

Report No. 10414-CHA

Price Reform in China

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CURRENCY EQUIVALENTS
(As of March 31, 1992)

Currency Unit = Yuan (Y)

\$1.00 = Y 5.46
Y 1.00 = \$0.19

FISCAL YEAR

January 1 - December 31

WEIGHTS AND MEASURES

Metric System

ABBREVIATIONS AND ACRONYMS

ABC - Agricultural Bank of China
BoP - Balance of Payments
CPI - Consumer Price Index
GNP - Gross National Product
ICBC - Industrial and Commercial Bank of China
MOF - Ministry of Finance
MR - Ministry of Railways
PBC - People's Bank of China
RCF - Railway Construction Fund
TVEs - Township and Village Enterprises

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PRICE REFORM IN CHINA

Executive Summary

i. China has been reforming its price system in small incremental steps since 1979. By the early 1990s, this process had reached a fairly advanced stage. Nearly 70 percent of all consumer goods, in terms of sales value, have been deregulated and price controls have been lifted from 58 percent of industrial raw materials. Only 17 agricultural commodities remained subject to state price controls at the end of 1991, as against 110 in the early 1980s and no more than a third of agricultural output was purchased at fixed prices. The expanding role of the market has had a pervasive influence on decision-making: on the margin, resource allocation economy-wide is increasingly subject to market prices. The effect of this on the growth of productivity has been noticeable in both the primary and the industrial sectors. Much of the expansion in farm production over the past decade can be traced to more efficient utilization of inputs. Total factor productivity in industrial collectives rose by an annual average of 4.6 percent during 1980-88. It grew by a lower but still respectable rate of 2.4 percent in the state sector.

ii. Having achieved macroeconomic stability and restored growth momentum following the crisis of 1988/89, China began another round of price adjustments in late 1990. These adjustments, embracing transport tariffs, and the prices of industrial raw materials, agricultural commodities and grain, have been deliberately low-keyed so as to minimize the announcement effects that aroused destabilizing consumer expectations in mid-1988. Nonetheless, they have successfully exploited the opportunities provided by a relatively benign macro environment, in substantially reducing relative price distortions in critical sectors and brought Chinese prices close to international ones. All this has been achieved with retail price inflation being held to single-digit levels in 1990/91.

iii. Major remaining price distortions are concentrated in a few but important areas such as energy, urban staple grains, raw materials, transport and housing services. This report examines the scope for reform in three of these--energy, grain and transport--and proposes a policy agenda for the future, which combines price changes with other complementary reforms that would promote efficiency with the minimum risk of reigniting inflation.

Energy Price Adjustment

iv. The report finds that the medium- and long-term implications of plausible changes in energy costs for the price level, the budget and efficiency would be highly positive.

v. So long as credit and fiscal policies are relatively conservative and the burden of price adjustment can be equitably shared between the state budget and other actors, the overall direct effects of energy price reform on consumer prices should be modest. Although initially the government may need to cushion the shock of higher prices for major energy users through budgetary

subsidies or sinking funds, over the medium run such reform would have a positive effect on state finances.

vi. Efficiency gains would follow a similar trajectory as users adapt to higher prices and practice frugality. There is much room for conserving energy, especially in China's state owned heavy industries. Hence, the potential benefits to be realized are very substantial.

Grain Prices

vii. The government has made considerable headway in adjusting the grain pricing system so as to reverse the rising burden of subsidies. By mid-1992, urban ration sales prices and farm quota procurement prices for the major grains had been essentially equalized. Undoubtedly, urban consumers will have to be partially compensated for price adjustments in the early stages, but over time, the savings to the budget will be large. However, a further round of grain price reforms might be needed to reduce urban consumer subsidies and to modify the structure of procurement prices, which currently do not reflect transport costs and supply bottlenecks in particular regions.

viii. Apart from completing grain price adjustments, the government also needs to strengthen commodity markets, established over the past two years, and introduce the regulations which will make possible the multiplication of such markets. Attempts must be made to generate competition in the grain sector, currently dominated by the monopolistic hold of the Grain Bureau. Finally, the government must allow for the seasonal variation of grain prices and encourage enterprises as well as private individuals to invest in storage, transport and bulk handling, which will smooth supplies and help minimize market fluctuations.

Transport Tariffs

ix. The reform of transport pricing will enable China to gradually alleviate one of its most critical bottlenecks. China's transport network is conspicuously smaller than that of other large developing countries, although the intensity of utilization is among the highest in the world. To cope with industrial growth, the changing geographical pattern of production and rising demand for passenger travel, the capacity of all transport modes will need to be enlarged and the system modernized. The aligning of prices with long-run marginal costs will contain the increase in demand, promote efficiency and enable the various carriers to generate more of the resources internally rather than depending on the budget or directed commercial credit.

x. During 1984-91 the upward revision of rail and water transport tariffs have brought them within 10-15 percent of financial costs. The principal objectives of future transport price reforms should be to first bring freight and passenger charges close to long-run marginal costs, and second, to give railways the flexibility to respond to economic demands by suitably tailoring the price structure. Reform entails raising not just the level of freight charges but also differentiating tariffs for the purposes of optimal modal allocation, to factor in freight characteristics and so as to allow for corridor congestion costs by mode.

xi. To fine tune intra- as well as intermodal rates and fully incorporate the effects of anticipated adjustments in the prices of inputs such as fuel and basic materials, cost data must be collected and analyzed along with data concerning the economic value of different rail services. The price of transport services should reflect their economic value, especially in cases where a transport service can result in savings to shippers outside of the transport sector itself (e.g., container transport or refrigerated services for perishable goods).

xii. Adjusting the level of tariffs and rationalizing their structure will encourage energy and material intensive industries to conserve resources and move to economically more desirable locations. It should also speed the integration of the national economy.

xiii. The three areas of reform discussed above while complex, are entirely feasible. They should be undertaken without delay. Beyond adjustment of prices, the government should move with all due speed to remove the ceiling, formal or informal, on market prices and to eliminate the bounds placed on improved negotiated prices. No doubt, this will be effective only with market functioning, but without such action, reform will be incomplete.

xiv. To realize the full gains from price reform, complementary actions in other areas will be necessary to sustain macroeconomic stability, make possible a dispersion of ownership, harden budget constraints and reduce the barriers to factor mobility. In all these areas, significant progress has already been registered. Experimentation has also identified the direction of future advance and the Eighth Five-Year Plan now provides the authorities a framework for proceeding with reforms in these interrelated areas.

PRICE REFORM IN CHINA

I. MACROECONOMICS OF PRICE REFORM

The Experience through 1988 and the Lessons

1.1 Between 1979 and 1987, China's price reforms put in place a two-tier system which subjected more than 40 percent of all prices to varying degrees of market guidance and allowed many more negotiated flexibility across a band determined by planning authorities. Beginning with substantial increases in agricultural procurement prices, price adjustments spread slowly to some industrial sectors, particularly those producing consumer goods. New entry into light manufacturing sectors, by raising supply, served to rationalize the relative prices of consumer durables and clothing, which had traditionally been sold at high markups. Finally, the development of the dual-track system for intermediate goods subjected the prices of a growing proportion market forces. These measures had significantly reduced distortions and price control by 1987.

1.2 The emergence of serious inflation in mid-1988 brought progress in price reform to a temporary halt. The government was forced to postpone further price reforms and concentrate its efforts on stabilizing the economy. Moreover, inflation tended to make relative prices even more distorted, because the remaining government price controls were more strictly enforced on low-price, rationed commodities such as grain and coal. Deflationary measures were introduced quickly, and were effective in restraining inflation by mid-1989. But additional price adjustments were required in 1989-91 merely to compensate for the effects of the inflation during 1988. As of end-1991, 17 agricultural products are subject to state price control, as against 110 at the beginning of the 1980s; and about a third of agricultural output is purchased at fixed prices. Nearly 70 percent of all consumer goods, in terms of sales volume, have been deregulated and price controls have been removed from 58 percent of industrial raw materials.

1.3 Even though the surge in prices was checked in a matter of months, the episode induced a rethinking of reform strategies and helped crystallize a number of lessons.

1.4 First, price adjustments, announced well in advance (as was the case in early 1988), are likely to trigger sudden opposing movements in demand and supply schedules, especially under conditions of long-enduring scarcity and rapid growth (Table 1.1).

1.5 Second, demand shocks will be more pronounced if expansive credit policies in earlier periods have augmented household savings accounts and transaction balances maintained by enterprises. Further, if interest rate controls prevent returns on financial assets from reacting to changes in inflation rates, there is a greater probability of a major shift into real assets such as consumer durables.

Table 1.1: REAL GNP GROWTH (percent)

Year	1984	1985	1986	1987	1988	1989	1990	1991
Growth Rate	9.9	13.5	8.3	11.0	10.8	3.9	5.0	7.0

Source: Tables 1.1-1.11 are from China Statistical Yearbook (various years) and China: Country Economic Memorandum, 1992, Report No. 10199-CHA.

1.6 Third, a full liberalization should be instigated when a clear majority of prices are close to or at market clearing levels. This lessens the magnitude of the shock (which exerts a one shot effect), minimizes the probability of interactive price-wage tendencies and ensures that embryonic market mechanisms can steer the system towards an optimal set of relative prices.

1.7 Fourth, the overall supply conditions and the rapidity of supply response to price stimuli are absolutely critical. Buyers' markets, sizable inventories of readily sellable products, excess manufacturing capacity with sufficient flexibility in the energy and transport sector for it to be utilized, foreign exchange sufficient to meet peak demand needs through imports, and an abundance of staple foods are the surest means of making a relatively inflation-free transition to relative prices reflecting true scarcities.

1.8 Fifth, aside from ensuring suitably propitious supply elasticities, the government must be ready with monetary, fiscal and wage policies to balance some very conflicting pressures: credit crunches, with their associated real effects,^{1/} are to be avoided just as much as excessive monetary accommodation. Fiscal deficits must not be allowed to undermine a monetary stance. And, wage restraint should supplement other instruments and neutralize, partially, the response of workers to an upward shift in the price level.

1.9 Lastly, price reform is only the first step in a package of reforms. The dividends it delivers in terms of efficiency and future macrostability are crucially tied to the subsequent or parallel implementation of reforms in neighboring fields. Two are of signal importance. Enterprise restructuring is a must if industrial productivity is to buttress future growth and make possible a hardening of budget constraint to secure fiscal policy from ever-mounting subsidies. Second, price signals must be able to free resources from one set of uses and redirect them to others. This calls for both factor mobility as well as significant annual additions to the supply of capital and labor.

^{1/} In China, as in other countries, a tightening of credit affects enterprise working balances and interenterprise indebtedness, resulting eventually in reduced output.

The Lessons Applied 1989/90

1.10 China was ill-prepared for a trouble-free price reform in 1988. Price expectations were volatile; many prices were still quite far from market-clearing levels; supplies of raw material, energy and consumer goods were tight; the food situation was not comfortable; monetary management was uneven; government finances were overstretched; complementary reforms, while debated vigorously, were far from being defined; and factor mobility on a limited scale had barely emerged.

