises that are to be the focus of reform and will become the backbone of Chinese industry. It is expected that these firms will attract a first wave of attention and support in granting management autonomy, incorporation, the transfer of social responsibilities, and, where necessary, debt restructuring.

The Government faces a basic choice in deciding the degree of protection and subsidies to accompany enterprise restructuring. International experience has clearly shown that competitive discipline combined with management autonomy offers the highest potential for sustained productivity gains. Relying on protection and subsidies will probably only extend inefficiencies. This suggests certain guiding principles: First, the restructuring process should not entail any retreat from existing market pressures; to the contrary, the restructuring program should include intensifying those pressures. Second, any subsidies should be through the budget, not the banking system, so they are transparent to policymakers; and subsidies should be limited in time and amount so as to convey to management the proper incentives to improve performance. Third, managers, supervised by their boards of directors must be given the full 14 autonomous rights early in the restructuring process to be successful.

The 1,000 priority firms, like all the 14,000 large and medium enterprises in industry, fall into three broad categories. Perhaps one-third are likely to be profitable after they are relieved of price controls, government interference in management actions, excess labor, and social responsibilities. These enterprises will be able to serve their existing debt on market terms. A second third would be commercially viable after restructuring, except that their debt loads are simply too heavy to permit them to service debt and make necessary reinvestments. Perhaps one-third of these enterprises would still not be economically viable under any circumstances. The difficult dilemma of the Government is that only firms that are incurring heavy losses and those that are making handsome profits can be identified with certainty. Deciding the fate of the middle third of enterprises that are marginally loss-making or marginally profitable requires using market forces and decentralized decision-making.

This suggests a phased approach to reform. *First, the lead agency should work with banks to analyze the asset-liability balance* and evaluate the economic potential of large state enterprises to distinguish bankrupt companies from the others.

Second, effectively bankrupt companies should be cut off from bank credit, and be placed in receivership, and eventually be closed and their assets liquidated, or sold. This may take time, during which implicit subsidies should be transferred to the budget. The Government will have to develop a transitional program for workers displaced by the closure of these enterprises. The program will have to fund pension liabilities, housing, and some transitional income maintenance. Housing and some portion of the pension liabilities should be taken from the liquidated assets of the companies. The remainder will have to come from public revenues.

The large enterprises that might become dynamic, going concerns have to receive government support in taking three difficult steps: establishing modern corporate governance mechanisms, shedding redundant labor, and separating social service responsibilities from enterprise management. This will allow enterprises to assume responsibility for their own profits and losses. The Government may have to provide subsidies to enterprises during a transitional period, but these should be made available only as part of a financing strategy underpinning a business plan that has clear promise of success.

Third, debt restructuring may be necessary for some heavily indebted enterprises that could become profitable after reform were it not for their debt. The first priority is to shut off the flow of new loans to non-creditworthy enterprises. Only as this flow, creating additional bad debt, is reduced can the Government consider restructuring the stock of bad debt. Four principles should guide the process:

- Debt restructuring will be more effective if it is among the last steps in enterprise reform, rather than among the first. If undertaken before other reforms have made it possible for firms to be profitable, or if it is not clear that restructured firms will be commercially viable, debt restructuring may have to be repeated. This would raise the cost of reform.

- Mechanisms should avoid "blanket" restructurings that would create incentives for many firms to seek debt forgiveness; instead, mechanisms should provide incentives for firms to service debt at least partially by offering debt relief for responsible payment efforts as of a specified date, and penalties, such as changes in management or ownership, for poor performance.

- Mechanisms should also be designed to allocate the costs of debt relief among creditors, local governments, and the firm itself (possibly through asset sales), and, only as a last resort, national taxpayers. The burden of debt restructuring will have to be shared to reduce the inflationary impact of writing down debts. If the Government absorbed all bad debts in its budget and then was unable to raise taxes, it would have to print money, which would fuel inflation.

- Any plan for debt restructuring must ensure that any debt write-downs occur only once and are not repeated. Policy should be clear that the Government will not provide relief for further bad debts incurred after the restructuring.

The Government may wish to consider establishing a mechanism at the national or provincial level to restructure enterprise debt. The function would be to provide financing for uncreditworthy enterprises while isolating them from the banking system, and ensure that any financing provided to them during the transition period does not accumulate as bad debt on the books of the banks. The entity would receive its financing only as transfers from the Government. It would organize the financial restructuring of enterprises with the participation (and financial contribution) of the municipal government, local creditors, and the firm itself.

The noncompetitive sectors have special requirements. Comprising perhaps fewer than 500 to 1,000 of China's state enterprises throughout the economy, these sectors include important industrial activities, such as natural gas and electric power distribution, and nonindustrial activities such as urban water supply, sewage and waste management, and railways. *In these sectors, the Government should accelerate reform programs, focusing on improving the regulatory framework, divesting social responsibilities, and diversifying financing sources to include private sources.*

Some state-owned monopolies could be made competitive. Examples include petroleum production, telecommunications, and power generation. In addition, many of these sectors are excessively integrated, and have ancillary businesses that could be spun off into separate, nonstate companies. The Government initiated pilot experiments in 1995 to stimulate BOT (build-operate-transfer) and project finance in power, transport, and water, and is developing regulations that will promote more competition and new sources of finance. *In these sectors, the Government should focus on removing policy barriers to entry and permitting new competition, including foreign investment, based upon sound regulation.*

Small Enterprises

About 90,000 of China's industrial state enterprises are classified as small enterprises and are under the control of Provincial government. They usually engage in potentially competitive activities that do not require the presence of the state. Provincial governments are now experimenting with programs that include mergers, sales, leasing arrangements, formation of cooperatives, management contracts, and joint ventures. *The Government should now convert these experiments to a systematic program to transfer these small enterprises to the nonstate sector, perhaps to be completed during the Ninth Five-Year Plan.* A decentralized approach will give municipalities the right incentives to manage this program efficiently.

During the first phase, the Government could use the Reform Cities to launch the pilot program, with the objective of transferring ownership of 10-20,000 companies in two years. The Government has designated the State Economic and Trade Commission as a lead agency at the national level. A first priority is to set up a leading group to coordinate the reform program at the municipal level to promote the restructuring initiatives. All assets and liabilities must be quantified and audited. Second, when forming cooperatives or allowing buyouts by workers, the Government may wish to provide mortgage-like financing with instruments that could later be sold onto the market. Third, for divestitures, mergers, or conversion to joint ventures, the leading group would set up and monitor transparent rules and procedures to ensure transparent and suitably competitive procedures to prevent "asset stripping." It would also approve the division of sales proceeds among creditors and state "owners." The proceeds from asset sales, for example, may have to be used to cover pension liabilities along with the municipal funds; in some cases, compensatory fiscal transfers may be required. These enterprises should be removed from the strictures of the investment and credit plan. In the medium term, the program would be extended progressively to other municipalities and provinces.

Objective	Policy Short term
Strengthen external incentives	
Competition	Phase-out restrictions on inter-provincial investments, sales and purchases
	Remove policy barriers to domestic and foreign purchase of SOE assets in all but a few designated industries
	Permit regulated entry of domestic and foreign private investment into infrastructure (e.g., telecommunications, oil and gas, and power)
	Remove tax biases that distort or inhibit competition (e.g., preferences for foreign firms and special zones, VAT and income tax derivation rules for SOEs)
	Rationalize tariffs and trade regime (e.g., phase-out exemptions to tariffs, rationalize tax draw-back scheme, convert nontariff barriers to tariffs) as consistent with WTO accession program
	Extend import and export trading rights to all enterprises, subject to meeting registration and other standards
Hard budget constraint	
• Credit investment plan	Simplify interest rate structure, and budgetize present implicit financial subsidies for state enterprises that require continued subsidization
	Continue phase down of subsidies, consistent with restructuring program (see below)
	Phase out prior investment approval (e.g., raise ceilings for prior approval of investments to RMB $200 m.)
• Financial system	Reduce coverage of directed credits
	Permit access to capital markets subject to eligibility and disclosure criteria
	Phase out provincial and municipal quotas for share or bond issues
• Price Controls	Phase deregulation of energy prices, and budgetize subsidies to loss-making energy companies
Strengthen internal incentives	
Accounting	Complete implementation of international accounting system, with financial accounts of 10,000-20,000 large state enterprises and with audits in annual reports
Governance and corporatization	Designate representative of government shares for largest 1,000 companies on board of SOEs, and define powers for Board of Directors to name company officers
	Complete incorporation under Company Law of largest 500 enterprises.
	Complete transfer of 14 autonomous rights for all enterprises, subject to phase out programs in credit and investment plans, and price controls

Framework

Medium term	Long term
Eliminate inter-provincial trade and investment restrictions, and ensure adequate cross-provincial legal protections for all	
Improve policies to facilitate foreign entrance (bilateral investment treaties, phase-out export requirements, and provide convertibility-equivalent access to foreign exchange)	
Continue tariff rationalization program	Complete program
End all other subsidies	
Complete phase-out of investment approvals	
End directed credits except for policy banks	
Phase out all price controls for competitive industries, and (if necessary) replace with targeted consumer subsidies	Complete phase-out of price controls
Implement for largest 60,000-80,000	Full implementation for all state
Extend program to cover all enterprises	
Incorporate all medium and large enterprises under company law	Complete incorporation of all companies.

Objective	Short term
Common elements	Establish lead government agency at central and municipal levels to promote and coordinate restructuring and asset divestiture according to transparent rules and procedures
	Transfer health and education responsibilities to government for at least pilot cities, with compensatory fiscal transfers (if required)
	Provide income maintenance during transition and extend coverage of unemployment insurance system
Competitive sector	
Large and Medium Enterprises	Restructure at least 1,000 enterprises
	Divest or liquidate assets of effectively bankrupt companies among 1,000 in at least 50 cities
	Budgetize subsidies to loss makers during reorganization period
	Phase down flow of credit to uncreditworthy companies
Small enterprises	Establish experiment in at least 18 cities, with objective of transferring 10-20,000 enterprises to the nonstate sector
	Remove from credit-investment plan
Non-competitive sector	
Corporatization and autonomy	Separate commercial activities from ministries and bureaus (e.g., power, gas, telecommunications)
Competition	Permit competitive BOT entry into power generation and natural gas
	Permit entry into long distance telecommunications service
	Expand conversion areas in petroleum
Tariff Regulations	Establish clear regulations for tariff setting
Capital markets	Permit bond and share issues for creditworthy companies

Program Medium term	Long term
Unify municipal programs with national programs for pension and health, and enact in remaining cities	
Extend program to municipalities covering at least half of remaining state enterprises	Complete program
Broaden experiment to include all major municipalities, with objective of transferring at least 60,000 enterprises to the nonstate sector	Conclude program
Replace administered prices with rule-based regulation, where competition cannot discipline price setting	
Complement bank lending for capital construction with increased reliance on issues in capital markets	

Chapter 1
Overview: China's State Enterprises

Introduction

The reform of China's state-owned enterprises (SOEs) will be one of the largest institutional transformations ever undertaken. Reform will affect more than 100,000 industrial enterprises employing more than 100 million people. The speed of reform and the ability of the state to finance the transition pose difficult problems. Both the challenges and the stakes are big: China's continued economic growth and the stability of its social fabric depend on the progress of market and business discipline.

The relative size of the nonstate sector in China's economy has grown since 1978. Successive reforms progressively liberalized prices and permitted new entry (Figure 1.1). These reforms, sustained over more than a decade, permitted the emergence of a strong competitive fringe, notably rural and urban collectives and foreign joint ventures. In recent years, the Government has improved the trade regime, a central policy for channeling resources in the economy. It reduced the unweighted average tariff from 43 percent in 1992 to under 23 percent by April 1996, with a target of 15 percent in 1997. Nontariff barriers, though still prevalent, have been reduced from 1,530 tariff lines to under 400 in 1996. The cumulative effect of these reforms is to allow markets to channel an ever greater share of resources into high return segments of the economy. This became the leading source of Chinese productivity gains during the post-reform period.

But state-owned enterprises remain the key drivers of China's industry, accounting for one-third of industrial production, two-thirds of urban employment, and almost three-quarters of investment.[1] State-owned enterprises provide essential raw materials and dominate such capital-intensive sectors as power, steel, chemicals, and machinery. Their borrowing comprises a large share of the total nonfinancial public sector deficit.

Although many state-owned enterprises are productive and profitable, many are inefficient and incur financial losses. As a group, state enterprises absorb a disproportionate share of domestic credit. Of particular concern to the Government is the burden that loss-making state-owned enterprises place on public budgets.

For these reasons, in November 1993, the Government initiated a pilot project called the "10,000-1,000-100-10 experiment." Under this program, assets for the 10,000 medium-size and large state-owned enterprises were to be carefully evaluated and inventoried. New state asset management committees were to oversee the asset management for 1,000 large enterprises. Another 100 enterprises were to be transformed into shareholding companies under the Company Law.[2] Eighteen cities (originally 10) were to undergo comprehensive reform, including the restructuring of their state-owned enterprises and their social services.

These programs produced some important advances. By early 1996, most of the 10,000 companies had completed their asset evaluation, and over 90 of the 100 companies had completed their experimental transformation into limited liability companies. The number of reform cities had expanded from 18 to 50, and most of these had begun to adopt municipal pension systems. In March 1996, at the Fourth Session of the Eighth National Peoples' Congress, Prime Minister Li Peng said that the Government would give priority to reform of the 1,000 state enterprises and group companies. These would be transformed into autonomous corporations, responsible for their own profits, losses, and debt. In addition, he announced that smaller firms would be reorganized via acquisition or merger into joint stock companies, or through leasing, management contracts or forming cooperatives.

These reforms are designed to overcome problems associated with the existing enterprise system. The most serious problems of the state enterprises are their *misallocation of resources* and link to *macroeconomic instability*. Each issue is complex and warrants elaboration.

Resource misallocation

Profits

As a group, state enterprises in industry—including manufacturing, energy, power, telecommunications, mining and hydrocarbons—have reported operating profits of about two percent of GDP in recent years. The many state enterprises that are relatively profitable could become the eventual backbone of a modern Chinese enterprise system. However, the reported financial performance of state enterprises is generally lower than the nonstate sector, and a large segment of companies lose money—in 1994 about 40

Figure 1.1

The pace of Chinese enterprise reform... **...and results**

1978-87 Chinese Communist Party (CPC) denounces "Cultural Revolution"; formulates general principles for economic reform; law on joint ventures promulgated; price liberalization in agriculture begins; fiscal autonomy granted to local governments; creation of Special Economic Zones; introduction of private income tax; price liberalization of consumer goods begins; "Tax-for-profits" reforms; bank lending begins to replace SOE budgetary allocations; encouragement of collectively-owned enterprises (COEs); transformation of People's Bank of China (PBC) into central bank begins; opening up of 14 coastal cities; SOE Director Responsibility System and "above-plan" production and pricing autonomy provisions introduced; town and village enterprises (TVEs) created.

1988 SOE Contract Responsibility begins; Regulations on Private Enterprise published; Enterprise Law and Bankruptcy Law passed.

1989 Regulations issued on mergers, joint-stock companies and commercialization of banks.

1991 Delegation of direct trade rights to SOEs begins; pension and housing reform begins; encouragement of enterprise groups and corporatization.

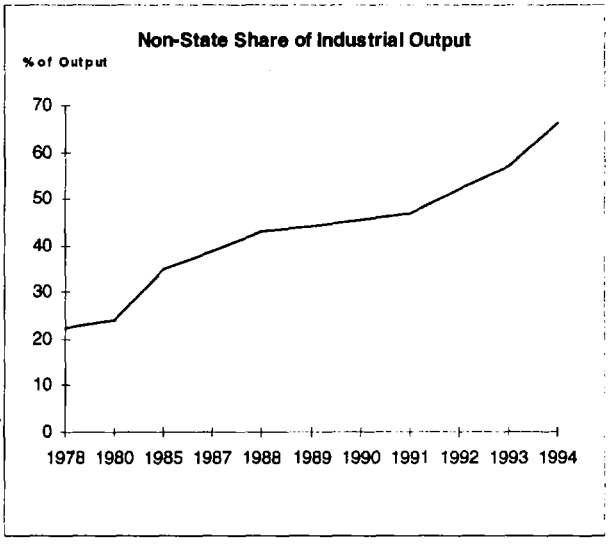
1992 Deng Xiaoping tour of South; New Operating Mechanism and 14 Autonomous Rights to SOEs; phasing out of production targets and most remaining price controls.

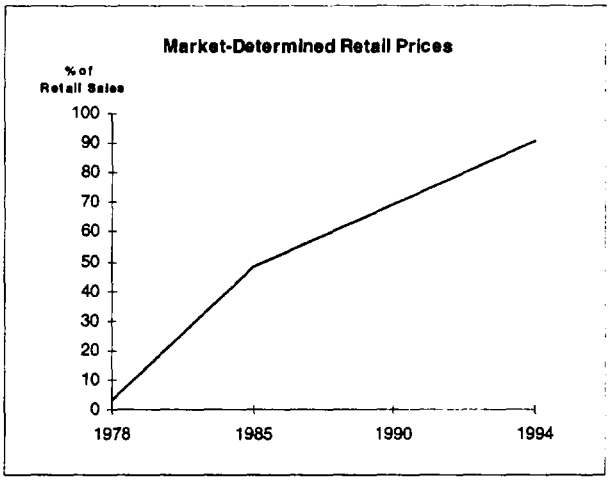
1993 Adoption of principle of "socialist market economy"; Decision of Third Plenum on establishing Modern Enterprise System by 2000. Passage of Company Law. Industrial subsidies fall 0.9% of GDP.

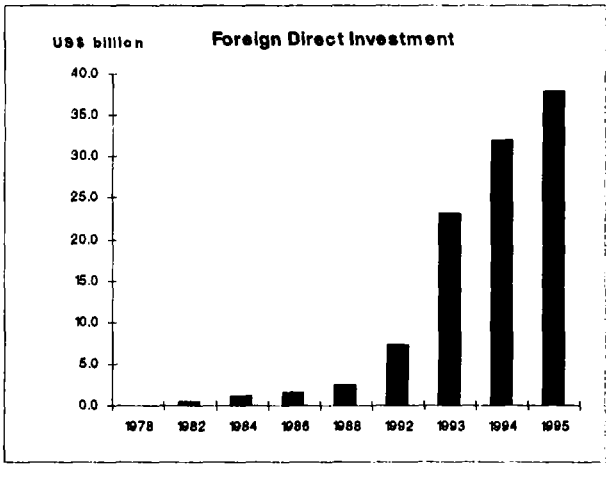
1994 Foreign exchange reform; VAT and other tax reform; implementation of Company Law; launching of 10,000-1,000-100-10 Program; Passage of Commercial Bank Law and Central Bank Law. Industrial subsidies continue to fall a further 2% of GDP.

1995 Implementation of Company and Commercial Bank Law; Announcement of tariff reduction of at least 30% for 4,000 of 6,000 lines; replacement of 179 non-tariffs barriers (30% of all NTBs) with tariffs.

1996 Premier Li Peng announces program of "grasping the 1,000" in March 1996 at National Peoples' Congress; implementation of announced trade reforms, April 1996, so average unweighted tariff falls to less than 23%.







Source: Bank Staff

percent of state enterprises reported collective losses of about one percent of GDP. Companies reporting losses rose to 44 percent in 1995.

As a consequence, after-tax profits of the state sector finance only a small share of enterprise investments (Figure 1.2).[3] In 1994, state enterprise in industry (broadly defined) reported 1.8 percent of GDP in after-tax profits; they invested an estimated 8.8 percent of GDP.[4] Thus, state enterprises financed about 20 percent of their investment from profits. This explains the large demand for credit that industrial state enterprises place on the banking system. In industry, for example, state enterprises made 74 percent of investments, but produced only one third of output in 1994.

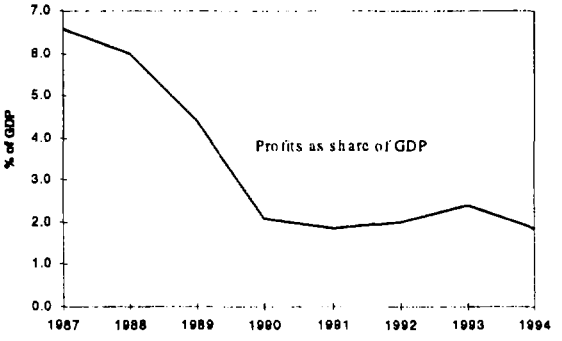
Profitability of these enterprises has also been falling since the late 1980s. In 1987-88, profits of these enterprises amounted to more than six percent of GDP. Their profits dropped to under two percent of GDP by 1994. The situation is even more precarious if transfers from the budget are deducted. After-tax profits, net of transfers, have been only marginally positive in the last two years, and were negative in 1989-92.

The declining share of state enterprise profits in GDP can be traced to two factors. First, the market share of state enterprises declined from 60 percent to 34 percent during this period, so their profits as a share of GDP also fell. Second, the rate of return on investments of state enterprises tended to fall as a group—from over 15 percent on fixed assets to about 5 percent. Progressive liberalization of prices, trade, and conditions of entry intensified competition, and put pressures on state enterprise profitability. Of the two effects, falling profitability of firms is the more important. Investment, meanwhile, also dropped, but by much less. State enterprises continue to enjoy access to borrowing despite their deteriorating financial performance and declining market share. As a result, the savings-investment deficit of industrial state enterprises has been rising.[5] The deficits associated with state enterprise continued to grow until 1993, when the Government began to curb state enterprise borrowing.

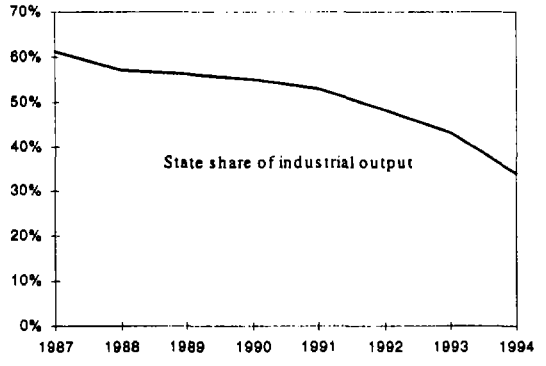
Large deficits cause two problems. Because their after tax profits are low, state enterprises use a disproportionately large percentage of available credit to finance investment, effectively crowding out nonstate investors. More important, state enterprises are less

Figure 1.2
Borrowing of state enterprise has increased...

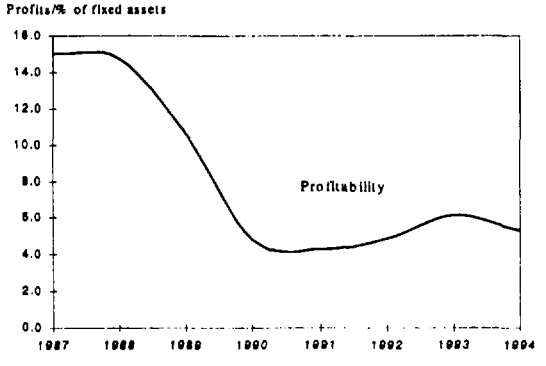
State enterprise profits as a share of GDP have fallen...



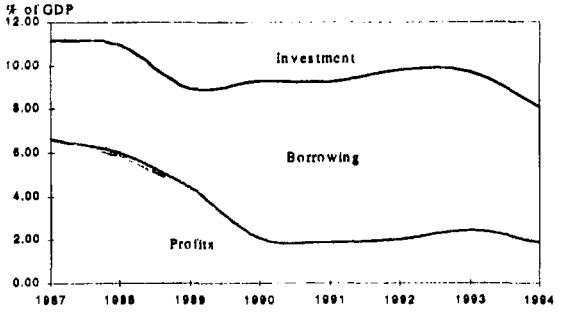
...as their market share dropped...



...and their profitability declined



...but state enterprise investment has fallen by much less so their borrowing has increased.



Source: Same as Table 1.1

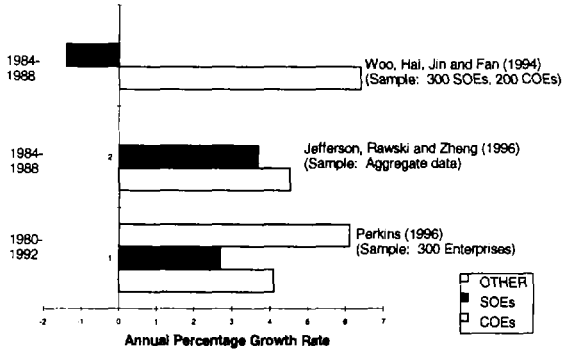
productive than the nonstate sector—collectives, TVEs joint ventures, and private firms (see Box 1.1). The growth rate of total factor productivity in state enterprises, while improving under the stimulus of reform,[6] has been estimated at roughly half to three-quarters as fast as the nonstate sector for the entire post-reform period.[7]

Box 1.1

State-owned enterprise productivity growth has lagged behind the collectively-owned and private sectors.

Although there has been much debate on the absolute rate of SOE total factor productivity (TFP) growth, the emerging consensus is that TFP growth in SOEs has lagged behind the rest of the industrial sector. In a series of papers, Jefferson et. al. (1992, 1996) have estimated that TFP growth in industrial SOEs ranged from 50 percent to 75 percent of TFP growth in COEs. The analysis of Woo et. al. (1994) confirms this finding of poor TFP performance in the SOE sector relative to COEs, but paints a much bleaker picture of absolute TFP growth in SOEs, actually finding it to be negative (Figure 1.3). The reason for this discrepancy lies not in the different data sets considered, but in methodology. Due to various data inconsistencies, Woo (et. al.) claim that Jefferson (et. al.) overdeflate intermediate inputs and underdeflate gross output series for SOEs. This leads to exaggerated real output growth and understated growth in material inputs, resulting in overestimated TFP growth. True SOE TFP growth probably lies somewhere between these two estimates.

Figure 1.3: Estimates of Industrial TFP



Less evidence is available comparing performance of the SOEs and the rapidly growing private sector, consisting of joint-ventures, foreign-owned, and privately- and individually-owned enterprises. However, rough calculations based on aggregate data indicate that SOE TFP growth has also lagged substantially behind this dynamic sector as well. Over the past ten years, industrial value-added per worker in the non-SOE, non-COE sector has grown substantially faster than in the SOE sector. Given SOEs' priority claims on investment resources, it is unlikely that this relatively poor labor productivity performance was due to slower rates of capital accumulation in the SOE sector, indicating significantly more rapid TFP growth in the private sector. The analysis of Perkins (1996), based on a sample of 300 enterprises from 1980 to 1992, supports this conclusion. The paper finds that TFP growth in joint-venture and wholly foreign-owned enterprises was 6.1 percent, compared with 2.7 percent in the SOE sector (Figure 1.3).

Sources:

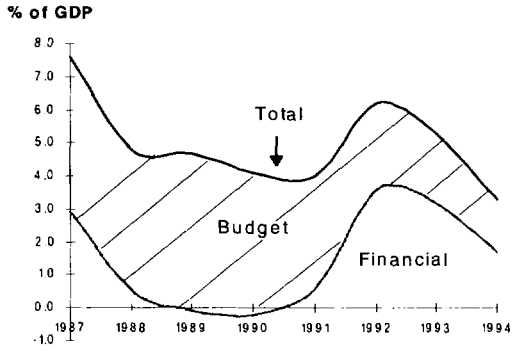
* Jefferson, Gary, Thomas Rawski and Yuxin Zheng. "Chinese Industrial Productivity: Trends, Measurement Issues and Recent Developments," Brandeis University; Unpublished Manuscript, 1996.

** Jefferson, Gary, Rawski, and Zheng, "Growth, Efficiency and Convergence in China's State and Collective Industry". *Economic Development and Cultural Change.* Vol. 40, No. 2, pp. 239-266, 1992.

*** Perkins, F. C.. "Productivity Performance and Priorities for the Reform of China's State-Owned Enterprises". *Journal of Development Studies.* Vol. 32, No. 3, pp. 414-444, 1996.

**** Woo, W. T., Hai, W., Jin, Y. and G. Fan. "How Successful Has Chinese Enterprise Reform Been? Pitfalls in Opposite Biases and Focus," *Journal of Comparative Economics*, 3: pp. 410-437, 1994.

Figure 1.4
Subsidies to state enterprises are high but falling...



Source: Calculation from World Bank, 1996

Policies Affecting Financial Performance

Evaluating the performance of China's state-owned enterprises is not straightforward because they are both producers of goods and suppliers of social services. They are miniature replicas of the broader socialist society, and the Chinese correctly refer to them as "small societies." The Government imposes social burdens on the state-owned enterprises on one hand and tries to offset the impact of these burdens with direct and indirect subsidies on the other.

Several policy-related distortions depress the relative financial performance of state enterprises. The *tax regime* imposes a heavier effective burden of taxation on state enterprise, primarily because of the exemptions of foreign funded enterprises; with only one-third of output, state enterprises paid 86 percent of all corporate income taxes in 1993-94. However, the tax payments of enterprises have fallen as a share of GDP by about one-quarter (Table 1.1).

Price controls depress earnings of companies in the coal, natural gas, and fertilizer industries, and these sectors have recorded substantial losses. Budget transfers are required to finance these losses. Outside of industry, price controls have adversely affected grain distribution and other trade, and required direct subsidies. Energy subsidies have benefited downstream users, particularly other state companies.

State enterprises provide *social services*—education, health, and pensions—which in most market economies would be partially borne by the Government. On the basis of a sample of large firms, this report estimates that these social costs, including housing, amount to about 7.6 percent of industrial output (see Chapter 2).

Finally, firms have limited autonomy to release *redundant workers*; almost 60 percent of the surveyed enterprises for this report indicated that their redundant workers exceeded 10 percent of their work force, but only 45 percent of enterprise managers reported they had freedom to manage their personnel. With an estimated 15 million redundant workers in state enterprises nationwide, policy is only now changing to facilitate gradual reduction of this burden.

