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Author(s): Athar Hussain, Nicholas Stern, Michael Burda and David Newbery

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Effective demand, enterprise reforms and public finance in China

Athar Hussain and Nicholas Stern

London School of Economics

1. Introduction

To design economic policy we must understand the effects of government actions. This task can be difficult, and becomes formidable when structural change lies at the heart of policy. We examine some of the problems of economic transition by analysing the most important modern example of decentralization – Chinese economic reform since the late 1970s. Reform of agriculture began in 1978, but it is the subsequent reforms of industrial enterprises in the mid-1980s on which we concentrate.

Our analysis of the enterprise reforms must go beyond a narrow microeconomic focus. We highlight the links between three elements: the behaviour and decisions of enterprises; those of the government; and the implications for the economy as a whole. Understanding these linkages is crucial to the formation of sensible policies and the success of new departures. The Chinese experience carries important analytical and practical lessons for other countries that have embarked more recently on reforms.

We emphasize that reforms have important implications for effective demand and public finance. The decentralization of decisions to enterprises implies their demands can no longer be ‘coordinated’ through the plan. What are the implications of abandoning coordination

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Economic reform in China

Athar Hussain and Nicholas Stern

Summary

This paper examines some problems of transition from a command to a market economy through an analysis of the most important example to date – the reforms in the Chinese economy since the late 1970s. Our focus is on the links between enterprise reforms, effective demand and public finance. The reforms have created a curious and problematic hybrid of market and command economies with serious problems of coordination. They have concentrated almost exclusively on the delegation of decision-making to enterprises from the higher to lower tiers of the government without taking into account its implications for investment, consumption and public finance. An understanding of future policy and lessons for other countries requires a careful examination of the effects of these past policies.

Granting discretion to enterprises over investment and wages has resulted in both an investment and consumption boom but, paradoxically, a fall in profits. There are strong reasons to suppose that the investment ratio has been too high in recent years, fuelling inflation and slowing additions to supply by prolonging the gestation period of investment. There has been a large increase in liquid assets in the hands of households, which makes their expectations increasingly important for macroeconomic policy. There is need for concerted financial innovation to diversify household wealth away from liquid assets. Finally, the changes in the composition of government revenue and expenditure are disturbing. There is an urgent need for a flexible and broad-based tax system and for reducing price subsidies and subsidies to loss-making enterprises.

without the complementary apparatus of a smoothly functioning market economy together with government fiscal and monetary mechanisms?

We shall argue that in China, notwithstanding a most impressive supply performance, the cumulation of effective demand generated the inflation of the late 1980s. Our purpose is not to write down a formal macro model of the Chinese economy, nor a detailed study of inflation *per se*. We are concerned with the logically prior, and deeper, question of relating the emergence of effective demand to the new economic structures and particularly the enterprise reforms. We shall show that the relaxation of planning controls and decentralization of decisions to firms, without effective aggregate control through credit markets or otherwise, and without recognition of the need for a government tax and revenue system to replace the profits from public enterprises, together led to excess demand. We also examine the components of demand and their relation to institutional and economic structure and to policy. Our analysis carries basic lessons for the economic modelling of economies in transition; for the consequences of decentralization in such circumstances; and for future policy design both in China and elsewhere.

We first provide a brief introduction to the Chinese reforms and then an overall picture of macroeconomic developments in China. Our emphasis is on the demand side. The impressive rise in Chinese output in the 1980s will be discussed only briefly in this paper (see, e.g. Perkins, 1988, and Lin, 1989) and is not our main topic here. We then discuss the enterprise reforms and demand arising from Chinese enterprises via both investment and wages. The institutional structure of the Chinese enterprise is critical, particularly the somewhat entangled three-way relationship between government, managers and workers. Next we examine public finance. In both cases, we shall see that while the simple models of standard economic theory carry important lessons, they must be adapted, reinterpreted and reconstructed to understand the economic effects of the structural changes. At the same time we shall point to basic difficulties arising from current policies and structures which future reforms must overcome.

The main reforms of the last 10 years comprise: a shift from collective farming to household farming; financial autonomy and operational autonomy for state-owned enterprises; a decentralization of government, delegating control from the higher to lower government tiers; encouraging private and foreign enterprises; and an open-door policy towards foreign trade and investment.

Broadly, during the first period of reforms, 1978–84, rural activities occupied the centre of the stage and enterprise reforms did not go

beyond administrative decentralization, allowing enterprises a measure of operational autonomy and giving them disposal of a portion of their gross profits. From 1984 the focus of the reforms shifted from the countryside to enterprises and the urban economy in general. Only in the second phase were market transactions allowed to coexist with 'administered transactions' and influence the pattern of enterprise output. Since 1987, attention has been focused on the links between enterprise management and the government.

A common thread running through various reforms has been the decentralization of decision-making, from higher government tiers to lower tiers and from the government to enterprises. Markets in goods and services have grown rapidly, but they are awkwardly segmented and multiple prices are pervasive. Capital and labour markets still remain fairly primitive. The price structure involving 'plan prices' and 'non-plan prices' is heavily distorted. The reforms have created a curious and problematic hybrid of market and command economies. Problems of coordination are particularly serious for two reasons. First, the assortment of administrative and market constraints which economic agents face do not cohere, leaving gaps and loopholes to be exploited for private profit. Second, administrative and market constraints are often 'incentive incompatible'. For example, the coexistence of the plan with a market where goods fetch higher prices generates a permanent incentive not to fulfil plan quotas. Similarly, the absence of bankruptcy provides an incentive to enterprises to disregard the financial constraints implied by prices.

The reform period since 1978 has been characterized by a Chinese version of a stop-go cycle, alternating between loosening administrative controls and bold economic reforms in the 'go' phase, and reimposition of controls and a cautious attitude towards further reforms in the 'stop' phase (Komiya, 1989). The economy has been in a 'stop' phase since the autumn of 1988, and a further round of reforms is not expected to begin until the end of 1991. The sharp acceleration in the inflation rate in 1988, which forced the Chinese leadership to embark on a policy of macroeconomic stabilization, suggests that some basic policy measures or structural elements were missing from the strategy of the reforms pursued from 1984-88.

This paper focuses on the implications of three central aspects of the enterprise reforms: the delegation of decision-making on investment and its financing to enterprises; the introduction of performance-linked wages and bonuses and the delegation of decisions concerning wages to enterprises; and the separation of enterprise budgets from the government budget.

Table 1. Real growth and inflation (% per annum)

	Growth rates			
	Net national income	Agriculture	Other	Inflation
1971-77	4.6	1.6	5.8	0.4
1978-83	8.1	6.7	8.8	2.4
1984-88	11.3	4.9	14.5	8.6
1978	12.3	3.9	16.4	0.7
1979	7.0	6.4	7.3	2.0
1980	6.4	-1.8	11.0	6.0
1981	4.9	7.1	2.2	2.4
1982	8.3	11.7	6.0	1.9
1983	9.8	8.5	10.7	1.5
1984	13.5	13.0	13.8	2.8
1985	13.1	1.7	19.4	8.8
1986	8.0	3.7	10.3	6.0
1987	10.5	4.5	13.6	7.3
1988	11.5	2.2	16.0	18.5
1989	3.7	NA	NA	17.8

Source: Growth rates from SSB (1990a): 25. Inflation rates refer to the retail index and are from SSB (1990a): 589. The 1989 figure is from SSB (1990b).

Note: Chinese statistical sources provide net national income figures.

2. Recent macroeconomic developments in China

We provide in this section a picture of the Chinese macroeconomy over the last two decades. Our analysis looks first at the overall rate of change of real national income and of prices. We then examine domestic components of demand, distinguishing between consumption arising through institutions and through households. We discuss the role of liquidity in determining household consumption demands. Finally, we look at the foreign sector.

We have divided the post-1978 period into two sub-periods 'up to 1983' and 'since 1984' corresponding to the two phases described in the preceding section. The pre-1978 economy is described in terms of annual averages for the period 1971-77. We start with 1971 because that marks the beginning of the relatively settled phase of the Cultural Revolution following the turmoil of 1966-71. (See Table 1.)

Over the reform period (1978-89), the Chinese population grew by 1.2% per annum, which gives an annual growth rate of per capita income around 8%. The contribution of agriculture to growth in the different periods is closely linked to the phasing of the reforms. During 1978-83 almost half of the acceleration in the GNP growth rate was

due to faster agricultural growth, which may reasonably be attributed to the rural reforms. In the second period, the higher growth rate of the non-agricultural sector, of which industry is by far the largest component, more than offset the deceleration in agriculture. But the higher aggregate growth rate in the second sub-period was accompanied by rising inflation and, as we shall see, a comparatively large balance-of-payments deficit.

One must interpret official growth rates with some circumspection since there are significant measurement problems (see, e.g. Summers and Heston, 1988). Nevertheless, the output growth in particular sectors and the visible increase in consumption levels suggest real and impressive advances.

The reforms turned sour in 1988, when inflation leapt from 7% to around 19%. In cities, inflation was over 21%, and food prices rose by over 25% (SSB 1990: 691). This provoked a panic run on banks and forced the leadership to embark on a stabilization policy with stringent credit and investment controls, due to last until the end of 1991 (see *Beijing Review* 1990: No. 7). In 1989 growth dropped to 3.7%, though inflation fell only marginally. Eventually inflation also came down; the figure for 1990 is likely to be well under 10%.

In terms of the growth of national and per-capita incomes, the Chinese reforms appear to be an outstanding success. Why have the Chinese reforms been more successful than those in Eastern Europe? The answer may lie in structural differences in the pre-reform economies.

First, central planning had a comparatively limited remit in China and the economy was highly decentralized with a great deal of discretion to provinces and the lower government tiers. There was substantial flexibility built into the economy. Second, an overwhelming proportion of the labour force (around 75%) was in rural areas and organized at the household level, even if the overall deployment of labour was determined by collective institutions. This meant that agriculture, a comparatively high proportion of national income and efficient by the standards of developing economies, could be decollectivized very easily, yielding spectacular results quickly and launching the industrial reforms on a sound footing (see Nolan, 1988). Providing some rights of households to the usufruct of the land cultivated through the contract-responsibility system produced sharp increases in output without involving the full property rights of private ownership. Incentives to effort brought forth a very large response (see McMillan *et al.*, 1989). Third, China's abundance of labour has eased the problems of redeployment. Fourth, China had no foreign debts on the eve of the reforms and could borrow abroad. Being a low-income developing country enabled

some access to loans at preferential rates from the International Development Association (IDA) of the World Bank Group.

Inflation in the Chinese economy raises a number of measurement and conceptual problems (see, e.g. Naughton, 1990a), chiefly because of multiple prices (for the same goods) and widespread rationing, involving both principal industrial inputs and daily consumer goods. A commodity may have several plan or government-controlled prices and 'negotiated' prices (at which, for example, outputs above 'plan agreements' can be sold). Plan prices have almost invariably been lower than negotiated prices and involve rationing. We sometimes refer to negotiated prices as 'white' market prices in contrast to the many 'black' markets which also exist. These multiple prices raise the problem of the choice of weights in price indices. The weights used in the official price indices are not published. Illegal or semi-legal arbitrage, purchasing at lower plan prices for resale at higher prices, imply that official price indices underestimate the prices actually paid by users of commodities. Reports in the Chinese press suggest that such transactions were widespread until the crackdown on corruption following the protest movement of May and June 1989.