1.11 In important respects, China is now much better positioned for wide-ranging reforms, starting with prices. To a substantial extent, this state of affairs is the outcome of macro, developmental and price policies pursued during 1989-91. However, the picture is by no means uniformly encouraging. The emphasis on planning and administrative control is still fairly pervasive. And, a number of much-needed institutions, such as those in the financial sector, are taking shape very gradually. These constraints are discussed in the next section. But on balance, policy has achieved more than could be expected in the face of considerable odds, economic and political.

1.12 Inflationary expectations of yesteryear have been largely dispelled by credible macropolicies. China possesses a comprehensive apparatus for administering prices and monitoring movements. This was immediately mobilized to the full and the reimposition of price ceilings was an important constituent of macropolicies, which prevented inflationary tendencies from becoming embedded. Price controls have played a useful short-term role in other countries, but the blanketing of price pressures in 1988/89 was far more complete than elsewhere. Perhaps the most tangible evidence of this is the abrupt disappearance of the consumer frenzy in mid-1988 and the apparent willingness on the part of individuals to hold currency and deposits. Financial savings have risen in each quarter since early 1989 and in 1990, the ratio of domestic savings to GNP touched 40.1 percent (Table 1.2). These are in no sense forced savings. People have gone on accumulating in spite of attempts to promote consumer spending. The propensity to save is high. This may in part be cultural, but the desire to rebuild real balances, growth in incomes, uncertainties regarding the state of social security in the future, the possibility that housing may be privatized, increased household formation as the baby-boom generation matures, all promote accumulation. Options being limited, cash and savings deposits are preferred, hence, the high M2 growth, not just in 1991 but since the early 1980s, has a much lower inflationary quotient.

1.13 Monetary policy has been used with some success. China has effectively skirted a damaging credit crunch. Growth of M2 was curtailed from the first through the third quarters of 1989. It was eased in the last quarter of 1989 and M2 increased by an average quarterly rate of 26 percent between the fourth quarter of 1989 through 1991 (Table 1.3). Deflation in 1989 cooled the economy, whereas monetary action in 1990 accommodated the rising demand for M2 on the part of households and prevented a collapse of industrial activity. No doubt some part of the credit extended during 1990/91 financed the accumulation of inventories, but these can now serve as a cushion to absorb the transitory shock of price adjustment.

Table 1.2: SAVINGS AND INVESTMENT (percent of GNP)

	1984	1985	1986	1987	1988	1989	1990
Gross national savings	33.1	36.6	38.0	39.2	38.7	37.8	40.1
Gross domestic investment	32.2	40.5	40.8	39.2	39.7	38.9	36.8
Fixed investment	26.3	29.7	31.1	32.2	32.2	26.2	25.6
Investment in inventories	5.9	10.8	9.7	7.0	7.5	12.7	11.2

Table 1.3: GROWTH OF M2 AND CREDIT (percent)

	1988	1989	1990	1991
M2	20.9	18.4	28.0	26.4
Net Domestic Assets	20.7	18.3	24.1	25.0

1.14 Interest rate policy has provided useful reinforcement. Indexed deposits, offering real positive interest rates, wooed households back to financial assets in 1989 and maintained their attractions through 1991. The reduction in the deposit rates to 7.5 percent in late 1991 was done so as to stimulate consumer spending which lagged in 1990/91. Avoidance of sharp fluctuations in credit supply, combined with administratively enforced cuts in fixed capital spending, meant that demand followed supply downwards. There was rationing of credit, but China sidestepped the deleterious consequences for eventual recovery of very high real interest rates.

1.15 Monetary management, which was conspicuously erratic during 1984-88, has also been strengthened in important respects. The People's Bank (PBC) has tightened its grip on the actions of its provincial branches by exerting its authority over appointments and monitoring targeted rates of provincial lending with greater vigilance. The PBC has also gained confidence in the use of indirect monetary instruments such as rediscounting, which usefully supplement administrative controls. The issuance of a wider array of government bonds not only diversifies options for investors but offers a start for open market

operations.^{2/} In any event, macromanagement during future reform episodes has the potential of being firmer yet more flexible.

1.16 Tax reform has made little headway but some weaknesses have been remedied. Unlike the East European countries, the Chinese government is not overly dependent on enterprise profit remittances. A diversified tax base dampens fluctuations in revenue (Table 1.4). It also means that enterprise reform is not necessarily a prisoner of fiscal exigencies. The central government which, in the mid-1980s, collected 40 percent of taxes allocated to Beijing, now directly obtains nearly two thirds, thereby lessening its dependence on provincial finance agencies. Perhaps the most significant development has been the success at stabilizing the revenue/GNP ratio since 1989 through better administration and the imposing of new taxes. China's tax system is subject to numerous distortions and is in need of overhaul but, after three difficult years, it has emerged marginally stronger with the growth of the public sector deficit kept in check (Table 1.5).

Table 1.4: SOURCES OF REVENUE 1990

	Percent of GNP
Taxes on Income and Profits	4.6
Taxes on Goods and Services	8.6
Taxes on International Trade	0.9
Other	3.1
Nontax revenue	2.7
Of which profit remittances	0.4

1.17 Only a few years ago, life in China was frugal. Daily necessities were adequate, everything else was hard to find. Having lived close to the minimum, people were exceedingly sensitive to small changes in supplies of goods and the variety available. Expanding industrial capacity, the fruit of heavy investment in plant during the mid-1980s has pushed aside the sense of insufficiency. For a range of consumer goods, buyers' markets have appeared. There is industrial slack; entry of new producers is relatively unimpeded; quality is improving with the absorption of foreign technology and the experience gained from trade; there are sizable inventories and underlining this transformation, prices of consumer goods in the free market declined from late 1989 through mid-1991 (Table 1.6).

^{2/} Construction bonds have been issued since 1981, but more recently these have been joined by treasury bonds. Indexed bonds and a securities market, which will make possible an active secondary market, are the developments during 1989/90.

Table 1.5: REVENUE/GNP, SHARE OF REVENUE COLLECTED BY CENTRAL GOVERNMENT

	1984	1985	1986	1987	1988	1989	1990	1991/ <u>a</u>
Revenue/GNP	26.4	26.6	25.2	22.7	20.0	20.5	19.9	18.6
Public sector deficit (percent of GNP)	1.5	0.5	1.9	2.0	2.6	1.8	2.0	2.6

/a Estimate.

Table 1.6: PRICE INDICES--URBAN AND FREE MARKET (annual percent)

	1984	1985	1986	1987	1988	1989	1990	1991
Urban CPI Price Index	2.7	11.9	7.0	8.8	20.7	16.3	1.3	5.1
Market Prices	-0.4	17.2	7.7	15.8	31.9	9.7	-6.0	-2.5/ <u>a</u>

/a Estimate for first ten months.

1.18 China's enormous investment in new plant during 1984-88, especially the capacity created in the consumer-oriented township, village and collective enterprises, has definitely paid off. The majority of urban households--as well as many in the rural sector--own a full suite of basic consumer durables and have access to an abundant supply of daily necessities at stable prices.

1.19 Investment in manufacturing partly explains the changed supply elasticities. China is also benefiting from the increased flow of capital into transport, energy and industrial raw materials since 1989. All these constraints on China's industrial growth during 1985-88 have become less binding. Similarly, the repair and extension of rural infrastructure and water management facilities, using resources raised through local levies, has had immediate payoffs. Grain production in 1989 exceeded that of 1988 and in 1990, 445 million tons of grain were harvested, an increase of nearly 7 percent (Table 1.7). In spite of severe flooding in 1991, grain output still reached 435 million tons. Not only can consumers find the consumer goods they want in ample quantity, food items, which absorb about half the household budget, are readily available. The agricultural economy appears robust and granaries hold enough grain to tide China over a year or two of poor harvests.

Table 1.7: GRAIN PRODUCTION

	1984	1985	1986	1987	1988	1989	1990	1991
Total production (million tons)	407	379	392	403	394	408	445	435
Kg per capita	390	358	365	369	355	362	380	376

1.20 The flexibility, responsiveness and quality of industrial supplies, which is the surest guarantee against price reform-induced macro turbulence, can also be traced to a gradual acceptance by the Chinese authorities of two important trends. First, the township and village enterprises (TVEs), with their variegated forms of ownership, are now viewed as leading the curve of industrial expansion (Table 1.8). These producers are closer to the consumer, find it easier to enlarge production, are more competitive and manage to stimulate local resource generation. They offset the dead weight of lossmaking state enterprises and can facilitate restructuring by providing employment opportunities for redundant workers in state-owned enterprises. Taken together, the collective and TVE sectors are almost as large as the state sector. They are a nearly irrepressible source of dynamism. In this respect, China is very different from East Europe or the (former) Soviet Union. The performance of the TVE sector under adversity in 1989/90 and its astonishing success in the export market over the past two years provide grounds for confidence in the adaptability of the economy.

Table 1.8: TVE GROWTH AND SHARE IN INDUSTRIAL OUTPUT (percent)

	1985	1986	1987	1988	1989	1990	1991
Growth	-	29.0	26.0	24.0	4.0	12.0	22.0
TVE share of industrial output	18.0	21.0	23.0	26.0	26.0	27.0	
State enterprise share of industrial output	64.9	62.3	59.7	56.8	56.1	54.5	

1.21 There are other reasons for drawing comfort from the experience of 1989/90 with regard to flexibility. In 1986, the BoP current account deficit was 2.75 percent of GDP. It fell to 1 percent GDP in 1989, but adjustment measures plus extraordinary export growth resulted in a surplus equal to 3.3 percent of GNP in 1990, a performance that was repeated in 1991 when the

current account surplus was, again, 3.3 percent of GNP. In the space of 18 months, over 4 percent of GDP was transferred to tradable sectors. In the process, China restored its standing in international credit markets, threatened by the June 4 incident (Table 1.9). By December 1991, it had accumulated reserves of \$44 billion (7.5 months of imports), which can be drawn upon to finance imports to take the edge off temporary shortages and inflationary spikes in selected subsectors, following price reform.

Table 1.9: EXTERNAL ACCOUNTS

	1985	1986	1987	1988	1989	1990	1991
Merchandise							
Exports (\$ billion)	27.35	30.94	39.44	47.52	52.54	62.06	71.9
Imports (\$ billion)	38.75	39.34	39.63	50.69	54.23	48.92	63.8
Current account (% of GNP)	-3.88	-2.75	0.01	-1.00	-1.03	3.29	3.3
Reserves including gold							
(\$ billion)	16.88	16.41	22.45	23.75	23.05	34.47	44.0

1.22 The adjustment achieved during 1989/90 indicates that factor markets have begun to coalesce. Hesitantly and with occasional reversals, the authorities at central as well as provincial levels have begun accepting the inevitability of factor movements across provinces. After decades of labor immobility, China has acquired, in less than five years, a floating population of well over 70 million--an essential adjunct to the regular labor force in the urban economy. Step by step, foreign exchange markets, on which enterprises trade their retained foreign exchange, have begun forming a unified whole. The country still lacks an integrated capital market, but initiatives begun in 1987/88 have started to flower in the early 1990s.