Decreased profitability associated with higher taxes, lower prices, social costs, and redundant employment is offset by *budget transfers* and implicit *financial subsidies* to state enterprises. In 1994, budget transfers (excluding price subsidies) amounted to 1.6 percent of GDP, and implicit financial subsidies—in the form of cheap loans and lax repayment—amount to an additional 1.7 percent of GDP (Figure 1.4). While these were down substantially from previous years, state enterprises still receive transfers and subsidies roughly estimated to equal the amount they spend on social services for their workers.[8] Thus, even taking into account the burdens and transfers, state enterprises do not appear to be as efficient as the nonstate sector.

Incentives: External and Internal

State enterprises have not been as productive because the strong incentives that spur superior performance in the nonstate sector are weak in China's state sector. ***External incentives*** that discipline state enterprises, though stronger now than in the past, remain weak because firms have privileged access to finance and are partially protected from competition.

Access to Finance. Most state enterprises have access to finance for working capital and credit subsidies regardless of their financial performance. Among sampled enterprises in this report, the portion of fixed investment financed by bank loans remained high in 1992-94—almost half of total fixed capital investment. The loss-making enterprises financed more than half of their fixed investment with bank loans, whereas profit-making enterprises financed only about 45 percent of their fixed investment with bank loans. Investment financing from banks is negatively correlated with profits. This result suggests that to maintain employment levels local governments use allocations of credit through the plan to maintain growth; it also seems that banks have been extending loans to loss-making firms despite their financial distress.[9]

Responses to a survey carried out in conjunction with this study contain observations on financing investment in fixed capital for 36 enterprises in three periods: 1990, 1992, and the first half of 1994

(Statistical Appendix, Tables A20-A25). Between 1992 and 1994 reliance on state funds to finance fixed capital investment remained flat—about 14 percent of total fixed investment. Enterprises in Shanghai used few state grants, whereas those in Wuhan financed about a quarter of their fixed investment with state grants. Those that relied most on state funds were the large enterprises, the loss-making enterprises, and the enterprises affiliated with the municipal governments.

In many profit-making state-owned enterprises, the profits earned on one product subsidize the losses made on another. Twenty-six percent of the surveyed state enterprises indicated that they are producing money-losing products, which account for 19 percent of the enterprises' total output value. Redundant labor is partly paid through these internalized losses as some products subsidize the production of unmarketable goods.

Competition. State enterprises rarely can be competed out of business. Many firms benefit from protection against entry in their regional product markets, protection from imports associated with the trading system or planning system, or restrictions on foreign entry. State enterprises also gain a competitive advantage relative to the nonstate sector from their access to capital at interest rates 40-60 percent of the informal market rate. Also, the trade regime does not provide adequate competition. Most imports—85 percent—come in exempt from tariffs; nontariff barriers and quotas are common and produce uneven import competition, with niches where domestic firms face no threat of competition and others where protection is absent altogether. At the same time, companies are required to purchase imports through state-licensed trading companies; while tariff unification in 1994 has mitigated distortions from this system and the number of trading companies has been rising, all of China's trade is still channeled through less than 10,000 licensed companies. Of the large enterprises surveyed in this report, only 39 percent had foreign trading privileges. Finally, the absence of a capital market diminishes the discipline of a takeover threat, and policy, until recently, has prevented merger with more efficient competitors. Bankruptcy is relatively new and in experimental stages.

Internal incentives rewarding good corporate financial performance are also weak. Policies are unclear on basic questions of corporate governance: Which agency of government should represent the owner's shares on the boards of directors? Who has authority to name corporate officers? Who has authority to dispose of corporate assets? This has meant that government representatives rarely define clear commercial objectives for managers, that managers cannot be held accountable for poor performance or be rewarded for good performance, and that managers lack full autonomy in carrying our corporate responsibilities.

Autonomy. Among the large firms surveyed for this study, none enjoyed the full autonomy over commercial business decisions promised in the 14 autonomous rights of corporations promulgated in July 1992. Less than half had freedom to import and export, invest, dispose of assets, engage in mergers or establish joint ventures, or refuse nonregulated government collections. The Government's 10,000-1,000-100 Program provides the essential elements to reforming governance, but implementation appears to be slow.

Investment Decisions. The restrictions imposed through the credit and investment plan are an integral part of the incentive framework that hobbles enterprise performance. By limiting managerial autonomy in basic investment decisions, the credit and investment restrictions direct resources according to criteria other than financial return, so companies cannot invest in the most promising technologies, products, and regional markets. In 1994, for example, planning authorities discouraged investments in "adequately supplied" markets and encouraged investments in favored sectors; this tends to impede competition in selected markets and vitiate market signals that would otherwise elicit new, more efficient supply.

Negative real interest rates have encouraged excessive capital investment, particularly in heavy industry, which is dominated by state-owned enterprises. The size of state investment crowds out nonstate investment and raises concern about the efficient use of capital in the state-owned sector. In heavy industry, the ratio of fixed assets to net output for state-owned enterprises is more than twice that for nonstate enterprises. Across industries, both light and heavy, state enterprises use more capital per output than nonstate enterprises.

The misallocation of resources associated with state enterprises may be decreasing because there is evidence that the incentives to improve performance are becoming stronger and this has led to incipient changes in Chinese industrial organization. Before reviewing these recent changes, however, it is useful to review the second problem state enterprises pose for the Government, their links to macroeconomic stability.

Enterprise deficits and macroeconomic instability

In 1990-94, China's total nonfinancial public sector deficit is estimated to have averaged about 12 percent of GDP (Table 1.1). The borrowing requirement fell sharply in 1994 as a result of increases in the savings of general government (including non-industrial state owned enterprises), and strict controls over investment that probably affected general government and state enterprises alike.

State enterprises produced a deficit in 1990-94 requiring finance averaging about 7 percent of GDP. *This amounted to about 60 percent of the borrowing requirement for the total nonfinancial public sector.* If the budget transfers, together with implicit price and financial subsidies are netted out against social spending, the state enterprise savings-investment deficit is even larger. State enterprise deficits are the hard core of the structural deficit of the public sector and are the most difficult to discipline.

In 1994, the sharp adjustment in the general government and nonindustrial state sector was not matched by an adjustment in the industrial state enterprises. While savings rose in general government, they are estimated to have remained the same or even fallen slightly for industrial enterprises.

Large public sector deficits represent a potential danger to macroeconomic stability, especially when they are financed by money creation. Seigniorage from currency creation to finance the public sector deficit averaged around 4.5 percent of GDP. In other countries, revenue raised from sustained money creation in amounts comparable to those currently observed in China has led to high inflation.

For this reason, the Government began to reduce the consolidated fiscal deficit in 1994, and change the pattern of finance in the public sector. Rather than relying on monetary financing, the Government has shifted the basis of deficit financing to borrowing from domestic sources, mainly bond financing. This has led to a sharp rise of domestic debt. Since domestic debt as a share of GDP is still low—only 5 percent of GDP—and domestic savings are very large, this pattern of finance is sustainable for some period and marks an improvement over monetary finance. However, in the medium term, the Government's announced objective of reducing the consolidated public sector deficit is wise and prudent. This can only be achieved through reforms of the state enterprises.

Table 1.1
China: Industrial enterprises in public finance
(% of GDP, unless otherwise specified)

	1987	1988	1989	1990	1991	1992	1993	1994
SOEs in Industry a/								
Savings (=After-tax Earnings) b/	6.6	6.0	4.4	2.1	1.9	2.0	2.4	1.8
Investment c/	11.2	11.0	8.9	9.3	9.2	9.8	9.7	8.1
Balance (=Borrowing Req.)	-4.6	-5.0	-4.5	-7.2	-7.4	-7.8	-7.3	-6.2
SOE Savings, net of transfers d/	1.8	1.7	-0.3	-2.2	-1.6	-0.7	0.2	0.3
SOE Balance, net of transfers	-9.3	-9.3	-9.3	-11.5	-10.8	-10.4	-9.5	-7.7
Total Nonfinancial Public Sector e/								
Savings	8.5	7.8	3.5	3.5	5.8	6.7	9.5	10.8
Investment	19.2	18.5	15.0	15.7	16.8	19.8	22.2	20.7
Balance (=Borrowing Req.)	-10.7	-10.7	-11.4	-12.3	-10.9	-13.1	-12.7	-9.9
Memo:								
Industrial SOEs' Share of Non-financial PS Borrowing	42.7	46.5	39.9	58.3	67.3	59.0	57.4	62.7
Tax Payments of SOEs	6.1	5.9	6.1	6.0	5.8	5.3	4.7	4.6

Sources:

a/ Includes manufacturing, energy, power, telecommunication, mining, and petroleum.

b/ *China Statistical Yearbook*, 1994 p. 403. "After tax profits" is net of losses in loss making companies.

c/ World Bank (1995) p. 127. "State-owned unit" (SOU) investment in "industry" as defined in "a" above. All figures are net of depreciation, as taken from China Statistical Yearbook, 1995 (p. 29).

d/ SOE Industry "after tax earnings" (ATE) less budget transfers close up.

e/ World Bank, 1996

Recent incentives and new experiments

Beneath the surface of national programs is a fast flow of important changes in Chinese industrial organization. The Government has strengthened external incentives. As seen in Figure 1.4, budget transfers to state enterprises are declining, implicit subsidies through the financial system are falling, and tight credit policies toward state enterprises have reduced their access to automatic roll-over finance. Subsidies to the state enterprises through the budget and financial system were nearly halved in 1992-94 to 3.3 percent of GDP. Also, the Commercial Bank Law passed in 1994 conferred greater autonomy on the specialized banks to make loans of their choosing. At the same time, a steady reduction in the scope of the credit plan to cover less than half of total credit has added to discipline in microeconomic decision-making. Recent changes in the tariff regime will also improve market signals to enterprises as they make their investment decisions.

BOX 1.2
The Zhucheng shareholding experiment

Many localities have encouraged reform of small SOEs through shareholding experiments. The Zhucheng reform is one of the most successful. Located in Shandong Province, Zhucheng has a population of 1.04 million. SOEs and collective enterprises in the city had performed poorly. Sixty eight percent of the 150 enterprises were in the red, with a total loss of RMB 147 million. This amounted to almost 150 percent of the annual budget of the city government. Many were insolvent. Asset-stripping was serious: 32 SOEs suffered from a loss of state assets of RMB 100 million.

The Zhucheng city government restructured 213 of its 274 industrial and commercial enterprises into shareholding cooperatives and shareholding corporations. Assets were sold directly to the staff and managers of the firm. The other 61 enterprises were sold through auctions, merged with other enterprises, leased to others, or transformed into foreign joint ventures.

The State Assets Management Bureau and the Auditing Bureau determined the net assets of the firm (excluding the land, housing and social service facilities). The net assets were then divided into shares and sold to the staff. The sale of shares involved share purchases and allocated share purchase. The shares were sold to the workers roughly in equal amounts, often at a discounted price to encourage the workers to purchase the company shares. The State Asset Management Bureau, however, converted the sale proceeds into a loan to the firm on commercial terms for one to two years. The firm signed a loan contract with their bank using the newly evaluated assets as collateral. The pension liability of retired staff were paid off once and for all, with each paid 1,500 yuan. The city thus speeded up reforms of pension, medicare, unemployment insurance, housing, and the labor market.

Results? The experiment was remarkably successful in increasing economic efficiency. In 1994, the labor productivity of enterprises rose by 73 percent, the highest in 15 years. Profits grew by 159 percent and government tax revenues rose by 50 percent. Workers' income increased. Most enterprises distributed dividends of more than 30 percent.

The Zhengding Model

Zhengding of Hebei Province is a county with a population of about 600,000 inhabitants. Zhengding had 94 state-owned enterprises in industry with 20,121 employees. Forty-three percent were making losses, amounting to RMB 70 million. Some had completely stopped production and relied on policy loans to pay wages. Many had a negative net worth. In 1994, Zhengding started to corporatize its state-owned enterprises by selling equity shares to employees. Other forms of restructuring were also allowed, such as joint ventures, and direct sales and leasing to individuals. By September 1995, 91 out of 94 state-owned enterprises in Zhengding were smoothly corporatized and partially divested.

Thirty-two state-owned enterprises had a positive net worth. The Government sold these enterprises directly to employees or the public. Each employee bought shares worth about 5,000 yuan. The revenues were used as special loans from the Bureau of Taxation for the enterprises to develop profitable new products. All of the 32 enterprises adjusted to their market, and resumed paying corporate taxes and interest on their debt arrears.

State-owned enterprises with a negative net worth presented a more difficult problem. Lack of working capital prevented these enterprises from adjusting their production to market demand. The Government allowed these firms to set up a new company as a subsidiary of the original firm. The parent firm contributed buildings, equipment and employees to the new company as a shareholder, and employees of the parent firm contributed cash as equity capital of the new company. They used these resources to develop new profitable products. With the new products, the companies became profitable and were able to borrow additional loans from banks. The parent firm then was able to use its dividend income to pay for its debt arrears. About one-third of the state-owned enterprises in Zhengding were restructured in this way.

Source: Ming Quyang and Yaping Li, 1995 *"Corporatization of State-Owned Enterprises at County Level: Zhending Model"*

These developments, together with tighter credit after mid-1993 and some progress on the internal governance issues, began to reduce access to finance for some poorly performing enterprises. Consequently, municipalities increasingly experimented with bankruptcies, and divestiture of small enterprise firms—often to managers, workers, and government officials. Pension pooling and new housing arrangements are becoming more common in the 50 experimental cities. Perhaps most indicative of change, several million workers have been released from state enterprises, and most have been reabsorbed into dynamic enterprises. These trends will accelerate with a fully supportive national policy framework.

While this report deals primarily with the large state enterprises, the recent changes in policies may well be having their greatest effects at the county level. State enterprises at the county level employed over 39 million workers—two in five workers in state enterprises nationwide. These enterprises produce less than 10 percent of industrial output. The "Decision on Issues Concerning the Establishment of the Socialist Market Economy" issued in November 1993 held that: "...in general, small state enterprises can adopt contract management, lease management and in some cases can be transformed into shareholding corporations, or sold to collectives or individuals with the sales proceeds reinvested into industries urgently in need of development..." This gave more freedom and flexibility to county and city governments to try different approaches to improving efficiency. Many counties have corporatized their state enterprises and gained prominence for resulting improvements in enterprise performance, including Zhucheng of Shandong Province, Yibin of Sichuan, Binxian of Heilongjiang, and Zhengding of Hebei Province. Zhucheng and Zhengding, for example, have effectively created cooperatives or employee-owned companies, and produced dramatic increases in productivity (Box 1.2).

More evidence of progress is discussed in the following chapters, which focus in detail on the component problems associated with large state enterprises—labor, financial restructuring, ownership diversification and governance, and social services. Chapter 2 of this report lays out the problem of state-owned enterprises through the lens of experience in five of China's main cities; using the information of a survey questionnaire covering 156 state-owned enterprises in Chongqing, Harbin, Shenyang, Shanghai, and Wuhan. Its focus is on labor redundancy and the financing of visible and invisible losses through different types of subsidies. Chapter 3 studies the progress made in separating government from business decisions. Chapter 4 examines the unbundling of social services.

While progress to date has been substantial, greater managerial autonomy, better defined rights, new boards of directors, and pooling pensions will have minimal effect unless state-owned enterprises are required to work under an ever tightening budget constraint. A hard budget constraint means the end of subsidies and the creation of competitive markets without barriers to entry and exit. The transfer of state-owned enterprises to the nonstate sector will lock in these key reforms. Chapter 5 presents a framework for implementing policies.

Notes

[1] See Annex 2. Also, Dollar (1990), Jefferson and Singh (1992), Harrold (1994), Groves and others (1994), and Broadman (1995) for detailed descriptions of the state-owned enterprises and the incremental reforms that took place in the past 10 years.

[2] The Company Law was made effective in July 1994. The program for these enterprises also includes cleaning up their debts, making a 15 percent refund on income taxes, and separating their social services.

[3] Chinese accounting practices tend to overstate slightly profits because rules mandate an allocation of 5 percent of the after-tax earnings to staff benefit funds; in international accounting these would be considered an expense. Also, it should be noted that national statistics showing a high degree of "self-raised funds" and include items in addition to retained earnings, namely all funds raised from the banking system or nonbanking system outside the credit plan, mainly working capital loans. These are frequently used to finance investment.

[4] Because industrial investment data for 1994 were unavailable, we estimated industrial investment by applying the increase for investment of state owned units in 1994 to industrial investment.

[5] Some (presumably small) share of industrial investment is financed through earmarked taxes and fees that are not intermediated through the financial system. These are also part of the nonmarket allocation system, but are not borrowings.

[6] During the 1980s, various reforms of incentives within SOEs were implemented in an effort to improve SOE performance. Theodore Groves, Yongmiao Hong, John McMillan and Barry Naughton (1994, 1995) find that in their sample of 769 enterprises observed between 1980 and 1989, schemes to improve worker incentives such as employment contracts and bonus payments significantly raised the level of average labor productivity. A further study by Wei Li (1995) using the same data set finds that fully half of TFP growth in SOEs can be attributed to the improved incentive effects of the bonus system. Although the overall estimates of SOE TFP growth (4.7% in the case of Li (1995)) obtained by these authors are probably overstated for the reasons discussed above, the emerging evidence is that incentive reforms in SOEs have had some positive effect on productivity performance.

[7] See Jefferson and Singh (1992) and World Bank Country Economic Memorandum (1996) for a more detailed review.

[8] Direct subsidies are taken from the budget; we have not included price subsidies to grain or food. Financial subsidies have two components: an interest subsidy and a default subsidy. The interest subsidy arises because of interest rates lower than inflation; the default subsidy arises because of nonrepayment, which effectively turns the loan into a grant. The interest subsidy is calculated by multiplying loans outstanding with the difference of inflation and interest rates; the default subsidy is calculated by multiplying the flow of new loans with the average default on loans, which, according to PBC data, is 20 percent. It is not possible to disaggregate direct or indirect subsidies to sectors outside industry, but these are probably small.

9. The importance of self-raised capital, such as issues of stocks or own-funds, has not increased on average for our sample. But in Shanghai the share of self-raised capital in total capital investment has risen from 45 percent in 1990 to 52 percent in 1992, and in Chongqing it has risen from 40 percent to 48 percent. It seems that medium-size enterprises have financed more of their fixed investment from their own funds in recent years.

Chapter 2
Experience in Five Cities

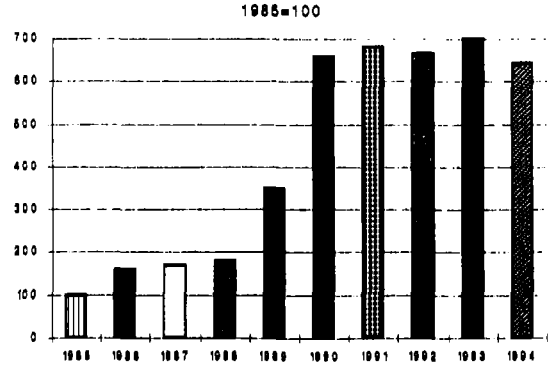
China's experience with state enterprise is not uniform across the country. Cities with older industrial bases have more loss-making companies, more companies with workers approaching retirement, and more slowly growing revenues to cope with the transition to a new regime. This chapter looks at the losses of industrial state-owned enterprises that incurred losses across the nation and in five big cities. It then analyzes firm performance using examples from a sample of 156 enterprises. The last sections focus on financial restructuring and labor issues.

Profits, losses, and subsidies

Losses of Loss-making Firms: The National Context

Although Chinese state enterprises as a whole, made profits of about 2 percent of GDP, more than 40 percent incurred losses. These money-losing firms in 1994 produced losses of 6.1 percent of total industrial value added and one percent of China's GDP.[1] These losses increased progressively in real terms until the early 1990s, and have hovered about the same absolute levels since then (Figure 2.1), though they have fallen as a share of GDP. Industrial losses are strongly correlated with the macroeconomic environment—they increase when the economy slows. In 1994, loss-making enterprises in four industries accounted for 37 percent of all losses: commercial infrastructure (power, gas, and water supply), textiles, coal, and chemicals. As with other industries, losses occurred because of overstaffing, wage and labor market rigidities, the heavy burden of social benefits, obsolete technologies, and rigid distribution systems. In addition, administrative controls on the price of coal, power and gas contributed to losses in those industries. Losses in the money-losing companies in infrastructure were probably associated with regional pricing arrangements, since other infrastructure state enterprises are among the most profitable. State-enterprise losses have been covered by budgetary subsidies and bank loans.

Figure 2.1
Loss making companies still incur large losses...
(Index of real losses of industrial state-owned enterprises, 1993-95)



Source: China Statistical Yearbook, various issues

Losses of Industrial Enterprises in Five Cities

The financial performance of state-owned enterprises varies widely. There are almost 40,000 enterprises in Chongqing, Harbin, Shanghai, Shenyang, and Wuhan.[2] Among these five cities, Shanghai is exceptional in terms of the losses of its industrial enterprises. In Shanghai the share of losses of local state-owned enterprises amounts to just 2 percent of local state-owned enterprises industrial value added. These losses represent just one-third of total industrial losses, with the other two-thirds divided almost equally between collectives and foreign funded enterprises (Table 2.1 and Figure 2.2).

By contrast, in Harbin, losses of industrial state-owned enterprises are as high as 18 percent of state-owned enterprises' industrial value added and are responsible for almost 90 percent of total industrial losses. In both Shenyang and Wuhan state-enterprise losses account for more than 70 percent of total industrial losses. As in Harbin, Shenyang's state-owned enterprises are in trouble. Their losses approach 15 percent of state enterprises' industrial value added. It is interesting to note that in three of the five cities in our sample, losses as a share of value added are greater in collectives than in state-owned enterprises.

Performance of the Enterprises in the Sample

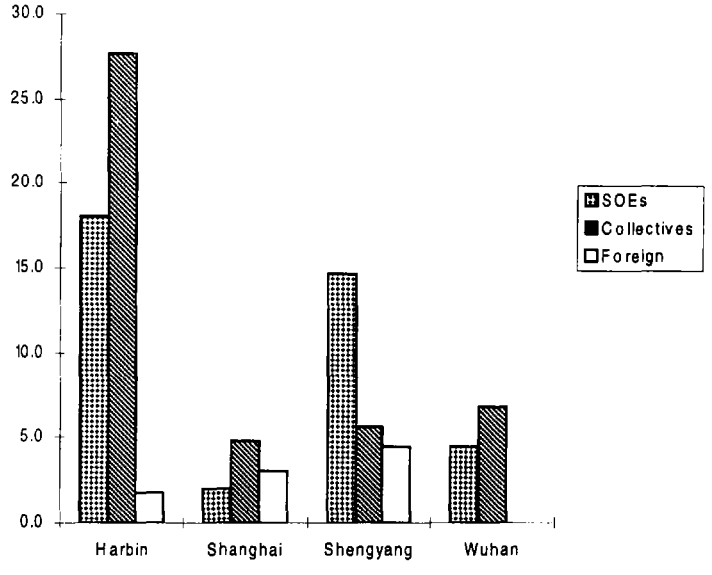
In the surveyed enterprises, profits amount to about 5 percent of sales revenue—well below the national average for industrial enterprises. Many state-owned enterprises in the sample could survive under a hard budget constraint. Sixty-seven enterprises in our sample make profits that amount to close to 5 percent of their sales revenue. If deprived of subsidies, which equal approximately 10 percent of their sales revenue,

Table 2.1
Losses in state enterprises account for most losses in industry with difference among cities

	Harbin	Shanghai	Shenyang	Wuhan
Share in Total Losses				
State-Owned Enterprises	87.9	36.0	73.7	74.2
Collectives	5.6	32.0	20.4	19.7
Foreign-funded	0.2	23.4	2.6	—
Total losses (million yuan per year)	1,320.0	1,660.0	1,411.0	706.0

— Not available.
Source: Municipal Statistical Yearbooks of Harbin, Shanghai, Shenyang and Wuhan, 1994.

Figure 2.2
Rate of losses to value added in industrial enterprises, 1993



and relieved from providing social services, which equal close to 8 percent of their sales revenue, these enterprises would still make profits amounting to close to 3 percent of the value of their sales (Table 2.2).

For these 67 enterprises the difference between subsidies and social costs is 2 percent of enterprises' sales value, or one percent of their value added. But adjusting for subsidies and social costs does not turn profit-makers into loss-makers. It is also possible that state-owned enterprises overstate costs of goods sold to conceal profits and overstate losses to avoid taxes. To calculate actual economic losses and profits we would need information that is not currently available. This exercise is also important in shedding light on subsidies. It shows that subsidies represent close to 10 percent of the value of sales of surveyed enterprises and that the biggest subsidies come in the form of subsidized credit.

Profits will change in the new environment. Enterprises will have to pay higher wages to compensate workers for the housing that they now receive at extremely low rents. Profits will also change with tax reform. As social benefits are cut and replaced by payroll taxes, firms will be affected differently. Chapter 4

Table 2.2
Recalculating profit rates in 67 profitable state-owned enterprises
(percentage of sales revenue)

	Percent
Profits before corporate taxes	4.8
Adjustment for:	
Energy subsidies	0.6
Investment subsidies	3.3
Working capital subsidies	4.4
Bad debts	1.3
Total subsidies	-9.6
Total adjustment for social burdens	7.6
Adjusted profits	2.8

Note: See Annex 4 for an explanation of how numbers were derived. Profits are net of sales taxes and other taxes that are part of the costs of production.
Source: Survey of Enterprises

Table 2.3
Firms that encountered difficulty in paying or receiving loans
(Percentage of total)

Difficulty in	Percent of Firms	Number of firms that responded
Repaying bank loans	47	150
Obtaining working loans	50	146
Obtaining capital construction loans	66	141
Recovering loans from other firms	67	137
Repaying loans to other firms	36	133

Source: Survey of Enterprises

explores a situation in which social benefits are replaced by new payroll taxes under the assumption that these taxes are not shifted to workers. Because the incidence of different taxes will also vary depending on the elasticities of demand and supply of different products and inputs, there is no simple way of calculating how profitable these enterprises will be in the new environment. But even with new costs many state-owned enterprises will remain profitable in a market economy where a social security system functions independently of businesses. Many of these enterprises could be sold to lock in the gains from reform and to help finance the transition process.

Bad debts

Banks were a major source of finance for enterprises. [3] At least three of the enterprises in the survey sample had liabilities that exceeded the market value of assets. A strong, negative correlation between the ratio of net assets and bank loans confirms the belief that banks lend to state-owned enterprises even if they are bankrupt.

Nearly half of the enterprises sampled indicated they had difficulty repaying bank loans (Table 2.3). Indeed, the Government estimates that nationwide bad bank loans to China's state enterprises are conservatively estimated at 20-30 percent of total loans of the banking system. This amounts to 25 percent of Chinese GDP. The problem can be separated into flow and stock components.

The *"flow"* consists of loans made to uncreditworthy state enterprises, including rollovers of amortization payments on nonperforming loans, capitalization of interest, and new loans, often as directed credits. This flow erodes the capital base of the banks. Their capital is further eroded when controls over interest rates compel banks to lend at rates lower than their cost of funds. The *"stock"* is the accumulation of past bad debts. *The first priority is to shut off the flow of bad debt creation. As this takes effect, it is possible to taking actions to reduce the stock* that plagues the portfolios of the banks. This in turn requires a restructuring mechanism for problem enterprises. Some of the losers are beyond repair and will have to be closed.

Inter-enterprise debt may not have to be the focus of policy efforts. Sixty-seven percent of the surveyed enterprises had difficulty recovering loans made to other enterprises, but only 36 percent said that they had had difficulty repaying loans to other enterprises. The buildup of inter-enterprise credit arrears may rise only temporarily, as the Government responds to inflation by tightening credit. Also, inter-enterprise arrears may be a response to the lack of formal short-term financial instruments. If credit markets function poorly, inter-enterprise credit performs a vital function. However, a problem does arise when lenders do not collect or continue to extend credit to defaulting firms. It helps to identify which sectors are lagging behind in their payments, and begin by restricting their access to yet more credit. This underscores the importance of public mechanisms to allow firms and banks to know the obligations of debtors.

Labor

A central issue in restructuring state-owned enterprises is shedding redundant labor. China is unable to instantly redeploy all redundant workers, but rapid growth gives it a good opportunity to rationalize em-

ployment across sectors. In this section we examine the extent of labor redundancy in state-owned enterprises and the growth of employment in different economic sectors in China.

The Past. The old form of job guarantee in China, called the " iron rice bowl," ensured job security for life, and the Government assigned workers to employers. Between 1983 and 1987 several measures to increase the flexibility of workers and state enterprises were introduced, including centers for the exchange of talent and some direct hiring by state enterprises.

The appointment of workers to jobs in urban areas has largely disappeared. Labor plans are still drawn up, but they are no longer prescriptive, and enterprise managers have gained some decision-making power over recruitment. Labor contracts, formally introduced in 1986, gave workers the opportunity to change jobs and gave managers more power over personnel matters.

Contracts. But life-long jobs are still offered in state-owned enterprises. In only 15.5 percent of the surveyed enterprises did contracted and temporary workers exceed 60 percent of the work force (Table 2.4). In 69 percent of the surveyed enterprises contracted and temporary workers made up less than 30 percent of the work force. In addition, there are caps on firing. By national edict, unemployment

Table 2.4
Workers under contract and temporary workers in 135 state-owned enterprises, 1994

Temporary and under-contract workers	Enterprises
More than 60	15.5
50 to 60	3.0
40 to 50	5.2
30 to 40	7.4
Less than 30	68.9

Source: Survey of Enterprises

should not exceed 3 percent of the labor force, and thus state-owned enterprises find it difficult to dismiss redundant workers.

The optimal labor combination program has added flexibility to enterprise operations by encouraging enterprises to redeploy workers. (Annex 5 offers some examples of labor redeployment experiences in Beijing, Chongqing, Shenyang, and Wuhan.) Labor service companies are organized to handle administrative functions and special employment enterprises or businesses for " disadvantaged workers." These companies administer unemployment insurance and job counseling, training coordination, and placement programs.[4] They create collectives that employ surplus workers from the mother company. These workers continue to receive company social benefits. Preferential tax treatment for labor service companies, including tax exemptions for two or three years and reduced rates thereafter, is common. Often the labor service companies produce goods identical to those made in the mother enterprise, and workers do not lose income or benefits. In these cases labor service companies are created to take advantage of tax benefits. Their creation is thus a form of subsidizing labor.