The underestimation of the extent of transactions at higher negotiated prices suggests that the official inflation rate figures may be biased downwards when the fraction of transactions at the higher prices is increasing. This underestimation may be especially severe during the period 1984–88 when inflation was accelerating: negotiated prices, being more susceptible to excess demand pressure, rise faster than controlled prices when the official figures show accelerating inflation.

Ceteris paribus, the relaxation of quantitative restrictions on purchases involved in a shift from a planned economy towards a market economy will show up as an acceleration in the inflation rate as the fraction of transactions at the plan or ration prices decreases. Arguably, inflation arising from the relaxation of price controls is a once-and-for-all adjustment of prices which should be distinguished from continuing inflation. Nevertheless, the changing extent of rationing and price control does seem to have played a role in determining inflation in China which goes deeper than this simple 'adjustment' interpretation. The government has tended to respond to a rise in inflation by extending price controls, as it did in 1989–90. Changes in the range of price controls have to be seen in part, therefore, as a tool of macroeconomic policy.

However, price controls are not independent of the principal determinant of underlying inflation, the pressure of demand. In a transitional economy, the range of price controls which can be enforced depends on demand pressure: higher demand increases the frequency of price-control violations, forcing the government to reduce the range of price

controls. Similarly, an extension of price controls is contingent on measures to reduce aggregate demand. This is exactly what has happened in China in 1989–90. Once economic reforms have granted a degree of discretion to economic agents, the enforcement of administrative controls depends not just on coercion but also on economic incentives, giving rise to a two-way causation between controls and the macroeconomic environment.

We turn now to a description of movements in the composition of aggregate demand, as shown in Table 2. Chinese national income statistics present the components of demand in terms of household consumption (*HC*), social consumption (*SC*: non-investment expenditure by institutions) and investment (*I*). We discuss foreign trade later. Column 4 gives the ratio of net changes in household bank deposits, both current and fixed-term, to national income (*HD/NI*), which in the absence of figures for personal incomes may be taken as a proxy for the ratio of household savings to national income. The last column gives the estimated share of household incomes to national income (*HI/NI*) as the sum of Columns 1 and 4.

Over the reform period, there has been a significant shift away from household consumption towards investment and social consumption. *Per se*, such shifts on the expenditure side do not tell us anything about excess-demand pressure in the economy. But, given widespread quantity constraints on consumers, it is difficult to argue that the shift towards investment and social consumption would have been accommodated entirely by an increase in ‘voluntary savings’: while the share of consumption fell, the share of household income in national income rose. Column 4 shows a steady rise in the ratio of changes in household bank deposits to national income over the whole of the reform period except for 1988. The dip in 1988 is interesting because it coincides with a sharp acceleration in the inflation rate (see Table 1). Arguably, the rise in the savings rate is in part due to an increase in ‘involuntary’ savings, which suggests willingness on the part of households to pay higher prices. In addition to the pressure of demand in consumer goods markets, the increase in the investment ratio in the second sub-period, which we discuss in Section 3, has been accompanied with increasing reports of widespread shortages of industrial inputs such as coal, cement and steel.

‘Involuntary savings’ arising from unsatisfied demand for consumer goods increase the volume of liquid assets in possession of households: the so-called ‘monetary overhang’. Quantity constraints on household purchases, analogously to liquidity constraints on households in market economies, may have implications for labour supply and the rate of substitution of future for current consumption (see Portes, 1989). In

Table 2. Composition of aggregate demand and changes in household bank deposits (%)

	<i>HC/NI</i>	<i>SC/NI</i>	<i>I/NI</i>	$\delta HD/NI$	<i>HI/NI</i>
1971-77	60.5	6.9	32.6	0.6	61.1
1978-83	60.2	8.2	31.6	2.9	63.1
1984-88	57.4	8.5	33.9	6.6	64.1
1978	56.3	7.2	36.5	1.0	57.3
1979	56.9	8.5	34.6	2.1	59.0
1980	60.2	10.5	31.5	3.2	63.4
1981	63.4	8.3	28.3	3.2	66.6
1982	62.7	8.5	28.8	3.5	66.2
1983	61.8	8.5	29.7	4.5	66.3
1984	59.6	8.9	31.5	5.6	65.2
1985	56.6	8.2	35.0	5.8	62.4
1986	56.6	8.6	34.7	7.2	63.8
1987	56.9	8.4	34.2	8.7	65.6
1988	57.5	8.4	34.1	6.0	63.5
1989	NA	NA	30.8	10.3	NA

Definitions: *HC/NI*: household consumption to national income; *SC/NI*: social consumption to national income; *I/NI*: investment ratio; $\delta HD/NI$: Changes in household bank deposits to national income; *HI/NI*: Household income to national income, $HI = HC + \delta HD$.

Note: All ratios are ratios with respect to magnitudes at current prices.

Source: SSB (1990a): 28 and 624. The 1989 figures are preliminary and from SSB (1990b): 3 and 44.

economies in transition, looser (or more loosely enforced) price controls on transactions, which in China take the form of white (or black) parallel markets, provide a mechanism for a partial translation of cumulated involuntary savings into higher prices. Looser controls also provide Chinese households with an option, albeit still not an easy one, of holding their wealth in other forms such as stocks of goods or foreign currency.

The changes in household bank deposits to national income, as shown by Column 4 in Table 2, have a wider significance for macroeconomic policy in China. The fall in the household bank-deposits ratio in 1988 corroborates the stories of a panic run on banks in the autumn of 1988. The spectacular rise in the ratio in 1989 is based on the preliminary figures, but fits with the 8% drop in retail sales in real terms (see *Beijing Review* 1990, No. 9: 'Documents'). The steady rise in the ratio poses a puzzle. A part of the rise may simply be due to a gradual spread of the 'banking habit' among households. But, a substantial part of the increase may be due to a rise in personal wealth which in large part, given the relative absence of other assets, is held in money. For a discussion of the demand for money see Portes and Santomero (1988).

With the large increase in liquid assets in the hands of households, the expectations of households assume an increasing importance for macroeconomic policy. Before 1978 the government could disregard any effect of expectations on household demands, given the limited scope they had for altering their consumption and saving pattern. But now with the large volume of liquid assets in the hands of households and a significant shift towards a market economy, expectations begin to matter. In particular, changes in expectations concerning future inflation could have a large impact on the current inflation rate: given that the ratio of household bank deposits to national income is currently around 40%, a decision by households to reduce their bank deposits by one percentage point would immediately add around 0.4% to aggregate demand.

The success of an anti-inflationary policy in the present-day Chinese economy depends crucially on its credibility and on providing households with financial and physical assets carrying some insurance against inflation. Currently, Chinese households, urban ones in particular, have precious few possibilities of holding their wealth in tangible or non-liquid assets. Almost all housing in urban areas is publicly owned. The increasing importance of household bank deposits also suggests that the control of inflation through a re-imposition of price controls and rationing, as in 1989–90, may lower the inflation rate, but at the cost of storing up a problem for the future. A re-acceleration of inflation may prompt households to decrease their bank deposits thus further accelerating inflation.

The components of effective demand concern foreign trade and are set out in Table 3. Two features stand out: the massive expansion in foreign trade relative to national income and the trade deficit as a regular feature of the Chinese economy.

The Chinese economy is now as open as any large developing economy, and this has a number of important implications for links between domestic and international price levels and resource allocation. Trade flows are still heavily controlled by the government via Foreign Trade Corporations (FTCs), which in the pre-reform period formed a tight 'air-lock' between the domestic economy and the world market. The 'air-lock' remains but is punctured by two reforms in the 1980s: the decentralization of foreign trade and the opening of parallel markets at negotiated prices. Provincial branches of the previously centralized FTCs were transformed into separate units, and the provincial and municipal authorities given the power to create their own FTCs, a power which they used enthusiastically (see, e.g. Vogel, 1989, and World Bank, 1988). At the end of 1989 there were 6,000 FTCs, in contrast to around a dozen in 1978. In addition, some large enterprises were permitted

**Table 3. Foreign trade and the balance of trade
(% of national income)**

	Foreign trade ratio*	BOT surplus
1971-77	5.0	0.3
1978-83	8.0	-0.2
1984-88	14.5	-3.1
1978	6.0	-0.7
1979	6.8	-0.9
1980	7.6	-0.5
1981	9.4	0.0
1982	9.0	1.3
1983	9.0	0.3
1984	10.5	-0.7
1985	14.5	-6.0
1986	15.7	-5.0
1987	16.2	-1.5
1988	15.6	-2.4

* Weighted average of exports and imports to national income.

Source: SSB (1990a): 28 and 546.

to conduct foreign trade. The competition between exporters arising out of the large-scale decentralization and the opening of the parallel markets in goods have considerably reduced the percentage of goods for exports procured at plan prices, which in the pre-reform period used to be 100. This has opened up a channel for the domestic inflation to spill over into the prices of exported goods as the FTCs bid up prices in the knowledge that the foreign exchange that they will gain from their sale will yield a premium (either in white or black markets).

A similar story holds for imports. In the past imported goods were sold at the plan prices for their domestic substitutes, if they existed, or otherwise at cost (converted at official exchange rates) plus import duties and handling costs. Such a pricing policy for imports implies a reduction in their profits, or bigger losses, compared with open market pricing. This has confronted the government with the uncomfortable option of either absorbing the losses of FTCs or allowing them to sell imported goods at negotiated prices. Further, the decentralization of foreign trade has made it increasingly difficult to enforce the pricing policy for imports. As in other fields, the government has followed a mixed policy: absorbing the losses of FTCs, allowing some imports to be sold at higher negotiated prices and devaluing the exchange rate (to reduce the black or white market premium). The general point is that with an increasing trade ratio and a partial decontrol of domestic prices, the maintenance

of an 'air-lock' has a heavy cost for public finance and eventually something has to give.

The decentralization of foreign trade has gone together with a decentralization of foreign exchange holdings. Units engaging in foreign trade are allowed to retain a part of their foreign exchange earnings and since 1988 also to sell them at negotiated prices through Foreign Exchange Adjustment Centres (FEACs). In 1989, around 15% of export earnings were transacted through FEACs (World Bank, 1990b). Their establishment has considerably reduced the importance of the black markets in foreign currency and amounted to a partial introduction of floating exchange rates and put pressure on the authorities to devalue so as to contain the divergence between the open-market rates and the official rate. The official exchange rate has been devalued a number of times in recent years, in 1986, then by 21% in November 1989 and by a further 9% in November 1990 (*Beijing Review*, No. 49: 6). Given the high inflation rate in 1988, which continued into 1989, the 1989 devaluation was too late and perhaps not enough fully to reverse the appreciation in the real exchange rate. Generally it seems that unlike many developing economies, the Chinese authorities seem quick to adjust the nominal exchange rate. This may be attributed to two factors: first, the very strong desire to sustain the high rate of growth of exports and, second, to reduce the dependence on foreign borrowing.