1.23 Having learned its lessons on the announcement effects of programmed price adjustments, the government resumed price reform in mid-1990 with the minimum of fanfare. In little less than two years, vast changes have been introduced in the prices of transport services, construction materials, industrial raw material, grains, cotton and other foodstuffs, and the exchange rate (Table 1.10). The adjustment in the latter is especially noteworthy. In late 1989, the official rate was about 60 percent of the free-market rate and export subsidies absorbed close to \$7 billion. Since then, the renminbi has been devalued by over 30 percent and the official rate is within 10 percent of the free-market rate. China is close to having unified the exchange rate and export subsidies have been sharply scaled down. Effects on retail price inflation in 1990 were negligible: prices rose 2.1 percent. Inflation was higher in 1991 but remains at single-digit levels. Retail prices rose by somewhat over 3 percent, but the urban cost of living was 8 percent higher. Increased prices of urban transport services and public utilities, along with higher rents, are largely to blame for acceleration in the second half of the

year, but these should be viewed as desirable changes in relative prices rather than as evidence of resumed inflation.

Table 1.10: PRICE ADJUSTMENTS IN 1990/91
(percent)

	1990	1991	1992
Cotton (procurement)	27		
Oil Seed (procurement)	28		
Crude Oil	21		
Rail Freight	34.5		
Coal	21.7		
Nonferrous metals	24-42		
Steel		15	
Grain (urban sales)		67	45
Edible Oil (urban sales)		159	

1.24 The ability to cope with such major price shocks once again highlights some of the gains made in the most recent years: markets and supplies are sufficiently flexible to cope with reform; various subsectors are beginning to raise their productivity so that they can absorb an increase in prices; and finally, the mechanism in place to police prices, even free-market ones, is able to dispel any unusual turbulence. This mechanism can help in the management of future reform as well until such time as market institutions appear to serve as stabilizers.

1.25 The latest round of adjustments have brought many of the most distorted prices closer to market-clearing levels. In many instances, the final stage of the journey to the market should pose less of a hurdle because of what has been done in the past two years. This final stage must be crossed before the potential gains can be fully realized.

1.26 Although growth in 1991/92 is back to respectable levels, improvements in total factor productivity over the past few years have been modest. Much of the increase in production is ascribable to factor inputs. The Chinese economy has vibrant sectors but the productivity averages are depressed by persisting inefficiencies in state enterprises, which forces the state to extend large subsidies, greatly complicating the management of fiscal policy (Table 1.11). Enterprise losses in relation to total government expenditures doubled between 1985 and 1990. Price reform can be an important vehicle for scaling these down. On the margin, resources are being allocated optimally, and there is a stirring of market competition, but controls continue to interfere with price signals in crucial areas. For instance, energy utilization per unit of industrial production, while it is trending downwards, remains high.

**Table 1.11: GOVERNMENT EXPENDITURE ON SUBSIDIES,
1985 AND 1990
(percent of total expenditure)**

	1985	1990
Subsidies	21.8	24.7
Daily necessities	13.5	9.8
Agricultural inputs	0.6	0.0
Enterprises losses	7.7	14.9

II. SECTORIAL PRICE REFORM

2.1 Price distortions are now concentrated in a few but important areas such as: energy, raw material and urban staple grains as well as transport and housing services.^{3/} Government control over these prices has remained extremely strict, even as unanticipated inflation has raised the overall price level. Adjustments during 1990, have increased planned prices but some have yet to catch up with past inflation in the general price level. Relative prices of energy, staple grains and rent are not higher than they were in the early 1980s. In many cases, they are lower. Between 1980 and 1991, the general consumer price level increased 7 percent per year; while the planned price of coal at the minehead, increased a little more than 6 percent per year. Even after the large price adjustment of 1990 is taken into account, the planned price of coal is about 10 percent lower--relative to the general consumer price level--than it was in 1980. A rough sense of how China's energy prices compare with world prices is provided by Table 2.1. In plan prices of coal, gasoline and diesel oil are below border prices, although market prices are broadly comparable and those of fuel oil well above international prices.

2.2 The concentration of problems on a few critical areas can also be seen by examining industrial profitability. Of 40 industrial sectors, 32 have average rates of total return (profit and tax) to capital between 10 and 25 percent, which might be considered within the normal range, given fluctuation in general business conditions. Five are below: coal, petroleum extraction, public water supply, coking, and leather products. Three are above: cigarettes, petroleum refining, and rubber products. Thus, of the eight sectors outside the range of average profitability, four are the direct consequence of low, controlled energy prices. Clearly, cigarette prices do not need to be adjusted nor do those of leather or rubber products. From the industry standpoint, energy pricing is the principal issue.

2.3 The current price system interferes with balanced sectoral development by discouraging investment in precisely the designated priority sectors in China's industrial policy. State-set prices prevent those sectors from accumulating their own resources, forcing planners to counteract this through administratively arranged transfers. The burden of subsidizing loss-making enterprises in key sectors is an important part of this problem. In 1989, 45 percent of all industrial losses were in three sectors: coal, coking and gas, and petroleum extraction.

2.4 There are large efficiency losses as well. Recent World Bank studies have quantified this loss for the case of coal, probably the largest single source of industrial inefficiency. Losses ascribable to low prices amount to more than 10 percent of annual consumption of coal, and are valued at over

^{3/} This statement is based on a narrow definition of price, construed as covering product and service prices only. There are still significant problems with respect to capital pricing, tax parameters and wages and benefits.

Table 2.1: COMPARISON OF CHINESE AND INTERNATIONAL ENERGY PRICES, 1991

	Beijing retail prices (Y/t) /a		International Prices (\$/t)	Estimated border price of potential Exports (Y/t) /b
	In-plan	Outside plan		
High quality steam coal /c	75-80/d	120-125/d	35/e	186/f
Gasoline	750-900	1,100-1,700	254/f	1,346
Diesel oil	500-700	900-1,300	182/f	965
Fuel oil	350-400	700	80-94/f	424-498

/a Based on prices quoted by fuel supply bureaus, November 1991.

/b Based on official exchange rate of Y 5.3/\$.

/c Low sulfur coal of 6,200-6,500 kilocalories per kilogram.

/d Prices refer to supply from city depots. Factory-gate charges may also include additional highway transport costs. Out-of-plan factory-gate prices were reported at about Y 140-150 during the same month.

/e FOB Qinghuangdao, November 1991.

/f FOB Singapore postings, June 1991.

Y 13 billion. The most important loss is that consumers do not have financial incentives to invest in energy-saving investment so long as they have access to cheap coal. The high demand places a heavy burden on the nation's railways. There are additional long-term efficiency losses because cheap coal retards the development of alternative, clean energy sources, such as natural gas. Cheap energy worsens China's environmental problems by raising coal use. Low transport costs encourage shipping and burning unwashed coal with a higher proportion of pollutants. Pollution has significant costs to the health of the Chinese people and may contribute to global environmental problems.

2.5 Just as industrial price reforms might concentrate on energy, the gains in the agricultural sector are greatest from a completion of grain price adjustment and marketing reforms. The widening gap between procurement prices of grain and the prices at which they are sold to urban consumers has steadily raised the cost of subsidies. As with energy prices, reform would, over time, free a large chunk of budgetary resources. In the arena of services, the transport sector deserves primacy not so much because of direct benefits for public finances, but because development and modernization of transport facilities are critical for future growth. Its expansion is being constrained because the existing price structure does not generate sufficient resources.

2.6 The urgency for price reform needs no further emphasis. However, reform is not costless: there are significant distributional consequences to be weighed and their political implications assessed. Gains would be sharply truncated if the authorities were to limit themselves to price adjustments only and not pursue other reforms which could enable the economy to fully exploit the salutary shock imparted by a change in relative prices. Below we discuss some of the implications of price reforms in three sectors: energy, grain and transport. The analysis is necessarily somewhat crude and for illustrative purposes only. A number of detailed exercises that are ongoing should yield more refined estimates.

A. Energy

Distributional Effects

2.7 Energy price reform will affect the interprovincial and intersectoral distribution of resources, and it will necessitate the increase in some consumer prices. In the following, we discuss an increase in plan prices at the minehead which would place coal prices at around 80 percent of long-run marginal costs. This would raise the state fixed price of coal at the minehead to around Y 85. In addition, petroleum prices would be more than doubled and the price of electric power to industry would increase by about 40 percent. These changes would approximately double the in-plan price of energy, putting energy prices near to their proper levels in a single move. However, the ultimate effects of such adjustment can only be traced out through further research which takes account of input-output relations and demand elasticities.

2.8 Raising the price of energy would redistribute revenues from energy consumers to energy producers. The current energy price structure benefits wealthy energy consuming regions at the expense of poorer regions. State allocations of coal at low fixed prices still account for nearly 50 percent of coal sales, and about half of that amount is transported across provincial boundaries. This results in implicit subsidies of about Y 8 billion, or 0.5 percent of national GNP (using 1988 data). The beneficiaries are predominantly coastal areas. Four northern provinces with large concentrations of state industry--Liaoning, Jilin, Beijing and Tianjin-- account for Y 3 billion, 1.5 percent of their provincial GNPs. Southern coastal provinces--Jiangsu and Shanghai through Guangdong--receive the same absolute subsidy, but it accounts for only 0.7 percent of their provincial GNPs. A few inland provinces--Hubei, Gansu, and Qinghai--receive implicit subsidies of 1 percent or more of GNP, but the aggregate amounts are large only in the case of Hubei. In general, wealthier coastal provinces can afford to pay the higher price of coal. Under current budgetary arrangements, in which provinces contract to deliver a fixed amount of revenue to the center, the wealthier coastal provinces can absorb the increased price of coal, given that they will retain all the savings they accrue subsequently from increased efficiency in coal use, and will have better access to inland supplies.

2.9 Inland coal-producing provinces pay an implicit tax because they deliver coal at low state-set prices. With few exceptions, these are poor provinces that receive fiscal subsidies from the central government

(Table 2.2). With the exception of Shanxi and perhaps Henan, the central government can allow these provinces to retain the larger coal revenues. In return, the central government can reduce fiscal transfers to these provinces. There will thus be savings in administrative costs and reductions in two-way transfers following coal price reform. The central government can recapture

Table 2.2: IMPLICIT TAXATION OF COAL-PRODUCING PROVINCES

	Absolute value implicit tax (Y billion)	Implicit tax of province GNP (%)
Shanxi	4.29	14.5
Ningxia	0.19	4.0
Henan	0.58	0.8
Heilongjiang	0.35	0.7
Guizhou	0.15	0.7
Inner Mongolia	0.13	0.6
Shaanxi	0.14	0.5

Source: Staff estimates.

much of Shanxi's increased revenues through greater remittances of profit tax and natural resource taxes. The job of revenue capture by the central government will be facilitated by the fact that revenues will be concentrated in one or two provinces, and should be directly linked to the amount of coal delivered to the state allocation network.