Redundancy. Despite the contract system and the redeployment program, labor redundancy remains a problem. Almost 60 percent of the surveyed enterprises indicated that their redundant workers exceeded 10 percent of their work force and one-third indicated that labor redundancy exceeded 20 percent (Table 2.5);

Table 2.5
Redundant workers in 142 state-owned enterprises, first semester of 1994

Actual employment relative to optimal employment level	Enterprises
More than 30	17.0
20 to 30	16.2
10 to 20	26.8
5 to 10	24.6
About right	12.0
Too low	3.4

Source: Survey of Enterprises

only 15 percent of enterprises indicated that they had no redundant workers.

Redundancy is a problem in both profit-making and loss-making enterprises, although corporations are better situated than noncorporations. Among the 44 corporations in our sample, only 11 percent had redundant workers in excess of 30 percent of their work force. Among the other enterprises, 20 percent indicated that their redundant workers exceeded 30 percent of their work force. Since firms undergo some restructuring before becoming corporations, this result is not surprising.

Interviews with officials in the five cities place surplus labor at around 15 to 20 percent of the labor

force citywide. This percentage is found across China. The Minister of Labor estimates that China's disguised labor surplus amounts to 15 million workers.

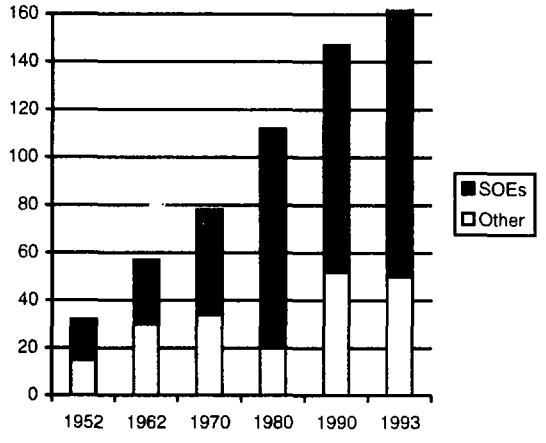
Employment and Unemployment. If 15 million surplus workers are hidden in state-owned enterprises across China, how fast can they be redeployed? Unemployment is socially and politically more explosive than production inefficiency, and rapid employment growth has not erased redundancy. Among the surveyed enterprises, plans for hiring and shedding labor are not related to the number of redundant workers they carry. Further, new jobs in urban areas went to new workers, and jobs in rural enterprises are out of reach of redundant urban workers.

The impressive job creation in China may be sufficient to absorb all the new workers and to reduce the extent of redundancy. Based on some rough calculations, around 2.6 million 20-year-olds will enter the urban labor market each year during the second half of the 1990s. But most jobs are still located in rural areas, and a growing flow of rural surplus labor will move into the urban areas in the near future. At the same time annual departures from the labor force will reduce the required net addition to the supply of jobs. The urban economy has created more than four million jobs a year on average, which should be enough to absorb new entrants.

These numbers are very rough, but they help to clarify which options are available. Obviously, China cannot absorb all 15 million redundant workers at once. But as long as the economy keeps growing, labor redundancy will not be an overwhelming problem.

How fast must the nonstate sector grow to absorb redundant labor from the state sector? State-owned enterprises still employ 70 percent of the urban labor force (Figure 2.3). Between 1979 and 1993 employment in China grew at an annual average of 2.7 percent while gross national product grew at 9.3 percent. Employment in state-owned enterprises also grew by 2.7 percent, and their output grew by 8.8 percent. The elasticity of employment with respect to output is thus low—about 0.3—for state-owned enterprises and for the economy overall.[5] But 1993 was not a typical year. National employment grew at only 1.3 percent, while GNP grew at 13.2 percent. In the urban sector employment grew at 2.1 percent—less than half a percent in the state-owned sector and 6 percent in the nonstate sector. If the employment growth rates of 1993 were to continue for the next 25 years, employment in the state-owned sector would decline from 70 percent in 1995 to 35 percent in 2020 (and employment in the nonstate sector would grow accordingly).

Figure 2.3
Urban employment, millions of people, 1952-1993



Source: China Statistical Yearbook, various issues

Table 2.6
Growth rate of urban employment, 1985-1993
(percent)

Year	Growth rate of employment in state-owned enterprises	Growth rate of employment in enterprises not state-owned
1985	4.1	6.3
1986	3.8	3.7
1987	3.4	4.3
1988	3.4	3.7
1989	1.2	0.0
1990	2.4	2.4
1991	3.1	5.0
1992	2 1	3.0
1993	0.3	6.4

Source: China Statistical Yearbook, 1994.

Conclusions

Two conclusions emerge from this discussion. First, the differential distribution of loss-making firms across China means that policies to resolve state enterprise related problems will have to be national in scope. The alternative will encourage internal migration of an unprecedented scope as the regions burdened with the legacy of pre-reform industry will grow more slowly than those with newer industries. Some of these disadvantages may be offset with tax policy and fiscal transfers between regions; other disadvantages, such as with pension liabilities and health services, will require integrated solutions as part of new national programs (discussed in Chapter 4).

Second, the time to reform China's state-owned enterprises is now—when growth is rapid and jobs can be found. In other countries, bad times have forced reform, but the costs were much higher than would have been the case if governments had taken advantage of good times to create a more efficient system. There is room for a dualistic approach. The workers who are paid more than their marginal productivity in cash and social benefits will not find comparable positions with full liberalization and enterprise reform. For both political and social reasons, these mostly older workers will continue to be subsidized. The majority of workers, younger on average, both inside and outside state-owned enterprises, should face the right kind of incentives.

Notes

1 *Statistical Yearbook of China*, 1995.

2 Annex 1 offers a description of the five cities and their economic indicators. Except in Shanghai, there has been very little movement away from public ownership. In Chongqing, Harbin, and Wuhan state-owned and collective enterprises still produce approximately 95 percent of gross industrial output and account for more than 95 percent of employment in industrial enterprises with independent accounts. In Shenyang state-owned enterprises and collectives produce 85 percent of gross industrial output and employ 90 percent of workers. Even in Shanghai state-owned enterprises and collectives still produce almost 70 percent of gross industrial output and hire more than 75 percent of the employees in industrial enterprises with independent accounts (Table A1.2 in Annex 1).

3 Bank Loans: Enterprises borrow from banks for circulating capital investment, capital construction, and technical renovation. In our sample 60 enterprises reported that during the first half of 1994 circulating capital loans represented 60 percent of their outstanding bank loans, followed by loans for technical renovation (24 percent) and capital construction (16 percent). Twenty-one enterprises reported that they had used circulating capital loans for capital construction. Twenty-seven enterprises reported that they had not repaid 15 percent (on average) of their bank loans in time during 1992. This problem seemed more acute in Harbin, where five enterprises reported unpaid bank loans amounting to more than 60 percent of their debts. In general, large firms had higher overdue loans and, interestingly, profit-making enterprises had higher overdue debts than loss-making enterprises.

4 Labor service companies now number more than 50,000. They run more than 200,000 enterprises and employ more than 9 million workers. They have set up 1,600 centers for preemployment training and retraining and more than 4,000 technical schools, which train more than 1.5 million people.

5 These elasticities should be taken with caution. Overall elasticity may reflect high output growth and the state-owned enterprise elasticity may reflect disguised unemployment rather than the underlying labor demand relationship.

Chapter 3
Separating the Government from Business Decisions

In the early 1950s the Soviet model of central planning shaped the relationships between Beijing and local governments. China's central authorities directly controlled major enterprises, distributed funds, and supervised fixed investment through the central budget. Concentration of power at the center reduced the initiative of local governments and hindered production. As the economy grew in size and complexity, the central government was forced to rely on inadequate information to make decisions. In 1957 decentralization authority for 88 percent of the centrally administered enterprises was passed on to provincial or municipal governments, and the remaining enterprises were placed under the dual leadership of central and provincial authorities. In 1957 central ministries ran more than 9,300 enterprises compared with fewer than 1,200 by 1958. A wave of recentralization, however, began in the early 1960s, and almost all large and medium-size enterprises were returned to central authority.

A new decentralization movement began in 1964 and continued throughout the Cultural Revolution. Local governments were made responsible for making investments in 19 nonindustrial sectors and for the distribution of iron and steel, cement, fertilizers, coal, and machinery produced by small enterprises. They were also given some power to allocate funds and materials. In the 1970s most of the central government's authority over enterprises was transferred to provincial governments, and local governments were allowed to retain enterprise depreciation funds. This decentralization provided strong incentives for local initiative and was promoted further in the 1980s, with the "contract responsibility system." Additional progress was achieved in the 1990s with the announcement of the "Fourteen Autonomous Management Rights" in 1992 and the Company Law in 1994.

China is also reinterpreting the economic role of state-owned enterprises and greeting new forms of ownership, such as foreign ventures and private businesses, with enthusiasm. It is diversifying state enterprise ownership by creating shareholding companies, forming joint ventures, leasing state-owned enterprises to managers or other firms, establishing group companies, and divesting small state enterprises.

This chapter uses the five-city sample—Chongqing, Harbin, Shanghai, Shenyang, and Wuhan—to describe the state of competition, how much ownership diversification has taken place and how much business management has changed in the 1990s. It concludes with a discussion of the impact of these changes on state enterprise performance. Recommendations are left for the final chapter.

Is ownership changing?

For the surveyed state enterprises the average provincial market share for each firm's principal product is estimated to be 53 percent, and the corresponding national market share is 24 percent. Competition will not arrive unless free entry and exit become part of the industrial scene. For the time being, sales of large and medium-size state-owned enterprises have been rare and ownership diversification has taken the form of corporatization, joint ventures, mergers, and leases.

Shareholding and Corporatization. In 1994, 44 of the 156 state-owned enterprises surveyed for this study had become either limited liability companies or limited liability shareholding companies. Among these, the state's ownership share (whether held by the supervising authority, state asset management bureaus, or other state enterprises) was 53 percent, on average. The average ownership share for nonstate interests (nonstate firms, employees, and managers, or private individuals) was 34 percent, and the average ownership share by foreigners was 13 percent. Of the state-owned enterprises that are corporatized, 17 have their shares listed on a stock exchange. Eighty-seven percent of these firms are listed on the Shanghai Stock Exchange, and 13 percent are listed on the Shenzhen Stock Exchange. On average, 83 percent of the listed firms reported "A" share listings (for Chinese nationals exclusively, payable only in yuan), and 14 percent reported "B" share listings (for foreign purchasers, payable only in hard currency).

Joint Ventures. Thirty percent of the 156 state-owned enterprises indicated that they had formed joint ventures with other state enterprises, 25 percent indicated they had formed a "major" venture with foreign investors, and 21 percent indicated that they had formed major ventures with collectives, including

township and village enterprises. Of those that had formed a major foreign joint venture, the share of foreign ownership averaged 41 percent; one firm indicated an ownership share of 80 percent, the maximum value in the sample.

Mergers, Enterprise Groups, and Other Forms of Integration. State enterprise ownership is also being diversified through mergers and other integration strategies. In Wuhan, for example, 55 mergers between state-owned enterprises and collectively owned enterprises were concluded in the early 1990s.

Chinese authorities believe that forming such enterprise groups yields substantial economies of scale, and in interviews they suggested that establishing more group companies was actively being considered. Among the 156 firms surveyed, 30 percent indicated that they were part of a group or holding company.

Chinese state-owned enterprises are also transforming their corporate structure by establishing different types of subsidiaries that are not necessarily separate companies. Sixty percent of the 156 firms under study indicated they have subsidiaries, seven being the average number of subsidiaries.

Among state enterprise subsidiaries, labor service companies are gaining importance. These companies make inputs for their affiliated state-owned enterprises and for other customers. They are often formed by a state enterprise's redundant workers or an employee's family members, and investment capital and facilities are often provided by the state-owned enterprise. Sixty-eight percent of the surveyed enterprises indicated they had a labor service company affiliated with them. Only 40 percent of the state-owned enterprises reported that their affiliated labor service company sold outputs to them exclusively. Functioning as independent suppliers, labor service companies may become an important source of new employment for redundant state enterprise workers.

Leasing. Beyond the transformation of increasing numbers of state-owned enterprises into shareholding companies, joint ventures, group companies, and other integrated entities, enterprises currently under state ownership have also been leased to managers, other enterprises, and workers. In Wuhan, for example, 148 small state-owned enterprises have been leased to several nonstate interests, including the private sector in recent years. At the same time hundreds of small unprofitable state enterprises have been closed or transformed into collectives. There are many examples of such experiments. In Harbin 10 city-owned industrial enterprises that were unprofitable and debt-ridden were shut down, and two money-losing state-owned enterprises were given over to their managers and workers. In Shanghai the No. 3 Radio Factory, which has a work force of 1,300 (200 of which are redundant) and 1,780 retirees and has been suffering losses since 1989, is now subleasing its prime downtown land to new service firms and relocating some of its facilities to the suburbs.

Divestitures. Divestitures of state-owned enterprises have occurred in the five cities under study here. Enterprises that were divested were generally small: divestitures of large state enterprises have been rare. In almost all cases divestitures have involved bankruptcies. Thus in 1994 Wuhan, which has 288 industrial state-owned enterprises under its municipal budget, sold five bankrupt state-owned enterprises, of which three were small and two were medium-size. In Wuhan the mayor decided on prices of the state enterprises that were sold. In addition, two small state-owned enterprises were sold through an auction.

A relatively small percentage of the firms surveyed indicated that their assets were being sold or leased to nonstate interests (Table 3.1). But such activity seems to be increasing, whether in terms of sales of machinery and equipment or leasing of buildings and land.

Table 3.1
State-owned enterprises' leases and divestitures to nonstate interests
(percent)

Enterprises surveyed that:	1990	1991	1992	1993	1994 (first half)
Sold and leased machinery and equipment	3.0	4.5	5.0	7.0	8.0
Leased buildings or land	0.6	0.6	2.0	3.0	3.0

Source: Survey of Enterprises

Is enterprise management changing?

During the 1980s the Government experimented with different types of contracts between the state and state enterprises. By early 1988 the contract responsibility system covered more than 90 percent of all state-owned enterprises. Five types of contracts allowed for the retention of excess profits (those above profit remittance targets) and linked the autonomy and pay of managers and workers to measures of enterprise performance, such as profits or increases in the value of enterprise assets.

A new phase of reforms in the 1990s began to convert state-owned enterprises into shareholding companies. Following the implementation of a new Company Law in July 1994, new contracts under the responsibility system are no longer initiated (but existing contracts remain in force until their terms expire). At the end of 1994, 47 percent of the enterprises in our sample no longer operated under a responsibility contract. Most of the other enterprises' contracts expired in 1995.

Eighty percent of the enterprises in our sample indicated that the general manager is the contractor for the enterprise. Seventy-five percent of the firms indicated that the general manager's pay is tied to the enterprise's profits. Seventy-three percent of the surveyed firms indicated that their general managers were appointed by the supervisory authority, and only 2 percent of the firms indicated that the general manager was either hired through open recruitment or assigned from other state-owned enterprises.

The Fourteen Autonomous Management Rights. Other reforms are changing the microeconomic world of enterprise management. In July 1992, in a document formally called the "Regulations on Transforming the Management Mechanisms of State-Owned Industrial Enterprises," the State Council spelled out enterprise management rights—the "Fourteen Autonomous Management Rights" (Table 3.2).

The implementation of the 14 rights has been uneven. At one extreme, more than 90 percent of the firms surveyed indicated they were fully autonomous in production, sales, and purchases. At the other extreme, less than 40 percent of the surveyed firms indicated that they were free to directly export or import goods, dispose of assets, engage in mergers and acquisitions, or refuse nonregulated government collections.

Boards of Directors and Decision-making. Reform of state-owned enterprises has also meant that boards of directors were created according to company law. Of the firms studied, 39 percent indicated they had a board of directors. Firms had an average of 11 board members, with a sample maximum of 20. Forty-five percent of the surveyed firms with boards of directors indicated that the board members were selected by a group of shareholders, 36 percent indicated that members were elected by all shareholders, and 9 percent indicated that the board was appointed by the state-owned enterprises' supervising authority. A board of directors typically includes: managers (54 percent), local authorities (8 percent), representatives from other domestic firms (16 percent), representatives from banks (8 percent), foreigners (8 percent), and others. Meetings of boards of directors occur frequently: from January 1993 to June 1994 the average number of board meetings was four, and the maximum in the sample was 21.

Table 3.2
Management autonomy in 128 surveyed stated-owned enterprises

Fourteen autonomous rights	Percent indicating full implementation
1. Production autonomy	96
2. Pricing autonomy	73
3. Selling autonomy	97
4. Purchasing autonomy	94
5. Import and export rights	39
6. Investment autonomy	47
7. Use of retained earnings	78
8. Right to dispose of assets	37
9. Autonomy to establish joint ventures or engage in mergers or acquisitions	40
10. Right to hire workers	58
11. Right to manage personnel	55
12. Right to determine wages and bonuses	65
13. Right to decide on organizational structure	78
14. Right to refuse nonregulated government collections	21

Note: Among the 156 surveyed enterprises, 128 answered all 14 questions.
Source: Survey of Enterprises.

Overall, the survey indicates that the firms' boards of directors have considerable influence over many operational decisions, but relatively less influence over managers' decisions concerning labor hiring, who the firm should sell to, and how prices should be set. On the other hand, board influence seems to be greatest with respect to decisions concerning joint ventures, investment projects, and disposition of welfare funds.

Given that boards of directors have considerable influence over the surveyed firms' operations, what are the principal objectives of firm managers? Sixty percent of the firms indicated that the primary objective of managers is to increase profits, and 22 percent indicated that the primary objective of managers is to increase output or expand firm scale (Table 3.3).

Table 3.3
Primary and secondary management objectives

Operational decisions	Management objective Primary	Secondary
Increase output, expand scale	22.2	39.2
Increase profits	59.5	25.5
Create job opportunities for employees' dependents	0.0	0.7
Increase employees' incomes	1.3	11.8
Fulfill contract target	3.9	2.0
Upgrade enterprise	6.5	15.7
Use local resources	1.3	0.7
Cope with current financial difficulties	5.2	4.6

Source: Survey of Enterprises

Table 3.4
Worker influence on state enterprise decision-making
(percent)

Operational decisions	Influence of workers		
	Extensive	Moderate	Little
Appointing enterprise leadership	12	48	39
Hiring and firing workers	14	63	22
Setting wages and bonuses	27	54	19
Allocating workers within the factory	5	45	50
Allocating housing	40	58	3
Decisions regarding large investment projects	12	46	41

Source: Survey of Enterprises

The survey provides some insights on the role of workers in Chinese state-owned enterprises' internal decision-making. Workers appear to exert at least some influence over issues such as allocating housing or setting wages and bonuses, but they appear to exert relatively little influence over the allocation of workers within enterprises (Table 3.4).

Have reforms improved performance?

Reforms, such as corporatizing state-owned enterprises and giving enterprise managers more autonomy to carry out commercial objectives, are expected to improve enterprise performance. While it is challenging to statistically assess the effects of changes in internal incentives on performance, the evidence from the surveyed state-owned enterprises offers some suggestive findings.

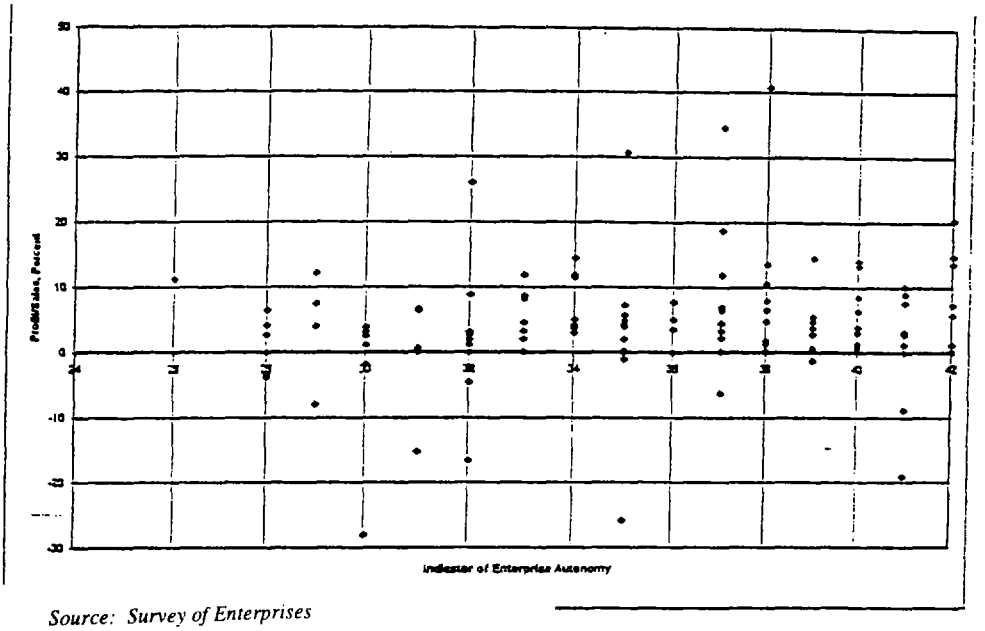
Simple correlation analysis shows that profits are higher for enterprises that have become either limited liability or limited liability shareholding companies. State-owned enterprises entering into foreign joint ventures also had higher average profits than those that did not. Of course, the direction of causality is unclear because only the best performing enterprises attract foreign investors or are allowed to become corporations.

Managerial Autonomy. We also tested the correlation between increased managerial autonomy (measured by implementation of the 14 Rights) and the profit-sales ratio during the first semester of 1994. First, we developed an indicator of autonomy by adding up each enterprise's scores, which indicated the degree of implementation of each of the 14 autonomous rights. Score values are 3 for full implementation, 2 for partial implementation, and 1 for no implementation. The maximum score is thus 42, and the minimum score is 14. The correlation between the autonomy indicator and the profit-sales ratio is 0.17 (significant at the 6 percent level) for 115 enterprises (Figure 3.1). But, the positive correlation between autonomy and profits disappears if a dummy variable is added for enterprises that have become limited liability or shareholding companies or that have formed a joint venture (Table 3.5). This is likely the result of high correlation between corporatization and autonomy.

More interestingly, the regressions show that overemployment is a drag on enterprises' profits (Figure 3.2). Each surveyed state-owned enterprise indicated its optimal number of employees, and this number was used to measure overemployment (the ratio of observed number of employees to optimal number of employees). In all our regressions the coefficient on overemployment is negative (as expected) and significant.

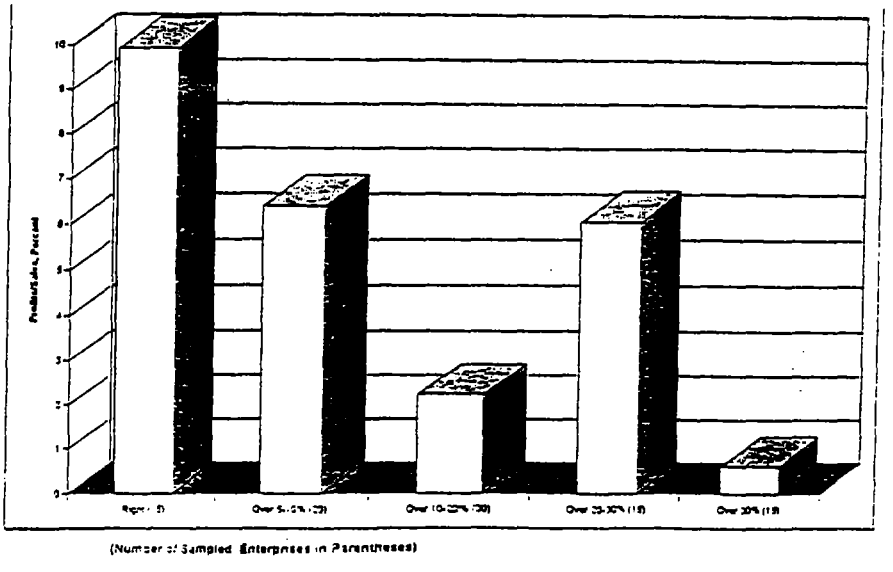
Although the efforts to improve internal incentives have been innovative, they have not established a risk-reward incentive structure and thus have left several problems unresolved. The general lines of authority over property rights between government and management remain vague, and increasing management autonomy while leaving soft budgets in place will not improve performance. In some respects the old government-enterprise institutional relationship remains fundamentally unaltered. A failure to build a market-based incentive system in its place could give rise to delays in implementing further reforms, to asset stripping, and to opportunistic behavior among local governments and state enterprise managers with respect to national tax revenues.

Figure 3.1:
Ratio of profits to sales versus indicator of enterprise autonomy
first semester 1994



Source: Survey of Enterprises

Figure 3.2:
Ratio of profits to sales in state-owned enterprise classified by employment



Source: Survey of Enterprises

Table 3.5
Determinants of profitability
(Dependent variable: profit sale ratio, ***first semester 1994)***

Independent variable	Estimated coefficient (1)	(2)	(3)	(4)
Dummy for corporation	4.8 (2.6)	4.8 (2.6)	5.4 (2.9)	5.4 (2.9)
Indicator of autonomy	-0.07 (-0.35)			0.06 (0.33)
Profit/sales in 1992	0.4 (3.1)	0.4 (3.1)	0.3 (2.7)	0.3 (2.5)
Overemployment	(-1.3) (-2.0)	-1.2 (-2.0)	-1.4 (-2.3)	-1.4 (-2.3)
Dummy for foreign venture			0.6 (0.3)	0.6 (0.3)
R^2	0.26	0.26	0.26	0.27
Number of observations	112	112	112	112

Note: t-statistics in parenthesis.
Source: Survey of Enterprises

State Asset Management. Of the 156 state-owned enterprises surveyed, 69 percent indicated that their state assets are supervised at the municipal level, 19 percent at the provincial level, and 5 percent by central management institutions. Center-directed regulations on state asset administration procedures were published only in July 1994. Many municipalities have recently begun to establish local state asset management institutions, but they lack both adequately trained staff and staff independent of the traditional line bureaus that have historically overseen these enterprises. As a result the emerging system still looks chaotic and complicated.

The organization and function of the state asset management institutions vary across the five cities. State asset management institutions at the municipal and provincial levels are evolving like their central counterparts, the National Administrative Bureau of State-Owned Property (NABSOP) and state investment corporations, which participate on state enterprises' boards of directors, evaluate their assets, and appraise their financial performance.

In Harbin and Shenyang the supervising structure includes a state asset management bureau and several state asset management companies. The head of the state asset management bureau reports to the mayor. Chongqing, Shanghai, and Wuhan are establishing an additional layer—a state asset management committee. In Shanghai the state asset management committee is headed by a vice mayor and also includes other Party officials. The state asset management bureau reports to the committee. The bureau is partly staffed by former personnel from sectoral line bureaus that have been reduced substantially in size and function. Reporting to Shanghai's state asset management bureau are various state asset management companies, which represent the state's interests on boards of directors and other groups supervising the operation of state-owned enterprises.

The emerging state asset management structure lacks clear lines of authority and transparency. The absence of independent directors of the state asset management bureaus is problematic. The division of responsibilities between the new state asset management institutions and the existing sector bureaus is not well defined. In fact, many of the state asset management committees being established are sector specific and are employing staff from the sector bureaus. An important exception is the Shenyang State Asset Management Company Ltd. (the only state asset management committee in Shenyang). This institution

represents the state's interests in a wide variety of state-owned enterprises stretching across several sectors.

The findings in this chapter are consistent with international evidence on performance contracts. Shirley and Galal (1995) use the evidence of 12 companies in six countries to argue that performance contracts have frequently been a waste of time and effort and that they generally have not helped improve state-owned enterprise performance. Contracts can improve performance when there is commitment to targets and incentives, but competition and hard budgets remain the best ways to ensure efficiency. Whether hard budgets are sustainable if state ownership remains widespread is subject to debate.

Chapter 4
Unbundling Social Services

Enterprise reform and social policy in China are strongly linked. Enterprise-based social services are an obstacle to enterprise reform because they impede labor mobility, hinder enterprise performance, and increase overhead. Furthermore, China's health and pension systems will soon be unable to meet the needs of its aging population. In less than 30 years the percentage of China's population older than 60 will resemble that found today in countries such as Hungary or the Netherlands. Some regions will reach today's level in Sweden. Assuming that China will continue to follow the international pattern, spending in these areas as a share of national income could quadruple.

Overview

China's welfare programs have been growing as unemployment and labor training programs, managed by municipal and provincial governments, respond to the redundant labor problem. Because state-owned enterprises have internalized unemployment, municipal expenditures on unemployment compensation have been contained. But expenditures on unemployment benefits will inevitably grow if restructuring takes place.

Most health, pension, housing, and other social expenditures benefit China's urban workers, especially civil servants and workers in state-owned enterprises (including collectively owned enterprises and joint ventures). Most of these benefits are administered by enterprises, and substantial intramunicipal disparities in access to social services can be expected as long as programs are administered by firms rather than by local governments. State-owned enterprises run clinics and sometimes hospitals, educate workers' children, run dining and laundry facilities, provide income during retirement, and supply lifetime housing. In March 1995 during an interview in Wuhan, a state enterprise manager only half-joked when he claimed that "we have everything except an airport." In many cases the value of these benefits exceeds the total wage bill. Evidence that this value is accurately given by a recent survey (Asian Development Bank/Ministry of Labor 1995), which found that 70 percent of state enterprise workers felt that social benefits were as important as wages. In the same survey workers reported that the most important social benefits were, in order of priority, health, housing, and pensions.

Ironically, the enterprise reforms of the 1980s, which were intended to increase enterprise efficiency, gave firms incentives to provide more social services. In particular, housing seems to have been used as a substitute for bonuses when bonuses reached levels that were officially discouraged or taxed. As a result about two-thirds of China's housing stock was built by state enterprises during the construction boom of the 1980s. Between 1981 and 1992 the ratio of housing investment to GDP oscillated between 1.6 and 3.3 percent of GDP and the stock of housing grew quickly. The share of worker compensation from implicit housing subsidies grew from 7 to 16 percent between 1978 and 1988 (Yukun Wang 1990).