The recurrence of trade deficits since 1978 is not a sign of a chronic problem but of a radical change in the attitude of the Chinese leadership towards foreign borrowing. In the early 1950s, China borrowed from the USSR and East European economies to finance its industrialization. With the deterioration in relations with the USSR in 1959, the Chinese government eschewed all foreign borrowing. In the 19 years between 1959–77, the balance of trade was in deficit only three times, and the sum of surpluses far exceeded the sum of deficits. In fact, over the period China was a net lender to selected African and Asian economies.

Since 1978, the reformist leadership, discarding the previous policy of 'self-reliance' has come to rely on foreign borrowing and welcome foreign investment. Foreign borrowing, which has been mainly from international organizations and governments, would appear to have contributed to the combination of a significantly higher growth than in the pre-reform period and an unprecedented increase in household consumption. China's total foreign debt at the end of 1989 was around \$42 bn. Given that exports in 1989 were around \$52 bn., by international standards the Chinese economy does not face a significant debt servicing problem (SSB 1990: 97) and could service a higher level of foreign debts without undue discomfort.

Should the Chinese economy borrow more (for some discussion see World Bank, 1990a, b)? In response, one should ask, for what purpose? Neither the growth rate nor the investment ratio has been low by international standards. The case for foreign borrowing to boost a low growth rate or investment ratio would seem to be weak in the Chinese case. Extra foreign borrowing to finance the import of goods in short supply will ease the inflationary pressure in certain areas, but will not serve, at least in the short run, to increase the supply of non-tradeables, which still account for an overwhelming proportion of total expenditure. International experience shows that borrowing abroad to address a problem created by internal imbalance simply postpones it and may make it worse. There is justification for China borrowing abroad to finance projects with an expected rate of return exceeding the expected cost. But this is not an argument which can be accepted without discrimination at the macro level on the general presumption that rates of return in China are high.

To summarize the salient macroeconomic features of the Chinese economy, the growth rates of national income and of exports since 1978 have been extremely impressive, and do not look out of place among the growth records of East Asian economies. Rapid growth has brought in its train a variety of problems, in particular inflation. The current macroeconomic problems of the Chinese economy look increasingly similar to those in other economies. What is, however, missing from our account is the problem of unemployment. The 'measured' unemployment rate is exceptionally low in China. China faces a huge problem of unemployment but most of it is 'disguised' because of life-time employment in industry and stringent restrictions on migration from rural to urban areas (even if these are partially evaded). The macroeconomic problems of the Chinese economy have some very special features because of the hybrid of a command and a market economy. In particular, while the reforms have either removed administrative control on economic decisions or weakened the remaining ones, they have not succeeded in creating an environment where prices and budgets act as clear constraints on economic decisions. Moreover, the expectations of economic agents, enterprises as well as households, and their response to government policy have assumed an importance which they did not have before.

Inflation in the Chinese economy does not look that high (again by international comparisons), especially when considered together with the growth rate. But the problem of inflation may be more serious than is conveyed by the figures. First, there are reasons to suspect that the actual inflation has been higher than indicated by the official figures. Second, the efficiency costs of inflation in the Chinese economy may

be particularly high, since anti-inflationary policies rely heavily on an extension of price controls. This has a strong bearing on relative prices since the proportion of sales at government controlled prices varies widely across commodities. There is a two-way relation between the enterprise reforms and inflation. As we shall see in Sections 3 and 4, the enterprise reforms have been amongst the main factors responsible for inflation. As inflation accelerated in 1988, the government resorted to direct controls on investment and wages, partially reversing the enterprise reforms. In addition, inflation has an adverse effect on public finance: tax revenue is inelastic with respect to inflation, but government expenditure, especially subsidies on prices and to loss-making enterprises, rises sharply with inflation. Finally, the emergence of sharp inequalities in a previously rather more equal society may be socially disruptive – China has not had any effective apparatus for relating incomes to inflation and some groups have been hit by inflation at the same time as others have benefited greatly from the new economic opportunities.

3. Investment and wages

The primary purpose of this section is to analyse the behaviour of investment and wages and their links with the enterprise reforms. We begin by providing a brief description of China's industrial structure and of the reforms.

3.1. Industrial structure and enterprise reforms

China has a peculiar industrial structure (for a discussion see Komiya, 1987). There are 421,000 'independent' industrial enterprises (*duli hesuan gongye*), including rural township enterprises (*xiangban gongye*) but not village enterprises (*cunban gongye*). Were the latter to be included the total would be a massive 1.2 million. The focus of the enterprise reforms has mainly been on 'independent' enterprises, which in 1988 accounted for around 84% of total industrial output. These enterprises are not only numerous but also diverse in terms of ownership and size. State-owned and collectively-owned are the main categories, both of which are heterogeneous, covering a wide range of ownership and organizational arrangements. The ownership status of an enterprise determines the constraints and incentives it faces, and has an important influence on its access to inputs and investment funds. Collective enterprises are, in principle, like employee cooperatives in market economies, and, unlike state-owned enterprises (SOEs), they are relatively free of detailed government control and output planning. They are predominantly small in size.

There are around 72,500 SOEs widely dispersed across different branches of industry, but dominant in metallurgy, heavy capital goods, and in energy. Around 11,000 (15%) SOEs are classified as large and medium size on the basis of the value of their fixed assets, and the rest are small. Unlike collective enterprises, SOEs, especially those of large and medium size, are subject to output planning: they have to sell a proportion of their output at lower plan prices, and correspondingly receive a proportion of their inputs at plan prices. The share of SOEs in industrial output has fallen from about 78% in 1978 to 57% in 1988 because of the faster growth of collective enterprises. Given their special importance to the Chinese economy, we shall concentrate on SOEs (for a detailed discussion of industrial structure see Hussain, 1990).

A schematic chronology of the reforms bearing on SOEs is as follows (see also Granick, 1990, and Tidrick and Chen Jiyan, 1987).

Main features of SOE reforms

- 1978–83 Letting enterprises produce outside the plan, retain depreciation allowances and a portion of profits; shift in the financing of working capital and investment from the government budget to internal funds and bank loans; discretion over labour recruitment and the introduction of performance-linked wage bonuses.
- 1984–86 Letting enterprises sell above-plan output at negotiated prices to other economic agents directly and plan their output accordingly; the replacement of profit remittances to the government with profit taxes; the emergence of commercial banking.
- 1987–90 Formalization of the role of enterprise directors, their methods of appointment and criteria for the evaluation of their performance; the introduction of multi-year contracts for the payment of taxes, as part of the ‘Contract Management Responsibility System’ (CMR).

Following the change in leadership in June 1989, enterprise reforms stopped altogether and were even reversed in certain respects. The power of enterprise party committees has been increased and the scope of quantitative planning and price controls extended. But China seems likely to embark on another round of enterprise reforms from 1991.

The central aspects of the reforms on which we now focus are: (i) the delegation of decision-making on investment to enterprises, its financial liberalization, and the implications for investment (Section 3.2); (ii) allowing enterprises discretion over money wages and benefits

Table 4. Share of government investment in total and sources of investment funds in SOEs (%)

	<i>GI/TI</i> ¹	Sources of investment funds in SOEs				
		Govt. budget	Bank loans	Foreign investment	Own funds	Other ²
1981	36.0	44	14	—	42	
1982	29.9	39	16	—	45	
1983	25.0	41	14	2	43	
1984	26.9	39	15	2	39	4
1985	27.2	26	23	3	40	7
1986	22.2	24	23	5	38	10
1987	23.0	21	25	7	38	9
1988	18.5	15	24	9	40	12

¹ *GI*: government financed investment; *TI*: total investment in the economy.

² Other includes government funds not included in the budget and investment funds provided by other enterprises.

Note: The figures are rounded and may not add to 100.

Sources: The SOE figures for 1981–82 are from SSB (1987b): 14, which does not provide the figures for foreign investment. The rest are from SSB (1986): 417; SSB (1987a): 371; SSB (1988): 405; SSB (1989): 565; SSB (1990a): 411.

in kind and the introduction performance-related bonuses, and their implications for wages (Section 3.3); and (iii) the separation of enterprise budgets from the government budget, multi-period tax contracts, and their implications for public finance (Section 4).

3.2. Financial liberalization and investment

As intended by the reforms, there has been a massive decrease in the percentage of government-financed investment (*GI*) in total investment (*TI*), and a substantial change in the sources of investment funds in SOEs, as shown by Table 4. Government-financed includes both public investment and government-funded investment in SOEs.

Two features stand out in Table 4. First, the percentage of government-financed investment in both total investment and investment in SOEs fell in seven years to around half of the figure in 1981. In SOEs, the fall was especially pronounced in 1984–85, following the introduction of the enterprise reform package in the autumn of 1984. Second, the percentage of loan-financed investment nearly doubled. The share of own-financed investment shows no upward trend since 1984, by which date the first set of reforms had already transferred the disposal of gross profits to enterprises. The share of own-financed investment probably increased substantially during 1977–84. The main effect of

Table 5. Annual interest rates on deposits and loans (weighted averages) and the growth rate of bank loans to enterprises (%)

	Deposit rate	Loan rate ¹	Inflation	Real loan rate	Growth rate of loans
1978	2.1	5.0	0.7	4.3	5.1
1979	2.4	4.9	2.0	2.9	3.3
1980	2.8	4.8	6.0	1.2	17.7
1981	2.9	4.9	2.4	2.5	11.7
1982	3.2	6.9	1.9	5.0	7.3
1983	3.3	6.8	1.5	5.3	11.3
1984	3.5	6.7	2.8	3.9	38.3
1985	4.0	7.3	8.8	-1.5	24.9
1986	4.3	7.6	6.0	1.6	43.9
1987	4.4	7.6	7.3	0.3	20.4
1988	4.8	7.8	18.5	-10.7	22.2
1989	8.0	10.9	17.8	-6.9	NA

¹ Includes the rates for budgetary loans.

Source: WB (1991): inflation rates are the same as in Table 1.

enterprise reforms since 1984 has been an increase in investment financed by loans, mostly from banks.

The introduction of loans instead of grants and a positive interest charge for investment funds have been an important feature of the enterprise reforms. Bank loans carry a positive nominal interest rate, own-funds have an opportunity cost and investment funds to enterprises from the government budget take the form of loans. However, the government has considerably weakened the impact of the reform by keeping nominal interest rates low (see Table 5) and, more important, allowing enterprises to deduct the principal as well as the interest from taxable profit, which can reduce the effective interest rate to zero or below. Thus, the tax system provides an incentive to enterprises to substitute bank loans for own-funds for financing investment.