2.10 Energy price increases have the largest effect on a relatively small number of energy-intensive producers. Table 2.3 shows the industrial sectors with the largest fuel and power requirements, and gives rough orders of magnitude as to the price increase that would be necessary to maintain profit levels unchanged with a doubling of energy prices. For all other sectors, the price increase implied by even a 100 percent pass-through of energy prices would be significantly less than 10 percent.^{4/} Table 2.3 also gives profitability in 1989: average industrial profitability was 17 percent, profitability of railroads is estimated. In practice, reform of state-set fuel prices would have a somewhat larger proportional affect on railroads than on other sectors.

^{4/} Data on fuel and power as a share of production costs are from 1985, which appears to be the most recent available--state-run firms only (1989 Industrial Statistics, pp. 66-70). Profitability is for 1989 with all enterprises practicing independent accounting. The 1989 profit figures were used to calculate the impact of passing through costs as well.

**Table 2.3: DOWNSTREAM EFFECTS OF DOUBLING ENERGY PRICES
(percent)**

	Price increase with full cost pass through	Profit rate, 1989 (profit & tax/capital)
Electric power	35	14
Water supply	26	5
Building materials	20	14
Ferrous metals	14	22
Railroads	13	8
Chemicals	11	23
Nonferrous metals	11	18
Paper	11	20

Source: Staff estimates.

2.11 Institutions are already in place to pass through the increased cost of primary energy into higher electricity tariffs. A significant proportion of electric power is already sold at prices substantially above state fixed tariffs. Power plants purchasing high price fuels are allowed to pass on most costs, and power tariffs have been raised by local surcharges used to repay construction costs. In practice, then, local power tariffs reflect real

capital costs, a somewhat less rigid form than including infrastructure bond payments in costs of power generation.

2.12 In addition to the industries listed above, coal and petroleum are used as raw materials in the chemical, petroleum refining, and town gas and coking industries. The chemical industry is diverse and generally profitable. The main concern is with chemical fertilizer production, which has suffered from price controls designed to ensure low-price supplies to farmers. We do not have specific data on profitability and energy usage of the fertilizer industry, but increasing energy prices will raise fertilizer production costs. However, if farmers are given full payment for quota grain, they should have no difficulty in accommodating higher fertilizer prices.

2.13 Refined petroleum products would increase in price by 69 percent if the full cost of a doubling of crude oil was passed through. But currently refinery profits are extremely high: 39 percent of capital. China collects the rents on petroleum production at the refining stage, rather than at the extraction stage as in most countries. Since refining is concentrated in a small number of centrally controlled refineries, the price of crude is essentially a transfer price among closely related state firms. Price adjustments will be easy to carry out with modest impact on the price of refined products.

2.14 Town gas production and coking are completely dependent on coal as a raw material. A doubling of coal prices would require an 80 percent price increase to maintain profitability, but current profitability is only 3.2 percent of capital. Moreover, there may be additional subsidies. For these sectors there should be a more than full pass through of increased coal prices.

2.15 Downstream industries affected by energy price increases can thus be separated into two categories. The first category consists of producers with controlled prices and low profitability. For these products, price adjustments will be required to permit them to pass through the cost of higher energy prices and in some cases restore profitability. The main sectors where prices will need to be changed and the range of adjustment (range given from maintaining existing profitability to reaching average industrial profitability) are:

- Town gas, coke: 80 to 100 percent
- Water supply: 26 to 60 percent
- Electric power: 35 to 40 percent
- Railroad freight: 13 to 22 percent
- Chemical fertilizer: n.a.

For this category, all that is required is adjustment of product prices. In many cases, this will simply mean the unification of prices, with all consumers paying the higher free-market price now paid by a large proportion of consumers.

2.16 The second category of industry consists of those with high energy consumption, but average or above-average profitability, and price determined or strongly influenced by demand conditions. These sectors are:

- Petroleum Refining
- Building Materials
- Ferrous Metallurgy
- Chemical Products (other than fertilizer)
- Nonferrous Metallurgy
- Paper

It may not be necessary or appropriate to adjust plan prices for these commodities, except in a few special instances. Instead, producers should be given temporary assistance to aid them in adjusting to higher energy costs.

Price Adjustments, Medium-Run Buffers and Long-Term Policy

2.17 Producers in energy-intensive sectors can be given a temporary sinking subsidy to aid them in adjustment. This subsidy would equal 80 percent of the difference between the old and new plan prices, multiplied by the volume of deliveries through the state allocation system in the base year (1991). This subsidy would be easy to calculate and administer, and would not require renegotiation of profit delivery contracts. In the second year, the subsidy would decline to 50 percent of the price difference; then 20 percent in the third and final year. In this way, downstream producers would be under great

pressure to economize on energy consumption, and the state's fiscal position would be protected from the danger of widespread renegotiation of enterprise financial obligations.

2.18 In addition, the state should create a structural adjustment fund to assist conversion and closing of inefficient energy intensive producers. It is inappropriate to protect all factories from the impact of higher energy costs. Indeed, some of the largest gains from higher energy prices will come from the closing of inefficient plants. In particular, some of the below optimal scale producers of cement, fertilizer, paper, and oil refiners may have to be closed. Large state enterprises will also require assistance to replace obsolete technology, eliminate uneconomic production lines, and transfer production. Capital from the structural adjustment fund can be made available to enterprises that present plans for closure or conversion of existing assets. This money can then assist in the retraining and transfer of workers and the reconstruction of physical capital.

2.19 Changes in energy prices will have a modest direct impact on consumer prices. For the urban consumer, the price of five items will increase, all of which are a small proportion of household outlays. The items, and their 1989 share in representative urban household budgets are:

• Coal used for fuel	1.5%
• Electricity	1.2%
• Transport (local and long distance)	0.8%
• Water	0.3%
• Town gas	0.2%

Together these account for 3.9 percent of household outlays (or 4.4 percent for the poorest decile). Household electricity tariffs are already near appropriate levels, and would only need to be increased about 20 percent. If water tariffs are increased 60 percent and the price of coal, transport and town gas doubles, the total impact on consumer outlays, assuming totally inelastic demand, would come to slightly less than 3 percent of outlays. The direct effects on urban households are quite small. As long as macroeconomic policy can keep the general price level stable, the total effect will also be minimal. This should not be surprising, since Chinese households are not profligate consumers of energy, either directly or embodied in other commodities. State-run industry is the big energy user.

2.20 Rural households purchase virtually no fuel from the state other than diesel (for pumps and tractors) provided under the "3-linkage policy" for grain. Fuel for rural inhabitants is wood, straw, dung or locally mined coal. Subsidized electricity is used in pumping on large irrigation and drainage schemes, but higher grain prices would allow farmers to absorb increased electricity charges. In any case, rural households in most areas of China have been purchasing much of their fuel and electricity at market or near-market prices already. Adjustment of state prices will make little difference to them.

2.21 Overall, then, the direct effect of energy price reform on the consumer price level will be modest. This depends, however, on keeping increased

energy costs from pushing up the price of other industrial and agricultural products. The ability to do so depends on two elements of state policy: first, overall macroeconomic policy, and second, division of the burden of price adjustment between the budget and other parties. The first element has been extensively discussed throughout this paper: conservative credit policy combined with effective use of state reserves of commodities and foreign exchange will be able to control changes in the overall price level.

2.22 The second issue concerns the division of the burden of price adjustment between the state budget and other actors. This also directs attention to the impact of price reform on the state budget. Price reform affects government revenue primarily by changing the distribution of profits among state-owned enterprises. Different industrial sectors have different profit tax rates. Therefore, redistribution of profits among industrial sectors can have a significant effect on government revenues. Predicting the fiscal effects of price reform depends on the assumptions made about profit tax rates. If it is assumed that average profit tax rates will be unchanged in each industrial sector, raising petroleum prices substantially decreases government revenue (because it redistributes profits from high-tax petrochemicals extraction) ^{5/} Similar effects occur when the price of coal is raised, because of redistribution of profit to low-tax coal from more heavily taxed electricity and rail freight, but the net effect is much smaller. However, the negative impact on budgetary revenues disappears when rail freight and electricity tariffs are raised along with coal and petroleum prices. Increasing freight tariffs and electricity rates increases profitability in these sectors with substantial profit tax burdens, and can increase government revenue even in the face of increased primary energy costs. Indeed, the picture is slightly more favorable than this, because the government is a net seller of energy to nonstate enterprises; thus, on balance the state sector will gain revenues from increased energy prices. Moreover, in the long run, as firms and households adjust to increased energy prices, there will be an efficiency gain in which the state will share.

2.23 As price reform raises the profitability of the coal and petroleum extraction sectors towards the national average, the government could enact temporary measures, such as an adjustment of the profit contract or on "excess profits" tax to keep the revenue system in step with the changed distribution of profits. The longer term goal should be a greater uniformity of sectoral tax rates. The situation with regard to industrial enterprises is more complex as efficiency gains are realized over several years. Most importantly, the government does not have perfect information about the volume of transactions at different prices, the financial impact of price changes on downstream users or the scope for energy conservation at the level of the individual user. As a result, if it adopts policies designed to fully compensate energy users for their increased costs, the result will be that the government budget will suffer substantial revenue losses. If every user is fully compensated, many users will be able to improve their financial position through their manipulation of information available to them, but not to the government.

^{5/} These are some of the preliminary findings of collaborative research done by the Bank and the Development Research Center of the State Council.

Thus, the ultimate impact on the government budget depends on the nature of the compensation policies adopted as part of price reform and the nature of tax reform.

2.24 In order to control the process of income redistribution, the government should adopt the following policies: (a) less than full compensation of increased energy costs; (b) partial compensation according to simple formulae not easily manipulated; and (c) targeted assistance to aid in restructuring. The simplest way to do this in the case of coal price adjustment is the method alluded to above, providing a sinking subsidy equal to 80 percent of the value of implicit coal subsidies in the previous year. Similarly, wage increases--if granted at all for this purpose--should on principle be limited to an amount less than the full amount of directly increased costs of power, fuel and utility provision.

2.25 Higher prices for central government allocated coal (by Y 50 per ton to the user) would result in increased costs of slightly over Y 20 billion. In the first year, the government would compensate Y 16 billion to users. All of this could be obtained by reduced subsidies to loss-making coal mines (over 4 billion annually), and increased profit and resources taxes from well-endowed coal mines (primarily in Shanxi province) and from the railroad system. Total revenues, even after accounting for the temporary compensation, would be greater.