Zu-liu Hu (1994) found that between 1978 and 1992 aggregate state enterprise spending on labor insurance and welfare, which includes medical benefits, pensions, unemployment, disability, maternity, and other benefits, increased from 71 to 80 percent of total national spending in these areas. By 1994, state-owned enterprises directly employed 1.4 million health care workers, one-quarter of the national total, and controlled a similar proportion of the country's hospital beds (World Bank 1995). Enterprises' health spending was almost as great as total government health spending. In addition to medical personnel, state-owned enterprises employ hundreds of thousands of teachers, pension administrators, and other workers to run social programs.

Problems

Government officials agree with several analyses of the problems associated with the social burden of state-owned enterprises. They point to both direct and indirect costs of the current systems (see Friedman and Hausman 1994). At least four shortcomings are associated with enterprise-based social services:

- They impede labor mobility.
- They impose high administrative costs.
- They obscure indicators of state enterprise performance.
- They provide little retirement income.

Labor Mobility. Chinese workers receive a large portion of their compensation in the form of in-kind benefits, especially housing. Until a private market for

housing is developed and the " brick and mortar wage" is converted into a cash wage, workers will be extremely unwilling to leave their jobs if unemployment compensation replaces only cash wages. At the same time the demand for their labor has fallen because of the high social costs associated with workers approaching retirement age.

The impact of inefficient labor allocation is difficult to measure, but it is clear that the portability problem—workers' inability to retain social benefits if they move from one job to another—is related to the redundant labor problem. Workers fear unemployment primarily because they would suddenly lose access to social services. For a Chinese worker the loss of a position in a state-owned firm means loss of medical benefits, shelter, pension wealth, and entertainment.

Until the mid-1980s labor was assigned and employment was permanent. Managers were not free to make decisions about employment—to a great extent they are still not free to make these decisions. A functional labor market did not exist in China until the mid-1980s and it still remains extremely rigid. Even today, despite claims by Ministry of Labor officials that all workers now operate under the new contract system, those workers who were previously classified as permanent continue to have job guarantees in the form of indefinite contracts, and unemployment rates are effectively capped.

Labor in China is made even less mobile by the high proportion of in-kind benefits in the average workers' compensation package. While the relative importance of different factors leading to labor market rigidity in China is difficult to assess, the lack of mobility itself is evident from the low turnover rate seen in Chinese cities. This rate was 1 percent in the early 1990s compared with 10 to 20 percent in the Republic of Korea (Zu-liu Hu 1994). This low rate is especially dangerous for a dynamic economy. Abundant anecdotal evidence, interviews with enterprise managers, and economic theory suggest that the portability problem creates large efficiency losses because labor is misallocated.

Administrative Costs. James and Palacios (1995), using cross-country regression analysis, show that economies of scale exist in the provision of public pension services. We found a similar pattern in the surveyed state-owned enterprises. Thus, administrative costs of the pension system and other services would be lowered if record keeping, collection, benefit calculation, and payment were performed by an agency such as a municipal pension bureau. The pooling of administrative expenses would tend to benefit small firms more than large ones, and given the small size of current schemes operated at the enterprise level, savings are potentially large. Only one firm in the sample had more than 15,000 pensioners, and most had fewer than 2,000. Assuming an annual per capita income of Y 5,000, costs per pensioner could be reduced by more than Y 50 if pooling increased the scale of operations from 1,000 to 100,000 pensioners. For a city like Wuhan with around 340,000 pensioners, savings would thus be substantial.

Enterprise Reform Indicators. Spending on social services obscures enterprise accounts and makes it difficult to assess economic performance and production efficiency. Social costs can alter profit and loss indicators in two ways. First, lumpy expenditures on items like housing or hospital construction may lower profits (increase losses) in a particular year. Firms may have an incentive to spend more on construction in a period of prosperity to compensate for the lack of housing expansion in past bad years.

Second, recurrent social costs, such as pensions, can distort comparisons between firms regardless of enterprise efficiency. Currently, production costs vary arbitrarily with the age of the firm because of the variation in the ratio of pensioners to workers. Pooling would lower the costs of firms with high dependency ratios and increase the costs of firms with low dependency ratios. Pooling would also make production costs more transparent. Given the prevalence of pensioners living in enterprise housing, differentials stemming from construction and maintenance costs would also be mitigated by removing housing from the list of enterprise responsibilities.

Further Issues. In addition to increasing transparency, lowering administration costs, and allowing labor to flow to its best use, divesting social services from state-owned enterprises is an important precondition to further reform. For example, before auctions can be held or joint ventures formed, firms' social liabilities and assets must be assessed. Social assets, including housing stock, medical and educational facilities, and related equipment can represent a large fraction of the value of firms in transition economies. For example, nonproductive assets represented almost a third of all capital assets in Kazakhstan in 1991. Most of these assets were enterprise-owned housing. National estimates are not available for China, but one study based on survey results found that one-fifth of sample state enterprise assets and almost one-quarter of collectively owned enterprise assets could be classified as nonproductive (Jefferson and Wenyi 1990).

Quantifying social assets and liabilities may be necessary in the case of bankruptcy. In Shenyang an official from the labor bureau described the ad hoc procedure invented to deal with severance pay and pension liabilities during the bankruptcy proceedings of a battery factory. Workers were paid Y 1,000 for every year they had served with the firm, and the present value of future pension payments to retired employees was calculated based on their life expectancy and current pension level. Proceeds from the sale of assets equal to the cost of these social liabilities were then transferred to the municipality that assumed responsibility for the workers and pensioners of the bankrupt firm.

Social assets are offset by social liabilities, such as acquired pension rights, the actuarial value of promised health coverage, and the cost of housing maintenance. Just as annual social expenditures can be smoothed across enterprises by pooling, social liabilities and assets can also be transferred to a government agency so that investors can concentrate on the business component of the firms' balance sheet and the market valuation of the enterprise can proceed with greater certainty. Transfers are especially important in China, where regulations regarding such liabilities have never been developed.

The bankruptcy calculation for the Shenyang battery factory (mentioned above) revealed the pension liabilities for that firm. A similar calculation was made for public pension schemes in several countries that introduced funded schemes requiring that workers be paid their accrued pensions. In China such a reform would have to be implemented on a municipal, if not provincial level, meaning that the local government would have to assume responsibility for this social liability. Municipal pension pooling not only smoothes annual costs across enterprises, it transfers the implicit pension liabilities from each firm's balance sheet to the municipal government, making it possible to consider fundamental reform options.

The extremely decentralized method of providing social services to enterprise workers makes it almost impossible to reform or even evaluate important programs. Indexation of pensions is a good example. On several occasions national authorities have mandated flat increases in pension levels in order to compensate for cost-of-living increases. These adjustments did not always match inflation rates and were not made on a regular basis. The more important decisions regarding indexation are made by enterprises. In practice, indexation varies from firm to firm and is probably a function of the number of pensioners and the firm's current financial status. It may also depend on individuals' relationships with the managers who make the decisions. A reform that mandated automatic indexation rules would, at present, result in large cost increases for some firms and small increases for others. Also, it might cement previous inequities based on company policies that gave higher pensions to favored employees. And practically, unless records were centralized, the implementation of such a reform could not be easily monitored.

Fundamental reforms of the health system involving cost recovery and centralized administration are also impossible to implement if individual firms operate separate health facilities. Health services are likely to vary according to the financial situation of enterprises. Some profitable enterprises are overstaffed, while others do not have enough doctors. Well-off enterprises are likely to purchase expensive curative medical services, while some parts of the community may lack basic preventive services. Health pooling has been introduced at the municipal level, but it lags far behind pension pooling.

Unemployment Insurance. Unemployment insurance was introduced in China in 1986. There are national guidelines, but it is administered locally. Unemployment benefits are paid for a maximum of 24 months, provided an individual has worked for five or more years. Benefits suggested for the first 12 months would equal 60 to 75 percent of basic wages, followed by 12 months at 50 percent. For those who have worked for more than one year but less than five, only the first year's standard wage would prevail. Some minor subsidies and supplements could top this value off.

Unemployment benefits cover permanent- and fixed-contract workers in bankrupt enterprises and in enterprises being restructured, along with workers whose contracts were terminated or who were fired for disciplinary reasons. Unemployment benefits are not available for ex-convicts, workers who twice refused a job assignment for no good reason, workers with new jobs, and workers whose eligibility time limits have been exceeded. Local regulations have taken local conditions into consideration in designing implementation.

New entrants, such as school graduates, who account for the bulk (80 percent) of unemployed workers, cannot receive unemployment benefits. Thus in 1993 urban unemployment totaled 4.2 million people, or 2.6 percent of the urban labor force, but only 1.8 million people were eligible to receive unemployment insurance benefits.

Allowing all surplus workers to receive unemployment insurance would force contribution rates up dramatically—not only would the number of beneficiaries increase, but the average period of benefit collection would also increase because surplus workers would likely have more difficulty finding jobs. Such shock treatment could entail serious costs because unemployment tends to perpetuate itself if long spells of unemployment diminish the attractiveness of unemployed people. In transition economies the majority of the unemployed eventually leave the labor force altogether.

Unemployment insurance is an alternative to job guarantees and a complement to labor contracts. Job guarantees impose costs on enterprises in that wages must be paid to redundant workers. Although unemployment insurance costs also fall on enterprises, the cost of unemployment insurance is less than that of job guarantees. At the firm level unemployment benefits pay at most 75 percent of the worker's standard wage and do not give a bonus. In addition, unemployment insurance is given only until a new job is found, while a guaranteed wage continues indefinitely.

At the system level unemployment benefits are also likely to have a cost advantage. The contribution rate measures the burden of the whole system of unemployment benefits on an enterprise. Of course, a larger pool of unemployed people drawing benefits would increase costs, but these would be less than or equal to the costs of maintaining an identical number of redundant workers, unless expenditures on employment services are very large. Job guarantees also have the disadvantage of preventing labor from moving to more productive activities.

Currently, unemployment insurance funds total only Y 5 billion and provide unemployment benefits to about 1.8 million workers, amounting to an average of 1 to 2 billion yuan per year. Services offered to unemployed workers consume another 1 to 2 billion yuan per year. A shock therapy that would bring another 15 million people into the program would immediately require another Y 15 to 30 billion—a sum that is not easily amassed. Furthermore, many workers would face long-term or permanent unemployment, and the associated political costs would be large.

Extending coverage to other enterprises would reduce the costs for covered enterprises only if the new contributors dismissed fewer workers, which may not be likely. The costs of distortions introduced by unemployment insurance that is financed by taxes based on the wage bill can be reduced if contributions were based on total costs. Extending the collection base more widely, by drawing on general revenue, for example, would reduce costs to covered enterprises.

The reserves that unemployment insurance programs have now accumulated will disappear in 1996 or soon after. Reserves will dwindle even though monthly benefits are still a small fraction (20 to 25 percent) of average cash wages and are almost invariant with respect to beneficiaries' past earnings. But the current mechanism for funding unemployment insurance, which is based on a 1 percent payroll tax on total cash wages, will not support a program of unemployment payments and services (including training, counseling, and job placement). This problem is exacerbated because many firms are refusing to pay their legally mandated contributions, and the collecting agents (banks) are unable or unwilling to enforce payment. In Chongqing the contribution rate was only 75 percent in 1993 and less than 60 percent in the first quarter of 1994. There are many ways to evade contributing, like creating multiple bank accounts, one of which belongs to the loss-making mother company. Also, companies base payroll payments on understated wages.

Until redundant labor is reduced, China will probably rely on job-to-job solutions, especially placements within other enterprises and the household economy. Thereafter, the political costs associated with allowing greater numbers of people to collect unemployment benefits will diminish because lifetime employment guarantees will no longer be seen as an entitlement by the newer generations of fixed contract workers, and because the massive surplus labor population will have disappeared.

Evidence from 156 state-owned enterprises

The following results are based on data from the survey of 156 state-owned enterprises, covering the most important social programs provided. Figures are from the first semester of 1994 unless otherwise noted. Missing or unreliable observations have been excluded from the analysis.

More than 94 percent of the enterprises surveyed reported that they provided housing, and 92 percent reported having hospitals or clinics (Figure 4.1). Almost three-fourths of the firms reported that they ran preschools or kindergartens. More than 90 percent paid transport allowances, and almost 15 percent provided gym or spa facilities. This list is only partial: bicycle repair, haircuts, laundry services, and many more could be added. The enterprise bears most of the costs of these services. An estimation of these costs

would require a detailed study of each firm and each of the services provided. Such depth is beyond the scope of this survey.

The costs of the largest social programs provided by enterprises were estimated from survey data. But the implicit housing subsidy is based on the estimates of Pudney. These figures are included because of their importance relative to other social services. The calculated subsidy suggests that current urban rents (35 fen/square meter) would have to be increased more than 15 times in order to reach estimated market rates. These results are conservative compared with those of the World Bank (1994), which estimates that typical urban rents would have to rise by a multiple of 20. We did not include a housing subsidy for firms in Shanghai because most of the city's housing is managed by the municipality. This arrangement is not typical throughout most of China.

These results show that nonwage labor costs for Chinese state-owned enterprises are very high, amounting to more than 75 percent of the labor costs of the average firm (Table 4.1 and Figure 4.2). While this figure is not surprising to those who have studied the issue, only estimates from individual case studies were available prior to this survey. The largest component of these costs is housing, with recurrent subsidies equaling more than one-fifth of total wage payments. Pensions and health care are the next largest items, together adding the equivalent of 35 percent of labor costs. Education is consistently the smallest component, suggesting that either most education facilities are being provided by the municipality or province or that some education expenditures are not being recorded accurately. Our estimate of total social costs is conservative because we used a conservative estimate for the housing subsidy and we did not include costs for services such as kindergarten and dining halls.

Figure 4.1
Selected services provided by state-owned enterprises in sample survey

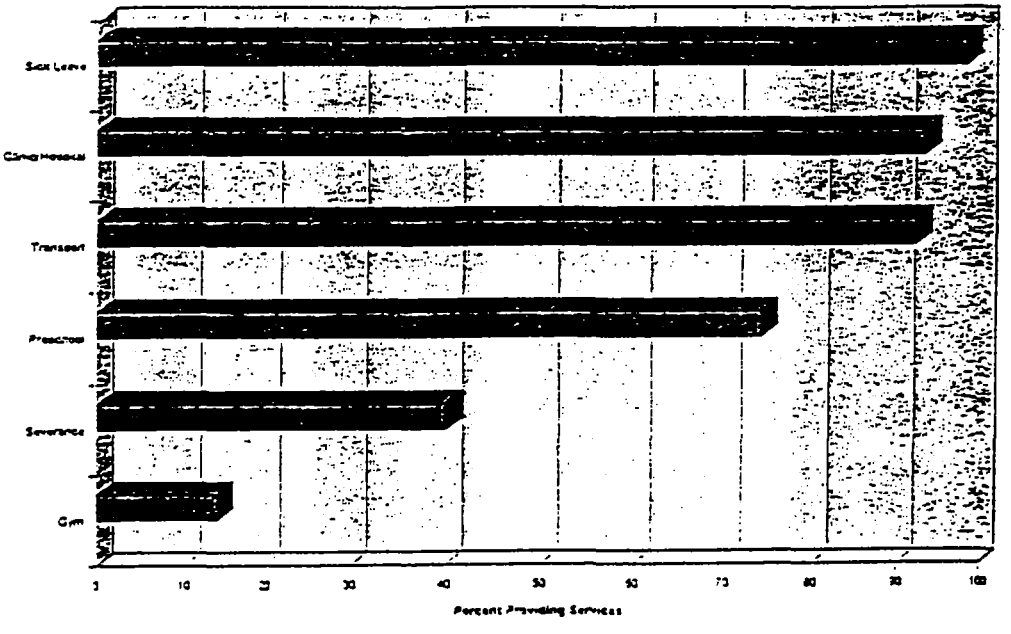


Figure 4.2
Labor cost in state-owned enterprises

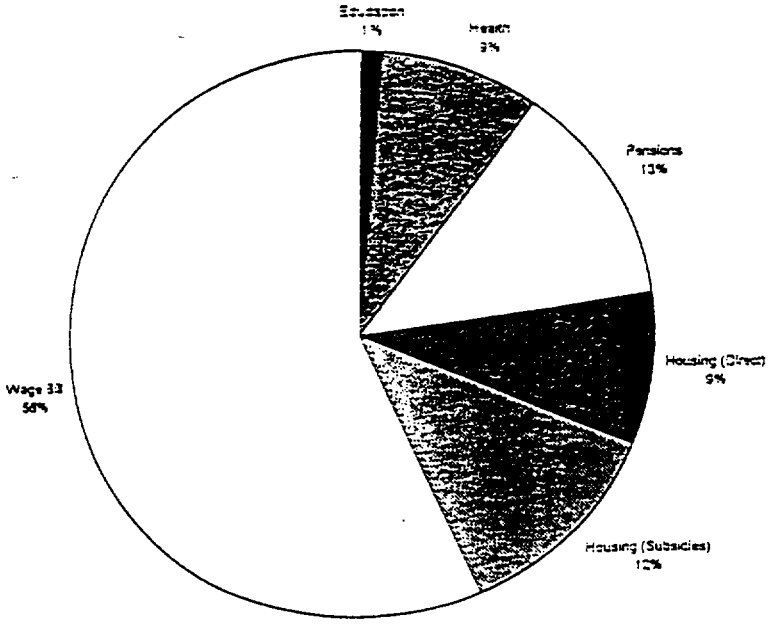


Table 4.1
Social spending of 37 state-owned enterprises, first semester 1994
(percentage of total wage bill)

Category	Percent
Education	2.1
Health	15.1
Pensions	22.4
Housing (direct)	15.7
Housing subsidies (implicit) /a	21.2
Total	76.4

Source: Survey of Enterprises
a/ Excludes Shanghai

National public health and pension spending tends to be concentrated in regions that have large elderly populations. This pattern is also seen in enterprises. For example, regression results on a sample of 83 firms show that the ratio of pensioners to workers explains more than three-fourths of the variation in pension costs. Given that a high proportion of pensioners in the sample were living in enterprise housing, it is not surprising that the housing ratio is also positively correlated with the dependency ratio.

Municipal pension pooling

In the mid-1980s municipal pension pools were adopted all over China. By the early 1990s more than three-fourths of state enterprise workers belonged to municipal pension pools, and accumulated reserves approached 30 billion yuan in 1993. But these aggregate figures hide substantial regional disparities with respect to implementing pension pools. For example, many pools continue to charge higher pension taxes to older enterprises. This practice occurred in Shenyang and is very common throughout China (Guo 1994). In short, the national policy guidelines have been implemented according to specific local characteristics.

The same will be true for the second phase of the reform process. The scale of reform and the variation in local conditions are so large, that, with few exceptions, a single policy prescription would not apply to all local situations. The Central Government has accepted two general long-term models in which employee contributions are introduced and individual accounts are established for each worker (Annex 7). The first reform model was proposed by the Systems Reform Commission and is being implemented in Chongqing, Ningbo, Qingdao, Shanghai, and Wuhan (according to interviews with officials from the Ministry of Labor).

The new system is complicated. Eventually, workers will contribute 8 percent of their wages to individual accounts. Their employers will also credit their accounts with 8 percent of their wages and 5 percent of the average wage in the city, both subject to a ceiling. The workers' benefit will come from the principal and interest accumulated during their working years. This amount will be divided into 120 monthly payments. Additional payroll taxes (in Shanghai the current rate is 29.5 percent) will pay for prereform pensioners, pensioners who outlived their annuity, and top-ups for poor pensioners who will be identified by each locality.

The second model, proposed by the Ministry of Labor, includes a flat pension payment, equal to about one-quarter of the citywide average wage for any worker who contributed for at least 15 years, in addition to the accrued savings and interest from the worker's contributions. This model also provides an additional benefit based on a linear accrual formula applied to contributions made after the tenth year. The payroll tax required for this potentially costly system is left largely to the discretion of the municipal authorities. Variations of this model are being considered for Beijing, Chengdu, Tianjin, and Yantai. As was true with pooling arrangements, each municipality seems to be creating its own version of reform according to local economic and political conditions.

Payroll Taxes. Most countries finance pensions and health services with earmarked payroll taxes. In China the idea of a payroll tax earmarked for pension, unemployment, and health benefits is gaining prominence at the local level. The municipal government of Beijing, for example, recently announced a 6 percent payroll tax for catastrophic health insurance. Many municipal pension pools have a single rate for all firms that must be contributed on the basis of the total wage bill or the workers' wage.

The intention here is not to advocate the use of earmarked payroll taxes but to point out that pooling on the basis of payroll taxes has advantages over current arrangements. It is also a necessary first step toward implementing fundamental reforms, which cannot be considered under current circumstances.

One advantage of pooling is that all workers within a pool are able to move from one firm to another without being penalized by the loss of accrued pension rights. The only other solution to the portability problem would be enforcing a standard methodology for vesting and calculation of the present value of these defined benefit pensions, an unworkable idea in the current environment. While problems of interregional mobility remain, the municipal pool is a great improvement over the enterprise-based system and could lead to interregional agreements similar to the international treaties that deal with these issues in other parts of the world. In the long run, a fundamental reform that relies on defined contribution accounts for retirement income would solve the portability problem at the national level.

Enterprise profits and losses are affected by nonwage labor costs, which are often determined by arbitrary factors, such as the year production began or the ratio of pensioners to workers. These costs arise

from the provision of social services and are not related to a firm's economic efficiency. In order to evaluate production efficiency, the costs of social services should be pooled across all enterprises in a geographic area. This procedure will show the nonwage labor costs as a percentage of total labor costs (although it penalizes labor-intensive firms). Pooling prevents different social burdens from affecting profit and loss comparisons between pool members. Pooling health and pension costs will affect the profit-sales ratio of different firms differently, meaning that some firms will benefit and others will resist the change (Figure 4.3 and Annex 8).

Further Issues. To complete pooling, pension pools must be consolidated and the payroll tax rates unified. Also, all record keeping, benefit payment, and other functions currently handled by enterprises must be transferred to the local labor bureaus that will manage the pool. The process of centralizing the administration, computerizing records, and undertaking other functions is evolving differently across Chinese municipalities because of local conditions. Some cities, like Shenzhen and Shanghai, have skilled personnel and computers and are likely to reform. Shenzhen and Shanghai, which actively trade with Hong Kong, also have skilled pension-fund managers. Other cities, such as Harbin, will have to cope with a scarcity of personnel trained in this area.

Finally, the maturation of municipal pools and the projected ratio of pensioners to workers will differ greatly across cities and provinces. This difference will result in heavy transition burdens in some areas relative to others. In new cities, such as Zhuhai and Shenzhen, the burden will be small, making a funded scheme feasible. In Shanghai on the other hand, payroll taxes of more than 25 percent will be needed just to pay off the obligations of the old system. Such a high rate leaves little room to finance individual accounts.

Evidence from Five Municipal Pension Pools. None of the pools in the surveyed cities cover all contributors to pension schemes. In Shanghai, where the pension pool is most inclusive, officials reported that 200,000 central government workers, covered by civil service schemes, were not covered by the pool. The coverage of the total labor force, including those not working for state-owned enterprises, collectives, or joint ventures, ranged from about one-third in Chongqing, Harbin, and Wuhan to more than half in Shanghai (Tables 4.2 and 4.3). Many of these workers may eventually be brought into the pension pool.

Pension pool performance may best be judged by comparing the payroll tax for pensions in seven municipalities (Table 4.4). Chongqing, Shanghai, and Wuhan are more advanced in terms of unifying payroll tax rates and centralizing record keeping. Computerization of records in these three cities was likely completed by the end of 1995. Harbin and Shenyang, on the other hand, have not computerized their records and continue to charge higher payroll tax rates to firms with more retirees. Shenyang officials confirmed that objections from young enterprises that would incur higher pension expenses prevented rate unification.

Figure 4.3
Ranking of state-owned enterprises according to profits/sales ratio

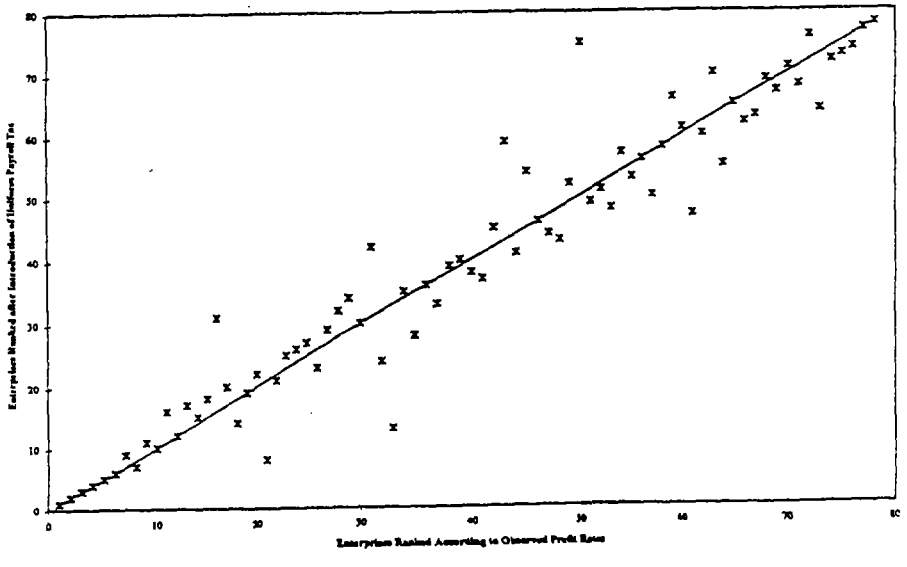


Table 4.2
Pension pool finances in five Chinese municipalities, 1994

(million yuan)

Municipality	Spending	Revenue	Surplus	Reserves
Chongqing	80	—	deficit	200
Harbin	360	420	60	100
Shanghai	—	—	small surplus	—
Shenyang	830	800	-30	360
Wuhan	439	413	-26	68

— Data not available.
Source: Mission interviews with municipal officials, March 1995.

Table 4.3
Coverage in seven municipal pension pools

Municipality	Covered workers (millions)	Pensioners (millions)	Pensioners/ workers	Labor force (millions)	Pensioners in pool (percent)	Percent of employees
Shanghai	4.20	1.70	0.40	7.6	56	86
Harbin	0.92	0.24	0.27	2.9	31	46
Chongqing	1.32	0.42	0.27	8.4	33	56
Wuhan	1.17	0.34	0.29	3.8	31	50
Shenyang	1.40	0.49	0.35	3.5	40	60
Mudanjiang	0.32	0.06	0.19	—	—	—
Tianjin	2.43	0.64	0.26	—	—	51

— Data not available.
Note: Labor force data are from 1993 while pool membership data are from 1994. The ratios are not adjusted for this difference.

Table 4.4
Payroll taxes and record keeping in seven municipal pension pools

Municipality	Employer payroll tax (percent)	Employee payroll tax (percent)	Centralized records kept	Computerization of records (percent)
Shanghai	25.5	4	Yes	50 (100 by 1995)
Harbin /a	20-25	2	Annual Only	None
Chongqing	27	3	Yes	In process
Wuhan	26	3	Yes	More than 75
Shenyang	18/b	3	Some	Some
Mudanjiang	16/c	2	—	—
Beijing	19	5	Yes	Almost complete

— Data not available.
/a Permanent workers in state-owned enterprises. Permanent workers in collectively owned enterprises pay 8 to 12 percent, while contract workers pay 20 percent.
/b Plus 40 percent of own pensions.
/c Plus 50 percent of own pensions.

Importantly, the combined employer-employee tax for pensions in all seven municipalities is high even when compared with industrial countries that have mature pay-as-you-go schemes. Shanghai, Chongqing, and Wuhan have among the world's highest rates—approaching 30 percent of the payroll. These levels are comparable with the much older systems of Eastern Europe. The variation across municipalities is also important, although the multiple rates that Shenyang and Harbin use obscure the comparison. The fact that differential rates continue to be used in some municipalities many years after the introduction of pooling suggests that intermunicipal and interprovincial pooling, which might involve large transfers from one area to another, are likely to encounter formidable opposition. Finally, it is important to note that these cities do not reflect the extent of heterogeneity across Chinese pension pools. Some of the younger cities in particular would have relatively low contribution rates or conversely relatively large surpluses.

Current financial indicators provide only a partial picture of the state of finances in a pay-as-you-go pension scheme. Another approach would be to compare the long-term liabilities and assets on the balance sheet of the pension scheme. Assuming that the municipal pension pool presently owns few assets, this approach would require only an estimation of the pension liabilities for each city. This debt would represent the future stream of spending that would have to be covered by future taxes, asset sales, or borrowing.

Pension liabilities arise from contractual arrangements in which employees and their dependents are paid a pension related to their salary upon retirement. In China enterprises make this promise to their employees. The percentage of the basic wage generally ranges from 60 to 90 percent, depending on the number of years worked and the enterprise's policy. Benefits in progress are indexed on an ad hoc basis. In the survey sample, less than 50 percent of firms reported making automatic cost-of-living adjustments.

The value of accrued pension liabilities, implicit pension debt, is the present value of future payments to current pensioners (until their death) and the value of pension rights earned by workers. The first value will be a function of the average pension, the average life expectancy of the pensioner population, and the indexation rule.

Estimating the value of pension rights requires that assumptions be made about vesting and the rate at which pension rights are accrued by workers during their careers. In a defined-benefit system the pension is contingent on the path of future earnings, and ordinarily, the calculation would thus require that each worker's path be approximated. But because clearly defined pension rights do not exist, the calculation is more likely to be based on perceptions of what compensation would be fair given the number of years a worker participated in the company plan.

Just as pension pools distribute the annual costs of social programs evenly across a group of enterprises, they transfer pension liabilities from the firm to the municipality, eliminating differences in this liability between older and younger firms. This transfer clarifies and facilitates the bankruptcy process, and builds confidence among private investors by making company balance sheets more transparent.