The shift in the sources of investment funds raises two related questions. First, given the government ownership and control of the banking system, what is the significance of the shift? Second, what are its macroeconomic implications? Part of the shift is no more than a change in label: the government, rather than borrowing to provide funds to enterprises, short-circuits the process, instructing banks to lend to enterprises. Nevertheless, the shift represents a real change and its significance lies in the relaxation of rationing on investment funds. The banking system, although government owned, is not closely integrated into government planning machinery. Since 1984, like enterprises, banks have had operational autonomy, and until the tightening of credit in 1989, central control on local branches was weak. Table 5 shows that

Table 6. Investment as a percentage of value-added

	State-owned enterprises	Whole economy
1971-77	55.4	32.6
1978-83	55.8	31.6
1984-88	83.4	33.9
1978	57.9	36.5
1979	54.7	34.6
1980	54.4	31.5
1981	48.5	28.3
1982	58.3	28.8
1983	60.8	29.7
1984	68.2	31.5
1985	81.9	35.0
1986	88.9	34.7
1987	90.3	34.2
1988	87.9	34.1

Note: Value added for the state-owned enterprises is estimated by multiplying the value added in the industrial sector by the share of SOEs in gross industrial output.

Source: SSB (1990a): 24, 225 and 410.

1984 seems to have been a watershed. The real interest rate on loans dropped, then stayed exceptionally low and negative, by a wide margin, in 1988 and 1989. The growth rate of bank lending to industrial enterprises shot up and stayed high, and both money and real wages increased sharply. The inflation rate accelerated, ending at around 18-19% in 1988-89. The 'real effective' rate of interest was considerably lower than the 'real loan' rate, given the tax deductibility of principal repayments.

The massive growth in bank lending to enterprises went together with a steep rise in the investment rate in SOEs and in the economy in general, as shown by Table 6. In the five years since 1984, the economy-wide investment ratio has averaged around 34%. This is exceptionally high by international standards and is higher than during the pre-reform period (1971-77), when investment was mostly financed by budgetary grants, or the first phase of the reforms (1978-83).

The investment ratio in SOEs shows a steady upward trend since 1982. It rose dramatically by 14 percentage points during 1984-85, immediately following the promulgation of the law on the reform of SOEs in Autumn 1984.

High investment ratios, especially since 1985, seem due to the lifting of restraints on enterprises to invest and on banks to lend. The pattern since 1984 conforms to the familiar multiplier-accelerator interaction: an increase in investment raised the growth rate, which in turn, via an

increase in demand and resulting shortages, stimulated a further increase in investment. Accelerating inflation since 1985 could be attributed to the economy coming up against supply constraints due to rapid growth. The introduction of the market track in 1984 provided the mechanism which translated shortages into inflation. Given the double-digit output growth since 1984, it seems surprising that inflation climbed to double figures as late as 1988. The main explanation lies in the trade deficits of 5–6% of national income between 1985–86 (see Table 3), which were large by previous standards. The situation changed after 1987: growth remained high, but the government succeeded in reducing the trade deficit to only 1.5% of national income: the result was an accelerating inflation rate.

Given performance since 1984–85, one might argue that with present economic structures the Chinese economy cannot sustain investment ratios of 34–35% without encountering a large balance of trade deficit or a runaway inflation (for further discussion see Naughton, 1990b, c). There is nothing magical about these figures. In principle, such rates of investment could be sustained by controlling household incomes, increasing public-sector savings or by foreign borrowing. As we argued earlier, foreign borrowing would not entirely solve the problem of inflation given the importance of non-tradeables in total expenditure. Nor does the Chinese government want to add significantly to its foreign debt in order to sustain a high level of investment. The implication is that the burden of macroeconomic adjustment has to come via the control of investment or consumption. Economic instruments for controlling consumption have become less strong. As we shall see, government control of wages and salaries has weakened, and personal incomes are largely untaxed. As we saw earlier, households have a large volume of wealth in the form of liquid assets. Higher indirect taxes on consumption goods may appear as a feasible option, but is severely constrained by the aim of keeping inflation low. In sum, there are political and social constraints on controlling consumption in order to accommodate a high investment ratio. A major part of the control of aggregate demand must be through curtailing enterprise investment and bank credit to enterprises. Since Autumn 1988, stringent quantitative controls on enterprise investment and bank credit to enterprises have succeeded in bringing down inflation substantially. Officially, such controls will remain in force until the end of 1992 (see *Beijing Review* 1990, No 9: 'Documents').

In the remaining part of this section we concentrate on three issues: the control of enterprise investment, the case for quantitative controls on investments and credit and the microeconomic effects of high investment ratios. Taking the first issue, the case for increasing the 'real

effective' cost of credit, by increasing the nominal interest rate and abolishing the tax deductibility of principal repayments, seems to be strong.

But the problem of constraining enterprise borrowings goes beyond raising the interest rate. The massive expansion of bank lending to enterprises, especially since 1984, was not justified on economic grounds (i.e. the returns on the investment relative to cost of funds) and would not have taken place had banks not been subject to political pressure, especially by lower tiers of the government. Although political pressure was important in credit expansion, the problem does not solely reside there. There would have been an excessive credit creation even with a banking system such as those in market economies. To elaborate, we turn to the capital account of enterprises. Financial autonomy granted to SOEs includes *inter alia* freedom to borrow and to dispose of physical assets within certain limits. Chinese SOEs, and other enterprises, have a capital balance sheet with special features. As many of their assets still date from the period when investment was financed by government grants, they inherited few financial liabilities but comparatively large assets.

The economic reforms introduced the principle that the use of capital should carry a charge, but applied the principle only to new investment, not to the assets inherited from the pre-reform era. The 'adjustment tax' on net-of-tax profits is meant to take into account that inheritance, but its impact is considerably weakened since it is not based on a systematic valuation of assets. The general point is that with a very large volume of physical assets relative to financial liabilities, Chinese SOEs would have a high credit rating in a market economy even if they were running at a loss. The policy suggestion is that if enterprises are allowed to borrow and banks to lend, then the reforms need to concern themselves with the capital account as well as the current account of enterprises, which they have not done thus far.

One way of constraining SOEs in their borrowing would be to create loan liabilities to the government to match the value of inherited assets. This would be equivalent to a 'leveraged buy-out' by the enterprise of the inherited assets and involves a valuation of assets which is necessary not only for financial transactions but also for any radical change in the ownership of SOEs. The raising of interest rates on its own does not address the issue raised here, because it does not discriminate between enterprises according to the volume of inherited assets.

Quantitative controls on investment and credit, although in principle incompatible with a free-market economy, have not been rare in market economies. Even in well-functioning market economies there may be a good theoretical case for encouraging or restricting the use of

commodities where the social opportunity cost diverges from the prices faced by users (Guesnerie and Roberts, 1984). The need for stabilization points to some serious weaknesses in the enterprise reforms thus far. When prices are heavily distorted and enterprises are not subject to the types of constraints to which firms in a market economy are subject, the delegation of economic decision-making to enterprises is not invariably a desirable development.

The strong case for raising the 'real effective' interest rate does not preclude quantitative controls on credit and investment in the short run. There are economic arguments for quantitative controls as a supplement to desirable price adjustments. First, it is usually infeasible to remove all major price distortions at one stroke. Second, estimating the exact change in quantity in response to a change in price, which is what one needs for policy, may be subject to a wide margin of error, and deviation from the intended target may have a high cost (Weitzman, 1974). Under the present set up in China, it is far from clear what level of 'real effective' interest rate would achieve a level of investment compatible with particular targets for the inflation and the trade deficit. It would seem prudent to retain some direct control on the quantity and allocation of investment and gradually relax that control as markets function better and prices give less distorted signals.

We turn now to the microeconomic effect of a high investment ratio. The total value of investment started but yet to be completed in 1988 was 1,300 bn. yuan, which is over three times the rate of investment and exceeded national income during the year. Between 1987 and 1988, the ratio of investment in gestation to new investment rose by 12 percentage points, even though the investment ratio remained constant (see Table 6). This may indicate an excessively high investment ratio. Given the general shortages of inputs such as steel and cement, the start of a major investment project is likely to prolong the gestation period of already started investment projects, but this cost is not taken into account by enterprises when they embark upon new investment because it is not relevant to them. This congestion externality is analogous to taking a car on a congested road in a regime where charges for the use of a road are low or non-existent.

Chinese enterprises do not face serious risks of bankruptcy or take-over. With distorted prices and free insurance against downside risks, an investment project may appear profitable to enterprises but be highly unprofitable from the social point of view. Similar problems arise in the utilization of the existing capital stock, which may be hampered by a serious shortage of electricity and fuel. Quantitative controls on investment projects may improve the utilization of existing capital. Alternatively, sharp increases in the prices of goods in short

supply would be appropriate but this, via inflation, may be politically difficult.

For macroeconomic control it is total investment that matters; for efficiency and the allocation of resources, the sectoral allocation of investment is critical. Indeed macroeconomic excess demand can appear through supply-side inefficiencies and misallocations. China has had relatively low investment in infrastructure, transportation and energy, a failure of investment planning. Ideally the macroeconomic control of investment should be complemented with improvements in investment planning. The Chinese economy will remain a planned economy over the medium term, but the reform of the planning system has been neglected. Planning in China should move away from output planning, the control of trade in commodities, towards investment planning, which remains necessary while market prices are severely distorted. This strategy, properly executed, should overcome some of the distortions so that more can be left to the market, and government actions can be concentrated on infrastructure.

3.3. Wages

In the pre-1978 period, labour earnings in SOEs, and also in collective enterprises, were controlled by the government and independent of the unit of employment. Wages conformed to a national wage scale and enterprises had little discretion over the assignment of workers to wage grades. The wage bonus linked to enterprise performance, introduced in the 1950s, was suppressed during the Cultural Revolution's move from material to moral incentives.

There has been a radical change in the composition of industrial earnings, as shown by Table 7. In particular, there has been a marked shift away from time wages and, as with the change in investment financing, the net effect has been to loosen the government's control on industrial earnings. A national wage scale still governs time wages in state-owned enterprises, though not in collective enterprises. Piece wages are largely decided by enterprises, because what constitutes a piece of work varies from enterprise to enterprise. The shift towards piece wages forms part of the attempt to increase labour productivity by providing incentives. Wage bonuses linked to enterprise performance, reintroduced in 1983, are not under direct government control. Besides, enterprise managers now have greater power to promote or demote workers than they did before the reforms. Subsidies are mainly compensation for inflation, and have gone up with the increase in inflation, reflecting the onset of a wage-price spiral familiar in market economies. As yet there is no formal nation-wide indexation.

Table 7. Composition of nominal wages in the state sector (%)

	Time wages	Piece wages	Bonuses	Subsidies	Other
1978	85.0	0.8	2.3	6.5	5.4
1980	69.8	3.2	9.1	14.1	3.8
1983	63.5	8.5	11.1	14.1	2.8
1984	58.5	9.5	14.4	14.5	3.1
1985	57.2	9.5	12.4	18.5	2.4
1986	56.3	8.7	12.8	18.8	3.4
1987	54.3	9.2	14.7	18.9	2.9
1988	49.0	9.4	17.2	21.4	3.0

Note: The figures refer to all state sector employees. Subsidies refer to cost-of living payments.

Source: SSB (1989): 182; SSB (1990a): 102.