2.26 Partially offsetting the increase in revenues would be increased outlay required by two factors. First, the structural adjustment fund would require new financing from the central government. Second, state investment outlays would become more costly, as energy price increases pushed up the cost of building materials and steel. This increase might account for about a 10 percent increase in construction costs. Thus, in the first year after reform, the fiscal impact should be small, and could be handled by restraint in the state investment plan for that year. In the second year, as the compensation fund declined, the net impact on the budget would become positive.

2.27 We next turn to the question of grain price reforms whose implications for macroeconomic functioning and the government's budget are as significant as those proposed for the energy sector.

B. Reform of Grain Prices

The Grain Price Situation in the late 1980s

2.28 Price and institutional reforms raised the growth rates of grain production in the first half of the 1980s by an annual average of 4.3 percent. However, the rate of increase slowed between 1985-88 because of diminished price incentives, deteriorating water management facilities and poor weather conditions. Renewed attention to agricultural infrastructure in the latter part of the 1980s, higher grain procurement prices (Table 2.4) and a spell of excellent weather revived the grain economy and resulted in a record crop of 446 million tons in 1990.

2.29 Although mandatory grain procurement prices were raised on several occasions during the past decade, consumer ration prices remained at levels set in the early 1960s. The widening gap between these prices inflicted major losses on the grain distribution system which have been financed in large part through budgetary subsidies. These have averaged 2.3 percent of GDP or 10.2 percent of government expenditures during 1989/90. In addition, recent years have witnessed increased reliance on mandated credit for grain purchases from the banking system (para. 2.37).

Recent Price Adjustments

2.30 The grain price adjustments of 1991 and 1992 (Table 2.4) have substantially improved the rationality of grain pricing in China, and propelled the grain sector to the leadership role in price reform in China's economy.

Table 2.4: GRAIN PRICE ADJUSTMENT

1989	37% increase in paddy procurement prices
1991	25% increase in wheat procurement prices (applicable to 1992 winter harvest)
1991	60% increase in urban ration prices for grain and flour
1991	150% increase in urban ration prices for beans and edible oil
1992	45% average increase in urban ration grain prices and 18% average increase in farm procurement prices, with higher increases for grains in greater demand and lower increases for those with weaker demand.

By mid-1992 urban ration sales prices and farm quota procurement prices had been essentially equalized for the major grains still subject to government control (wheat, maize, Indica and Japonica rice), thus eliminating at least half of the previous subsidy element in the government grain marketing system. Remaining consumer subsidies cover the costs of the portion of the storage, handling, and distribution system devoted to official rations. These are now estimated at Y 25 billion. The massive reduction in explicit subsidies was not achieved at the expense of farmers, who have benefitted from substantial increases in quota prices at intervals over the past decade, and who now receive prices for quota wheat, maize, and oilseeds rather close to world price levels, netted back to the rural depot. Official grain prices are also now quite close to domestic negotiated prices and the market prices on which they are based. It is possible that Japonica rice (and to a lesser extent, Indica) is now the most underpriced of the main grains, given supply and demand in China.

2.31 The official grain price system is still not a model of rationality. Large subsidies are still granted to urban consumers, although to a signifi-

cant extent they are no longer provided by implicit taxation of grain farmers. The uniformity of quota procurement prices is irrational, in that prices take no account of transport costs from, or even absolute bottlenecks in, various regions. But the recent changes have all been in the right direction, they have been substantial, and they have come quickly. Many have followed World Bank recommendations, and in many cases where they diverged, adjustment of policies has been effective. The treatment of the huge outstanding stock of old grain coupons is a case in point. By simultaneously linking the coupons to new (rather than old) urban ration prices, and raising those prices to near-market levels, the government has reduced their monetary value to comparatively negligible amounts, at considerably less political cost than attempting to confiscate or arbitrarily invalidate them.

A Suggested Approach to Further Grain Sector Reform

2.32 The following proposals are in rough order of priority, although most of the programs should be started simultaneously. First, prices should continue to be adjusted as rapidly as political circumstances permit, mainly now to cover distribution, processing and marketing costs. Urban consumers should not be fully compensated through wage increases.

2.33 Mechanisms for determining market prices should be expanded by improving existing commodity markets (e.g., Zhengzhou, Wuhan, Harbin, Changchun, Changsha) and establishing new ones (e.g., Shanghai). This calls for several different actions: appropriate regulations and facilities, to stimulate high and consistent volumes of free trading in all major provinces; interconnecting information systems; and the stabilization of prices by government intervention which is backed up by its buffer stock system. Meanwhile, the program of township level free physical markets in grain (highly developed in Hubei and in Xindu county, Sichuan) should be enlarged to embrace the entire country.

2.34 As market prices begin to apply to larger and larger proportions of grain sold by farmers, bought by consumers, and traded on the commodity markets, public attention should be redirected to those prices (through radio, newspapers, television) as the prime indicators of the value of grain, rather than the policies of national or local governments. In addition, the authorities could begin to publicly announce price changes in official prices as based on trends in market prices. The point here is to remove grain prices as much as possible from politics, so that consumers or farmers do not blame government for grain price changes, but rather the true factors--weather, floods, pests and diseases, increasing yields, and changing consumer tastes.

2.35 Attempts must be made to generate competition in the grain sector, which is now dominated by the monopolistic hold of the Grain Bureau system. This is critical to reducing the excessive costs of grain storage and distribution in China today. Experiments in Shandong and Beijing indicate how urban retail shops can be turned into competitive enterprises managed by their employees. These shops are close enough to compete with each other. Experiments in Tianjin and Beijing show that urban depots can also be turned into efficient competitive enterprises managed by their employees. In Tianjin Municipality, 216 enterprises were created, which again should provide plenty

of competition. In both cases the employee cooperatives should be charged (e.g., rent or interest) for the assets they are given. Once this occurs in any jurisdictions, urban retailing and wholesaling of grain should be open to any individuals or enterprises who wish to compete in the grain business.

2.36 Over time, the Grain Bureau installations in the countryside (the rural collection centers and depots) should be converted into real cooperatives, owned jointly by the farmers who sell to them (and buy fertilizers and other goods), meanwhile encouraging private traders and any enterprise which wants to, to enter the competition for farmers' grain. The goal here is to prevent exploitation of farmers by local monopolies. One strong factor here will be expansion of the network of free local grain markets and fairs.

2.37 Financing of Grain Purchases, Storage and Distribution. Currently, ABC and ICBC are the main providers of working capital funds to the grain bureaus and their enterprises. In the aggregate, about Y 90 billion in overdue loan payments is owed by Grain Bureaus to the Agricultural Bank of China and Y 60 billion to the Industrial and Commercial Bank of China (ICBC). This has serious implications for the liquidity and profitability of the banking system, requiring the provision of credit by PBC usually at subsidized interest rates. MOF (Ministry of Finance) channels budgetary subsidies for grain procurement through finance bureaus at various levels, which are in arrears to the extent of Y 60 billion. ABC and ICBC loans have thus indirectly financed MOF's fiscal obligations to the Grain Bureaus. This is an unsustainable banking practice, which must soon be replaced by full explicit budgeting of remaining subsidies. ABC and ICBC loans to Grain Bureaus carry preferential rates of interest which are usually lower by 0.4 percent than the commercial rate. Apart from eliminating remaining subsidies on grain consumption, reforms are needed in the areas of grain transfer prices, grain stock management, allocation of loans for reserve grain stocks and plan and nonplan purchases to make subsidies on each of these operations more explicit. Furthermore, a network of computerized financial management systems would ensure more efficient use of working capital.

2.38 Finally, government must accept that grain prices will vary seasonally and from place to place. Seasonal fluctuation will eventually induce enterprises and private people to invest in efficient grain storage, both in rural and urban areas, as this will be profitable. Prices will be lower after harvest, and higher through the winter. Variance in prices from place to place, already noticeable in free markets today, will call forth investments in transport. Governments will however always be responsible for investments in roads and probably in railroads, ports, and major bulk-handling terminals also. This should be financed from savings in urban subsidies, and is crucial for market development.

Possible Effects of Grain Reform on Inflation

2.39 A good economic model to predict effects of grain sector reform on the general rate of inflation does not exist, in part because the history of grain consumer price adjustment in China is so short. But a few facts can be stated with some certainty. First, nothing can be more potentially inflationary than the current system, where the government does not have adequate tax

revenue to purchase all the grain it has committed itself to acquire, and must resort to ordering the banks to provide the Grain Bureaus with credit to purchase grain from the farmers. Given that the existing logistical system cannot move all the grain to consumers, and hence much of the incremental grain must be stored in the countryside, there is no corresponding increase in supply to consumers which would then depress prices and soak up the increased purchasing power created by grain procurement. Of course, this situation has been exacerbated with the record harvests of 1990 and 1991. Reducing government responsibilities in grain procurement (at least down to a very low protection price level) would alleviate this situation, while elimination of the remaining urban grain subsidies would remove one major source of government budget deficits, another root cause of inflation.

2.40 Adjustment of ration price levels, to near market price levels, is a one-time measure, affecting the CPI only once. In the relatively near future, ration prices should gradually fluctuate with market prices, with just as much chance of going down (as market prices have done in 1990/91) as up. Finally, when the floating and temporary populations buy ration coupons, they pay near market prices, and thus are not affected by urban ration price change.

2.41 Evidence of the minimal influence exercised by increased ration prices on the general rate of inflation is also now available from the 1991 experience itself. Even with the large price adjustments of grain and oils in that year the rate of inflation six months later was under 5 percent. The reduction in purchasing power obviously nullified the increase in wages granted simultaneously to urban residents; without the wage increase the grain price increase would actually have had a deflationary effect.

2.42 Finally, the best means of neutralizing inflationary pressures is by increasing the supply of goods in demand. By further reducing subsidies, the government could support investments in producing more of the grain products in demand (possibly wheat, certainly animal feed), or imports can be increased (e.g., soybeans and corn into southern China, or for that matter, sugar, rubber, palm oil, etc.) when they are cheaper than Chinese production. Probably most important, investments can be made in transport and handling infrastructure, so that huge surpluses (e.g., of corn in the Northeast, rice along the Yangtze) can be moved to deficit areas, to lower the prices in the latter. More efficient specialization in food production by region, coupled with more efficient transport and distribution, is the best long-term solution to holding down food prices in all regions of China, including the prices of meat, milk, eggs, and fish.

2.43 The third item on the agenda is transport tariffs which are covered in the next section.

C. Transport Tariffs

Transport Indicators and Principal Goals

2.44 Continuing the reform of transport prices ranks alongside energy and grain in terms of priority. Transport prices are closely tied to energy prices, in that each is a major component of the cost of producing the other.

Therefore, transport price reform should, ideally, coincide with energy price reform.

Table 2.5: FREIGHT TRAFFIC - INTERNATIONAL COMPARISONS

Country	Rail Density Area /a (km)	Road Density Area /a (km)
China	5.56	107.11
USSR	6.55	52.45
USA	21.87	664.68
India	18.93	547.61
Brazil	3.66	196.78
Japan	113.71	2,936.46

/a Total land area.