The pension liabilities of the Shenyang municipal pension pool were calculated using two different discount rates (Annex 9). Using a 4 percent discount rate, Shenyang's implicit pension debt is approximately half of municipal GDP (after netting out its RMB 360 million in reserves). Even with a discount rate of 8 percent, pension liabilities in Shenyang still approach one-third of local GDP. Pension debt overhang of this size will make it difficult to phase in the type of funded, individual accounts that are currently being discussed.

Chapter 5
Recommendations

To attain the ambitious objectives of the Ninth Five-Year Plan (1996-2000), China will have to complete the reform of its state enterprise sector. This is a formidable task. At present, state enterprises in industry absorb a disproportionately large share of resources and use them less efficiently than the nonstate sector. As long as their profitability is low and they remain part of the state sector, they will continue to form a large part of the borrowing requirement of the public sector.

Prime Minister Li Peng in his opening speech to the National Peoples' Congress in March 1996, recognized that the time to face this problem is now. Growth in the national labor force is slowing, but growth in the urban labor force could continue apace because there are many rural workers in surplus. Barriers to mobility are falling. The state sector as presently constituted will be an inefficient producer of good jobs. While the short-run employment effects of restructuring could be negative, they are easier to absorb in China's present environment of rapid growth and high savings and investment.

International experience has shown that when barriers to trade and administered prices distort markets, political advantage guides economic decision-making. When economic policies price resources at less than their real worth, people waste valuable effort and energy attempting to obtain privileged access to goods through nonmarket channels. From Argentina to Zambia, from Russia to Uganda, state-ownership and protective regulation, especially in trade, have led to serious inefficiencies.[1] This experience confirms the importance of the Ninth Five-Year Plan in making state enterprise reform a centerpiece of policy initiatives over the next half decade.

The objectives of the Government's reform are to:

- Transform today's state enterprises into modern corporations that are more profitable and more productive, so as to increase the growth rate of productivity for the whole economy.
- Reduce the borrowing requirement of the state sector, so as to contribute to macroeconomic stability.

There are two ways to achieve these twin objectives. Reforms can improve enterprise profitability and productivity, increase the share of investment financed from retained earnings, and thus reduce the borrowing required under partial or full sovereign guarantee. Also, reforms can transfer enterprises to the nonstate sector through merger, cooperativization, sales, and other mechanisms; this would transfer risks

BOX 5.1:
Why reform state-owned enterprises: The international experience

Governments around the world are concerned about the burden that loss-making state-owned enterprises place on hard-pressed public budgets. The losses of state-owned enterprises as a percentage of gross domestic product reached 9 percent in Argentina and Poland in 1989; throughout the 1980s about half of Tanzania's 350 state-owned enterprises persistently ran losses that had to be covered from public funds; in Ghana in 1985 to 1989 the annual flow from the Government to 14 core state-owned enterprises averaged 2 percent of gross domestic product. Losses have important consequences. Mexico's former finance minister, Pedro Aspe, has noted that a fraction of the losses incurred by the state-owned steel complex would have been enough to bring potable water, sewerage, hospitals, and education facilities to the poorest region of his country.

The benefits of divestiture can be considerable. Galal and others (1992) studied the postprivatization performance of 12 companies in Britain, Chile, Malaysia, and Mexico, to find net welfare gains in eleven of twelve cases; on average, the present value of these gains equaled 26 percent of the firm's predivestiture sales revenue. Furthermore, they document no case where workers as a group were made worse off, and three cases where workers were made much better off. Megginson and others (1994) compared the pre- and post-divestiture financial and operating performance of 61 companies, representing 32 industries in 183 countries. These companies experienced full or partial privatization through public share offerings during 1961-90. The study documents strong performance improvements: firms increased real sales, became more profitable, increased their capital investment spending, improved their operating efficiency, and increased their work forces. Furthermore, these companies lowered their debt and increased dividend payout.

Source: Galal and others (1992); and Megginson and others (1994).

from taxpayers to those willing to accept it—entrepreneurs, in exchange for profit opportunities, and workers, in exchange for higher wage opportunities. The program announced in the Eighth National Peoples' Congress in March 1996 contains elements of both reform strategies. Successful implementation requires two levels of action: it would establish a *policy framework* that harnesses market forces to promote enterprise reform, and a specific *reorganization program.*

Policies

Two clear principles should form the foundation of the policy framework. First, *external incentives* should promote economic performance by establishing a market-based discipline. Second, *internal incentives* through improved governance mechanisms would reward shareholders and managers for good firm performance and penalize them for poor performance.

External Incentives: Competition And Financing

Enhancing external discipline would entail:

- *promoting competition* in product and, eventually, capital markets by removing policy-related barriers to new competition, especially between provinces, and restrictions on the entry of foreign companies; and,
- *phasing-out noncompetitive access to finance and subsidies*, by transforming implicit subsidies through the financial system into explicit subsidies in the budget, and by phasing out the credit-investment plan over a five-year period.

In our sample, state-owned enterprises compete mostly among themselves. Sixty-four percent of the surveyed firms indicated that other state-owned enterprises are their toughest rivals (Annex 6). China's state-owned enterprises have a commercial toehold because central planning created interlocking supplier-user relationships among state enterprises. The survey indicates that the average share of inputs purchased from each firm's largest supplier is 60 percent, and the average share of sales made to each firm's largest customer is 41 percent. Seventy-eight percent of the surveyed firms said their single largest supplier is another state-owned enterprise, and 60 percent indicated that their single largest customer is another state-owned enterprise. On average, more than 75 percent of the value of receivables is from other state-owned enterprises. If reform is to be effective and enduring, competition must be fostered. Free entry and exit are needed to break up current market niches.

Several measures could be taken in the near term that would *increase competition* significantly. These include eliminating barriers to entry and exit across provinces, removing obstacles to entry of nonstate firms into wholesale and distribution, and permitting entry of domestic and foreign private investment into basic industries and infrastructure provision (e.g., telecommunications, oil, power generation), subject to sector regulations. To avoid putting domestic state enterprises at a market disadvantage, the tax incentives granting foreign direct investment a "better-than-national" treatment ought to be phased out. Similarly, tax incentives that discourage cross-provincial competition, such as VAT and income tax derivation rules that allocate receipts to the home tax jurisdiction, ought to be changed so as to allocate to the jurisdiction of economic activity. Phasing out interest rate discrimination by class of ownership—in combination with the progressive phase out of the credit plan—would put firms on a more equal competitive basis. This measure should be combined with the transfer of social expenditure responsibilities to the Government. Rationalizing the tariff and trade regime—including the phase-out of exemptions to tariffs, transforming the import tariff exemption for exports to a modern drawback scheme, and converting nontariff barriers to tariffs—would increase neutral competitive pressures on domestic industry. Extending trade rights to all domestic and foreign companies could be done in a year and would help create more trade competition.

Phasing out access to noncompetitive finance as well as the implicit subsidies is essential to reform. The experience during 1994-95 has shown that "hardening the budget constraint" facing companies will stimulate the decentralized, market-driven reform that is essential for efficiency. In the near term, essential measures include rationalizing interest rates, phasing out directed credit through the commercial banks, permitting creditworthy companies access to capital markets (subject to eligibility requirements) and eliminating provincial quotas for share and bond issues. Price controls, especially on energy, have generally benefited downstream state enterprises and constitute an important implicit subsidy—and source of losses for up-stream firms; prices should gradually be deregulated. Subsidies should be phased out, except where necessary for purposes of regional equity or income distribution; and these necessary subsidies should be financed through the budget.

The medium-term program would depend on how rapidly these measures are enacted. Some elements of the reform process can only be undertaken as part of a medium-term program. The specifics of improving the trade regime, for example, should be coordinated with

efforts to accede to the World Trade Organization (though China's national interest in a more efficient, internationally competitive industry should drive the timetable for implementation). Reforms in the financial sector have to be part of a larger strategy of improving the way capital is allocated in the economy. Other elements can be free-standing, such as establishing the legal foundations for a national market through proscriptions against restrictions to inter-state commerce, and establishing a neutral, transparent and enforceable regime governing foreign investment.

Internal Incentives: Improving Governance

Implementing the 10,000-1,000-100-10 program will allow government owners to make clear demands on state enterprise for improving the financial returns to investments, and accord management sufficient autonomy and authority, with ex post accountability to achieve those results. This would entail:

- *implementing the new accounting system*, with publicly registered and audited balance sheets and income statements for all state enterprises above a predetermined size, with the objective of having complete income statements for 10,000 enterprises in the first two years;

- *accelerating the incorporation of enterprises* under the new Company Law, regardless of financial performance; this will make profits and losses more transparent, establish book values of assets, and clarify ownership;

- *consolidating government representation to replace line bureaus.* Municipal governments should appoint full-time directors and report directly to the mayor;

- *setting clear commercial objectives* through government representation on the board of directors, and the main objective should be to maximize the value of the company's assets;

- *using the board of directors to hold management accountable* for achieving enterprise objectives, rewarding and penalizing them in accordance with performance; and,

- *granting management maximum autonomy* in its decision-making as well as some sharing in corporate profits to spur efforts at profit maximization.

During the first phase, *implementing the new accounting principles for the 10,000 enterprises should be a national priority.* The absence of reliable financial information on enterprise performance inhibits debt restructuring efforts with creditors, impedes adequate valuation procedures when divesting small firms, and prevents holding management of large firms responsible for performance. Reliable financial information is necessary for banks to evaluate loan applications, and for firms to enter into business with other partners; it is necessary for enterprises that want to be listed on stock exchanges; it is necessary for authorities to collect taxes.

Another priority should be clarifying the agency to represent the Government on the boards of directors and limiting the ability of other agents outside the boards to influence naming of corporate officers. Building on past reforms, recent efforts have continued to delegate business decision-making to state-owned enterprises and have begun to break up some of the line ministries that historically managed them. But the bureaus, organized along narrow industry-specific lines, have resisted cross-industry diversification and competitive entry, thus largely freezing patterns of output and investment. Implementing the Company Law should allow for the formation of more limited liability and limited liability shareholding companies, and an increased number of state enterprise shares will become available on the national and international stock exchanges. Finally, *the Government should complete the transfer of the 14 autonomous rights for all enterprises*, subject to the phased abolition of the credit and investment plans.

In the medium term, the program would extend audited accounting to most firms. Also, by a specific date in the future, legal incorporation should be required of all businesses, public or private, with defined corporate charters, assets, liabilities, and ownership.

Program of state enterprise reorganization

Beyond supportive policies that harness market forces to the task of restructuring, the Government could adopt a pro-active program to reorganize the 102,200 state enterprises in industry and several thousand more outside of industry. While such a program should differentiate between competitive and non-competitive sectors as well as large and small firms, certain policies have to be undertaken for all firms.

Common Elements

The program would entail:

- *Appointing a lead agency at central and municipal level to promote and coordinate asset evaluation, and the programs for small and large firms.* For presently noncompetitive sectors, such as electric power, telecommunications or oil and gas, the respective ministries might oversee the process. The State Economic and Trade Commission for the competitive sectors could be strengthened by giving it greater *authority* and more resources to spur change.

- *Transferring pension, health and education responsibilities to municipal governments,* perhaps with compensatory fiscal transfers from the national government; as national pension and health programs are created, these would be merged.

- *Providing income maintenance to displaced workers* in the pilot companies, while the municipalities put in place an unemployment insurance program.

Municipal and national programs will have to assume a greater role in financing and administering health, education, and pension programs. The program would accelerate efforts in the 50 cities to transfer the social responsibilities from firms to municipal programs. Resources from the sale of assets might be used to restructure the debt overhang, including unfunded pension liabilities; the Central Government would provide supplementary funding if necessary as an incentive to stimulate the process.

At least in the short term these pooled social services will probably have to be financed from payroll taxes at the municipal or provincial level. The conversion to earmarked payroll tax financing has advanced the farthest in the area of pensions. Pooling should not be seen, however, as the final stage of the reform process.[2]

The next step toward establishing funded, individual accounts will be to find a mechanism to pay off these liabilities, either by transferring assets or bonds to individuals' accounts or by taxation. The financing requirement can be lowered by reform measures. In particular, each pool should consider gradually increasing the normal retirement age, especially that for women. The expected duration of women's retirement in Shanghai or Shenyang, where the average retirement age for women is 52, is more than 25 years. In some cases women receive pensions for more years than they work. Also, life expectancy varies across regions in China. In Qinghai a 60-year-old male can expect to live 12 years after retiring while the male retiree in Shanghai will probably live 17 years beyond retirement. Increases in the retirement age will have a greater impact in some areas than in others, and a case might be made for establishing different ages for different pools.

The Central Government should also maximize portability among local pools. Portability will be easier with defined-contribution accounts, which individuals can move from one location to another. Still, the transition period may involve complicated arrangements, and mobility may be hindered by the lack of coordination among local governments. Nonetheless, the ultimate goal of the pension reform process, which may take several years to complete, is to establish a public redistributive pension that guarantees a minimum income based on some poverty criterion and mandatory savings for retirement that raises retirement incomes above this minimum and reduces dependency of the old on the Government.

The largest component of social costs is housing. As long as housing remains linked to jobs, labor markets cannot develop. Such a use of state assets not needed for productive processes can ease the financial restructuring of overindebted enterprises and protect social needs. Per capita urban housing space in China, between 9 and 10 square meters, is comparable to that in middle-income countries. There are two distinct housing groups. The lower-quality group, occupied by nearly half of the urban population, consists of housing that is at least 30 or more years old, crowded, and lacking basic facilities such as toilets or kitchens. The other group consists of housing built in the last decade that has relatively modern facilities. Distributing ownership to housing occupants would be a forceful way to establish a housing market, but such a method is likely to be socially unacceptable given the large disparity between the two groups of urban homes. There is a consensus on the desirability of a market-based housing system, but progress in this direction has been disappointing: artificially low rents create a disincentive for workers to buy their houses.

Reforming the current system requires that housing subsidies be phased out by converting subsidies into wages, raising rental prices to cover the cost of construction plus interest forgone, and selling real property rights to workers. Housing should be eventually privatized and the financial instruments needed to develop a healthy housing market created. One strategy is to create housing development corporations owned by the state enterprise; rents and wages are si-

multaneously increased; and the housing corporations can then use assets to create mortgages to finance new construction. A variation of this strategy is to form housing cooperatives owned by workers currently occupying houses in a certain area. They would organize and administer the transfer of ownership from enterprises to individuals. Housing cooperatives would buy the housing stock from enterprises using debt notes and would repay these quasi-mortgages in 20-year installments. Enterprises would use quasi-mortgages from the sale of houses to partially offset social liabilities (such as future payments of retired workers) that would be transferred to municipalities. Freed from housing obligations, enterprises could raise wages to compensate workers for loss of in-kind housing benefits. Higher wages would allow workers to pay back the mortgages of their cooperatives. They would also have full ownership of their houses and would be allowed to rent and sell their houses for profit.

Experiments are on-going in China using both options of renting and sale. These should be evaluated with a view to establishing regulations allowing the profitable operation of the housing management and finance institutions, including market-oriented long-term mortgage lending operations. This framework would enable real estate developers to respond to housing demand.

A well-functioning unemployment insurance system should be established. An unemployment insurance system that provides protection but also encourages active job search is a superior alternative to the current system of job guarantees. It is less costly and it encourages labor mobility.

Autonomous enterprises should not be forced to hire or retain unwanted workers to "solve" the surplus labor problem. The issue is whether a surplus labor redeployment program can successfully be put in place without dramatically increasing the percentage of the population that suffers the trauma of unemployment and without damaging the parallel effort to build a regulated market economy. Surplus labor programs should allow workers to enjoy greater labor mobility and give employers much greater flexibility in deciding who to hire or dismiss. In Chongqing, Harbin, Shanghai, Shenyang, and Wuhan, officials from the labor bureaus envisage a program that would include early retirement for 15 percent of the surplus workers. Another 30 to 35 percent of the pool should be shifted from manufacturing or from ancillary activities within the mother firm to self-employment or work within (often new) small businesses.

The proposed solution for the remaining 50 percent of the redundant workers involves retraining and redeployment within medium- and large-scale enterprises. Chinese cities have extensive experience in setting up and managing training programs. The basic skills for managing such programs are available. But they have to be better suited to a more mature target population, and administrative responsibility must be divided between enterprises and the state. Nonetheless a word of caution is warranted. The Bank's *World Development Report, 1995* could not empirically substantiate cases of successful retraining—from the United States to Indonesia.

The redeployment/retraining program is justified in terms of giving job subsidies to older workers who have implicit or explicit contracts that cannot be violated without social and political costs. The entire economy gains from liberalization. Thus, assisting those who bear the brunt of adjustment costs makes sense. If losses are not compensated, risk-averse behavior will delay the adoption of an efficient organization and related training. In addition, targeting support to the displaced maintains political support for reform. Some of the best assistance practices include adequate advance notice given to develop an assistance strategy, early identification of services and resources needed to facilitate redeployment, local-level coordination of labor market services, temporary intensive on-site services augmented by limited public employment services, and community economic development strategies that stress private sector job creation.

Countries are often tempted to provide supplementary assistance to people going into business for themselves. Although the value of such aid is not obvious, some advocate training in record keeping and business planning. The benefit of providing seed money and loans has also been debated. As long as such payments are based on widely publicized criteria and benefit levels continue to be relatively modest, little harm should come from such initiatives. Involving banks or government agencies in loan programs, however, is not recommended because these programs are costly to administer, are easily subverted by political interests, and generally show poor repayment records.

With these common policies in place, the program could distinguish between those sectors to be disciplined by the market—the competitive sector—and those to be disciplined through regulation, usually natural monopolies.

Priority 1,000 Enterprises and other Large Firms

The Government has selected about 1,000 firms that are to be the focus of reform and will become the backbone of Chinese industry. It is expected that these firms will a first wave of attention and support in granting management autonomy, incorporation, the transfer of social responsibilities, and, where necessary, debt restructuring.

The Government faces a basic choice in deciding the degree of protection and subsidies to accompany enterprise restructuring. International experience has clearly shown that competitive discipline combined with management autonomy offers the highest potential for sustained productivity gains. Relying on protection and subsidies will probably only extend the life of the existing system. This suggests certain guiding principles: First, the restructuring process should not entail any retreat from existing market pressures; to the contrary, the restructuring program should include expanding those pressures. Second, any subsidies should be through the budget, not the banking system, so they are transparent to policymakers; and subsidies should be limited in time and amount so as to convey to management the proper incentives to improve performance. Third, managers, supervised by their boards of directors, must be given the full 14 autonomous rights early in the restructuring process to be successful.

The 1,000 priority firms, like all the 14,000 large and medium enterprises, fall into three broad categories. Perhaps one-third are likely to be profitable after they are relieved of price controls, government interference in management actions, excess labor, and social responsibilities. These enterprises will be able to serve their existing debt on market terms. A second third would be commercially viable after restructuring, except that their debt loads are simply too heavy to permit them to service debt and make necessary reinvestments. Perhaps one-third of enterprises would still not be economically viable under any circumstances. The difficult dilemma of the Government is that only firms that are incurring heavy losses and those that are making handsome profits can be identified with certainty. Deciding the fate of the middle third of enterprises that are marginally loss-making or marginally profitable requires using market forces and decentralized decision-making.

This suggests a phased approach to reform. *First, the lead agency should work with banks to analyze the asset-liability balance* and evaluate the economic potential of large state enterprises to distinguish bankrupt companies from the others.

Second, effectively bankrupt companies should be cut off from bank credit, and be placed in receivership, and eventually be closed and their assets liquidated, or sold. This may take time, during which implicit subsidies should be transferred to the budget. The Government will have to develop a transitional program for workers displaced by the closure of these enterprises. The program will have to fund pension liabilities, housing, and some transitional income maintenance. Housing and some portion of the pension liabilities should be taken from the liquidated assets of the companies. The remainder will have to come from public revenues.

The large enterprises that might become dynamic going concerns have to receive government support in taking three difficult steps: establishing modern corporate governance mechanisms, shedding redundant labor, and separating social service responsibilities from enterprise management. This will allow enterprises to assume responsibility for their own profits and losses. The Government may have to provide subsidies to enterprises during a transitional period, but these should be made available only as part of a financing strategy underpinning a business plan that has clear promise of success.

Third, debt restructuring may be necessary for some heavily indebted enterprises that can become profitable after reform, except for their debt. The first priority is to shut off the flow of credit to uncreditworthy enterprises. Only as this flow, creating additional bad debt, is reduced can the Government consider restructuring the stock of bad debt. Four principles should guide the process:

- Debt restructuring will be more effective if it is among the last steps in enterprise reform, rather than among the first. If undertaken before other reforms have made it possible for firms to be profitable, or if it is not clear that restructured firms will be commercially viable, debt restructuring may have to be repeated. This would raise the cost of reform.

- Mechanisms should avoid "blanket" restructurings that would create incentives for many firms to seek debt forgiveness; instead, mechanisms should provide incentives for firms to service debt at least partially by offering debt relief for responsible payment efforts as of a specified date, and penalties, such as changes in management or ownership, for poor performance.

- Mechanisms should also be designed to allocate the costs of debt relief among creditors, local governments, and the firm itself (possibly through asset

sales), and, only as a last resort, national taxpayers. The burden of debt restructuring will have to be shared to reduce the inflationary impact of writing down debts. If the Government absorbed all bad debts in its budget and then was unable to raise taxes, it would have to print money, which would fuel inflation.

- Any plan for debt restructuring must ensure that any debt write-down occurs only once and will not be repeated. Policy should be clear that it will not provide relief for new bad debts incurred after the restructuring.

Financial restructuring can include debt-equity conversion between enterprises and nonbank creditors. Commercial intermediaries (such as trust and investment companies) could assist in implementing enterprises' debt rearrangements. Other mechanisms include acquisitions of one enterprise by another, creation of joint-stock companies, and public sale of shares.

Restructuring and Finance Agency. The Government may wish to consider establishing a mechanism at the national or provincial level to restructure enterprise debt. The function would be to provide financing for uncreditworthy enterprises while isolating them from the banking system, and ensure that any financing provided to them during the transition period does not accumulate as bad debt on the books of the banks. The entity would receive its financing only as transfers from the Government. It would organize the financial restructuring of enterprises with the participation (and financial contribution) of the municipal government, local creditors, and the firm itself.

Non-competitive Sectors. The non-competitive sector is relatively small, comprising perhaps fewer than 500 to 1,000 of China's state enterprises throughout the economy. This sector includes important industrial activities, such as natural gas and electric power distribution, and nonindustrial activities such as urban water supply, sewage and waste management, and railways. The Government has embarked on programs of reform and restructuring that typically involve separating commercial activities from government bureaus, clarifying the regulatory and legal framework for setting tariffs, diversifying sources of finance by tapping foreign and domestic capital markets, and, where feasible introducing competition, including from foreign sources. *In these sectors, the Government should accelerate reform programs, focusing on improving the regulatory framework, divesting social responsibilities, and diversifying financing sources to include private sources.*

Some sectors that are now state-owned monopolies are *potentially* competitive. Examples include petroleum production, telecommunications, and power generation. In addition, many of these sectors are excessively integrated, and have ancillary businesses that could be spun off into separate, nonstate companies. The Government initiated pilot experiments in 1995 to stimulate BOT (build-operate-transfer) and project finance in power, transport, and water, and is developing regulations that will promote more competition and new sources of finance. *In these sectors, the Government should focus on removing policy barriers to entry and permitting new competition, including foreign investment, based upon sound regulation.*

Small enterprises

About 90,000 of China's state enterprises are classified as small enterprises. They usually engage in potentially competitive activities that do not require the presence of the state. The Government is now experimenting with programs that include mergers, sales, leasing arrangements, formation of cooperatives, management contracts, and joint ventures. These programs, such as those in Shandong, Hebei, Sichuan, and Heilongjiang (see Chapter 1), have already produced evidence of improvements in output and efficiency, reductions in government subsidies, increases in government revenues, and improvement in debt repayment records.

The Government should now convert these experiments into a systematic program to transfer these small enterprises to the nonstate sector, perhaps to be completed during the Ninth Five-Year Plan. A decentralized approach will give municipalities the right incentives to manage this program efficiently. During the first phase the Government could use the Reform Cities to broaden the pilot program, with the objective of transferring ownership of 10-20,000 enterprises in two years. The Government has designated the State Economic and Trade Commission as a lead agency at the national level. A first priority is to set up a leading group to coordinate the reform program at the municipal level to promote the restructuring initiatives. An important first issue is having standardized financial accounts, and these should be audited. All assets and liabilities must be quantified and audited. Second, when forming cooperatives or allowing buyouts by workers, the Government may wish to provide mortgage-like financing with instruments that could later be sold on the market. Third, for divestitures, mergers, or conversion to joint ventures, the leading group would set up and monitor transparent rules and procedures to ensure transparent and suitably competitive procedures to prevent "asset stripping." It would also approve the

division of sales proceeds among creditors and state "owners." The proceeds from asset sales, for example, may have to be used to cover pension liabilities with the municipal funds; in some cases, compensatory fiscal transfers may be required. These enterprises should be removed from the strictures of the investment and credit plan. In the medium term, the program would be extended progressively to other municipalities and provinces.

Transfer programs, including mergers, sales, leasing arrangements, formation of cooperatives, management contracts, and joint ventures, usually will involve the following steps:

- Creating an entity for the coordination, supervision, and execution of the transfer of public enterprises to the new nonstate form in each municipality.
- Assessing the current status, activity area, and general background of the enterprise offered for sale or transfer.
- Selecting an agent to carry out the sale or transfer.
- Setting up programs for groups of individuals, workers and/or managers to participate in the transfer. Buyers or beneficiaries could pay the Government for the enterprise in five-year installments, for example.
- Choosing a sale strategy, which may include transparent private negotiations (as is already the practice in Wuhan, for example) and auctions.

Deciding to auction must be followed by notifying prospective buyers of conditions of sale; schedule of procedure; an executive descriptive summary, which outlines the characteristics of the firm; and a prospectus, which contains financial and commercial information about the firm. The agent should evaluate the enterprise using different methods and determine a price that would be used to evaluate offers.

For auctions or other sales, a mechanism would need to be set up to receive and compare official bids and approve sales. Once a sale is concluded, the proceeds may be used for different but clearly specified ends, including the coverage of social liabilities that are transferred to the municipality.

The State Economic and Trade Commission should conduct a study of on-going cases of transfer, and establish general guidelines that promote the practices that lead most frequently to successful outcomes. It should then disseminate these guidelines as part of its program to carry out the reform. Best practices should be formalized to coincide with establishment of the entity coordinating sales. A more decentralized approach will give municipalities the right incentives to manage sales efficiently.

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[1] See Shirley and Galal, *Bureaucrats in Business* (1995) for a summary of international experience.

[2] See World Bank, *China: Pension System Reform*, forthcoming 1996.

Annexes

ANNEX 1:
A Sample of Five Cities and 156 Enterprises

This report relies in part on the analysis of the 156 state-owned enterprises that responded to a survey questionnaire distributed to the 167 enterprises chosen for comprehensive reform, including restructuring of state-owned enterprises and their social services. They include 49 enterprises in Chongqing, 18 in Harbin, 39 in Shanghai, 22 in Shenyang, and 28 in Wuhan. Their activities cover more than 40 industrial sectors: textile mills, factories producing computers, televisions, boilers, refrigerators, automobiles, machine tools, paper products, bicycles, sewing machines, pharmaceutical products, cement, steel, and petroleum; and firms involved in processing grain, and making beer, porcelain, educational and many other products.

Five Cities

The populations of each of our sample cities is greater than those of most Central American countries (Panama, Costa Rica, Nicaragua, or El Salvador) and greater than those of many transition economies (Estonia, Latvia, Armenia, Moldova). In fact, Shanghai is bigger than Hungary. Shanghai has the highest income per capita of the five cities—4.4 times that of Chongqing, the poorest city in our sample (Table A1.1). Between 1978 and 1993 the economies of the five cities grew quickly. GDP per capita grew at 10 percent a year in Chongqing, Shenyang, and Wuhan and at nine percent a year in Shanghai.[1]

The sectoral composition of GDP varies in the five cities. Shanghai is the most industrialized, with 60 percent of its GDP generated in the secondary sector. And Chongqing is the least industrialized, with 20 percent of its GDP produced in the primary sector. There are almost 40,000 enterprises in these five cities (Table A1.2). Except in Shanghai, there has been very little movement away from public ownership (collectives which are not private businesses, do differ from state-owned enterprises in that they cannot receive large loans from state banks). In Chongqing, Harbin, and Wuhan state-owned and collective enterprises still produce approximately 95 percent of gross industrial output and account for more than 95 percent of employment in industrial enterprises with independent accounts. In Shenyang state-owned enterprises and collectives produce 85 percent of gross industrial output and employ 90 percent of workers. Even in Shanghai state-owned enterprises and collectives still produce almost 70 percent of gross industrial output and hire more than 75 percent of the employees in industrial enterprises with independent accounts (Table A1.2).

Table A1.1
Economic indicators

	Chongqing	Harbin	Shanghai	Shenyang	Wuhan
Population, 1993 (millions)	1.5	5.6	13.0	6.6	6.9
GDP per capita, 1993 (Yuan/person)	2,660	3,780	11,700	6,140	4,700
GDP growth, 19978-93 (% per year)	10.6	—	8.9	10.1	9.6
GDP Composition (percent)					
Primary	20	11	2	9	11
Secondary	47	46	60	50	53
Tertiary	33	43	38	41	36

— Not available.
Source: Municipal Statistical Yearbooks of Chongqing, Harbin, Shanghai, Shenyang, and Wuhan, 1994.

Since state-owned enterprises still dominate the economy, average labor productivity as a whole and state enterprises labor productivity are approximately the same (Table A1.3). Labor productivity in collectives is well below that in state-owned enterprises and productivity in foreign-funded firms is much higher. Shanghai's labor productivity, both for the

industrial sector as a whole and for state-owned enterprises, is twice that of other cities.