In addition to cash income, employees receive a sizeable income in kind, notably, heavily subsidized housing. Around three-quarters of housing in urban areas is owned by organizations (or work units), which can increase the income of employees by investing in housing. This increased sharply with the industrial reforms: the share of housing in total investment rose from 12% during the fifth five-year plan (1976–80) to over 21% during the sixth five-year plan (1981–85), then fell to 16% during 1986–87 (SSB 1989: 567). The increase may have seemed ‘necessary’ given its previously low level, but it also implied a substantial increase in the real incomes of employees – house rents in China are often too low to cover even the maintenance cost of dwellings. The fact that a substantial proportion of personal earnings accrue in kind is of considerable significance. First, government control over personal earnings is much looser than is indicated by control over wages and salaries in cash. Second, enterprises can evade profit tax by using operational profit to provide benefits in kind to their employees, which are not taxable under the personal income tax (which plays a negligible role in China). Third, as benefits in kind for employees vary considerably among work units, inequality among the labour force of the state sector is greater than inequality in cash income.

Government control over personal earnings, although still formidable, is a lot weaker than it was before the reforms. The shift in the composition of earnings indicated by Table 7 has gone together with a rapid increase in labour earnings, as shown by Table 8. While the high rates of increase in real wages between 1979 and 1980 might be regarded as a ‘correction’ for low wages in the pre-reform period, the sharp acceleration in nominal and real wages between 1984–86 seems to be due, first, to the enterprise reforms, which gave enterprises a

Table 8. Annual increase in nominal and real labour earnings in SOEs (%)

	Nominal wages	Cost of living ¹	Real wages
1979	9.0	1.9	7.6
1980	13.5	7.5	6.0
1981	0.6	2.5	-1.9
1982	1.6	2.0	-0.4
1983	2.1	2.0	0.1
1984	20.7	2.7	18.0
1985	17.1	11.9	5.2
1986	15.4	7.0	8.4
1987	10.7	8.8	1.9
1988	20.4	20.7	-0.3

¹ The cost of living index for 'workers and staff', which is not the same as the retail price index for the whole economy given in Table 1. Source: SSB (1989): 194. The 1988 figure is from SSB (1990a): 110.

greater discretion over the wages of their employees, and, second, to the acceleration in the inflation rate. Real wages fell slightly in 1988, which fits in with the widespread disenchantment with the economic reforms in 1988.

The acceleration in wages coincides fairly closely with the increase in the investment ratio. The reforms simultaneously loosened control over enterprise investment and wages, thereby engineering both a consumption and an investment boom. The conjunction of the two, together with the extension of the market determination of prices, eventually led to a rapid inflation. Again, one can make a case for control of personal earnings. In the pre-reform period, with tight direct control over wages, and there was no need for personal taxation to control disposable income. Now those direct controls have been considerably weakened, there is a need for additional policy instruments such as taxes on personal incomes. As with investment, we have an interesting problem of sequencing. The goal is to free markets and if all were operating smoothly there would be little argument for quantitative controls in any of them. However, freeing just one set of decisions may create serious difficulties.

The argument usually advanced for wage controls in market economies holds also for the Chinese economy, but with a greater force. Employees care not only about how many yuan per month they get but also how many yuan per month other employees get. Arguably, sensitivity to relative wages is greater in China than in market economies because until recently a national wage scale covered all employees of the state sector. Wage differences between occupations and industries were very small. Interestingly, after enquiry about one's age, marital

status and work units one of the first questions one gets asked in China is 'how much do you earn?'

The rise in wages since 1984 has been coupled with significant changes in relative wages. A common refrain in China is that a hotel waiter gets more than professor and a barber more than a surgeon (Liu Guoguang, 1989). The upheaval in the structure of relative wages is widely regarded as unjust and has been one of the major causes of disenchantment with the reforms. There is a pattern to these changes. Whilst the incomes of the self-employed and of those engaged in the production of marketed goods and services have raced ahead, those of groups engaged in providing non-marketed services such as education, health and in the government have fallen behind. Some changes in relative wages may have been conducive to furthering labour efficiency, especially within an enterprise; others have created disenchantment.

Finally, we turn to an issue implicit in the discussions of wage increases. Liu Guoguang (1989) has remarked that enterprises have used their autonomy to grant wage increases unrelated to increases in productivity. There is also anecdotal evidence that in many cases enterprise managers, rather than resisting, have exploited gaps and loopholes in the regulations to meet the demands of their labour force for wage increases. The general suggestion is that in many cases enterprise managers collude with their labour force. Rather than pursuing profit they seek to increase the income of their labour force. There are three parties to the enterprise reforms: the government, enterprise managers and the enterprise labour force. The presence of the third party means that enterprise reforms should take into account the relation between the enterprise management and the labour force, and the possibility of collusion between them against the government. This implies that a mere transfer of decision-making to enterprise managers may not be sufficient to induce profit seeking. Enterprise reforms must also introduce incentive schemes and constraints to prevent collusion between enterprise management and the labour force to the detriment of the economy at large.

4. Public finance

A central feature of the enterprise reforms has been the disengagement of enterprise budgets from the government budget. This implies a reduction in government revenue and expenditure relative to national income (see Blejer and Szapary, 1989). We are concerned with the magnitude of this reduction; the impact of the enterprise reforms on the composition of government revenue and expenditure; and the size of budget deficits in the reform period, and their role in the acceleration

of inflation. We shall argue that the deficit was not of sufficient magnitude to play a major role in accounting for the inflation. We do, however, stress disturbing trends on both the expenditure and revenue sides. The reforms have led to very large subsidies as price incentives to producers are offered at the same time as attempting to hold prices to the consumers. And the provision of revenues to finance future government expenditures is likely to require the building of a tax system appropriate for a more decentralized economy to replace the public profits on which the earlier system was based.

In the pre-reform period, gross profits of state-owned enterprises (SOEs) with some exceptions accrued to the government. In effect, SOEs were subject to a 100% tax on their operational profit. In turn, the government provided SOEs with working capital and investment funds as grants. Following the 1984 enterprise reforms, most SOEs have become financially independent, retaining their depreciation allowances and profits net of taxes, which can be used for investment or wage bonuses. Financially independent SOEs are expected to finance their working capital and their investment from own-funds or bank loans. Funds for enterprises still provided from the government budget now carry an interest charge, though, as we indicated in Section 3 it loses much of its impact because of the tax policy.

The enterprise reforms have had an effect on the government budget which is asymmetric between profits and losses. The government has decreased its share in positive profits from 100% to 55% or less (under the profit tax), but still has to bear 100% of losses. As in other socialist economies undergoing market-oriented reforms, making enterprises responsible for their own profit and loss means many enterprises are not financially viable. This confronts the Chinese government with an especially difficult dilemma: given the extensive social welfare and other obligations of enterprises to their employees and pensioners, it is wary of letting loss-making enterprises go bankrupt; conversely, sustaining loss-making enterprises through budget subsidies goes against the 'incentive' spirit of the reforms and creates a substantial public finance problem.

The enterprise reforms did not, it seems, fully take into account their consequences for public finance. The decline in government revenue relative to national income appears to have been much greater than expected, a point of substantial importance to all economies attempting decentralization. If incomes or profits are left in the hands of individuals or enterprises to provide incentives, government activities must be financed in some other way. Decentralization requires a new tax system. We turn now to the impact of the enterprise reforms on government revenue, expenditure and budget deficit.

Table 9. The composition of government revenue

	Govt. revenue/ National income (%)	% of government revenue			% of national income		
		Enterprise taxes			Enterprise taxes		
		Direct	Indirect	Other	Direct	Indirect	Other
1978	41.4	60.0	32.0	8.0	24.9	13.3	3.3
1979	37.6	60.0	33.7	6.3	22.6	12.7	2.4
1980	35.6	59.3	34.5	6.2	21.1	12.3	2.2
1981	35.5	57.2	35.4	7.4	20.3	12.6	2.6
1982	32.9	52.5	38.7	8.8	17.3	12.8	2.9
1983	33.4	47.2	35.1	17.7	15.8	11.7	5.9
1984	32.3	44.0	36.5	19.5	14.2	11.7	6.3
1985	29.7	33.2	41.7	25.1	9.9	12.7	7.2
1986	28.8	33.6	42.6	22.2	9.6	12.2	6.9
1987	26.5	31.9	42.5	22.2	8.9	11.3	6.4
1988	23.7	24.9	43.6	33.0	5.9	10.3	7.8
1989	23.2	17.9	46.3	37.4	4.1	10.5	8.5

Source: SSB (1990a): 24 and World Bank (1990a).

4.1. Government revenue

The massive decline in the ratio of government revenue to national income is shown by Table 9. Over the 12 years from 1978–89, the government revenue ratio has fallen by over 18 percentage points, eight percentage points during the first phase of the enterprise reforms, then another 10 percentage points in just six years spanning the second phase 1984–89. Thus, the shift of focus from rural to the enterprise reforms in 1984 sharply accelerated the decline. This may be due to the ‘Contract Management Responsibility System’ (CMR), which began to be introduced on a large scale at that time (see Section 3).

It is also helpful to look at changes in the components of government revenue, which we divide into three parts: taxes on enterprise profits, indirect taxes, which are nominally paid by enterprises, and the rest. The rest covers *inter alia* agricultural taxes, customs duties, non-tax revenue and personal taxes (for a discussion of the tax system see Easson and Li Jiyan, 1987).

Table 9 brings out a number of significant points. The decrease in the revenue ratio between 1978–89 is almost entirely accounted for by the decrease in the ratio of direct taxes from the enterprise sector to national income. *Prima facie*, this decrease could arise as a result of two factors: first, a reduction in the proportion of profits taken by taxes; and second, a reduction in the share of profits in national income. The latter if true would be somewhat paradoxical, given that the general

thrust of the reforms is to encourage profit seeking. But, as we saw in the preceding section, there is some indirect evidence that this may have happened.

As one would expect given the fall in direct enterprise taxes, the share of indirect taxes in government revenue has risen. But, significantly, the ratio of indirect taxes to national income also seems to have fallen, especially since 1985. The fall is a little puzzling because it would be difficult to attribute this to the enterprise reforms as such. This may be due partly to the problems of tax collection created by the reform and partly the 'Contract Management Responsibility System'. A large part of the increase in the 'other' is due to the increase in customs revenue arising from the substantial of the expansion of foreign trade.

Direct taxes in Table 9 include remittances to the government from enterprises and the profit tax. Until 1983, government revenue from enterprises largely accrued in the form of 'remittances', which were enterprise-specific and decided through bilateral bargaining. Since then, for 'financially independent' SOEs, a profit tax has replaced remittances. The profit tax in China has two peculiar features: first, tax rates vary with the size (defined in terms of the value of assets) and also the ownership status of enterprises, which makes the yield from the profit tax dependent on the distribution of output across ownership categories. Second, not only interest on loans but also the repayment of principal by SOEs is tax-deductible. This must be responsible for a significant erosion of the tax base, given the expansion in the borrowings by SOEs (see Table 4). Large- and medium-size SOEs are subject to a tax rate of 55%, and they may also be subject to an enterprise-specific 'income adjustment tax', which is meant to take account of the differential endowment of assets inherited from the pre-reform era free of charge. Small SOEs and collective enterprises are subject to a non-linear tax schedule with a maximum marginal rate of 55%. Collective enterprises, which are mostly small, are more lightly taxed than their state-owned counterparts. This has an adverse long-term implication for government revenue in that the share of collective enterprises in industrial has been increasing.