Source: China: CEM, April 1992, Table 15.1.

Table 2.6: REVENUE FREIGHT TRAFFIC INTENSITIES

Country	Tons/\$1,000 of GNP	Ton-km/\$GNP
China (1987)	27.1	4.77
USSR (1987)	14.1	3.51
USA (1987)	1.1	0.83
India (1987/88)	2.3	1.40
Brazil (1987)	2.7	1.13

Source: See Table 2.5.

2.45 Compared to other large developing countries, China's transport network is conspicuously smaller (Table 2.5), although the intensity of utilization for the haulage of freight is the second highest in the world. Freight intensity in tons per unit of GNP is ten times the level of India and Brazil while ton kilometers of traffic per unit of GNP is higher by a factor of three (Table 2.6). This is ascribable to the emphasis on heavy industry whose material and energy requirements are well above the world average; to the reliance on coal for 72 percent of energy needs; the geographical dispersion of industrial facilities, which greatly magnifies transport requirements; and the low cost of transport and raw material inputs that has encouraged lavish use. Because industry has had first claim on the transport system, passenger movement was sharply restricted until the early 1980s. As recently as 1989,

the average citizen travelled about 550 km annually on an intercity basis as compared with 900 km for India.

2.46 In 1990, railways accounted for 58 percent of the freight traffic and half of all passenger movements. Other modes have received increasing attention during the 1980s but because of past neglect, their shares remain relatively small (Table 2.7).

Table 2.7: CHINA INTERCITY TRAFFIC MODAL SPLIT
(Percentage share)

	1980		1990	
	Freight	Passenger	Freight	Passenger
Rail	67.3	60.6	57.9	46.6
Road	9.0	32.0	18.9	46.3
Domestic waterways	17.9	5.7	19.8	3.2
Civil aviation	0.0	1.7	0.0	3.9

Source: China, CEM, April 1992, Tables 15.2 and 15.3.

2.47 The transport sector imperatives are clear cut:

- (a) To promote national market integration and rationalize the geographical distribution of industry, the network must be expanded through increased investment in transport infrastructure.
- (b) The modal structure needs to be modified by enlarging the shares of road, waterway and air transport facilities. This will require significant shifts in the allocation of capital between modes and these shifts will take many years before their impact is felt. Therefore, it is important to begin as soon as possible.
- (c) The high transport intensity must be scaled back by increasing the prices of energy and raw materials as well as the prices of their haulage, so that future demand for transport reflects economic costs.
- (d) Distribution of freight and passenger traffic across the various modes needs to be optimized through suitable adjustments in prices and supply.
- (e) Past reliance of the various transport systems on the central government's budget to cover operating or capital outlay must be eliminated and, to the extent possible, all expenses covered from the carriers resources or by drawing upon financial markets.

2.48 A range of policies will be required to achieve these goals but reform of transport tariffs will play a decisive role. It is only through substantial changes in the structure of transport prices that direct and indirect claims on the government's budget can be curtailed; demand for transport services controlled; a balanced expansion of the different modes financed; and the distribution of traffic across the modes rationalized. Because the various issues of transport price reform--pricing flexibility, price distortions, price subsidies and self-financing--are closely interrelated, it is important that they be addressed simultaneously.

Trends in the 1980s

2.49 Transport demand approximately increased in step with the growth of GDP between 1979 and 1990: freight and passenger traffic rose by 8 percent per annum and 10 percent per annum, respectively (Table 2.8). Although rail-

Table 2.8: CHINA TRAFFIC GROWTH RATES
(percentage)

	Average (1980-90)	
	Freight (ton-km)	Passenger (passenger-km)
Rail	6.0	7.7
Road	15.5	14.5
Domestic Waterways	9.2	4.4
Civil Aviation	19.1	19.5
Overall	7.6	10.3

Source: See Table 2.7.

ways retained their preeminence, freight movements by road doubled their share from 9 percent to nearly 19 percent while passenger traffic increased from 31 percent to 44 percent (Table 2.7). This period also witnessed a significant increase in the average length of railway freight haulage from 500 km to 686 km and of passenger journeys from 202 km to 546 km. Unfortunately, investment in the transport sector as a share of GNP declined slowly throughout the 1980s from about 1.7 percent in 5th FYP to about 1 percent in 1989 (Table 2.9). As a result, congestion, especially in the heavily travelled eastern corridors worsened substantially. By 1989, for instance, 37 percent of all railway lines were saturated in at least one direction, and there was a decline in the average speed of vehicular traffic, particularly in the vicinity of major cities. However, price adjustments introduced in the mid-1980s, along with the more radical changes announced in 1989-91, have begun to improve the financial circumstances of the transport sector making it possible to lessen the supply-demand imbalances across the different modes.

Table 2.9: GOVERNMENT-SUPPORTED TRANSPORT INVESTMENT
(By Five-Year Plan Periods)
(Y billion)

	In Current Prices								
	3rd FYP 1966-70	4th FYP 1971-75	5th FYP 1976-80	6th FYP 1981-85	1986	1987	7th FYP 1988	1989	1990
Transport investment as % of GNP	1.7	2.4	1.7	1.3	1.7	1.5	1.4	1.1	1.4

Source: China Statistical Yearbook 1991, pp. 5 and 23 and 1990, pp. 33 and 171.

2.50 Railway tariffs were raised in 1956 and 1961. Further adjustments, in both directions, were introduced in 1967. Thereafter, they were left unchanged until 1983 when rates for bulk cargo were increased by 23 percent and the minimum chargeable distance was doubled to 100 km. This was followed by a major round of adjustments in 1985, when a Y 4 per ton surcharge was imposed on freight hauls of under 200 km and a Y10 per ton surcharge on the shipping of "out of plan" coal. Passenger fares on trips of under 100 km were also increased by 37 percent. By making rail travel and freight haulage more costly, these changes transferred some short haul and bulk cargo traffic from the severely burdened railways to the road and waterway networks. Rail traffic of under 200 km was brought below 15 percent, and intercity passenger transport movement by buses was encouraged.

2.51 Equally important were the effects on the budgets of the central government and the Ministry of Railways (MR). Prior to 1985, MR paid a sales tax on gross revenues and turned over its net income to the central authorities, which were largely responsible for funding railway capital investment. In 1985, for example, the center financed 59 percent of capital expenditures, 16 percent was paid for through bank loans and the balance covered either through MR's own resources (13 percent) or through foreign borrowing (5 percent). Higher tariffs enlarged MR's gross profits, while a change in the tax regime permitting railways to retain a sizable portion of net earnings allowed MR to cover operating expenses by 1986. Currently, railroads pay a 5.3 percent excise tax on gross revenues, and are expected to fund investment through retained earnings.

2.52 Although railways loom large in the transport picture, other modes are gaining in importance. The superiority of trucking services in terms of convenience, reliability, and speed, are taking away high value traffic from the railways, especially in fast-growing coastal areas, even though highway freight rates are five to ten times higher.

Recent Tariff Adjustments

2.53 The latest round of transport tariff adjustments were introduced in 1989-91 (Table 2.10) with far-reaching effect. Average freight rates on rail and water transport have been brought within 10-15 percent of financial costs prevailing in mid-1991. Long distance rail passenger and freight tariffs are

now have understated financial operating costs, as computed according to the current accounting procedures. With corrections for distortions in financial reporting, the operating costs would be significantly higher than the tariffs. Provincially operated railroads have been allowed to raise their tariffs for freight above the national rate structure, thereby covering all costs in the majority of cases. Similarly, these railroads are permitted to set higher tariffs for newly constructed lines so that they can recover construction costs, but this may result in some underutilization of added capacity. Trucks and barges owned by individuals or cooperatives are charging tariffs which appear to cover total costs although private truckers frequently quote rates that are more competitive than those of state trucking enterprises because their equipment is utilized more efficiently. Road use charges are quite steep reflecting high operating costs arising from the poor quality of road surfaces, congestion and the heavy dependence on technologically obsolescent trucks.

Table 2.10: TARIFF ADJUSTMENTS FOR TRANSPORT MODES, 1989-91

	1985	1988	1989	1990	1991	Increased % 1988-90
Freight (fen/tkm)						
Railway	1.19	2.09	2.19	2.65	2.85	10.83
Highway	n.a.	21.10	25.20	30.00	n.a.	19.24
Coastal waterway	n.a.	0.88	1.30	1.30	n.a.	21.54
Inland waterway	n.a.	1.46	2.24	2.24	n.a.	23.86
Passenger (fen/pkm)						
Railway	n.a.	1.96	2.53	4.17	n.a.	45.86
Highway	n.a.	2.49	2.98	3.84	n.a.	24.18
Coastal waterway	n.a.	3.40	3.40	5.81	n.a.	30.72
Inland waterway	n.a.	2.06	2.06	4.93	n.a.	54.70

Note: Railroad freight shipped less than 200 km has been subject to an additional Y 4.00/ton surcharge since 1985. This would raise the cost for a 200 km shipment to 4.09 fen/tkm before, and 4.89 fen/tkm after the price adjustment.

The 1991 figures are preliminary. Rail freight includes tentative approval of 0.2 fen for railroad construction fund.

Source: SPC Institute of Transportation.

2.54 In 1990, MR's gross profits, buoyed by the tariff increases of 1989/90, reached Y 11.3 billion on which it paid tax to the government and made additional transfers as well. By 1990, combined railway revenues from freight, passenger and other sources averaged 2.98 fen per traffic unit (converted ton km) as against operating costs of 2.11. These operating costs

reflect price and interest subsidies as well as gross under reporting of depreciation of fixed assets. Although highway maintenance fees, the main source of operations and maintenance and new construction, have increased, they are far from sufficient to meet the needs of the system. The situation would be eased significantly if these were supplemented by a portion of the funds collected through fuel taxes, that are currently channeled to general revenues.

2.55 While the financial picture is much improved, pricing of some transport subsectors still does not satisfy economic criteria, especially with regard to railroads and waterways. There are four reasons: first, significant percentages of inputs, such as steel, coal, cement, timber, electricity and diesel oil plus a range of services are available to the transport sector at subsidized prices. This distorts the calculation of marginal costs. Prices of certain raw materials, for example, coal and steel are being revised upward, but these may not as yet be fully reflected in current transport tariffs and, even after upward revision to take account of forecast congestion, prices might remain below market clearing levels for some time.

2.56 Second, the transport sector in general and railways in particular, have benefitted in the past from subsidized credit and reduced prices of energy and raw material. The market prices of these items are now increasingly being charged to the central railway as well as other government run transport enterprises. As a result, prices have risen substantially for trucks, buses, locomotives and railway rolling stock, such that depreciation at book values (which is already understated for a variety of reasons given in para. 2.62), will not cover replacement costs, especially for the central railways. These must be factored into the accounts before a true picture of costs can be derived.