The Sample

Chinese authorities use different criteria in classifying enterprises by size. For example, in the power sector, size may be based on kilowatts of electricity produced, or in enterprises producing more than one good, size may be based on the value of output or the size of the labor force, or the value of fixed assets. Among the state-owned enterprises included in our sample, 105 are large, 43 medium-size, and seven small, according to China's official classification system (Table A1.4).[2]

How does our sample compare with the distribution of large and medium-size state-owned enterprises in the rest of China? To make this comparison, we use 1992 data because more recent figures on comparable variables are not available. For medium-size and large enterprises in our sample, both value added and the value of sales are about twice as high as the national averages (Tables A1.5 and A1.6). The value added of the few small enterprises in our sample is, on average, 10 times as large as the value added of small enterprises throughout China.

Not surprisingly, the predominance of medium-size and large enterprises in our sample is reflected by the average number of employees per firm. For the 135 enterprises that reported the size of their labor force, this figure is 4,890—more than 10 times the national industrial average.

Almost 70 percent of enterprises in the sample are supervised by their municipal government, and only five percent by the central government. About 80 percent of the enterprises are more than 15 years old.

In examining the performance of the enterprises in our sample, we use the survey data with caution. We have excluded firms with missing observations and outliers (observations that deviate from the average by more than two standard deviations). We have avoided comparisons over time because of changes in the accounting system in mid-1993. The intricacies of Chinese accounting are discussed in Annex 3. Unless otherwise indicated, data are for the first semester of 1994.

Table A1.2
Number of enterprises and employees in industrial enterprises with independent accounts *(1993)*

	Chongqing	Harbin	Shanghai	Shenyang	Wuhan
Number of enterprises (thousands)	6.4	3.8	10.3	6.6	3.5
Share of enterprises in SOEs and collectives in total (percent)	96.2	98.3	74.7	96.2	96.9
Number of employees (thousands)	1,407.5	953.1	3,330.6	1,327.6	1,071.7
Share of employees in SOEs & collectives in total (percent)	97.9	97.3	75.6	91.1	96.7

Source: Municipal Statistical Yearbooks of Chongqing, Harbin, Shanghai, Shenyang, and Wuhan, 1994.

Table A1.3
Labor productivity of industrial enterprises with independent accounts, 1993
(thousands of Yuan per year)

Industrial value-added/ employees	Chongqing	Harbin	Shanghai	Shenyang	Wuhan
All	10.8	10.2	26.1	10.7	14.0
SOEs	13.5	10.4	26.0	10.0	17.0
Collectives	5.7	8.7	13.7	10.1	5.8
Foreign-funded	—	35.2	38.5	65.0	—

— Not Available.
Source: Municipal Statistical Yearbooks of Chongqing, Harbin, Shanghai, Shenyang, and Wuhan, 1994.

Table A1.4
Characteristics of the sample enterprises, 1994

	Chongqing	Harbin	Shanghai	Shenyang	Wuhan	All Cities
Sample Observations	49	18	39	22	28	156
Size of Enterprises in the Sample						
Large	24	12	31	20	18	105
Medium	21	4	7	2	9	43
Small	3	2	1	0	1	7
Missing Obs.	1	0	0	0	0	1
Supervising Authority						
Central	7	0	0	1	0	8
Provincial	1	3	28	2	2	36
Municipal	38	14	11	18	23	104
District	2	0	0	0	2	4
Missing Obs.	1	1	0	1	1	4
Age of Enterprises in the Sample						
Under 5 Years	3	0	4	2	1	10
5 to 15 Years	4	1	7	3	1	16
Above 15 Years	39	17	27	13	24	120
Missing Obs.	3	0	1	4	2	10

Source: Survey of 156 SOEs.

Table A1.5
Industrial value added--sample and national averages, 1992

Size	China /a		Sample /b	
	Number of Enterprises	Average Value Added (Y'000)	Number of Enterprises	Average Value Added (Y'000)
Small	391,086	723	7	8,121
Medium	13,003	11,559	22	27,729
Large	3,900	85,535	53	158,860

/a Industrial Enterprises with independent accounting system, 1992.
/b Sampled Enterprises reporting value added in 1992.

Sources: China Statistical Yearbook, 1993 and Survey of 156 Enterprises.

Table A1.6
Average sales revenue sample and national averages, 1992

Size	China /a		Sample /b	
	Number of Enterprises	Sales Revenue *(Y'000)*	Number of Enterprises	Sales Revenue *(Y'000)*
Small	391,086	2,673	7	28,162
Medium	13,003	41,850	36	72,031
Large	3,900	255,698	87	505,678

/a Industrial Enterprises with independent accounting system, 1992.
/b Sample enterprises reporting sales revenue in 1992.

Sources: China Statistical Yearbook, 1993 and Survey of 156 Enterprises

Notes

[1] Harbin's growth rate was approximately 8 percent in 1993. There is no information on its growth rate in the previous years.

[2] One surveyed enterprise did not report its size.

Annex 2:
Statistical Annex to Chapter 1

Table A2.1
Population, labor force, and employment in China's state-owned enterprises
(1985-93)

	1985	1993
	Millions	
Population	1,059	1,185
Labor Force: Total	499	602
Urban Employment	128	160
Staff and Workers	124	149
Staff and Workers in Industry	56	66
Rural Employment	371	442
Employment in SOEs		
Total	90	109
In Industry	38	45
Labor Force in Industry (Urban & Rural)	84	102/a
	Percent	
Total Employment in SOEs as a share of		
Total employment	18.0	18.1
Urban employment	70.3	68.1
Employment in Industrial SOEs as a share of		
Industrial Employment	45.7	43.0
Urban Industrial Employment	67.8	68.1

/a Total staff and workers include persons employed in enterprises and institutions under state ownership, collective ownership, joint ownership, shareholding, foreign ownership, and ownership by overseas Chinese. Total urban employment exceeds total staff and workers because it also includes the self-employed and workers in private enterprises.

Source: China Statistical Yearbook, 1994.

Table A2.2
Number of enterprises and investment in China's industrial sector, 1985-93

Type of Enterprise	Number of enterprises ('000s) /a		Share of fixed-capital investment (%) /b	
	1985	1993	1985	1993
State-Owned	94	105	66.1	61.5
Collectively Owned	1,742	1,804	12.9	18.0
Individually Owned and Others	3,349	8,003	21.0	20.5

/a Enterprises with independent accounting systems.
/b The numbers for 1985 and 1993 are not strictly comparable because the ratio for 1985 biases the share of state-owned enterprises upward by including investment undertaken by joint ventures, for example.

Source: State Statistical Bureau, China Statistics Yearbook, 1994.

Table A2.3
Output in China's industrial sector, 1985-93 (Percent)

Type of Enterprise	1985	1993
State-Owned	64.9	43.1
Collectively owned /a	32.1	38.4
Individually owned and others /b	3.0	18.5

/a Collective enterprises include township enterprises,village enterprises,and joint urban and joint rural enterprises.
/b Others include rural and urban private enterprises, joint ventures, foreign-owned enterprises, and enterprises invested in by overseas Chinese.

Source: State Statistical Bureau, China Statistics Yearbook, 1994.

Table A2.4:
Growth rates of industrial gross real output, 1991-93

Year	Total	State-Owned	Collectively-Owned	Individually-Owned	Other
1991	7.0	6.0	9.4	4.2	10.7
1992	12.8	3.8	20.9	27.6	14.7
1993	0.5	-6.7	-3.3	15.1	22.0

Source: China Statistical Yearbook, 1994.

Table A2.5:
Losses of SOEs in Harbin, 1993 (Percent)

SOEs by Affiliation	Losses/Value Added	Share in Total Losses of SOEs
Central Government	11.1	20.9
Local Government	21.6	79.1
Light Industry	32.4	49.6
Heavy Industry	12.6	50.4
Small	13.6	11.6
Medium	25.4	31.7
Large	16.4	56.7

Source: Municipal Statistical Yearbooks of Harbin, 1994.

Table A2.6
Losses of industrial enterprises with independent accounts in Shenyang, 1993
(Percent)

	Losses/Value Added
Light Industry	4.6
Heavy Industry	8.5
Small	3.5
Medium	2.9
Large	6.9

Sources: Municipal Statistical Yearbooks of Shenyang, 1994.

Table A2.7
Share of Pretax Profits in Sales Revenue:Sample and National Averages, 1992

Sizes	China /a		Sample /b	
	Number of Enterprises	Profits/Sales	Number of Enterprises	Profits/Sales
Small	391,086	9	-	-
Medium	13,003	11	33	4
Large	3,900	13	84	5

(-) Not available.

/a Industrial Enterprises with independent accounting system, 1992.
/b Sample Enterprises reporting profits in 1992.

Sources: China Statistical Yearbook, 1993 and Survey of 156 Enterprises.

Table A2.8
Pretax profits/sales and overemployment

Actual/Optimal Employment	Profit/Sales (percent)	Number of Enterprises
Too Low	6.05	4
About right	9.94	15
Over, 5-10%	6.41	29
Over, 10-20%	2.25	30
Over, 20-30%	6.07	16
Over, 30%	0.61	18
Total	**4.58**	**112**

Source: Survey of 156 State-Owned Enterprises.

Table A2.9
Plans for layoff of redundant workers in 122 enterprises
(Plans made in 1994 for 1995)

	Percentage of Firms Planning to Layoff		
Firms with	Less than 30% of Redundant Workers	More than 30% of Redundant Workers	Total
More than 30% redundant workers	20	0	20
Between 20 and 30%	19	1	20
Between 10 and 20%	24	1	25
Less than 5%	35	0	35
Total	98	2	100

Source: Survey of 156 enterprises in five cities.

Table A2.10
Birth rates and urban population in China (Selected Years)

	Birth Rates (per thousand)		
Year	National	City	Urban Pop. (Mln.)
1965	37.9	26.6	130
1970	33.4	--	144
1975	23.0	14.7	160
1978	18.32	13.6	172
1980	18.2	14.2	191

Source: China Statistical Yearbook, 1994.

Annex 3: Accounting Systems

All SOEs in China follow a unified enterprise accounting system stipulated by the Ministry of Finance (MOF). Until the recent accounting reforms, the Chinese accounting system largely followed the Soviet system, which was developed in the context of a highly centralized, planned economy. China's accounting regulations for industrial SOEs were first introduced in 1952. A fundamental shortcoming of this system was the orientation to ensure compliance with tax rules, rather than to produce information needed for the management of the enterprises in pursuit of prudent financial management. In a word, the accounting regulations were rule- rather than principle-oriented.

The lack of distinction between financial and tax accounting gave rise to major inconsistencies between Chinese accounting practices and international standards. As a result, the financial statements of Chinese SOEs presented a distorted view of their operating results and financial position.

Beginning with a law in 1985 that amended the 1952 regulations, China initiated reform of its accounting system. However, until the implementation of the first set of accounting standards by MOF in July 1993, no such standards had been explicitly established to provide a conceptual basis for Chinese SOE accounting. The 1993 standards embody principles that are generally consistent with internationally accepted practices; these standards are legally binding on all enterprises established in China. In July 1993 MOF also revised and promulgated new accounting regulations for more than 10 industries; by 1996, completion of the general accounting regulatory framework is expected.

The previous lack of attention to accounting standards in China is in part attributable to the fact that professional accounting organizations were not established until recently. In 1980 the Accounting Society of China (ASC), which is devoted to the development of the accounting profession, was established; it has local branches nationwide. Although a professional organization, ASC does not have the authoritative status of FASB in the United States (or analogous organizations in other Western countries) in developing and ensuring adherence to accounting standards in China. MOF's Department of Administration of Accounting Affairs (DAAA) is the agency officially responsible for developing and enforcing accounting standards and regulations; still, the DAAA closely collaborates with the ASC.

After the suspension of the auditing function in China for 30 years—at the time of the People's Republic of China's founding the country's auditing system, which dates back 3,000 years to the Zhou Dynasty, was abolished—the Audit Administration of China (AAC) was established in 1983.[1] AAC effectively oversees (a) state auditors, who operate within government departments and are responsible for the official audits of SOEs, and (b) internal auditors, who operate within enterprises on behalf of management, but can be tasked to carry out a supervisory audit of the enterprise on behalf of the state (thus posing a conflict of interest). There are more than 50,000 state auditors and more than 100,000 internal auditors. CPA auditors, which number more than 6,000 persons, are independent of AAC, but regulated by MOF. Although an SOE can hire a CPA firm to audit its accounts, at present most CPA firms serve joint ventures or fully foreign-funded firms. On the other hand, municipalities and provinces are increasingly requiring CPA audits for large state-owned investment projects, for newly registered enterprises of all types, and for firms seeking to be listed on a stock exchange. Within the past decade, foreign accounting firms have attempted to enter the Chinese market; today, all of the "Big Six" international accounting firms have been allowed by Chinese authorities to establish joint ventures with local firms.

Implementation of the New Accounting Standards. Among the 156 firms surveyed, 96 percent report that they have "fully implemented" the new accounting standards; 3 percent indicate "partial implementation." On-site interviews with managers of a sample of the surveyed firms reveal that, despite the July 1993 deadline, in fact implementation of the new standards is less uniform than suggested by the survey data.

Interviews with municipal officials confirmed this finding. In Harbin, for example, city officials report that beginning in April 1994 the municipality fully implemented the new accounting system. They also report that in order to ensure the smooth transition from the old to the new accounting system, the city Finance Bureau sponsored numerous (more than 35) training sessions in 1994 for accountants (of which there are more than 40,000) and factory directors. Harbin authorities indicated that accountants in all the SOEs

under the municipal industrial bureaus have received training in the new system.

With regard to audits, 84 percent of the firms indicate they have had their accounts independently audited since 1990; 13 percent indicated they had not. Most audits took place in 1990 and 1992, which is prior to the implementation of the new standards. Seventy-four percent of the firms indicated their audited accounts are public, and 25 percent said they are not.

Notes

1 *Accounting in China,* Longman Press, Hong Kong, 1994.

Annex 4:
Calculation Of Economic Profits After Adjusting For Implicit Subsidies

Given widespread interference by the Government in almost all spheres of enterprise activities, the profit figures reported by Chinese enterprises cannot be taken at face value. Adjustments have to be made for several forms of implicit taxation and subsidies that the enterprises are subjected to. The following exercise attempts to adjust for sales tax, energy subsidies, investment subsidies, working capital subsidies and bad debt to arrive at the economic profits for 67 profitable enterprises in our sample. It may be noted at the outset that this exercise could not include profit and corporate taxes due to lack of relevant data. Also, several enterprises continue to enjoy direct cash subsidies from the central, provincial and municipal governments. The 67 enterprises in question reported that such direct cash subsidies were zero.

The subsample of 67 profitable enterprises. Out of 156 enterprises in our sample, 146 enterprises reported non-zero profit figures, out of which 120 showed positive profits. However, to be able to adjust also for social burdens—in particular, housing subsidies—we have confined ourselves to only 84 enterprises for which social subsidies could be estimated. Of these 84 enterprises, only 67 reported positive profits. The present exercise, therefore, focuses on these 67 profitable enterprises.

Adjusting for Implicit Price Subsidies. Implicit subsidies and taxation to which enterprises are subjected through price regulation are fairly large in China. Our data do not allow us to estimate the implicit taxes that enterprises pay due to controls on output prices, but we have data on energy costs (mainly coal and electricity) to estimate subsidies on energy inputs. We have assumed that energy inputs are being provided at 90 percent of their costs—that is, a flat 10 percent subsidy for energy inputs used by the firms. On a per enterprise basis, the estimated energy subsidies amount to around Y 950,000 per enterprise.

In addition to subsidized energy, SOEs also enjoy subsidies on telephones, transport and a host of municipal services. We could not account for such subsidies due to lack of data. To that extent, our exercise will underestimate subsidies (and overestimate economic profits).

Adjusting for Subsidies of Fixed Investments. A large part of fixed investment of state enterprises are financed with cheap credit from the Government and the banks. The interest rates on such credits charged to SOEs are lower than the inflation rate. For example, the interest rate on fixed capital loans for a maturity of three to five years is 13.9 percent whereas the short-term market rates of interest are around 25 percent and the inflation rate around 21 percent. We have assumed that the opportunity cost of investment capital is around 25 percent, which implies an interest rate subsidy of around 11 percent per year (or 5.5 percent per semester).

During the first half of 1994, the 67 profitable enterprises in our subsample reported that their fixed investment within state budget was around Y 47 million and their fixed investment financed by bank loans was around Y 42 million. Using an implicit interest subsidy of 5.5 percent, the subsidy on fixed investment works out to Y 4.91 million.

Adjusting for Working Capital Subsidies. Enterprises also rely on the Government as well as the banks to finance their working capital requirements. In 1994 first semester, the 67 enterprises under consideration borrowed, on average, about Y 29 million from the state and about Y 118 million from the banks for their working capital. We assume that the implicit interest subsidy for working capital loans is the same as that for fixed investment, that is, 5.5 percent per semester.

It may be noted that enterprises also maintain deposits with the banking system for which they obtain an interest rate far below the market rate or even the lending rates. For example, interviews revealed that enterprises are getting only a 2.6 percent per year deposit rate. To that extent, the enterprises are getting implicitly taxed. This amount must be netted out from the implicit interest subsidies. We assume that the implicit taxation is about 22.4 percent (= 25 - 2.6) per year, or 11.2 percent for six months. The implied

subsidy on working capital, after netting out the implicit taxation on account of lower deposit rates, works out to around Y 6.43 million.

Adjusting for Bad Debt. Given the reluctance of the banks to reveal the extent of the bad debt problem, one has to essentially guestimate this figure. The enterprises in our survey did report that a substantial amount of bank loans as well as loans from other enterprises remained unpaid on time. The 67 enterprises in question reported that they could not pay on time Y 29.3 million to the banks and Y 5.3 million to other enterprises during the first half of 1994. We have assumed that about 30 percent of the loans reported as unpaid on time constituted bad loans. For bank loans, we have further assumed that they are amortized over 10 years using a 10 percent rate. The bad loans to banks and other enterprises are thus estimated at around Y 1.14 and Y 0.8 million respectively.

Table A4.1:
Calculation of Economic Profits for 1994 First Half, 67 Firms
(in Million Yuan)

	Million Yuan
Reported Profits	7.07
less	
Energy subsidies (assumed as 10% of energy cost):	0.95
Investment subsidies:	4.91
Fixed investment within state budget	2.58
Bank loans for fixed investment (assuming 11% interest subsidy)	2.32
Working capital subsidies:	6.43
Working capital loans from state	1.58
Working capital loans from banks (assuming 11% interest subsidy)	6.47
less Interest forgone on bank deposits (includes special capital bank deposits; estimated using growth rate of sales (16%); assuming 25-2.6=22.4% in forgone interest)	1.63
Bad debt:	1.93
Bank loans in default (assuming 30% default over 10 years amortization, 10% interest)	1.14
Enterprise loans in default (assuming 30% default)	0.79
Sales Revenue (million yuan)	147.18

Annex 5:
Labor Redeployment Strategies

Each of the sector study cities had rough estimates of the absolute size of the surplus labor or redundant labor force. Chongqing reports approximately 200,000 such workers; by comparison, only 4,300 received unemployment benefits in 1994. Wuhan authorities assume a surplus labor population of 300,000, of whom about 120,000 are industrial workers; only 5,000 received unemployment benefits in 1994. Shenyang estimates 500,000 workers are redundant; compared to 10,600 who collected unemployment benefits in 1994. Harbin assumes surplus labor totals range from 200,000 to 250,000; while 4,200 received unemployment benefits in 1994. Shanghai's surplus labor is said to total 300,000 to 350,000; compared to 50,000 receiving unemployment benefits in 1994. To move all surplus laborers directly into the small existing unemployment compensation program is not realistic in the shortrun; though all cities see the total number of individuals benefiting from such payments as doubling each year for the foreseeable future.

If such a safety net can only be counted on to play a full-fledged role in the medium- to long-term, what other options exist?

The most popular, i.e., least disruptive, involves retraining and redeploying workers. According to the World Bank, 1993 (as updated by mission estimates), there are approximately 3,000 municipality-operated training centers capable of handling up to 1 million students at a time. In addition, 20,000 to 25,000 enterprises run their own in-house centers. Five thousand public apprenticeship schools offer technical training to 2 million mostly new entrants into the labor force. Municipal centers have generally well-established curricula, but staff are geared to preservice not adult workers looking for short, focused inservice courses. At training centers run by enterprises in-house, the training curricula are much more varied in quality. In all cases, too much time is spent on theory and 40 percent or less on practice because of lack of equipment, consumable supplies, and appropriate tools and machines. Government employment centers have curricula more suited to preservice than inservice students. Teaching methods stress passive training approaches and are not focused enough on competency-based objectives and materials. There is often a severe lack of materials and supplies, leading to severe underutilization of workshops and exacerbated by low teaching loads (often eight hours per week). Too many teachers are too academic and lack orientation to the world where industrial experience counts. Currently, the training for pre-university worker seems too limited and includes—for municipality-sponsored centers—cashiers, street vendors, waiters, auto mechanics, and hotel services; while secondary vocational schools provide training in food processing, cosmetology, sales, and low-level office work. Some of the secondary technical schools provide for introductory accounting skills, basic information processing, technical sales, and driving skills. SOEs also organize or farm out training, but the curricula are limited, materials are in short supply, there is a shortage of trainers, and facilities are poorly equipped.

Once retrained, what will become of the surplus workers? The preferred options involve moving workers into subsidiaries of the original employer, either pre-existing COEs or newly-created Labor Service Companies (LSCs); the latter would receive multiyear tax exemptions or tax reductions upon establishment. Here, one important issue is whether the parent company will assume financial responsibility for poorly-performing subsidiaries; if so, then the cycle of poor performance followed by redeployment responsibilities may become open-ended. In other cases, trainees are encouraged to pool their savings, and create self-financed cooperative enterprises; begin work with another, pre-existing employer; or become self-employed. Depending on the locality, exercise of each of these options may be accompanied by preferential tax treatment and/or financial incentives such as lump-sum payments out of pre-existing unemployment compensation funds.

The next, most popular option involves granting workers a severance pay package that is tied to seniority within the firm—typically one month's payment for every year worked—with the last month's total compensation used for purposes of calculation. Though potentially costly, severance payments end the bulk of enterprise responsibilities toward a given worker; given the undeveloped state of housing and social security reforms, however, the employer would continue to bear any current burden of providing

housing, medical care, and pensions. As municipal pooling schemes emerge, pension and (at a later date) medical care expenditures may be divorced from that employer once severance payments have been made. Housing reforms are still in their infancy.

Workers who receive severance pay are expected to fend for themselves. If they do not withdraw from the labor market (which is an option, given urban China's unusually high labor force participation rates, then the remaining options include working in a cooperative, finding work with an existing (unrelated) SOE or COE, joining a TVE; or becoming self-unemployed. As a further incentive, beneficiaries of severance pay schemes are allowed to draw unemployment benefits, concurrently, up to a maximum of 24 months.

This is virtually the same fate that awaits those who are released using the remaining three options: access to unemployment benefits followed, after two years, by eligibility for welfare benefits; access to informal unemployment allowances, in the form of basic wage payments (roughly half of total cash compensation for the fully employed), followed by eligibility for welfare benefits; in return for "staying home;" and early retirement—often at some fraction of the entitlement level, a worker can expect to receive once full retirement age is reached. A variant on this option involves providing disability payments to workers who may have an otherwise marginal case for receiving them.

Unlike the earlier options discussed, those workers that receive de jute or de facto unemployment benefits may take home little more than the very meager welfare benefits the poverty-stricken are eligible for. As a rule of thumb, welfare benefits rarely exceed Y 100 per month; unemployment benefits or enterprise allowances reach, at most, Y 200 per month; while full cash compensation for an average worker totals Y 400-Y 600 per month, depending on the locality involved.

No city has canvassed the entire surplus labor population to establish its characteristics and likely fate. At best, one must rely on orders of magnitude. Whether realistic or not, the cities surveyed believe roughly half the surplus workers will be redeployed by the original employer within a company subsidiary. A small fraction, amounting to no more than 15 percent, will benefit from early retirement or disability pay. The remainder are expected to resolve their problem through individual initiative, though usually with transition payments and access to incentives and safety net benefits cited above. The local authorities assume that the regional economy will generate alternative employment opportunities for all who seek them. It is too early to know if each and every metropolitan area can fulfill this expectation.

ANNEX 6:
Competitive Strategies

Table A6.1
State-owned enterprises' most competitive rivals

Rivals	Percentage of responses	Number of Responses
Other state-owned enterprises	72	139
Town and village enterprises	15	112
Urban collectively owned enterprises	3	109
Private domestic businesses	7	89
Foreign firms	20	101

Note: Percentages in the first column cannot be added. Firms did not rank all alternatives but only a subset of them. The table should be read as follows: among the 139 enterprises that included other state-owned enterprises as rivals in their answer, 72 percent indicated that other state-owned enterprises were their toughest rivals.

Table A6.2
China: State-owned enterprises' most effective competitive strategies

Competitive Strategies	Percentage	Number of Responses
Improving Product Quality	57	145
Lowering Prices	18	136
Introducing New Products	20	143
Lowering Costs by Improving Internal Efficiency	9	141
Using Government Authorities to Influence Market Conditions	2	125
Advertising	1	130

Note: The column percentage do not add to 100 because enterprises did not rank all alternatives. The table can be read as follows: Among 145 enterprises, 57 percent indicated that improving quality was their most effective competitive strategy.

Table A6.3
China: State-owned enterprises' objectives in price setting

Objectives	Percentage of Responses	Number of Responses
Maximize Profits	34	144
Expand Market Share	55	145
Stabilize Prices	1	137
Maintain Stable Output Levels	4	137
React to Rivals' Price Changes	10	139

Note: The column percentages do not added to 100 because enterprises did not rank all alternatives.

Annex 7:
The Circular of the State Council on Deepening of Reform of Pension Insurance System

State Council Document (1995) No. 6

The people's governments of provinces, autonomous regions and municipalities directly under central government, institutions under the State Council:

Since the issuing of "Decision of the State Council on the reform of pension insurance system of enterprise workers" (State Council document <1991> No. 33), various regions and departments concerned have been actively implementing the reform of pension insurance reform and have achieved some results in pushing forward social pooling of insurance premium, expanding insurance scope, practicing individual premium payment system and trial experiment combining social pooling and individual accounts. The reform has played an important role in guaranteeing the basic lives of retired workers, safeguarding social stability and promoting economic development. However, as the reform is still in the initial exploring stage, the current enterprise workers' pension insurance system can not meet the demand of socialist market economic system and thus needs further reforming. In light of the Decision of Central Committee of Communist Party of China on the Issues Concerning the Establishment of Socialist Market Economic System, the State Council, on the basis of investigations and extensive collection of suggestions, hereby issues the following circular on the questions concerning the deepening of reform of pension insurance system:

I. The target of reform of enterprises workers' pension insurance system is: by the end of this century, a pension insurance system, which meets the demand of socialist market economy, shall be basically be established. Applying to workers of various urban enterprises and individual workers, the system shall be characterized by multichannels of fund sources, multilevels of insurance means, combination of social planning and individual accounts and rights and responsibilities, and socialized management service. The basic pension insurance system shall gradually help to put various kinds of enterprises and workers under unified system, standard and management. The funds shall be under unified regulation.

II. The principle of deepening the reform of pension insurance system is: the insurance level shall adapt to the social productivity of the country and bearing abilities of various aspects; social mutual aid shall be combined with self-insurance and fairness with efficiency; policies shall be unified and management legalized; administrative management shall be separated from that of insurance funds.

III. The premium of basic pension insurance shall be shared by enterprises and individuals with social pooling combined with individual accounts. Distribution relationship shall be smoothed and proportion of individual premium payment shall be raised gradually on the basis of quickening the step of salarizing of individual incomes and monetizing of wages. The degree of individual premium payment raising shall be decided by provincial, regional and municipal people's governments according to the wage increases in different areas. Two implementing plans which combine social pooling and individual accounts, have been proposed to suit different situations in different regions (see appendixes). The prefectures and cities (excluding county-level cities) shall make their decisions and report to the provincial and regional governments for approval, The municipalities under the central government shall make their decisions and report to Ministry of Labor for record. Various localities may revise and improve the two plans according to their specific situations.

IV. In order to ensure the basic lives of retired personnel, various areas should set up normal adjustment mechanism of basic pension. Basic pension may be adjusted according to a certain proportion to the average growth rate of wage for the previous year. The detailed plan may be decided up by provincial,

regional and municipal governments under the guidance of state policies.

V. In addition to basic pension insurance to ensure basic lives of retired personnel, the enterprises shall be encouraged to set up supplementary pension insurance and individual depository pension insurance. After they have paid premium for basic pension insurance, the enterprises may, under the guidance of state policies, establish supplementary pension insurance for their workers. The enterprises and individuals shall select on their own the insurance agencies for supplementary pension insurance and individual depository insurance.

VI. The localities shall fully consider the fact that reform of pension insurance system is a long-term process. The proportions of premium payment by enterprises and individuals, standard of pension granting and fund accumulation rate shall be decided upon according to the actual situation of our country with low productivity, large population and ever serious aging problem. The interests of state, enterprise and individuals, as well as short- and long-term interests should all be taken into consideration. An overall planning should be conducted on the basis of intensive calculation and investigation. The premium collection proportions for basic pension and basic pension granting should strictly controlled to alleviate the enterprises and state's burdens.

VII. The budget management and accounting systems for pension insurance funds, premium payment recording and individual accounts should be established according to the state regulations. The withdrawing and use of management fee should be strictly controlled. In accordance to the principle of special funds for special purpose, the funds should be well managed to ensure the safety and try to maintain and increase the value of funds. At present, 80 percent of the remnant of pension insurance funds, except for that enough for pension payment for two months, should be used to buy the special bond for social insurance funds issued by the state. Any units or individuals may not decide on their own upon the uses of the funds. The gains from the operation of pension insurance funds should all be placed to the funds and enjoy tax exemption.