Indirect taxes paid by enterprises include Product Tax, Value Added Tax and the Business Tax. Product Tax applies to a wide range of products, is similar to a sales tax, and is levied at widely different rates on the purchaser price, (rather than the producer price). It cannot be shifted to purchasers when the product is sold at government-fixed prices. Value Added Tax is gradually replacing Product Tax, and it too is levied on the purchaser price. As output and prices are, in many cases, regulated, indirect taxes often act like direct taxes.

Another central feature of the Chinese tax system is that direct and indirect taxes paid by enterprises may depart considerably from formal rates. This is due to the CMR, which is intended to reduce government interference in enterprise management, and since 1986 has covered around 70% of SOEs (for a discussion of the CMR see Koo, 1990). Under the system an enterprise pre-commits itself to handing over to the government fixed amounts of not merely direct but also indirect taxes every year over the period of contract, which ranges over two to five years. The contracted sum is usually equal to the tax bill for the year preceding the start of the contract, and may rise at a pre-set rate over the contract period. These contracts, which are arrived at by bargaining between the supervising agency and the enterprise, vary widely. The contracted sum of taxes is fixed in nominal terms. Where an enterprise is 'unable' to meet the contract, it can appeal to the government for a revision of the contract on the ground of circumstances beyond its control. In 1988, around 9% of enterprises covered by the CMR failed to meet their tax target; the figure for 1989 is expected to be considerably higher.

The CMR has a number of important consequences for government revenue. First, the tax rate on above-target profit is zero. Similarly, pre-set quotas for indirect taxes imply that output in excess of some level is free of taxes. Both reduce the income elasticity of government revenue. The quotas for indirect taxes may account for the fall in the ratio of indirect taxes to national income mentioned above. Second, government tax revenue bears (in real terms) the consequences of an unforeseen increase in the inflation rate and variations in enterprise profits. If profit exceeds the government estimate implicit in the contract then the whole of the unforeseen profit accrues to the enterprise. Where profit is below expectation, the enterprise is expected to meet the contract from its reserves. However, if the enterprise is simply unable to meet the contract then the government has no option but to revise the contracted sum downwards, as inability to meet financial obligations is still not regarded as a sufficient reason for bankruptcy. The implications of the CMR for government revenue are clearly of significance because between 1986–88, direct and indirect taxes on enterprises accounted for around three-quarters of government revenue.

From the point of view of public finance there is little to be said in favour of the CMR other than that it simplifies some aspects of tax collection. The effect of the system on economic incentives is not clear either. The regime is not one of lump-sum taxes, since in addition to the tax quotas of the CMR, enterprises are subject to various forms of *ad hoc* levies and forced contributions by the local government, and these depend on the financial position of the enterprise. These are

illegal but appear to be widespread, given that they were singled out for criticism in the Central Committee communique at the end of the important November 1989 plenum (see *Beijing Review* 1990: No. 7). Besides, the period of CMR contracts is only two to five years. Expectations concerning the terms of the next contract are likely to have a strong bearing on current enterprise behaviour. Generally speaking, enterprises would expect that the target rate of profit and thus tax quotas in the next contract would depend on the difference between the target and the actual rate of profit during the current contract period. This would give rise to the 'ratchet effect' common under the traditional output planning in socialist economies. The current performance acts like a notched gear wheel in fixing the target for the following contract period (for a discussion see Weitzman, 1980). Moreover, multi-year fiscal contracts are like a built-in macroeconomic destabilizer, in that they make the disposable enterprise profit high when the growth rate and the inflation rate are higher than the trend rates and conversely when the growth and inflation are low.

4.2. Government expenditure

Government expenditure has also fallen substantially, the fall being roughly similar in magnitude to the fall in the revenue ratio, though somewhat smaller. The patterns of decline in the two are not the same. As a result, as we point out later, there has usually been a budget deficit in the post-1978 period. For the present purposes what is particularly notable is the change in the composition of government expenditure, as shown by Table 10.

Two features stand out: a substantial shift from capital to current expenditure, and a large increase in price subsidies and subsidies to loss-making enterprises. Both are direct consequences of the economic reforms. Together they may have pre-empted investment in infrastructure needed to maintain the growth in the economy. The decline in capital expenditure is implied by the transfer of the financing of investment from the government to enterprises. However, there are limits to the displacement of government investment by enterprise investment, as there are items of investment which cannot be so shifted. These include not only investment in infrastructure but also investment in those industries which are forced to sell a significant proportion of their output at low 'plan prices'. These industries include the coal, electricity, oil and steel industries. Electricity and coal have been in short supply throughout the reform period.

The increase in price subsidies has been due mainly to large increases in the procurement prices of agricultural commodities (in particular

Table 10. Composition of government expenditure (%)

	Govt. expenditure/ National income	Current expenditure			
		Total	Price subsidies	Enterprise losses	Capital expenditure
1978	41.2	56.5	6.4	2.9	43.5
1979	43.8	58.7	10.9	2.4	41.3
1980	39.6	67.7	16.4	2.3	32.3
1981	37.0	74.2	22.7	2.9	25.8
1982	34.6	76.3	21.6	3.5	23.7
1983	35.5	74.8	18.9	6.2	25.2
1984	34.0	71.2	16.7	4.4	28.8
1985	31.0	72.3	14.1	7.7	27.7
1986	30.9	71.3	9.2	12.3	28.7
1987	27.1	73.3	10.4	13.3	26.7
1988	26.6	74.6	9.8	13.9	25.4
1989	25.5	77.7	11.8	15.1	22.3

Note: Price subsidies largely consist of those on grain, cooking oil and fertilizers.

Source: World Bank (1990a).

grain), by way of economic incentives, which were not fully passed on to urban consumers. The share of price subsidies in total government expenditure fell substantially after 1982, but began to rise from 1987 with the acceleration in the inflation rate. The deceleration in the inflation rate between autumn 1989 and autumn 1990 has relied heavily on the control of purchaser prices for consumer goods. Unlike in the pre-reform period, the government can no longer exercise complete control over procurement prices and rely entirely on commands to meet its procurement targets. It has to provide sufficient economic incentives to producers. The parallel markets in agriculture produce, together with the discretion of households over the deployment of their labour, set a lower bound on procurement prices and mean that low consumer ration prices cannot be offset by low procurement prices.

The share of expenditure on subsidies to loss-making enterprises has risen fairly steadily since 1980; and the 1984 enterprise reforms, which included the introduction of the two-track system, seem to have accelerated the upward trend. Comparing Tables 9 and 10, the yield of direct enterprise taxes in relative terms has fallen substantially, but the share of government expenditure on subsidies to loss-making enterprises has risen sharply. The effect of this two-way squeeze on the public finances may be illustrated by looking at the net yield from the profit tax: the revenue from profit tax less the subsidies to loss-making enterprises (see Table 11).

Table 11. Net yield from profit tax as a percentage of national income

1978	23.7
1979	21.6
1980	20.2
1981	19.3
1982	16.1
1983	13.6
1984	12.7
1985	7.5
1986	5.4
1987	5.3
1988	2.2
1989	0.2

Source: Net yield is equal to profit tax minus subsidies to loss-making enterprises and is derived from Tables 9 and 10.

Notwithstanding the decrease in the percentage of enterprise profit accruing to the government, it would seem that enterprise profitability has fallen significantly, especially since 1985. The decrease in the net yield from the profit tax since 1985 coincides fairly closely with the massive increase in borrowing by SOEs (see Table 4) and a sharp acceleration in the wage rate increases in SOEs (see Table 8). The first lowers taxable profits significantly, as both interest and principal repayments are tax-deductible, and the second reduces operational profits.

4.3. Budget deficits

The ratio of the (measured) budget deficit to national income over the 12 years is provided in Table 12. Since 1978 when the budget was roughly in balance, the expenditure ratio has more or less tracked the revenue ratio but with a lag. As a result, the Chinese government has run a deficit every year since 1978. By international standards the ratios of deficits to national income are comparatively small. There are two points to be made about the pattern of the financing of deficits over the reform period. First, there has been a noticeable shift from borrowing from the central bank (The People's Bank), which amounts to the printing of money, to the other two sources. Second, the importance of foreign borrowing has increased in later years. The growing importance of bond financing is connected with the development of the financial market, which did not exist at the outset of the reforms.

Table 12. Budget deficits relative to national income and their financing (%)

	Deficit/NI ¹	Source of deficit financing as % of deficit ²		
		Money Creation ³	Bonds ⁴	Foreign borrowing
1978	-0.20	125.0	0.0	-25.0
1979	6.10	82.5	0.0	17.5
1980	4.00	84.9	0.0	15.1
1981	1.50	-39.7	84.5	55.2
1982	1.70	40.8	62.0	-2.8
1983	2.00	44.8	43.8	11.4
1984	1.80	42.9	40.0	17.1
1985	1.30	-51.2	148.8	2.4
1986	2.10	39.7	30.7	29.6
1987	0.60	26.0	46.0	28.0
1988	2.90	22.6	44.5	32.9
1989	2.30	NA	NA	NA

Source:

¹ Derived from Tables 9 and 10.

² From World Bank (1990a).

³ Denotes borrowing from the central bank.

⁴ Includes borrowing from banks, enterprises and individuals.

In assessing what level of domestically financed deficits (seigniorage plus bonds) may be sustainable in the Chinese economy, one must keep in mind the fact that the financial market is still in its infancy in China. Even with what appear to be relatively low levels of bond holdings, the government has had to force enterprises and wage and salary earners to purchase government bonds (for details of the method of sale of bonds see World Bank, 1991). The government cannot assume that an unforeseen increase in expenditure can always be financed by an increase in the budget deficit.

Estimating budget deficits and analysing their impact in an economy undergoing transition from a command economy to a market economy raises some fundamental issues. The distinction between the government and the non-government sector, in particular the enterprise sector, is not clear cut. Visible subsidies to loss-making enterprises are included in the budget. But bank lending to enterprises, at the behest of the government, which is not justified by commercial criteria, constitutes a potential financial liability for the government but is not included in the budget. As the volume of such lending appears to be substantial, measured budget deficits may underestimate actual budget deficits by a significant margin.

Accurate measurement of budget deficits is important for the planning of public finance, but we must recognize the size of the budget

deficit is unlikely to be the main problem with public finance in China (see also Blejer and Szapary, 1989 and Takahashi, 1989). The government with its control of the banking system and coercive power over enterprise can finance its expenditure. Rather, we would suggest, the main problems lie with the tax system and the composition of expenditure.