2.57 Third, freight tariffs do not seem to sufficiently reflect the transport cost of the commodity. The recent across-the-board adjustment of rates by fixed amounts, leaves these distortions untouched. Freight carriers and especially railways need to differentiate their rate structure so as to adequately reflect the nature of goods and their impact on transport costs. To cite but one example, the volume of coal carried by railways is six times larger than grain. Changes in relative tariffs that allowed grain to displace 5-10 percent of the coal now carried would greatly enhance the efficiency of grain distribution.

2.58 Finally, some "in plan" building materials are being transported at below costs and MR provides public services to remote areas or destinations attracting little traffic at highly favorable rates. The government may desire to subsidize these services, but this policy should be separated from railway income accounting and not penalize MR's ability to raise funds for new construction.

The Next Stage of Tariff Reform

2.59 The principal objectives of future transport price reforms should be to first bring freight and passenger charges close to long-run marginal costs, and second, to give railways the flexibility to respond to economic demands by

suitably tailoring the price structure. Reform entails raising not just the level of freight charges but also differentiating tariffs for the purposes of optimal modal allocation, in order to factor in freight characteristics and so as to allow for corridor congestion costs by mode.^{6/}

2.60 Moreover, expanding the transport network will call for large capital expenditures well into the future. A reversal of the downward trend in investment/GDP ratios is evident in 1990 (Table 2.9). But for it to be sustained, additional levies will be necessary. In 1990, MR proposed a 2 fen per ton/km surcharge on railway freight which would be paid into the Railway Construction Fund (RCF) to help cover the planned investment of \$22.5 billion in the railway sector during the Eighth Five-Year Plan. So far, only 0.2 fen has actually been agreed. To avoid a persistence of shortfall in funding for new construction, freight charges should be raised to a sufficient level at the earliest so that the RCF accumulates the targeted resources.

2.61 To fine tune intra- as well as intermodal rates and fully incorporate the effects of anticipated adjustments in the prices of inputs such as fuel and basic materials, cost data must be collected and analyzed along with data concerning the economic value of different rail services. The price of transport services should reflect their economic value, especially in cases where a transport service can result in savings to shippers outside of the transport sector itself (e.g., container transport or refrigerated services for perishable goods). For this reason, the studies of railway costing, port costing, highway tolls, and highway finance, sponsored by the Bank, can provide essential guidance. MR has the data on average economic costs to allow a preliminary judgement on general levels of tariff increase for major categories of service level.

2.62 At this stage only rail and inland waterway freight charges may need to be increased, the former by possibly up to 75 percent, the latter by about 20 percent so as to shift more of the low value bulk traffic to what is intrinsically the cheapest transport mode for such items. Rail charges need to be revised to pass on the higher prices of fuel and raw materials used by the system, as well as depreciation based on replacement costs. Computed on the basis of replacement costs, depreciation for rail and waterways are 42 percent and 32 percent of the total long-run marginal costs, respectively. These are by no means insignificant. Fuel costs are 17 percent of operating costs for railroads, 24 percent of trucking expenses and 20 percent for waterways. MR saved Y 456 million by obtaining fuel at in-plan prices instead of having to purchase it at market prices, but this had declined by 1990 when 70 percent of diesel fuel was obtained at out-of-plan prices. It should be noted that these adjustments would help correct existing distortions but may not increase funding for future investment needs.

2.63 The adjustment of inland water freight charges must be calibrated with bulk tariffs charged by other modes so as to promote optimal distribution

^{6/} The railway is an exception, because when a rail line is saturated with traffic, the volume of traffic is determined by MR staff (i.e., on the basis of how many trains per day to run, etc.), not by railway tariffs. Normally MR would not add another train to a line once the increase in congestion makes it uneconomical to do so.

of traffic. At the same time, waterway transport badly needs capital for locks, the widening and deepening of channels, wharf facilities and modern barges. A surcharge on tariffs that fed into a investment fund like the RCF could greatly enlarge the contribution of waterways to the transport system (albeit at the risk of decreasing its competitiveness somewhat during the medium run). The Bank's study of Guangdong's transport system 7/ pointed to the advantages of redistributing resources from the development of ports, where returns are low to inland waterways that promise significantly greater benefits.

2.64 Other modal tariffs are not urgently in need of upward revision, although significant micro level structural changes should be introduced as the quality of cost estimates improves. However, both government run carriers as well as others should be allowed a degree of flexibility in pricing their services (subject to an annual price ceiling) so that they can take account of market fluctuations.

Reform Impact

2.65 The effects of tariff adjustments will manifest themselves at many levels. Allocative and efficiency gains are likely to be large but they will accrue over the longer term.

2.66 The tariff increases already in effect and the further changes proposed above, would make the transport sector financially self-sufficient. With compensatory tariff increases, indirect budgetary support currently provided through subsidized inputs and low interest loans could be sharply scaled back and perhaps eliminated altogether. By taking full account of depreciation, the railway system could also do away with the implicit claims on the central budget for the future renewal of track, rolling stock and marshalling facilities. Although the visible immediate gains for the budget might appear modest, the invisible benefits and longer term savings on capital assets would be quite large.

2.67 The items that comprise the bulk of the tonnage shipped by rail or water are coal, oil, iron and steel, wood, grain, cement, building materials and other minerals (Table 2.11). The direct impact on these commodities of raising transport tariffs (20 percent for waterways and up to 75 percent for railways) would be significant. A 75 percent increase in railway tariffs would increase the price of in-plan coal by about 25 percent (somewhat more for distant shipments to Shanghai or Guangzhou). The price of other bulk average delivered commodities would increase somewhat less (see Table 2.12 for share of transport costs in total delivered cost). However, in most cases, the cost of these commodities would also be substantially enlarged by increases in energy (or grain) prices.

2.68 Higher transport tariffs would tend to reinforce the effect of raising energy prices, and would push up costs of electric power (via increased

7/ Clell Harral ed., "Transport Development in Southern China," World Bank Discussion Paper Series, No. 151, 1992.

Table 2.11: RAILWAY/WATERWAY TURNOVER BY GOODS, 1990

	Railway	Waterway
Turnover total (in billion ton/km)	1,060.12	1,054.87
Share total	100.00	100.00
Coal	32.51	15.10
Oil	3.96	8.66
Coke	1.84	
Minerals	4.18	12.96
Iron & steel	7.60	5.09
Mine bldg. material	4.17	0.84
Cement	1.45	0.53
Wood	5.06	0.78
Nonmineral	3.92	5.25
Fertilizer & pesticide	2.53	7.00
Salt	1.18	0.26
Grain	5.34	22.22
Cotton	0.22	
Others	26.05	21.31

Source: China Statistical Yearbook, 1990, pg. 539 and 1991, pg. 505.

Table 2.12: TRANSPORT COST

	Plan Price Y/t	Market Price Y/t	Haul Distance (km)	Transport Cost (Y/t)	Transport cost % of delivered	
					Plan Price	Market Price
Coal (steam)	80	200	550	26	25	11
Cement (no. 425)	165	185	450	24	13	12
Timber (raw)	500	800	1,500	51	9	6
Steel (bar)	1,300	1,600	970	38	3	2
Fertilizer (Orca)	420	1,000	800	30	7	3

Source: Staff estimates.

coal transport costs), building materials, and metallurgic industries. The discussion of energy cost management above applies to this section as well.

Careful management of final demand could induce the industries to absorb a part of the increased cost, but some of it would have to be passed on through higher prices. However, the experience of transport price adjustments since 1989 has been generally reassuring. Although price controls were widespread during 1990/91, it appears that inflationary impact was minimized primarily through effective macroeconomic policy.

2.69 Increasing freight and passenger tariffs will reduce demand and result in a redistribution of some traffic across modes. A reduction in demand is highly desirable as transport intensity in China is above the norm, and a shift of traffic from railways to other modes would enhance efficiency. However, short-term elasticities are bound to be low. The experience of 1989/90, though admittedly somewhat unrepresentative, suggests that railway freight elasticities in the short run are as low as 7 percent. Cross elasticities between rail and road freight are lower still--4 percent, because rail charges are generally a tenth of road tariffs and since most truck hauls still average 50 km, road transport does not compete against railways on medium to long length hauls, except for high value container service and some coal transported along congested corridors. Nevertheless, long-term elasticities are bound to be greater as technology and location changes, along with improved efficiency in resource use, push down both material and transport coefficients of GDP. For transport intensity to be brought closer to the norm, the growth rate of freight haulage should be lower than the increase in GDP. Higher tariffs, together with higher prices of energy and raw materials, should--over the longer term--compress transport consumption and thereby enable China to contain expenditures on transport infrastructure.

2.70 The efficiency and allocational benefits from a reform of transport tariffs cover a wide spectrum. First, there is the much needed rationalization of traffic across modes and upgrading of technology, which tariff reform will make possible. Short haul freight traffic will move increasingly by truck and low value bulk traffic over inland waterways. The rapid growth of passenger traffic by bus and aircraft will also continue under present conditions. The prospective provision of high-speed railway passenger services has the potential to absorb a substantial share of passenger traffic in busy coastal corridors. Availability of capital, coupled with the flexibility in marketing and pricing transport services, will enable carriers to enhance the quality of equipment, improve services, expand the use of containers and integrate container shipments through the various modes.

2.71 Second, congestion related surcharges in heavily travelled corridors such as the lower Yangtze Basin area, even in small amounts relative to the congestion costs themselves, should produce incremental revenues in quantities sufficient to reverse the slide in transport investment, for instance in Jiangsu, and encourage the fuller exploitation of waterway and road options.

2.72 Third, energy and material intensive industries will have even greater encouragement to conserve resources and they will also be induced to move to more economically desirable locations. There will be more power generation closer to the minemouth; the siting of steel industry closer to sources of material supply; increased reliance on material and energy imports by coastal industry; and a relocation of cement plants nearer to areas of use.

The increase in the prices of coal and coal haulage by rail will stimulate the washing of coal and the diversification of energy sources for power generation.

2.73 Fourth, the apparent short term price elasticity with respect to increased rail passenger tariffs is high (36 percent, 1989/90). Adjustments introduced two years ago have helped free rail seats for business travellers and lessen the degree of rail passenger rationing. This is certainly beneficial for economic interaction between provinces. High long-term income elasticities of demand for distance transport should be shared between air, bus and rail transport.

2.74 Fifth, by adjusting the level of tariffs and rationalizing their structure, the various modes, especially railways, could substantially accelerate the integration of the national economy. Currently, the sheer scale of raw material shipments, the exceedingly high rates of railway utilization and the preference given to "in plan" shipments, has adversely affected interprovincial shipments of other goods and cross-provincial sourcing of industrial inputs by enterprises. Because wagon space is very scarce and services poor, enterprises are reluctant to purchase inputs from distant suppliers or to market products throughout the country. Uncertainties in the availability of transport capacity to accommodate future business growth narrow the horizons of business enterprises. The high charges for "out of plan" shipments is an added deterrence. This state of affairs inflicts costs on the economy in terms of untapped scale economies, insufficient specialization and subnormal levels of competition. A larger transport system, which is not weighed down by the necessity of transporting a few bulk items and which efficiently differentiates its tariffs for the purposes of traffic distribution, stands to make a major contribution to future economic development. Many decisions will be required to expand and modernize China's transport but it is no exaggeration to say that critical ones will be about prices.