VIII. Various localities and departments concerned shall actively create conditions to increase the socialization of pension insurance management. In the areas with good technical conditions and early achievements in pension reform, the pension granting by enterprises shall be gradually transferred to the bank and post office. In the areas without proper conditions for the time being, the social security agencies may take over the granting. These agencies may set up their offices in large enterprises to offer service to retired workers. In the meantime, enthusiasm from other aspects shall also be brought into play. The management of enterprises over retired workers shall be gradually transferred to communities which shall take care of most of the work in order to improve socialized management and alleviate burdens of enterprises.

IX. A management system shall be set) to separate social insurance administration and fund management, executive organizations from supervision organizations. The main tasks of social insurance administrations are to formulate policies and plans, and intensify supervision and guidance. The management of social insurance funds shall be in the charge of handling agencies. Various localities and departments concerned shall establish social insurance supervision committee composed of representatives of enterprises, trade unions and retired workers in a bid to strengthen the supervision over the implementation of social insurance policies and regulations, and fund management.

X. The enterprises which, upon approval by the State Council, are directly organized by departments concerned and units under the State Council to join in the pooling of pension insurance expenses, shall remain unchanged in the pooling. But they should also practice the reform in light of the principle of combining social pooling and individual accounts.

XI. The Ministry of Labor shall be responsible for guiding and supervising the work of pension insurance in the country as well as pushing forward the reform of pension insurance system. The State Commission of Restructuring the Economy shall actively participate in the efforts by choosing some areas as the trial places for deepening reform. The Ministry of Labor shall also support their work. The State Planning Commission, State Economic and Trade Commission, Ministry of Finance, the People's Bank of China and so on should cooperate according to respective duties.

The deepening of pension insurance system is an important task, which is of vital significance to improving social security system, boosting reform, development and stability. Various localities, departments concerned should attach great importance to this work, strengthen leadership and meticulously organize its implementation so as to push forward the reform actively and steadily, and get substantial results. The new situation and questions in the course of the

reform should be timely studied and solved. The major issues should be reported timely to the higher departments.

Appendixes:

1. Implementing Plan I of basic pension insurance combining social pooling and individual accounts

2. Implementing Plan II of basic pension insurance combining social pooling and individual accounts.

March 1, 1995

Implementing Plan I Of Basic Pension Insurance Combining Social Pooling And Individual Accounts

I. Raising of basic pension insurance premium

Basic pension insurance premium shall be jointly borne by units and individuals.

1. Individual premium payment

The wage base figure of individual premium payment shall be the average monthly wage of this worker for the previous year. Average monthly wage shall be calculated on the basis of items listed as parts of total monthly wages provided by State Statistical Bureau. They include wage, bonus, allowance and subsidies. The part of average monthly wage which is higher than the local worker's average wage by 200 percent or above 300 percent shall not be calculated into the base figure of individual premium payment; the part which is lower than local worker's average wage by 60 percent shall be calculated into the premium payment by 60 percent.

The proportion of individual payment. As of the date of implementing this plan, workers shall pay the premium by the proportion of no less than 3 percent of the wage base figure. Later, one percentage point shall be raised every two years until it reaches 50 percent of individual-account pension premium. The retired personnel shall not pay the premiums.

Nonwage-earners like the self-employed workers themselves and owners of private enterprises may set the worker's average monthly pay for previous year as the base figure of premium payment. They shall pay the premiums with the proportion of around 20 percent, about 4 percent of which shall go to social pooling funds and 16 percent go to individual accounts.

2. Pension insurance premiums paid by enterprises

Enterprises shall pay basic pension insurance premiums by a certain proportion of the workers' total amount of wages. To cross the peak time of aging of population in their areas, various localities should set out long-term fund pooling rate according to partial accumulation system. At present, the premiums may be paid according to the current fund pooling rate. Through such measures as raising collection rate and enlarging covering scope, the social pooling rate should be steadied at a set-out standard and even lowered to some extent to ease the burden of enterprises.

3. The basic pension insurance premiums paid by enterprises should be listed before tax and individual premium payments shall not be levied individual income tax.

When difficulties occur with basic pension funds, financial department at the same level shall offer support.

II. Establishment of individual accounts for basic pension insurance

1. In light of the principle of social pooling combined with individual accounts, social insurance agencies shall set up a life-time account for each person who buys basic pension insurance according to the social security number (State standard GBI1643-89) issued by State Technological Supervision Bureau or number of resident's ID card.

2. The individual account for basic pension insurance shall be set up at the proportion of about 16 percent of worker's wage, including:

(1) All the premium the worker himself or herself pays

(2) The part of premium paid by enterprise which is converted to the individual account according to a certain rate.

The above two items put together shall be about 11 percent. With the raising of proportion of individual payment, the part of enterprise-paid premium shall be subsequently decreased.

(3) The part of premium by enterprise which is converted to the account by the proportion of about 5 percent of local worker's monthly average wage.

3. The interest for the deposit amount on the individual account shall be calculated according to "value maintenance rate for pension insurance fund." The rate shall be set out according to the interest rate of fixed deposits in the bank with reference to average increase rate of worker's wage for previous year.

4. Those who change work units within the same area shall not have their individual accounts changed. Those who stop their work due to various reasons shall have their individual accounts maintained. The deposit amount for the workers who change units or stop their work may be calculated on an accumulative basis. The interest charge shall not stop.

5. For workers who change units between different areas, the total amount of deposit amount on the individual accounts shall be transferred by social security agencies at the two places. The receiving agency shall set up individual accounts for the workers.

6. The deposit amount on individual accounts may only be used to pay the worker himself or herself as monthly pension after the worker retires. It man not be used for other purposes.

7. If the worker dies before or after retirement and the remnant amount on the individual account which has not been drawn or completely drawn, the part paid by individual shall be granted to beneficiaries designated by the worker or legal heir according to regulations; the part to which is converted from the premium paid by enterprise shall be returned to social pooling fund. After the worker retires and deposit amount on the account has been completely drawn, the social pooling fund shall continue to pay the worker according to provided standard until his or her death.

8. Establishing social pooling basic pension insurance fund. Part of pension insurance premium paid by enterprise shall go to the fund. The pensions of original retired personnel, part of the pensions of workers with a certain service length when the reform started and after their retirement, part of the pensions of workers with long lives and low incomes, as well as the money needed to adjust the pensions according to the growth of on-job workers, shall all be paid by social pooling fund.

III. The calculation method of basic pension insurance

Any worker who reaches legal age of retirement and has paid individual premium for 15 years, or has had continuous service length longer (including premium period) than 10 years before this method was practiced may enjoy basic pension insurance by drawing monthly pension.

To ensure the basic lives of retired workers and reflect their contribution on their posts and premiums they paid, the basic pension shall be connected with the individual premium payment period and amounts. The calculation method is to deal out monthly pensions according the average expected remnant life-span after retirement on the basis of accumulative deposit amount on the individual accounts (including principal and interest).

As on-the-job workers did not pay individual premiums and some workers will soon retire shortly after individual premium payment system was started, different calculation methods shall be adopted for different kinds of workers so that the old and new pension systems may be linked up steadily.

1. The workers who are employed after this reform is practiced and will retire at the legal age of retirement shall be paid basic monthly pensions according the deposit amount on basic pension individual accounts. The calculation formula is:

Monthly basic pension = deposit amount on individual account x ratio/120

2. The personnel who retired before this reform was practiced shall be paid pensions according to original method and enjoy the pension adjustment after the reform. The workers who was employed before the reform was practiced and shall reach legal age of retirement in three years shall be granted increased pension according to a certain proportion of deposit amount on individual accounts while getting pensions according to old method before reform. The calculation formula is:

Monthly basic pension = pension granted according to original calculation method before reform + basic pension deposit amount on individual account x proportion for increased pension

The principle for setting out increased pension is: for the workers with same wage level, those who retire later shall get a little higher pension who retire first, but the gap should not be too wide.

3. For the workers who was employed before the reform and shall retire in three years after the reform was started, the service length before this method was implemented may be regarded as premium payment period; the deposit amount for the whole service length shall be calculated according to the deposit amount on

the workers' individual accounts; then divided by 120, and basic pensions shall be granted monthly. Its calculation formula is:

Monthly basic pension = basic pension deposit amount on individual account x ratio /120

The ratio is to help to calculate the deposit amount for the whole service length and reasonably adjust the pension adjustment for different personnel during the transitional period. The ratio is fixed according to one's service length and premium payment period.

If some workers' pensions calculated according to paragraph 3. will be lower than that of paragraph 2., their pensions shall be calculated according to the latter formula.

4. The workers' retirement age shall remain unchanged according to current regulations. For the workers who work high above the ground, in underground mine, high temperature, low temperature, poisonous and harmful conditions or engage in especially heavy physical work, and may retire ahead of normal retirement age according to state regulations, their pensions shall still be calculated according to the retirement age provided by the state regulations. They shall be granted pensions according to this method after they retire.

5. After this method is adopted, those who win the title of model workers shall be given nonrecurring award or additional pension insurance by its unit. The basic pension after their retirement shall not be increased. Those, who won the title of model workers and were allowed to enjoy preferential pension insurance treatment according to state regulations before the reform was adopted, shall enjoy such treatment after retirement.

6. The minimum standard for retired personnel's pension shall be decided upon by local government. The retired personnel who meet the requirement for being granted monthly pension shall have their pension added to meet the minimum standard if their pensions can not reach the minimum standard.

7. For the workers who were employed before the reform was adopted and whose continuous service length (including premium payment period) is no longer than 1 0 years, or who was employed after the reform was adopted and reached retirement age when their premium payment periods are no longer than 15 years, the total deposit amount on the individual accounts shall be paid to the individuals in a lump-sum way and in the meantime, pension insurance relationship shall be terminated.

8. For those who meet the requirements of retired veteran cadres, their treatment shall follow the current state regulations.

Implementing Plan II of Basic Pension Insurance Combining Social Pooling And Individual Accounts

I. Raising of basic pension insurance premium

1. The worker's average monthly wage for previous year shall be base figure (mentioned as premium-payment wage base figure) of basic pension insurance. The enterprise shall regard the sum of all the workers' premium-payment wage base figure as the enterprise premium-payment wage base figure. The monthly average wage shall be calculated over the items which should be included in the wage statistics, including wage, bonus, allowance and subsidies. If the worker's average monthly wage is lower than 60 percent of the local average wage, the 60 percent of the local wage shall be used to calculate the wage base figure; the part that exceeds the local worker's average wage by 300 percent shall be calculated into premium-payment wage base figure, nor it shall be calculated in the base figure of pension.

2. The basic pension insurance premium shall be paid by enterprise and workers. The period for enterprise and workers jointly premium payment shall be called "premium payment period." The continuous service length of workers before the individual premium payment system was adopted shall be regard as payment period.

3. The enterprise shall pay the premium according to the proportion provided by the local government. The premium shall be listed before tax.

Workers shall pay the premiums according to the proportion provided by local government. The premiums paid by individuals shall be exempted from individual income tax.

4. Nonwage-earners like the self-employed workers and owners may pay the basic pension insurance premium with the local worker's average monthly wage as base figure. The payment proportion shall not exceed the sum of premiums by enterprise and individuals. The detailed proportion shall be decided upon by local government. The payment period shall start from the actual payment year until the legal retirement age.

5. When difficulties occur with social pooling pension insurance funds, financial department at the same level shall offer support.

II. Establishment of individual accounts for basic pension insurance

1. In light of the principle of social pooling combined with individual accounts, social insurance agencies shall set up a life-time account for each person who buys basic pension insurance according to the social security number (State standard GB11643-89) issued by State Technological Supervision Bureau or number of resident's ID card. The premiums paid by enterprises and individuals shall be recorded monthly in the workers' pension insurance handbook and individual accounts. The handbooks and individual accounts shall be filled out by enterprises and examined regularly by social security agencies, and kept by workers. When the workers retire, they shall draw the pensions according to the premium-payment wage, deposit amount on the accounts (including principal and interest).

2. Individual accounts include:

(1) The whole or part of the worker's premium payment shall be recorded in the individual account;

(2) Of the enterprise-paid premium, the part of worker's premium payment wage base figure which is 200 percent-300 percent higher than local average wage shall all or partially be recorded in the individual account.

(3) The interest of the above deposit amount.

The individual account should also record the premium payment wage base figure of enterprise or worker as well as the payment proportion.

3. The interest of deposit amount in the individual account shall be calculated according to the actual operation of pension insurance fund.

4. Those who change work units within the same area shall not have their individual accounts changed. Those who stop their work due to various reasons or become unemployed shall have their individual accounts maintained. The deposit amount for the workers who change units or stop their work may be calculated on an accumulative basis. The interest charge shall not stop.

For the workers who change their units between different areas, their individual accounts and their deposit amounts should also move with them.

III. Calculation and granting methods of basic pension

1. Those whose premium payment is longer than I 0 years shall be granted pension in the following way:

(1) Social pension: 20-25 percent of the local average wage; detailed rate shall be decided upon by local government.

(2) Premium pension: 1.0-1.4 percent of the premium payment wage base figure when the premium payment period of enterprise and worker reaches one full year; detailed rate shall be decided upon by government.

Social pension and premium pension shall be reimbursed monthly from the social pension insurance fund.

(3) Individual account pension: the deposit amount recorded in the basic pension insurance account (including principal and interest) shall belong to the individuals. The worker who retires meeting the requirement of retirement may choose ' to draw the money in a way of lump-sum, multiple-time way or monthly. After workers or retired worker personnel die, their remnant amount of deposit amount on the individual accounts shall be granted in a lump-sum way to designated beneficiary or legal heir. The worker who has not met the requirement of retirement but comes across extremely special difficulties may draw part of the pension from their individual account after application by themselves and examination and approval by departments concerned. Detailed procedures shall be provided in other regulations.

(4) With the yearly increase of pension on the individual accounts, the remnant subsidies in the basic pension shall be offset until the premium payment shall be gradually adjusted to the reasonable level which suits the country's economic development level.

2. For the worker whose premium payment has not reached 10 years, he shall be granted the lump-sum social and premium pension way equivalent to two times of local average wage when his or her payment period reaches one full year. The individual account pension shall be granted in a lump-sum way according to the deposit amount on the account (including principal and interest).

3. The age for worker's or cadre's retirement and their other treatments shall be changed for the time being. For the workers who work high above the ground, in underground mine, high temperature, low temperature, poisonous and harmful conditions or engage in especially heavy physical work, and may retire ahead of normal retirement age according to state regulations. They shall be granted pensions according to this method after they retire.

4. After this method is adopted, those who win the title of model workers shall be given nonrecurring award or additional pension insurance by its unit. The basic pension after their retirement shall not be increased. Those, who won the title of model workers and were allowed to enjoy preferential pension insurance treatment according to state regulations before the reform was adopted, shall enjoy such treatment after retirement.

5. The personnel who meet the requirements for retired veteran cadres shall enjoy the treatment according to the current state regulations.

ANNEX 8:
Payroll Tax Equivalence for SOE Sample for Health and Pensions

Most countries finance publicly-mandated pension and health programs with earmarked payroll taxes, especially in the case of pensions. In China, for about 20 years, state-owned enterprises provided their employees these services directly. Because of different practices and conditions at each enterprise, health and pension costs varied greatly between firms. The older firms in particular, with more retired or older employees found their health and pension costs rising.

The hypothetical scenario shown in Table A8.1 is based on the stated objective in China to pool pensions, at least at the municipal level and to do something similar for health. More progress has been made on the former than the latter. Table A8.1 takes the reported pension and health costs as a share of the wage bills of each firm and compares them to the average for all firms in the same city.

1. The first step is to calculate the pool payroll tax. The payroll tax required to cover pension and health costs in each of the five cities was as follows:

Shenyang	35%
Wuhan	47%
Shanghai	29%
Harbin	34%
Chongqing	34%

This is the payroll tax rate which would cover all health and pension expenditures of the firms in each city in the first quarter of 1994. It is equivalent to the weighted average of pension + health spending wage bill in each group of firms by city. Only firms reporting both health and pension spending and wage bill were included.

2. The next step was to compare the pension + health spending of individual firms with this "pooling rate." If the firm-specific rate was found to be higher than the municipal rate, the firm would have been paying more for pensions and health alone than pooled. Typically, the older firm would benefit (i.e., pay less for health and pensions) from pooling. Conversely, younger firms would find their costs had risen.

3. The equation to generate the savings or higher costs from pooling is:

(a) FSPT - PPT = DPT
(b) DPT * WB = SAV

where,

FSPT is the firm-specific payroll tax (i.e., pensions + health costs over the wage bill)
PPT is the pool payroll tax (i.e., total pension + health costs/wage bill)
DPT is the difference between the two tax rates
WB is the wage bill of each firm
and,
SAV is the savings (or increased cost) which arises by applying the pool tax rate to each individual firm.

4. Each firm will have a unique SAV depending on its wage bill and original health + pensions to wage bill ratio. If the number is positive, it increases the profits of the firm or reduces the losses. If the number is negative, it results in lower profits or greater losses.

5. This effect is expressed in Table A8.1 as a change in the profit to sales ratio.

6. Note that the total cost of health and pension spending are not reduced, only spread evenly between older and younger firms. There is no a priori reason to expect that this will produce more loss-makers or more profitable firms only that the individual firms will show fewer or greater profits and losses to the extent that differences in health and pension costs exist.

Table A8.1.

ID	Paytax	paycost	profit94		sales94	Before	After
101	0.35	24.76	437	461.76	8,188	5.34	5.64
102	0.35	42.47	94	136.47	2,992	3.14	4.56
103	0.35	-97.21	1,918.6	1,821.39	7,384.4	25.98	24.67
105	0.35	-15.59	502	486.41	16,854	2.98	2.89
106	0.35	-73	862	789	23,395	3.68	3.37
107	0.35	15.39	838.1	853.49	21,911.3	3.82	3.90
109	0.35	-19.23	102	82.77	1,612	6.33	5.13
112	0.35	43.65	2,517	2,473.35	28,644	8.79	8.63
115	0.35	598.1	134	732.1	19,060	0.70	3.84
118	0.35	-284.55	40	-244.55	12,249	0.33	-2.00
119	0.35	-42.01	463.5	421.49	6,685.7	6.93	6.30
121	0.35	-34.8	2,800	2,765.2	43,004	6.51	6.43
204	0.47	2.29	-1,648.97	-1,646.68	9,910	-16.64	-16.62
207	0.47	-187.17	1,002	814.83	13,043	7.68	6.25
209	0.47	-77	135.14	58.14	1,898.3	7.12	3.06
212	0.47	112.11	-372.31	-260.2	1,438	-25.89	-18.09
213	0.47	16.74	204	220.74	6,734	3.03	3.28
214	0.47	-24.24	255.3	231.06	6,243.04	4.09	3.70,
220	0.47	49.54	456.21	406.67	9,094.36	5.02	4.47
221	0.47	-28.34	59.12	30.78	1,442	4.10	2.13
222	0.47	23.27	155.45	178.72	1,492	10.42	11.98
224	0.47	-13.53	291.41	277.88	5,132.65	5.68	5.41
225	0.47	166.1	1,678	1,844.1	12,592	13.33	14.65
226	0.47	-6.97	1,007	1,000.03	8,500	11.85	11.77
228	0.47	56.58	1,841	1,897.58	5,335	34.51	35.57
305	0.29	73.64	2,347	2,420.64	59,469	3.95	4.07
306	0.29	20.47	1.02	21.49	359.8	0.28	5.97
308	0.29	23.45	1,351.07	1,374.52	9,990.4	13.52	13.76
314	0.29	172.36	702	874.36	14,450	4.86	6.05
319	0.29	-19.8	-330	-349.8	24,718	-1.34	-1.42
322	0.29	-14.88	223.2	208.32	2,939.6	7.59	7.09
325	0.29	-69.91	251.8	181.89	20,289.6	1.24	0.90
326	0.29	130.73	25.09	155.82	974.77	2.57	15.99
327	0.29	-33.41	2,768.6	2,735.19	37,155	7.45	7.36
332	0.29	38.96	52.95	91.91	1,658.38	3.19	5.54
333	0.29	-339.51	1,769	1,429.49	64,962	2.72	2.20
334	0.29	12.54	1,127.4	1,139.94	17,505.2	6.44	6.51
402	0.34	8.84	25.5	34.34	301	8.47	11.41
404	0.34	88.5	1,714	1,802.5	11,892	14.41	15.16
405	0.34	11.141	2,511	262.141	46,261	5.43,	5.67
406	0.34	70.38	1,718.8	1,789.18	19,858.5	8.66	9.01
408	0.34	12.34	144	156.34	6,681	2.16	2.34
409	0.34	-32	415	383	9,066	4.58	4.22
410	0.34	-28.32	434.92	406.6	4,644	9.37	8.76
411	0.34	180.28	2,742.8	2,923.08	23,953.9	11.45	12.20
412	0.34	18.5	100	118.5	8,771	1.14	1.35
414	0.34	-64.32	10	-54.32	4,622	0.22	-1.18
415	0.34	-5.08	29	23.92	790	3.67	3.03
501	0.34	0.81	-28.7	-27.89	1,209.86	-2.37	-2.31
502	0.34	-87.77	-140	-227.77	2,500	-5.60	-9.11
503	0.34	497.17	-241.7	255.47	5,328.7	-4.54	4.79
504	0.34	-32.66	41	8.34	3,504	1.17	0.24
505	0.34	96.18	-339	-242.82	5,431	-6.24	-4.47

ID	Paytax	paycost	profit94		sales94	Before	After
506	0.34	101.82	-94	7.82	2,885	-3.26	0.27
510	0.34	8.12	232	240.12	2,083	11.14	11.53
513	0.34	-2.83	111.21	108.38	6,249.42	1.78	1.73
515	0.34	-64.18	125	60.82	2,642	4.73	2.30
516	0.34	-7.87	563	555.13	8,646	6.51	6.42
517	0.34	2.76	70.09	72.85	2,194.1	3.19	3.32
518	0.34	-36.67	-156.53	-193.2	4,165.14	-3.76	-4.64
519	0.34	7.82	251	258.82	3,080	8.15	8.40
520	0.34	18.63	-55	-36.37	2,348	-2.34	-1.55
521	0.34	37.5	687.62	725.12	7,471.56	9.20	9.71
524	0.34	-237.67	147	-90.67	51,839	0.28	-0.17
525	0.34	24.12	250	274.12	972	25.72	28.20
527	0.34	71.39	279	350.39	10,687	2.61	3.28
528	0.34	15.66	146	161.66	5,941	2.46	2.72
530	0.34	-29.06	108	78.94	2,703	4.00	2.92
531	0.34	24.98	112.44	137.42	5,616.32	2.00	2.45
532	0.34	13.61	-545	-531.39	6,871.44	-7.93	-7.73
533	0.34	2.22	-45.42	-43.2	2,490.31	-1.82	-1.73
536	0.34	56.98	-43	13.98	4,150	-1.04	0.34
540	0.34	-545.79	4,412	3,866.21	219,567	2.01	1.76
541	0.34	-38.8	204.9	166.1	6,503	3.15	2.55
542	0.34	6.16	3.1	37.16	5,351	0.58	0.69
543	0.34	-299.45	304.5	5.05	6,518.8	4.67	0.08
547	0.34	24.54	232.38	256.92	1,910.92	12.16	13.44
549	0.34	35.91	-916.81	-880.91	9,863	-9.30	-8.93

Annex 9:
Calculating the Implicit Pension Debt

The implicit liabilities of a defined-benefit pension plan depend on the assumptions made about future indexation of benefits, wage growth and age-earnings profiles and the current benefit formula. In addition, the result will be very sensitive to the discount rate used to calculate the present value of these expected benefits or accrued rights. There are several reasonable ways of approaching this calculation. Here, the method used in Kane and Palacios (1995) is applied.

There are two components to the implicit pension debt or IPD, the pension rights earned by workers and the value of future benefits for retired persons. For the current pensioners, the calculation entails taking the present value of the stream of future payments taking into account the current pension being paid and the life expectancy of men and women at each one year age interval. The pension amount is held constant in real terms so that price indexation is implicitly assumed. This data is available for urban workers differentiated by province and gender from Tables 7 and 8 above and from the Chinese Working Population Life Tables, 1989-1990.

For workers, the calculation requires stronger assumptions. The method chosen takes the present value of the indexed pension stream calculated for pensioners reaching retirement age in the current year (i.e., 60 year old men and 55 year old women) and applies a coefficient based on the prorated number of contribution years out of the full career maximum. For example, a male worker with 20 years of accrued rights out of a possible 40 (assuming age of entry of 20), would receive half the present value of the benefit of the 60 year old male worker. In the calculation for Shenyang, workers with fewer than four years of contributions were not credited with accrued rights so that three years was the assumed vesting period. The age distribution of workers in the pension pool was provided by Shenyang municipal authorities in five year cohorts. These were converted into one year cohorts using the known one-year age group mortality rates from the life tables mentioned above.

The total liabilities are the sum of the accrued rights of workers and pensioners after subtracting the pool's current stock of assets, in this case Y 360 million in accumulated reserves. Results are shown below by one year age cohort by gender. Shenyang GDP is based on 1993 figures adjusted upward to account for nominal growth in 1994. No attempt is made here to show the financing alternatives in the case that "recognition bonds" were to be issued. The cost to the government of such bonds to old and younger workers would depend on the interest rate on those bonds and the rules for redemption.

Implicit Pension Debt in Shenyang

Number of Covered Workers	1.4 million
Number of Pensioners	0.5 million
Average Pool Pension (est.)	1,633
Average Pool Covered Wage (est.)	253
Effective Replacement Rate (est.)	69
Life expectancy at Retirement Age	
Male: 15.39	Female: 25.66

Table A9.1

Accrued Liabilities of Workers (4% discount rate)

Age	Number of Men	Number of Women	Accrued Rights with three year vesting	
			Men	Women
18	467	311	0	0
19	1,556	1,556	0	0
20	4,357	4,045	0	0
21	7,624	7,157	505	829
22	13,225	12,603	1,009	1,658
23	17,893	16,804	1,514	2,487
24	23,339	23,026	2,019	3,316
25	20,849	19,760	2,524	4,146
26	17,582	16,804	3,028	4,975
27	25,517	24,427	3,533	5,804
28	31,585	30,651	4,038	6,633
29	42,476	42,321	4,543	7,462
30	52,589	59,878	5,047	8,291
31	20,071	19,449	5,552	9,120
32	27,851	27,539	6,057	9,949
33	34,385	32,985	6,562	10,778
34	32,674	31,585	7,066	11,607
35	39,209	37,964	7,571	12,437
36	36,252	35,631	8,076	13,266
37	34,852	34,541	8,580	14,095
38	34,541	22,763	9,085	14,924
39	31,118	30,184	9,590	15,753
40	27,073	26,139	10,095	16,582
41	24,272	23,650	10,599	17,411
42	21,627	20,849	11,104	18,240
43	23,961	22,405	11,609	19,069
44	14,159	13,380	12,114	19,898
45	14,159	13,692	12,618	20,728
46	13,070	12,758	13,123	21,557
47	12,758	12,292	13,628	22,386
48	11,669	10,891	14,133	23,215
49	11,202	9,958	14,637	24,044
50	11,980	3,112	15,142	24,873
51	11,980	3,112	15,647	25,702
52	11,514	2,956	16,151	26,531
53	11,047	2,178	16,656	26,219
54	11,047	1,867	17,161	26,219
55	11,514	0	17,666	26,219
56	11,980	0	18,170	0
57	13,070	0	18,675	0
58	13,225	0	19,180	0
59	11,358	0	19,685	0

Accrued Liabilities of Pensioners (4% discount rate)

Pensioners: Estimated 1994 total is 540,000

Age	No. of Males	No. of Females	Life Expectancy Males	Life Expectancy Females	PV Debt per Cohort Females	PV Debt per Cohort Males
50	N/A	21,086	N/A	27.304	584,939,819	
51	N/A	20,990	N/A	26.432	582,287,631	
52	N/A	20,894	N/A	25.55	579,609,807	
53	N/A	20,770	N/A	24.666	563,772,384	
54	N/A	20,644	N/A	23.81	547,715,321	
55	N/A	16,243	N/A	22.952	420,606,422	
56	N/A	16,127	N/A	22.096	406,899,831	
57	N/A	15,990	N/A	21.252	392,433,340	
58	N/A	15,834	N/A	20.429	377,258,859	
59	N/A	15,668	N/A	19.626	373,313,886	
60	13,866	12,994	15.387	18.828	299,906,856	279,941,560
61	13,638	12,800	14.595	18.044	285,516,337	269,894,876
62	13,392	12,585	13.83	17.309	270,561,244	252,884,656
63	13,134	12,333	13.075	16.597	265,159,010	235,623,335
64	12,843	12,054	12.322	15.925	249,042,069	217,806,531
65	8,853	9,171	11.59	15.283	181,480,945	150,134,997
66	8,611	8,939	10.839	14.634	176,888,435	137,256,042
67	8,346	8,708	10.129	14.001	164,420,645	124,173,697
68	8,063	8,467	9.435	13.359	151,893,626	111,065,658
69	7,735	8,205	8.749	12.724	147,196,006	106,544,071
70	7,348	7,936	8.099	12.115	134,588,877	92,786,026
71	6,921	7,657	7.499	11.508	129,849,956	87,396,123
72	6,479	7,344	6.931	10.91	117,056,951	74,088,109
73	5,981	7,027	6.369	10.353	104,544,176	60,966,731
74	5,470	6,715	5.858	9.798	99,913,523	55,754,790
75	4,952	6,349	5.359	9.229	87,460,703	44,090,591
76	4,411	6,002	4.867	8.733	82,670,614	33,346,367
77	3,873	5,635	4.403	8.21	71,154,614	23,877,150
78	3,263	5,248	3.945	7.711	66,271,757	20,113,178
79	2,649	4,862	3.59	7.243	55,591,810	16,331,725
80	2,503	2,708	3.305	6.778	30,964,225	11,796,037
81	1,961	2,461	2.943	6.367	25,081,022	9,243,609
82	1,410	2,203	2.617	5.957	22,458,869	6,645,644
83	950	1,950	2.445	5.594	19,881,621	3,043,188
84	660	1,714	2.387	5.254	15,257,474	2,113,914
85	424	1,468	2.216	4.928	13,065,590	1,358,997
86	252	1,250	2.17	4.671	11,130,188	808,374
87	154	1,044	2.307	4.396	7,890,632	492,956
88	91	873	2.463	4.167	6,597,849	293,091
89	68	600	2.802	3.885	4,536,371	218,775
90	0	137	2.585	3.507	1,035,805	0
Total	**168,304**	**371,682**			**8,127,905,099**	**2,430,090,796**
All pensioners	**539,986**		**Grand Total**		**10,557,995,895**	

Statistical Appendix

Table A.1. Basic Information About the Sample Enterprises

	Shenyang	Wuhan	Shanghai	Harbin	Chongqing	ALL
ALL	22	28	39	18	49	156
SIZE						
Large	20	18	31	12	24	105
medium	2	9	7	4	21	43
SUPERVISORY AUTHORITY						
Central govt.	1				7	8
Provincial govt.	2	2	28	3	1	36
Municipal govt.	18	23	11	14	38	104
County (District) govt.		2			2	4
CORPORATIZATION						
Noncorporatized	14	13	23	9	48	107
Corporatized	7	14	14	8	1	44
STOCK EXCHANGE LISTING						
Missing	4	8	8	2	11	33
Listed in a stock exchange	2	1	12	2		17
Not listed in a stock exchange	16	19	19	14	38	106
JOINT VENTURE						
Non-JV or domestic JV	18	23	22	14	40	117
Foreign investment venture	4	5	17	4	9	39
AGE OF ENTERPRISE						
Missing observations.	4	2	1		3	10
Under 5 years	2	1	4		3	10
5-15 years	3	1	7	1	4	16
Over 15 years	13	24	27	17	39	120

Table A.2. SELECTED VARIABLES FROM THE SAMPLE ENTERPRISES BY CITY, 1994 FIRST HALF

	ALL	Shenyang	Wuhan	Shanghai	Harbin	Chongqing
Number of employees	4,890	5,722	3,008	7,367	3,587	4,093
N	135	18	23	34	16	44
Gross value of industrial output	31,883	22,324	7,936	79,523	8,876	15,330
N	113	15	19	31	13	35
Sales revenue	26,678	17,667	6,268	67,646	12,035	13,466
N	131	18	23	34	15	41
Fixed assets	22,405	20,860	11,197	40,748	11,702	17,843
N	107	15	16	28	15	33
Circulating capital	43,368	45,309	14,975	98,805	15,468	27,442
N	112	16	20	27	15	34
Value added	9,200	9,028	3,372	20,491	3,405	7,928
N	81	11	16	17	11	26
Profits	1,532	1,176	237	4,482	1,191	200
N	135	18	23	34	16	44
Losses	-339		-827	-167	-103	-252
N	21	0	4	2	2	13
Payments per employee (Yuan for six months)	2,804	2,665	2,083	4,477	2,337	2,167
N	131	18	23	32	15	43
Bonus to employees (Yuan)	747	846	436	1,303	577	465
N	123	18	18	32	14	41
GVIO/Employment (Yuan)	55,839	48,402	33,958	108,098	33,189	33,031
N	113	15	19	31	13	35
Value added/Employment in profit-making (Yuan)	27,674	25,022	19,164	70,324	15,335	15,012
N	75	11	15	14	9	26
Profit/Sales %	5	8	4	8	4	1
N	131	18	23	34	15	41
Profit/Fixed assets	2	2	2	4	3	1
N	94	14	14	23	14	29
Sales tax rate %	0		0	0		
N	3	0	1	2	0	0
Value added/GVIO %	50	52	49	51	57	48
N	75	11	15	14	9	26
Wage Payment/Value added %	19	17	23	13	16	20
N	75	11	15	14	9	26
Social cost/Value added %	3	7	2	2	4	2
N	92	13	15	20	15	29

Note: Values -in 10,000 Yuan except when indicated.