5. Concluding comments

Our primary purpose in this paper has been an examination of the implications of the reforms in China since 1978 for effective demand and public finance. We have linked the reforms to the development of the central components of demand, of revenue and of expenditure. We have seen that the standard macroeconomic framework with one good, and with consumers, firms and government as separate agents, is inadequate to understand developments in China during this period. There are a number of reasons for this. First, the agricultural sector has been treated differently from industry and in ways which have had an important bearing on supplies, demands and public finance. Second, managers, workers and government interact in the determination of outputs, investments, incomes, consumption and taxes in a manner which the standard division into consumers, firms and government fails to capture. Third, while the expansion of foreign trade has been of substantial importance, the rest of the economy has been partially insulated from it. Fourth, the labour market responds to demand increases and decreases predominantly by changing labour allocations within firms rather than by open unemployment. Fifth, consumption decisions are taken in large part through enterprises rather than entirely through households and the distinction between consumption and investment can be blurred. As a result the detail of the workings of the institutions and of the reforms matters a great deal to the understanding of both their micro and macro implications. In these circumstances a crude application of simple standard macroeconomic models is likely to obscure some central questions in the understanding of the determinants of effective demand and of the public finances.

The three central sections of this paper traced the recent macroeconomic developments, the behaviour of investment and wages and the changes in the public finances. We concentrated primarily on the analysis of the effects of government policy. We shall highlight our main conclusions following the order described, emphasizing those implications which have lessons for other countries and which require close attention in the subsequent development of policy.

The reform period in China has been characterized by very rapid growth both by historical and international standards. In the period 1978–83, when the reforms were concentrated on agriculture, the growth of agriculture was particularly rapid (almost as fast as industry) but subsequently, during the period of the industrial enterprise reforms, growth in industry outstripped that of agriculture. There is little doubt that the rewarding of, or sharing in, productivity increases has produced a massive supply response. It is much less easy to judge how far allocative efficiency has improved. There are still many price distortions and the hybrid between a command and a market economy, for example the two-track pricing system, seems to lead to substantial effort being devoted to arbitraging and manipulating a highly distorted system (where post-arbitrage allocations and prices may be no less distorted than pre-arbitrage). Further, the scope for reallocations between firms is still highly restricted by the inflexibilities in factor markets.

Inflation rose dramatically at the end of the 1980s causing great concern and leading to a severe reaction. The stop phase consisted in large part of a control in demand through the reimposition of controls. There was also an attempt to impose greater tightness through credit markets but it seems that the older methods had the more substantial effect. In the Chinese economy there is a two-way relationship between inflation and excess demand on the one hand and controls on the other. Controls are harder to enforce with higher demand, yet their relaxation leads to an increase in measured inflation to which the government reacts by a cut in demand and a reimposition of controls.

The decentralization of economic decisions and the rising importance of individual behaviour has not been confined to production. The government has now to take much more careful account of household choices and expectations. This is exemplified by our brief discussion of the dramatic rise in household bank deposits relative to national income. With the rise in household bank deposits, which we have treated as a proxy for household wealth, and the shift towards a market economy, the expectations of households have assumed an increasing importance for the conduct of macroeconomic policy. One can approach the problem posed by household bank deposit either in terms of reducing real balances (via inflation or taxes) or providing households (especially urban ones) with a wider menu of assets to hold. The former seems politically unattractive, but the consideration of the latter points to an important lacuna in the Chinese economic reforms.

The reforms have taken into account households as consumers, producers (as in the case of rural households or the self-employed in cities) or as suppliers of wage labour. But, as yet, they have neglected the forms in which households hold assets and their implications. In spite

of a dramatic increase in household income and wealth, the assets available to urban households are not significantly different from those in the pre-reform period. There is a strong argument in favour of concerted financial innovation to diversify household wealth away from liquid assets. Such innovations could include the sale of equity in state-owned enterprises and urban housing to individuals and an increase in the coverage of contributory old-age pensions; pensions for the most part are still non-contributory.

Our discussion of the determination of investment and wages was set out in Section 3. We argued that the relaxing of controls on investment, the encouragement to take profitable opportunities, the transfer of control over assets without corresponding liabilities, the granting of effective insurance against losses while lowering taxes on profits, and the weakness of the banking and credit systems, all combined to produce a strong investment boom. At the same time the loosening of control over wages, the provision of wage incentives, and the expansion of opportunities for perks and social- or enterprise-based consumption led to strong wage and consumption pressure and, paradoxically, the decline of profitability at the moment when the seeking of profits was being encouraged and facilitated.

There are now serious problems concerning investment in the Chinese economy. The investment ratio has been too high in recent years, creating problems both for demand and supply. It has not only fuelled aggregate demand, it has also slowed addition to supply, by prolonging the gestation period of investment projects, and reducing the rate of utilization of existing capital stock. Severe congestion difficulties imply that the problem lies not merely with high investment but, equally important, also with the composition of investment. The decentralization of investment decisions without appropriate price signals, charges for investment funds and attention to the capital account of enterprises may have reduced the efficiency of capital use.

The solution to these problems with investment should lie eventually with a reform of the price system to give better incentives, a tax system which does not excessively distort, a genuine possibility of bankruptcy to punish errors, labour market flexibility to allow for adjustment and a social security system that protects against its most severe costs. It is naive in the extreme to expect that all these things can appear overnight. In the interim China has to control its investment and try to improve its allocation. One cannot in the short run automatically assume that direct controls should be eschewed both for the aggregate and its distribution across sectors and projects. A possibility for the improved use of such controls would be a more extensive application of systems of project appraisal.

The effects of the enterprise reforms on government revenue and expenditure were not adequately assessed in advance. The steep fall in the revenue ratio should have been anticipated, but, perhaps more important, the massive rise in government expenditure on price subsidies and subsidies to loss-making enterprises has also been a direct consequence of the reforms. This has a number of implications for public policy. First, there is an urgent need for a systematic evaluation of the effects of the enterprise reforms on public finance. Second, since the tenor of the enterprise reforms is to decrease the importance of the enterprise sector as the source of government revenue, a diversification of the sources of government revenue is required. In particular, there is a strong argument for the introduction of a more wide-ranging tax on personal incomes, covering both incomes in cash and kind. Such a tax should *prima facie* be easier to introduce in China than in many other developing economies, as almost all of the formally employed labour force (25% of the total labour force) is either in the state or the collective sector, both of which are under close government control. Such taxation would have a role not only in raising revenue but also in regulating demand.

The change in the composition of government expenditure reflects major problems. Although the enterprise reforms imply a decrease in the percentage of government expenditure devoted to investment, limitations on government investment are creating problems in sustaining growth. There are widespread shortages of goods and services which depend crucially in their production and distribution on infrastructure such as electricity and transport. Further, a high proportion of government expenditure on both price subsidies and subsidies to loss-making enterprises suggests a careful re-examination of their social and economic benefits. As long as enterprise bankruptcies remain rare, and the government feels constrained to rely almost exclusively on price subsidies to attain social welfare objectives, subsidies will remain largely beyond government control.

It is the composition of revenue and expenditure that causes most concern for the future. Given the strong controls available to the government, deficits can be controlled and there does not seem to be strong evidence that they were the prime source of recent inflation. Future government responsibilities for infrastructure, together with an expansion of responsibilities for education, health and social security (given the likelihood of a declining role for the enterprise in these areas) will require a strong revenue base and this must now be reconstructed. At the same time a major contribution both to finance and efficiency can come from redirecting expenditure away from subsidies and towards productive investment.

Generally we see that the problems of public finance both on the revenue and expenditure sides are very different in a decentralized market economy from a command economy. For revenue the government could rely primarily on profits of enterprise. If these are to be increasingly left with enterprises, other sources of revenue are necessary. Decentralization inevitably requires new forms of taxation and this basic lesson was not appreciated at the outset. Similarly the pattern of expenditures must change. Old responsibilities, such as those for investment, can be shed but new ones must be accepted. In particular if enterprises are to be allowed to react flexibly, shed labour where necessary and even go bankrupt, the government must play an increased role in the provision of health, education, social security and, in part, housing. Economic policy in transition must recognize that what is at issue is not simply a matter of reducing government: a clear understanding of the requirements of a radical change in their composition is essential.

China's record of growth under the reforms has been most impressive. The problems we have indicated may, however, seriously impede building on that success and may devalue the reforms in the eyes of those who might otherwise be ready to go further. The problems that China has already faced and the achievements it has secured have strong lessons for those countries embarking on their transition more recently. These countries have a great deal to learn from the study of China's experience.

Discussion

Michael Burda
INSEAD

This paper gives an excellent analysis of economic reform in China since 1984. In these comments I shall play the devil's advocate and claim that China is, from a macroeconomic perspective, not fundamentally different from other developing countries, and that developments in China are readily understood with simple macroeconomic models. Thus, most of what I have to say will under-emphasize the role of institutions, except for the importance of bankruptcy, an institution that is lacking in China as in most East European economies in transition. Overall, the lesson is simply that liberalized economies function poorly with soft budget constraints, a lesson not restricted to China in the 1980s.

Intermediation, Investment and Growth

I would characterize the Chinese experience in the latter half of the 1980s as a remarkable investment boom, led by state-owned enterprises (SOEs) and funded with massive intermediation by a liberalized banking system and the blessing of the central bank. Real interest rates were remarkably low in this period, and made even lower through the curious tax deductibility of amortized principal payments. This was no doubt aggravated by the sensitivity of after-tax real interest rates when nominal interest is deductible and inflation is rising. Given the lack of financial assets around, might not fixed business investment also represent a vehicle for protection against inflation? Irrespective of causation, high rates of investment are associated with high growth rates, and China is no exception. The authors raise a valid concern about the supply-side effects of this investment boom, with strong concentration by SOEs. But China is still moving from an agrarian to an industrial phase of development, in which the SOEs are of prime importance, so it is hard to tell whether their concern is justified. Congestion externalities of heavy investment are present in all developing countries, and little hard evidence is adduced here that resources are being wasted. Similarly, a more detailed discussion of the supply-side implications of low investment in infrastructure, transport and energy would have made this case more convincing.

Perhaps wishing to encourage intermediation for efficiency and welfare reasons, the central bank accommodated the explosion of credit which ultimately led to inflation in 1988–89. Was all this intermediation really efficient? The authors suggest that it was mainly a reflection of opportunistic behaviour of SOE managers and workers, who are simply leveraging up their companies on the back of the government. In this view, what has happened in China is a transfer to SOEs and their workers (via investment and wages) financed by debt which is ultimately the liability of the government. The authors advocate quantitative restrictions on credit allocation to enterprises and control of investment projects, rather than raising real interest rates to positive levels, or removing tax-based distortions at the source. Their justification is that without quantitative restrictions, companies with high physical capital endowments will then get all the credit, since they are the best collateralized. More importantly, leverage does not discipline managers in China the way it does in Western economies.

In my opinion, this phenomenon rather clearly underscores the need for bankruptcy as a disciplining device in decentralizing socialist economies. If firms faced bankruptcy risk and if managers were accountable, subjective valuation of the assets would represent a sufficient

constraint on firm borrowing. Wage increases that threatened enterprise viability would be resisted. Lacking a bankruptcy threat, however, SOEs will continue to behave as if they faced a soft budget constraint: they will continue to spend and borrow until controls are imposed. Domestic credit has risen from 61% of GNP in 1983 to 85% of GNP in 1989, nearly all of which was enterprise debt. As long as enterprise debt is indistinguishable from government debt, the consolidated budget deficit of public, SOE, and other accounts is the ultimate engine of inflation. A concrete quantification of the aggregate budget constraints of public, SOE, and other accounts was sorely missing in this paper.