2.75 The three areas of reform discussed above while complex, are entirely feasible. They should be undertaken without delay. Beyond adjustment of prices, the government should move with all due speed to remove the ceiling, formal or informal on market prices and to reduce the regulation of prices. No doubt, this cannot be done in advance of effective market functioning, but without such action, reform will be incomplete.

2.76 As we stated earlier, price reform cannot be viewed in isolation. How smoothly it unfolds and how extensively the economy benefits from it depends on the parallel deployment of other macropolicies and reforms.

III. COMPLEMENTARY REFORMS AND POLICY ACTIONS

3.1 Macroeconomic Conditions. China is starting from a position of macroeconomic stability and a credible commitment to its maintenance. To sustain this and ensure that the other gains from price reform are maximized calls for complementary actions in several areas. To keep inflation within single digit bounds as key prices are adjusted will require a delicate balancing of conflicting claims on monetary policy, testing the PBC's skill at using the tools at its disposal to the fullest. Too much accommodation of price adjustments would quickly push inflation into double digits. On the other hand, excessive tightness under conditions of downward price and wage rigidities, would depress production in a range of industries, especially the more energy intensive ones.

3.2 Fiscal action would have to be meshed with the monetary. Price adjustments of grain and energy will reduce one set of subsidies, but these savings may be offset by (temporary) compensatory subsidies to urban wage earners now having to buy costlier food items. On balance, the budget picture could improve in the short term. If the government follows through with tax reform, which progressively displaces tax contracting, long-term revenue elasticity could be higher. If budget deficits can in fact be cut quite sharply, the macroeconomic implications of these working directly and through monetary expansion, will need to be traced out, so that GNP growth objectives can be met.

3.3 Successful price reforms require a stable macro environment. Many of the administrative controls applied to good effect in 1989/90 could now be dispensed and superseded by monetary and fiscal instruments. As large changes in wages can and should be avoided, the effort to restrain wages must be continued. Furthermore, a continuation of trade reforms by integrating the Chinese economy more closely with the world market, should provide an additional measure of stability aside from raising the level of competition.

3.4 Price reform makes it possible for the market mechanism to steer a restructuring of industry but only if market forces are permitted to impinge on decision-making within a milieu that is competitive and where participants are subject to hard budget constraints. A first step towards hardening budget constraints would be to freeze subsidies and credit to enterprises still incurring losses at the level of 1991. Moreover, the government should define a plan, with very few exceptions, that halves the subsidies in nominal terms over a three year period and also does away with preferential credit.

3.5 This is only a partial solution. What is needed over the medium term is ownership reform for major segments of industry. The form it takes will be for the Chinese authorities to decide, but certain guidelines can be set forth.

3.6 Reform of Governance. Under the current system, local industry bureaus have wide ranging regulatory authority over enterprises, management is relatively weak and workers, because of tenurial arrangements, in a position to strongly influence day to day decision making. From the perspective of

enterprise managers this state of affairs is clearly unsatisfactory. It is both over regulated, with far too many administrative barriers, and at the micro level, far too exposed to pressure from employees. Investment decisions are strongly subject to non-economic concerns; too much revenue is diverted into bonuses and welfare funds; too little is put aside for depreciation, maintenance and systematic modernization of plant.

3.7 An attempt at reform that curtails the power of bureaus but also diffuses ownership widely, is liable to enhance the influence of enterprise employees. Unless the legal owners of the capital at stake can motivate management to enforce their rights, enterprises will pursue shortsighted and frugal investment strategies, while generously rewarding workers. If a shareholding system is established and cross-provincial ownership encouraged, a critical mass of owners must provide continuous oversight and ensure that management practices long-run profit maximization. Over the medium term, institutional investors--banks, pension funds and insurance companies--will be unable to perform an adequate role in exerting ownership rights, as they do in Japan and Germany for instance, because the relevant managerial experience is scarce in such bodies and will have to be acquired. In the interim, large holding companies that concentrate managerial and supervisory expertise, might be an option to be experimented within China as it is in Eastern Europe. These should be self-liquidating but in the early stages, they could substitute for effective Boards of Directors and financial market discipline, which in developed countries is exerted through stock price movements and takeovers.

3.8 One outcome to be avoided is the reinstatement of the current control structure of enterprises in a different guise after ownership reform. The East European experience suggests that in many instances, members of the local nomenklatura tasked with administering enterprises, manage through their connections to reappear as owners or directors after reform. Some of them bring valuable experience and skills to their new roles, but the de facto continuity of managerial structures undermines the comprehensiveness of industrial restructuring. It is difficult to offer specific guidance on this but it is a factor to be reckoned with as reform proceeds.

3.9 Even after ownership reforms and hard budget constraints have been introduced the incumbent labor force, accustomed to a particular work regime and rules, might vigorously resist a diminution of privileges, changes in work practices, large scale dismissals and a drastic reapportionment of job content. Such opposition, common enough in developed market economies, slows restructuring, increases its painful, confrontational nature and makes it harder to achieve productivity gains. Once again, piecemeal restructuring in expanding local economies, where redundant labor can be absorbed retired or carried on unemployment rolls, might be the strategy with the fewest drawbacks.

3.10 Full market autonomy for enterprises, while it brings the advantages of competition, could in certain subsectors and regions, result in the emergence of monopolies. This danger is less acute in China, where industry concentration ratios are lower than in Eastern Europe, but transport and administrative barriers to interprovincial trade can affect the market power of producers locally. Such tendencies, which could influence price trends over

the medium run, are undesirable. Although the purpose of reform is to narrow the scope of state planning and control, there may be a need during the transitional period, to establish a system for regulating monopolies, until such time as national market integration and external competition begins to exert its own discipline.

3.11 Industrial restructuring will make modest headway without progress in three other areas: the financial sector; skills and entrepreneurship; the scope of the social safety net and its financing.

3.12 Financial Modernization. China's commercial banking sector is gaining in experience, and it is being joined by a variety of nonbank institutions. Most recently, stock exchanges have been created in Shanghai and Shenzhen. With suitable encouragement from the authorities, financial deepening can quickly gather momentum, given the volume of individual and enterprise saving, given also the paucity of financial instruments available to investors. However, the emergence of healthy and competitive financial markets capable of supporting industrial restructuring on the scale envisaged, requires a new framework of rules and official bodies to supervise their observance. The rules essentially establish accounting standards for enterprises, require them to divulge information on a regular cycle, set forth guidelines for auditing, and specify the legal process of enforcement. Their purpose is to greatly enlarge the volume of relevant information provided to investors as well as to ensure standards of accuracy. Such information is the basis of an efficient and robust financial market.

3.13 Rules prescribing the types of information which must be revealed and others, for instance, supporting orderly trading, must be policed as experience shows that these are not automatically enforced by the market. Thus, the presence of suitably vigilant regulators is part and parcel of efficient financial markets, enjoying the trust of investors small as well as large. There are other hurdles to be overcome, some of a technical nature, such as clearing systems between banks and security houses which determine how speedily a large volume of transactions on a nationwide scale can be consummated. Clearing arrangements also influence liquidity and transaction lags, ultimately deciding how the actions of monetary authorities affect target variables.

3.14 One of the principal benefits to be derived from financial modernization is that it will facilitate the transfer of capital from households to entrepreneurs thereby facilitating new entry into the most dynamic sectors. This smoothes the process of restructuring, raises growth rates, and draws the country's talent into the productive sectors. Already industrial entrepreneurship is becoming China's most prestigious and best rewarded occupation. This is a most significant development, akin to what has occurred in other successful East Asian economies, and it bodes well for the future of growth. Once a cycle is established of technically skilled people finding profitable careers as industrial entrepreneurs and contributing to the prosperity of a region, it can become self-perpetuating. Something along these lines is evident in Guangdong, Fujian, Zhejiang and Jiangsu. To no small measure, the virtuous cycle in the southern provinces is the result of multiplying financial linkages with Hong Kong and Taiwan (China). The better developed capital

markets of these economies by embracing China's southern region have given local entrepreneurs the opportunity they were looking for. The emergence of a superior financial infrastructure elsewhere in the country could enable other provinces to emulate the Guangdong miracle.

3.15 Over time, China has accumulated a large reservoir of skills, especially in engineering. It is this reservoir which is the source of entrepreneurial talent and technical manpower sustaining the industrial drive. However, national policies must see to it that the pool is being not just replenished, but also augmented so that the technological challenges of the future can be satisfactorily met. Human capital complements physical capital in the growth equation. This human capital must not only be active on the shop floor, but also feed the industrial need for technology by way of research departments in universities, and in enterprises. Entrepreneurs, finance and human skills jointly fuel growth if the regulatory environment is hospitable to new entrants in the various fields. Guangdong has pulled ahead in part because it places the fewest administrative hurdles before its aspiring industrialists large and small. Other regions could follow this lead. The tight administrative corset around industry is an encumbrance. Supervisory agencies are inclined to see restructuring as a carefully planned salvage operation of troubled industries when this may only be desirable on a quite limited scale. For the rest, market solutions of closure, mergers and fresh starts, are far more expeditious. Economic agencies must begin to use rather than obstruct market forces. More planning is not the solution to China's industrial problems. In fact, they are in part the result of planning.

3.16 We have left labor mobility to the very end because it will require some of the most complex reform measures affecting social security, housing, intersectoral migration and a change in the wage structure. Several of the changes required are necessary for restructuring to proceed, but they may need to be implemented in slow stages. We will mention just a few.

- (a) The urban wage structure, e.g., the income of highly trained professionals as against skilled workers, is highly distorted but any sudden shifts by upsetting established relativities could risk sparking a wage price spiral. Market forces should be allowed to act but gradually.
- (b) A pooling of pension funds and unemployment compensation into larger and larger aggregations, extending upwards from the municipality, is a way of eventually transferring them away from the enterprise and making them portable.
- (c) Raising rents, in steps, to market levels as is being done, will bring a housing market into existence and also provide enterprises with avenues to relinquish their obligations to workers. Once again, the way to proceed is by pushing up rents at a speed which avoids triggering wage inflation. Enterprises that are involved in restructuring in one form or the other could also deal with the housing issue through transfers to a housing corporation or sale. On a limited scale, this can and should be done side by side with

industrial restructuring. However, a national housing market will take many years to come into existence.

3.17 We indicated earlier that China must come to terms with a serious problem of urban structural unemployment. Like housing this is something to be tackled piecemeal through the restructuring or closure of selected enterprises. A small percentage of those affected might be retrained, for the rest alternative employment in the retail sector, the start-up of small urban businesses or retirement may be the available options. Unemployment insurance funds now being collected will support temporary unemployment for moderate numbers, but funding retirement for large numbers of older employees may call for budgetary grants from the center.