Table A.3. COMPARISON OF THE SAMPLE SOEs WITH THE SOE UNIVERSE

I. Selected Variables for Industrial Enterprises with Independent Accounting System by Size, 1992

	Unit	Small	Medium	Large
Number of enterprises	number	391,086	13,003	3,900
Average GVIO	thousand yuan	3,019	44,883	258,495
Average Value Added	thousand yuan	723	11,559	85,535
Average Sales Revenue	thousand yuan	2,673	41,850	255,698
Pretax Profits/Sales	%	9	11	13

II. Selected Variables for Sample Enterprises by Size, 1992

	Unit	Small /a	Medium	Large
Average GVIO	thousand yuan	..	63,532	504,613
N		..	29	73
Average Value Added	thousand yuan	..	27,729	158,860
N		..	22	53
Average Sales Revenue	thousand yuan	..	72,031	505,678
N		..	36	87
Pretax profits/sales	%	..	4	5
N		..	33	84

/a There are only seven small enterprises in our sample. Therefore, we do not report the numbers for small enterprises. However, for these seven enterprises, the average GVIO, Value added and Sales were found to be respectively 27,384, 8,121 and 28,162 yuan, respectively.

Note that the average figures reported from the sample are based on different number of enterprises. To that extent, one has to be cautious while comparing one variable with another (e.g., taking ratios such as Value-added/GVIO).

Table A.4. GROSS VALUE OF INDUSTRIAL OUTPUT

	1990	1992	1994 1st half
ALL	24,900.40	36,276.71	31,847.22
N	107	107	107
CITY			
Shenyang	18,988.08	24,720.77	20,181.55
N	13	13	13
Wuhan	9,190.45	11,967.59	7,664.14
N	19	19	19
Shanghai	60,366.95	91,482.69	87,388.68
N	27	27	27
Harbin	8,968.29	12,744.86	8,502.21
N	14	14	14
Chongqing	14,335.77	20,129.22	15,327.90
N	34	34	34
SIZE			
Large	34,558.41	50,461.28	45,084.99
N	73	73	73
Medium	4,594.12	6,353.19	3,806.72
N	29	29	29
PROFIT/LOSS			
Loss-making enterprises	12,120.77	16,485.83	13,387.88
N	21	21	21
Profit-making enterprises	28,021.01	41,109.37	36,354.74
N	86	86	86
SUPERVISORY AUTHORITY			
Central govt.	16,950.50	27,635.24	19,983.86
N	7	7	7
Provincial govt.	55,997.24	82,042.25	80,444.88
N	27	27	27
Municipal govt.	14,529.88	20,708.89	15,408.11
N	71	71	71

Table A.5. EMPLOYMENT

	1994 1st half
ALL	4,763.71
N	140
CITY	
Shenyang	5,722.00
N	18
Wuhan	2,942.33
N	24
Shanghai	7,184.74
N	35
Harbin	3,529.47
N	17
Chongqing	3,953.04
N	46
SIZE	
Large	6,524.04
N	94
Medium	1,276.90
N	40
Small	430.50
N	6
PROFIT/LOSS	
Loss-making enterprises	4064.92
N	26
Profit-making enterprises	4923.08
N	114
SUPERVISORY AUTHORITY	
Central govt.	5926.13
N	8
Provincial govt.	7664.16
N	32
Municipal govt.	3882.17
N	96
County (District) govt.	392.25
N	4

Table A.6. VALUE ADDED

	1990	1992	1994 1st half
ALL	7,392.05	11,747.88	9,241.49
N	77	77	77
CITY			
Shenyang	4,293.28	5,657.78	7,233.78
N	10	10	10
Wuhan	3,639.38	4,470.49	3,296.92
N	16	16	16
Shanghai	21,951.10	39,007.18	26,229.03
N	13	13	13
Harbin	2,775.36	3,498.02	3,366.33
N	12	12	12
Chongqing	5,744.47	8,746.61	7,889.72
N	26	26	26
SIZE			
Large	9,981.45	15,886.04	12,675.34
N	53	53	53
Medium	1,777.03	2,772.85	1,804.63
N	22	22	22
Small	538.29	812.10	49.68
N	2	2	2
PROFIT/LOSS			
Loss-making enterprises	2,273.96	3,303.00	1,719.13
N	14	14	14
Profit-making enterprises	8,529.40	13,624.52	10,913.12
N	63	63	63
SUPERVISORY AUTHORITY			
Central govt.	6,978.25	10,862.00	7,364.00
N	4	4	4
Provincial govt.	16,463.27	28,512.35	18,966.99
N	16	16	16
Municipal govt.	5,036.82	7,339.21	6,873.91
N	55	55	55

Table A.7. VALUE ADDED/GVIO (PERCENT)

	1990	1992	1994 1st half
ALL	43.47	43.49	49.45
N	69	69	69
CITY			
Shenyang	45.29	41.65	51.59
N	10	10	10
Wuhan	43.85	40.87	50.35
N	14	14	14
Shanghai	39.00	42.02	47.52
N	11	11	11
Harbin	44.87	46.51	56.52
N	9	9	9
Chongqing	43.98	45.25	46.38
N	25	25	25
SIZE			
Large	43.84	43.57	50.02
N	49	49	49
Medium	43.06	43.57	49.37
N	19	19	19
PROFIT/LOSS			
Loss-making enterprises	45.59	43.90	45.60
N	11	11	11
Profit-making enterprises	43.06	43.41	50.18
N	58	58	58
SUPERVISORY AUTHORITY			
Provincial govt.	45.01	48.24	54.51
N	13	13	13
Municipal govt.	42.61	41.88	48.22
N	50	50	50

Table A.8. SALES

	1990	1992	1994 1st half
ALL	24,319.67	36,506.15	26,179.05
N	128	128	128
CITY			
Shenyang	16,450.02	22,788.41	15,942.54
N	16	16	16
Wuhan	7,720.67	10,969.98	6,226.03
N	22	22	22
Shanghai	60,363.91	91,000.36	67,605.14
N	33	33	33
Harbin	11,210.15	16,951.98	11,352.91
N	16	16	16
Chongqing	12,402.23	19,331.45	13,323.15
N	41	41	41
SIZE			
Large	33,591.74	50,567.75	36,573.43
N	87	87	87
Medium	5,025.30	7,203.11	4,559.67
N	36	36	36
Small	1,905.14	2,816.19	976.39
N	5		5
PROFIT/LOSS			
Loss-making enterprises	11,752.52	16,583.64	10,050.35
N	25	25	25
Profit-making enterprises	27,369.95	41,341.71	30,093.79
N	103	103	103
SUPERVISORY AUTHORITY			
Central govt.	15,731.18	29,451.17	17,697.50
N	6	6	6
Provincial govt.	59,128.35	88,555.26	65,070.64
N	31	31	31
Municipal govt.	13,403.71	19,810.52	13,912.46
N	88	88	88

Table A.9. AVERAGE PAYMENTS TO WORKERS

	1994 1st half
ALL	2,768.66
N	135
CITY	
Shenyang	2,664.91
N	18
Wuhan	2.070.5
N	24
Shanghai	4,392.76
N	33
Harbin	2,336.58
N	15
Chongqing	2,135.49
N	45
SIZE	
Large	3,081.29
N	91
Medium	2,143.51
N	38
Small	1,986.44
N	6
PROFIT/LOSS	
Loss-making enterprises	1,988.68
N	24
Profit-making enterprises	2,937.31
N	111
SUPERVISORY AUTHORITY	
Central govt.	2,496.00
N	8
Provincial govt.	3,994.29
N	31
Municipal govt.	2,361.37
N	92

Table A.10. Average Bonus to Workers

	1994 1st half
ALL	730.06
N	127
CITY	
Shenyang	845.73
N	18
Wuhan	426.16
N	19
Shanghai	1,268.93
N	33
Harbin	577.34
N	14
Chongqing	452.10
N	43
SIZE	
Large	807.82
N	89
Medium	582.14
N	33
Small	322.07
N	5
PROFIT/LOSS	
Loss-making enterprises	346.07
N	23
Profit-making enterprises	814.98
N	104
SUPERVISORY AUTHORITY	
Central govt.	415.09
N	8
Provincial govt.	1,058.02
N	31
Municipal govt.	644.21
N	86

Table A.11. Production Costs

	1990	1992	1994 1st half
ALL	23,633.05	31,641.67	24,407.23
N	104	104	104
CITY			
Shenyang	14,116.77	18,489.11	12,633.60
N	15	15	15
Wuhan	7,126.54	9,493.26	5,641.36
N	22	22	22
Shanghai	62,515.28	83,912.06	70,750.07
N	25	25	25
Harbin	9,360.26	13,607.77	6,838.56
N	12	12	12
Chongqing	13,803.24	18,115.03	12,464.10
N	30	30	30
SIZE			
Large	31,322.53	42,719.41	33,415.10
N	73	73	73
Medium	6,007.49	6,004.27	3,428.89
N	28	28	28
PROFIT/LOSS			
Loss-making enterprises	10,981.44	15,678.72	11,181.12
N	18	18	18
Profit-making enterprises	26,281.07	34,982.76	27,175.48
N	86	86	86
SUPERVISORY AUTHORITY			
Central govt.	9,715.08	19,676.40	12,655.74
N	5	5	5
Provincial govt.	60,081.72	79,924.79	68,052.96
N	25	25	25
Municipal govt.	12,576.45	16,559.31	10,724.26
N	72	72	72

Table A.12. LABOR PRODUCTIVITY: VALUE ADDED/WORKERS

	1994 1st half
ALL	26,844.12
N	78
CITY	
Shenyang	25,021.57
N	11
Wuhan	18,392.43
N	16
Shanghai	70,324.10
N	14
Harbin	14,930.62
N	10
Chongqing	14,462.28
N	27
SIZE	
Large	32,046.25
N	53
Medium	16,283.34
N	24
PROFIT/LOSS	
Loss-making enterprise	6482.30
N	14
Profit-making enterprises	31298.26
N	64
SUPERVISORY AUTHORITY	
Provincial govt.	41671.35
N	14
Municipal govt.	23948.26
N	58

Table A.13. EXPORTS/SALES (PERCENT)

	1990	1992	1994 1st half
ALL	17.17	18.95	22.70
N	45	45	45
CITY			
Wuhan	14.33	12.15	21.94
N	5	5	5
Shanghai	18.29	16.69	17.28
N	17	17	17
Chongqing	20.30	29.27	32.65
N	15	15	15
SIZE			
Large	15.57	14.47	17.05
N	34	34	34
Medium	22.14	32.82	40.17
N	11	11	11
PROFIT/LOSS			
Profit-making enterprises	16.88	18.92	21.89
N	41	41	41
SUPERVISORY AUTHORITY			
Provincial govt.	18.30	16.17	15.26
N	16	16	16
Municipal govt.	17.06	21.23	27.87
N	27	27	27

Table A.14. PROFITABILITY: PROFITS/SALES (PERCENT)

	1990	1992	1994 1st half
ALL	3.76	4.70	4.31
N	121	121	121
CITY			
Shenyang	4.69	4.72	6.81
N	16	16	16
Wuhan	5.59	6.31	2.84
N	21	21	21
Shanghai	6.94	6.50	8.38
N	30	30	30
Harbin	2.81	4.47	4.46
N	15	15	15
Chongqing	0.32	2.53	0.88
N	39	39	39
SIZE			
Large	5.09	5.13	4.97
N	84	84	84
Medium	0.10	3.50	3.16
N	33	33	33
PROFIT/LOSS			
Loss-making enterprises	-0.94	0.19	-8.19
N	20	20	20
Profit-making enterprises	4.70	5.59	6.78
N	101	101	101
SUPERVISORY AUTHORITY			
Central govt.	13.54	6.84	1.42
N	6	6	6
Provincial govt.	4.40	4.54	4.11
N	28	28	28
Municipal govt.	2.60	4.04	4.51
N	84	84	84

Table A.15. SELECTED VARIABLES FOR A SAMPLE OF 78 SOEs INCLUDED IN THE PENSION POOLING EXPERIMENT—*for studying ranking effects of payroll taxes*
(Values in 10,000 Yuan except when indicated)

	ALL	Shenyang	Wuhan	Shanghai	Harbin	Chongqing
Number of employees	3,532	5,106	2,265	2,095	2,441	4,356
N	78	12	12	12	11	31
Gross value of industrial output	13,856	20,407	6,968	15,152	9,674	15,290
N	68	9	11	11	9	28
Sales revenue	13,314	15,998	5,818	21,206	9,490	13,357
N	76	12	12	12	10	30
Fixed assets	14,393	16,831	8,747	6,134	14,332	18,915
N	61	10	8	10	10	23
Circulating capital	27,395	46,158	8,706	29,493	9,987	33,487
N	67	11	11	10	10	25
Value added	6,073	9,445	3,034	2,534	2,383	8,450
N	55	8	9	7	8	23
Payments to employees (Yuan)	2,414	2,470	1,766	3,742	2,388	2,139
N	78	12	12	12	11	31
Bonus to employees (Yuan)	612	753	386	976	636	476
N	75	12	10	12	11	30
GVIO/Employment (Yuan)	44,245	48,029	40,012	82,478	40,256	30,955
N	68	9	11	11	9	28
Value added/Employment in profit-making enterprises (Yuan)	24,439	21,242	22,283	84,507	17,566	15,129
N	51	8	9	5	6	23
Profit/Sales %	4	6	5	4	6	2
N	76	12	12	12	10	30
Profit/Sales adjusted for payroll tax %	4	6	4	3	6	2
N	76	12	12	12	10	30
Value added/GVIO %	50	49	48	60	48	50
N	51	8	9	5	6	23
Wage Payment/Value added %	18	19	16	12	16	20
N	51	8	9	5	6	23

Table A.16. LOSS-MAKERS BEFORE ADJUSTING FOR THE PAYROLL TAX, 1994 FIRST HALF

(Values in 10,000 Yuan except when indicated)

	ALL	Wuhan	Shanghai	Chongqing
Number of employees	3,196	4,079	3,478	3,010
N	14	2	1	11
Gross value of industrial output	6,672	6,160	16,684	5,673
N	12	2	1	9
Sales revenue	5,951	5,674	24,718	4,295
N	14	2	1	11
Fixed assets	5,063		9,471	4,574
N	10	0	1	9
Circulating capital	8,309	12,973		7,272
N	11	2	0	9
Value added	1,736	2,295		1,550
N	8	2	0	6
Payments to employees (Yuan)	2,112	1,747	3,038	2,094
N	14	2	1	11
Bonus to employees (Yuan)	346	320	468	340
N	14	2	1	11
GVIO/Employment (Yuan)	23,389	13,192	47,970	22,924
N	12	2	1	9
Value added/Employment in profit-making enterprises (Yuan)	6,783	5,781		7,117
N	8	2	0	6
Profit/Sales %	-7	-21	-1	-4
N	14	2	1	11
Value added/GVIO %	42	55		37
N	8	2	0	6
Wage Payment/Value added %	31	30		31
N	8	2	0	6

Table A.17. PROFIT-MAKERS BEFORE ADJUSTING FOR THE PAYROLL TAX, 1994 FIRST HALF

(Values in 10,000 Yuan except when indicated)

	ALL	Shenyang	Wuhan	Shanghai	Harbin	Chongqing
Number of employees	3,605	5,106	1,902	1,969	2,441	5,097
N	64	12	10	11	11	20
Gross value of industrial output	15,395	20,407	7,148	14,999	9,674	19,846
N	56	9	9	10	9	19
Sales revenue	14,977	15,998	5,846	20,887	9,490	18,604
N	62	12	10	11	10	19
Fixed assets	16,222	16,831	8,747	5,763	14,332	28,134
N	51	10	8	9	10	14
Circulating capital	31,144	46,158	7,757	29,493	9,987	48,233
N	56	11	9	10	10	16
Value added	6,811	9,445	3,244	2,534	2,383	10,885
N	47	8	7	7	8	17
Payments to employees (Yuan)	2,481	2,470	1,770	3,806	2,388	2,164
N	64	12	10	11	11	20
Bonus to employees (Yuan)	673	753	402	1,022	636	554
N	61	12	8	11	11	19
GVIO/Employment (Yuan)	48,715	48,029	45,972	85,929	40,256	34,759
N	56	9	9	10	9	19
Value added/Employment in profit-making enterprises (Yuan)	27,724	21,242	26,998	84,507	17,566	17,957
N	43	8	7	5	6	17
Profit/Sales %	6	6	10	5	6	6
N	62	12	10	11	10	19
Value added/GVIO	51	49	46	60	48	54
N	43	8	7	5	6	17
Wage Payment/Value added (%)	15	19	12	12	16	16
N	43	8	7	5	6	17

Table A.18. LOSS-MAKERS AFTER ADJUSTING FOR THE PAYROLL TAX, 1994 FIRST HALF

(Values in 10,000 Yuan except when indicated)

	ALL	Shenyang	Wuhan	Shanghai	Harbin	Chongqing
Number of employees	4,646	6,863	4,079	3,478	4,850	4,633
N	14	1	2	1	1	9
Gross value of industrial output	10,805	13,321	6,160	16,684	4,880	11,657
N	13	1	2	1	1	8
Sales revenue	9,975	12,249	5,674	24,718	4,622	9,635
N	14	1	2	1	1	9
Fixed assets	15,456	15,971		9,471	11,395	16,817
N	10	1	0	1	1	7
Circulating capital	37,412	24,858	12,973		25,223	47,930
N	11	1	2	0	1	7
Value added	4,300	4,502	2,295		2,583	5,220
N	10	1	2	0	1	6
Payments to employees (Yuan)	2,081	1,960	1,747	3,038	1,738	2,101
N	14	1	2	1	1	9
Bonus to employees (Yuan)	384	332	320	468	83	428
N	14	1	2	1	1	9
GVIO/Employment (Yuan)	22,400	19,410	13,192	47,970	10,062	23,422
N	13	1	2	1	1	8
Value added/Employment in profit-making enterprises (Yuan)	7,160	6,560	5,781		5,326	8,026
N	10	1	2	0	1	6
Profit/Sales adjusted for payroll tax %	-6	-2	-17	-1	-1	-5
N	14	1	2	1	1	9
Value added/GVIO	42	34	55		53	37
N	10	1	2	0	1	6
Wage Payment/Value added	31	30	30		33	31
N	10	1	2	0	1	6

Table A.19. PROFIT-MAKERS AFTER ADJUSTING FOR THE PAYROLL TAX, 1994 FIRST HALF

(Values in 10,000 Yuan except when indicated)

	ALL	Shenyang	Wuhan	Shanghai	Harbin	Chongqing
Number of employees	3,288	4,946	1,902	1,969	2,201	4,243
N	64	11	10	11	10	22
Gross value of industrial output	14,577	21,292	7,148	14,999	10,274	16,744
N	55	8	9	10	8	20
Sales revenue	14,068	16,339	5,846	20,887	10,031	14,953
N	62	11	10	11	9	21
Fixed assets	14,185	16,926	8,747	5,763	14,658	19,833
N	51	9	8	9	9	16
Circulating capital	25,427	48,288	7,757	29,493	8,294	27,870
N	56	10	9	10	9	18
Value added	6,467	10,151	3,244	2,534	2,354	9,590
N	45	7	7	7	7	17
Payments to employees (Yuan)	2,487	2,516	1,770	3,806	2,453	2,155
N	64	11	10	11	10	22
Bonus to employees (Yuan)	664	791	402	1,022	692	496
N	61	11	8	11	10	21
GVIO/Employment (Yuan)	49,409	51,607	45,972	85,929	44,030	33,968
N	55	8	9	10	8	20
Value added/Employment in profit-making enterprises (Yuan)	28,653	23,339	26,998	84,507	20,014	17,636
N	41	7	7	5	5	17
Profit/Sales adjusted for payroll tax %	7	7	10	7	7	5
N	62	11	10	11	9	21
Value added/GVIO	52	51	46	60	47	54
N	41	7	7	5	5	17
Wage Payment/Value added %	15	17	12	12	13	16
N	41	7	7	5	5	17

Table A.20. FINANCING FIXED CAPITAL INVESTMENT WITHIN STATE BUDGET
(Percent)

		1990	1992	1994 1st Half
ALL	Mean	13.68	14.09	10.09
	N	30	30	30
CITY				
Wuhan	Mean	25.41	29.37	20.15
	N	11	11	11
Shanghai	Mean	0.08	0.00	0.00
	N	5	5	5
Chongqing	Mean	13.06	9.93	8.07
	N	10	10	10
SIZE				
Large	Mean	20.52	20.94	15.13
	N	20	20	20
Medium	Mean	0.00	0.43	0.00
	N	9	9	9
PROFIT/LOSS				
Loss-making enterprises	Mean	38.96	37.18	36.94
	N	6	6	6
Profit-making enterprises	Mean	7.36	8.31	3.37
	N	24	24	24
SUPERVISING AUTHORITY				
Provincial govt.	Mean	5.69	3.88	3.65
	N	6	6	6
Municipal govt.	Mean	13.45	14.58	9.52
	N	21	21	21

Table A.21. FINANCING FIXED CAPITAL INVESTMENT WITH BANK LOANS
(Percent)

		1990	1992	1994 1st Half
ALL	Mean	47.08	47.24	49.11
	N	30	30	30
CITY				
Wuhan	Mean	45.78	41.64	44.16
	N	11	11	11
Shanghai	Mean	47.04	39.35	29.86
	N	5	5	5
Chongqing	Mean	47.06	42.98	48.06
	N	10	10	10
SIZE				
Large	Mean	42.70	44.04	44.25
	N	20	20	20
Medium	Mean	57.98	51.91	65.36
	N	9	9	9
PROFIT/LOSS				
Loss-making enterprises	Mean	50.21	59.14	53.88
	N	6	6	6
Profit-making enterprises	MEAN	46.30	44.26	47.92
	N	24	24	24
SUPERVISING AUTHORITY				
Provincial govt.	Mean	32.13	61.17	55.69
	N	6	6	6
Municipal govt.	Mean	56.05	46.38	53.33
	N	21	21	21

Table A.22. FINANCING FIXED CAPITAL INVESTMENT WITH SELF-RAISED CAPITAL
(Percent)

		1990	1992	1994 1st Half
ALL	Mean	38.87	40.50	41.00
	N	30	30	30
CITY				
Wuhan	Mean	31.34	37.75	43.78
	N	11	11	11
Shanghai	Mean	45.13	52.27	54.60
	N	5	5	5
Chongqing	Mean	39.88	47.12	43.87
	N	10	10	10
SIZE				
Large	Mean	37.69	37.75	40..92
	N	20	20	20
Medium	Mean	38.75	47.70	34.64
	N	9	9	9
PROFIT/LOSS				
Loss-making enterprises	Mean	32.13	19.75	24.02
	N	6	6	6
Profit-making enterprises	Mean	40.56	45.69	45.25
	N	24	24	24
SUPERVISING AUTHORITY				
Provincial govt.	Mean	60.97	27.97	26.82
	N	6	6	6
Municipal govt.	Mean	35.08	43.64	41.39
	N	21	21	21

Table A.23. FINANCING CIRCULATING CAPITAL WITH STATE FUNDS
(Percent)

		1990	1992	1991 1st half
ALL	Mean	9.56	7.50	6.27
	N	76	76	76
CITY				
Shenyang	Mean	9.77	9.81	8.35
	N	11	11	11
Wuhan	Mean	12.47	8.94	6.54
	N	14	14	14
Shanghai	Mean	10.98	7.97	9.57
	N	14	14	14
Harbin	Mean	5.89	4.22	2.82
	N	13	13	13
Chongqing	Mean	8.93	7.09	5.11
	N	24	24	24
SIZE				
Large	Mean	10.02	8.63	7.08
	N	52	52	52
Medium	Mean	8.74	5.01	4.74
	N	22	22	22
PROFIT/LOSS				
Loss-making enterprises	Mean	8.23	5.92	6.06
	N	17	17	17
Profit-making enterprises	Mean	9.94	7.95	6.33
	N	59	59	59
SUPERVISING AUTHORITY				
Provincial govt.	Mean	8.76	4.16	3.18
	N	16	16	16
Municipal govt.	Mean	9.03	8.21	7.55
	N	54	54	54

Table A.24. FINANCING CIRCULATING CAPITAL WITH ENTERPRISE'S INTERNAL FUNDS
(Percent)

		1990	1992	1994 1st half
ALL	Mean	5.16	4.96	6.83
	N	76	76	76
CITY				
Shenyang	Mean	4.74	3.28	8.76
	N	11	11	11
Wuhan	Mean	11.77	8.31	12.08
	N	14	14	14
Shanghai	Mean	4.32	3.13	4.52
	N	14	14	14
Harbin	Mean	1.81	2.15	4.07
	N	13	13	13
Chongqing	Mean	3.81	6.37	5.72
	N	24	24	24
SIZE				
Large	Mean	5.96	4.47	6.53
	N	52	52	52
Medium	Mean	3.39	3.28	7.05
	N	22	22	22
PROFIT/LOSS				
Loss-making enterprises	Mean	7.28	5.77	2.48
	N	17	17	17
Profit-making enterprises	Mean	4.55	4.72	8.08
	N	59	59	59
SUPERVISING AUTHORITY				
Provincial govt.	Mean	8.10	2.54	2.66
	N	16	16	16
Municipal govt.	Mean	3.71	3.57	6.76
	N	54	54	54

Table A.25. FINANCING CIRCULATING CAPITAL WITH BANK LOANS
(Percent)

		1990	1992	1994 1st half
ALL	Mean	25.54	27.73	31.18
	N	76	76	76
CITY				
Shenyang	Mean	33.54	38.45	37.31
	N	11	11	11
Wuhan	Mean	20.98	23.38	35.19
	N	14	14	14
Shanghai	Mean	27.63	25.28	27.56
	N	14	14	14
Harbin	Mean	24.67	26.70	29.25
	N	13	13	13
Chongqing	Mean	23.79	27.34	29.19
	N	24	24	24
SIZE				
Large	Mean	24.41	26.55	30.82
	N	52	52	52
Medium	Mean	27.27	29.78	30.82
	N	22	22	22
PROFIT/LOSS				
Loss-making enterprises	Mean	21.47	23.25	29.37
	N	17	17	17
Profit-making enterprises	Mean	26.72	29.02	31.70
	N	59	59	59
SUPERVISING AUTHORITY				
Provincial govt.	Mean	30.21	30.03	31.58
	N	16	16	16
Municipal govt.	Mean	24.06	26.90	30.37
	N	54	54	54

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