I would have liked to see far more emphasis in this paper on the exchange rate in the inflation transmission mechanism. Devaluations mentioned only in passing by the authors have increased the yuan price of the dollar by 138.4% between 1983 and 1989 (the earnings index reported by the IMF rose by 136.0% over the same period, while the less reliable consumer price index increased by 87.8%). This is no coincidence. The authors also neglect to remark that the reason for the devaluations appears to be the reserve position of the Chinese central bank, which fell by more than 45% from 1984–86. The availability and ownership of foreign exchange is probably more pervasive than suspected: a nation of 1.1 bn. people is likely to own considerable foreign currency stashed away in mattresses, and now it appears that decentralized export/import companies have converted this black market for foreign assets into a white one.

Lessons for Eastern Europe

While the Chinese experience predated that of Eastern Europe, it is still too early to judge which has been more successful. The common themes in the two sets of experiences are more remarkable than their differences. The behaviour of Chinese ‘super-creditworthy’ enterprises could have been predicted by observing that of East German managers before monetary union – who faced exactly the opposite situation of being saddled with ‘hard’ DM debt which many tried desperately to prepay. Similarly, in the months following unification, firm managers granted wage increases largely unlinked to productivity, knowing they would be financed via the soft budget constraint by West Germany. Similar problems exist in Poland and Czechoslovakia. Disciplining such ‘agents without principals’ will require the contingency of bankruptcy or some form of corporate accountability. The public finance aspects of decentralization and liberalization of enterprises on the budget have been just as evident in the USSR and what was once the German Democratic Republic as they are in the People’s Republic of China.

David Newbery
 DAE, Cambridge

The Chinese economic reforms are of central importance, not only as they affect one-fifth of the world's population, but because they provide a rare example of the transformation of a planned economy towards a more market oriented economy. As Eastern Europe, and even more, the USSR, contemplate such a move, they look anxiously for relevant precedents to guide their reform programme. What lessons does the Chinese example hold for them, and, conversely, how might China have managed matters better?

The argument of the Hussain–Stern paper is that decentralization without an associated fiscal reform and careful demand management can, and in China's case, did lead to excess demand, budget and trade deficits. The key point in China's case is that decentralization of enterprise finance meant that enterprise profits were no longer subject to an effective 100% tax rate, nor were they dependent on central allocation for investment funds. They paid lower taxes, retained more profits and were able to borrow. Not surprisingly, they have increased investment. They also appear to have raised real wages sharply – in short, not surprisingly, given the opportunity they have pursued goals more in the interest of the enterprise than the government. This would not have had adverse macroeconomic consequences if the central government had increased other taxes to replace the fall in profits tax, or had cut expenditures in line with income. Figures A.1 and A.2 show that the fall in profits tax and the rise in transfers (price subsidies and

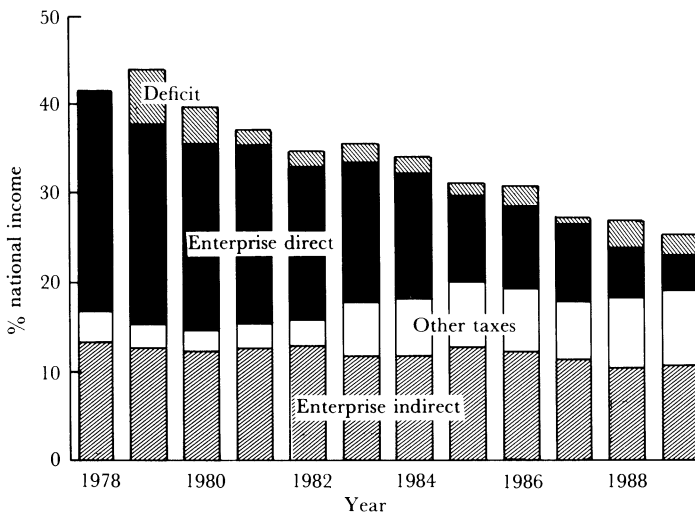


Figure A.1. Composition of Chinese government revenue

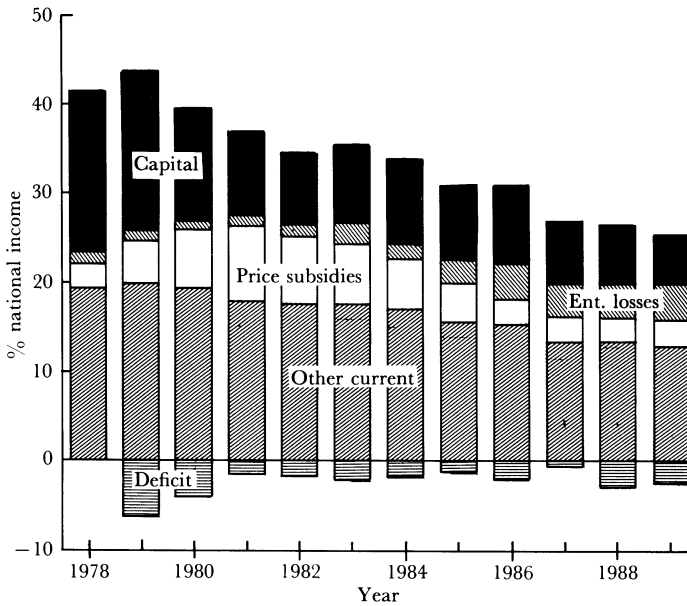


Figure A.2. Composition of Chinese government expenditure

enterprise losses) required the government to cut its expenditure dramatically, and to a remarkable extent (compared to the USSR, for example) it succeeded in doing so. Nevertheless, given the inevitable lags in adjusting government expenditure, the budget was in (modest) deficit throughout the period, with the almost inevitable trade deficit, a growth in foreign debt (again, to modest levels) and in domestic claims (in the form of highly liquid wealth).

Not only were the macro balances in deficit, but many of the chosen tax instruments have had perverse micro incentive effects. It appears that the environment facing enterprises in China has much in common with that of bureaucratic socialist economies of Eastern Europe. Taxes and subsidies, along with resources more generally, are subject to bilateral negotiation, which, given the limited information available to the centre, leads to an inability to commit to future actions, and hence to soft budget constraints and poor incentives. One of the key first steps in systemic reform in Hungary was the creation of a uniformly applied, non-arbitrary legal tax code, as a precondition to the decentralization of investment finance. Without the predictability which such a system provides, banks cannot assess the credit worthiness of enterprises, and bankruptcy becomes an arbitrary and rarely used mechanism (at least for large enterprises).

Hussain and Stern argue that as it may be hard to reduce consumption, macro balance will require reduced investment, which in turn

might best be achieved by credit rationing and raising the debt-equity ratio of enterprises, to reduce their ability to borrow from banks. If the experience in Poland is a guide, it may also be necessary to think of ways of restricting trade credit between enterprises, which has allowed large firms there to avoid (or at least postpone) bankruptcy despite a massive fall in demand.

In their discussion of the labour market, the authors argue that the combination of decentralized wage setting which responds to increased profitability, together with little insecurity of employment for the bulk of the non-contract labour force, and a strong sense of equity or parity, makes for an explosive inflationary mixture. The market solution is to harden budget constraints, reduce demand, and hence precipitate bankruptcies. This would create unemployment and a downward pressure on wages. The alternative adopted by many Eastern European economies in the days of guaranteed employment was a resort to baroque structures of penal excess wage taxation, but this rapidly distorts the factor markets even further and undermines the attempt to move towards a decentralized market guided economy.

What to do? The authors argue that the excess liquidity should be reduced by the creation of alternative less liquid assets. Shares in privatized SOEs, at least as direct holdings, seem improbable – even in developed market economies few own shares directly. Indirect holdings as pensions may be an attractive way of dealing with the political problem of how to privatize with least damage to the fisc,¹ but presupposes a wider system of state-funded pensions than China has. If unemployment or the risk of unemployment is likely to increase, then households will need higher precautionary liquid balances anyway, and may not wish to spend them (as we see in the former GDR). The obvious asset attractive to a significant fraction of households is the house itself, but this requires the reduction of housing and rent subsidies, as well as the creation of legal property rights. Even Hungary, with its longer history of intelligent and gradual reform, has found this a difficult task. One suspects that money holdings will be dealt with by inflation, as in Poland. Fear of that might encourage massive real investment by small entrepreneurs using family funds – desirable in the reform process but likely to exacerbate inflationary pressures in the short run.

This leads the authors to conclude that the government should increase taxes on personal income and/or consumption as far as politically expedient, and cut government investment which may have doubtful social value. Perhaps instead one should encourage the government

¹ As argued in Newbery (1991).

to reallocate its funds to infrastructure, particularly those communications facilities which enable complementary small scale private investment – roads so that private trucking and passenger transport can prosper and serve as an outlet for enterprise and savings, and telecommunications to facilitate private and foreign business. Given the difficulties of freeing up the labour market and creating a system of unemployment insurance in a poor densely populated country like China, the key question for the continuation of the reform process is whether hardening budget constraints on enterprises via tougher credit policies, together with the elastic supply of labour associated with the large, dominantly rural economy, will allow creeping commercialization and continue moves towards a price-guided market economy in the industrial sector.

General discussion

A number of panellists were concerned about difficulties in reforming the system of microeconomic incentives. There was discussion of incentives for saving: Edmond Malinvaud doubted whether shares in state enterprises could be an adequate alternative to holding money for the household sector. Even with a well developed stock market to ensure liquidity, there was likely to be insufficient confidence in the future profitability of state-owned enterprises. Vittorio Grilli added that the financial system as a whole was underdeveloped, causing particular difficulties for floating government debt. Moving on to incentives for enterprise management, John Black said that the large positive net worth of corporate enterprises might be irrelevant, since corporate assets did not constitute collateral unless there was a way for creditors to liquidate the assets. Restructuring firms' balance sheets to incorporate debt might have no effect on lending for unprofitable projects. He also thought that restrictions on freedom of movement might make it hard for profitable enterprises to expand employment. Damien Neven stressed the importance of considering the role of competition in product markets; in its absence, improved managerial incentives might just lead to the exploitation of monopoly power.

Restrictions on aggregate investment were next discussed. Paul Seabright said that the macroeconomic balance was not *per se* a reason for restricting investment; socially profitable investment could always be financed by foreign borrowing. Axel Weber wondered what scope there might be for foreign direct investment. Richard Portes said that a great deal of investment was not socially profitable because of bottlenecks; foreign capital goods were no solution because there was often inadequate infrastructure to utilize them properly.

Portes also pointed out the significance of the dramatic decline in public expenditure (unlike in the Soviet reforms, for example). Sweder van Wijnbergen said it was important not to overlook the considerable successes of the reform programme. A number of Latin American countries had had several years of reform programmes, all of them accompanied by low economic growth. Why had China been able to enjoy much higher growth than these countries? At all events, he and other panellists were agreed in thinking that, daunting though the transitional difficulties might be, China was in a much better position to face them than were many other countries facing similar reforms.

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