CHINA'S SPECTACULAR GROWTH SINCE THE MID-1990S – MACROECONOMIC CONDITIONS AND ECONOMIC POLICY CHALLENGES

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Abstract

This paper analyses the macroeconomic reasons for the Chinese boom since the mid-1990s. It is argued that the stable growth performance of China would not have been possible without the strategy of unilaterally fixing the exchange rate, which has been implemented since 1994. This strategy was successful because it was accompanied by a reform of the wage-setting regime in the mid-1990s, a heterodox macro-economic demand management that has addressed the country's needs and a rather closed capital account. This arrangement has made it possible for China to both master the challenges of globalization and modernize the domestic economy at the same time. Without this macroeconomic complement to favourable microeconomic conditions, it is argued, the stable and vigorous growth of the past decade would not have been possible.

INTRODUCTION

The economic performance of China over the past 30 years has been impressive. Since the beginning of the reform phase in 1979, per capita income has risen fivefold; average private consumption today is roughly 400 per cent above the level at the beginning of the reforms in real terms. China was able to lift more than 200 million people out of absolute poverty (World Bank 1997). Its total GDP in dollar terms is already close to that of Italy, Britain or France, and its GDP in purchasing power parities might already be higher than that of Germany. With growing speed China has opened its market and made a quick integration into the world economy possible. While the country was virtually closed to international trade at the end of the 1970s, it has now managed to overtake France and Japan, the world's

[1] The opinions expressed in this paper are those of the authors and do not necessarily reflect the views of UNCTAD. The authors remain solely responsible for any shortcomings in this paper.

fourth and third biggest exporter in 2003, respectively (WTO 2004). China has likewise become an important global player in an increasing number of industries. As a result, China is now a major power in international economic policy. This is reflected in the fact that international finance and exchange-rate movements cannot sensibly be discussed without including China in the discussions.

The whole growth and catching-up period can be split into two different sub-periods. China grew rapidly but unspectacularly compared with other successful Asian economies from the end of the 1970s to the beginning of the 1990s, however the pace of catching-up has accelerated markedly since 1994 (Table 1). Recently, the Chinese economy has seemed to shoot through the roof with growth rates ranging between 8 and 9.5 per cent since 2002. The overall investment ratio is close to 50 per cent with an apparently never-ending exceptional construction boom; FDI is still flowing in on a large scale and the growth of exports and imports is breathtaking.

Economic literature explains the extraordinary growth performance of the Chinese economy mainly by specific microeconomic reforms in the transition process. Traditionally, observers examine how the overall reform process was brought forward and specify qualitatively the efficiency gains brought forward by single reform measures. In the late 1990s, a wide range of articles and books explored China's growth experience: Some of them stressed the gradualist reform approach and the appearance of new, non-capitalist institutions as the main characteristic of the Chinese model. Others compared the Chinese experience with other successful catching-up periods in Asia, focusing on the gradual convergence of existing institutions towards those prominent in the Asian model (for an overview see Sachs and Woo 1997). Overall, these explanations of the "Chinese miracle" are not conclusive. From the very beginning, China was less of a "market-fundamentalist" than other transition countries and much less consequent in transforming its institutions into what the Washington consensus considers as the only promising systemic departure from the old state-dominated model. Moreover, even if the undeniable success of the Asian model suggests that it has created successful institutions and regulations, it is by no means evident that regional affiliation is sufficient to explain any national success by the institutions that have been associated with the Asian model.

This paper explores a different path. While it acknowledges the role of market- based reforms in putting in place the necessary conditions for strong economic growth, it will principally focus on and analyse the macroeconomic conditions that made it possible for China to grow vigorously over such a long period of time. The paper argues that China's undeniable success in igniting and sustaining growth from 1994 onwards was the result of a policy package that combined market-orientated, but prudent microeconomic reforms, with aggressive and growth-oriented macroeconomic policies. In the 1990s, no country in the world achieved to combine a stable and competitive exchange rate, a low interest rate level and an anti-cyclical fiscal demand management with a low inflation environment. China, however, in the aftermath of the inflation and exchange-rate shock in 1994, managed to combine an aggressive pro-growth monetary policy with a high degree of price stability. Chinese authorities kept the inflation rate under control through the use of heterodox instruments such as wage and price controls. The policy was complemented by capital controls, non-orthodox investment policies and an active fiscal policy.

Foreign Direct Investment (FDI) has played an important supporting role as it helped China to integrate into a regional production network, thereby speeding up the country's technological integration into the world economy. However, given the favourable overall investment environment created by the policy package, FDI inflows have not been central to China's success.

In a nutshell, China's performance since 1994 has been the result of the working of the profit-investment nexus,[2] the interplay of pro-growth monetary conditions with vigorous export growth and a very stable domestic demand-development. Extremely favourable monetary conditions boosted capital accumulation. Investment, fuelled by quickly rising non-equilibrium profits,[3] has been the main driver of growth; a good export-performance and high growth rates of real income and demand of households have been the main stabilizers of overall growth.

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[2] Keynes (1930); UNCTAD *Trade and Development Report* (various issues).
[3] Flassbeck (2004).

This paper is organized as follows: Section I outlines some stylized facts on China's economic development in an Asian and Latin American perspective. Section II gives some indication on the interaction of traditional policy instruments with non-orthodox monetary instruments. Section III describes the role of FDI in the development process and Section IV presents a number of policy conclusions.

I. CHINA'S GROWTH PERFORMANCE IN PERSPECTIVE

Though impressive by itself and particularly in relation to Latin American or African countries, China's long-run economic performance is not extraordinary compared to other Asian countries that have experienced rapid catch-up growth in the course of the 20th century.[4] Table 1 lists major growth episodes of Asian countries experiencing annual GDP per capita growth above 7 per cent over recent decades. Obviously, neither the Chinese GDP per capita growth nor the rate of investment is markedly higher than other countries: Both Japan and Korea experienced long periods of more than ten consecutive years of GDP per capita growth in excess of 5 per cent. In all these countries and episodes, the average investment share was above 25 per cent of GDP; China's share of almost 37 per cent between 1994 and 2003 was, however, outstanding.

In these episodes the three countries achieved per capita growth rates between 7.2 and 9.1 per cent (Figure 1). However, all but China (1994–2003) are characterized by high volatile growth rates in their growth episodes. China's (1994–2003) highest/lowest growth rates were 11.33/6.18, while Japan (1961–1973) and the Republic of Korea (1968–1979) show a much wider deviation of 12.51/4.69 and 11.64/2.77, respectively.

I.1. Exports and the external balance

The speed with which China penetrated world markets is not unprecedented either. During the first years of China's reform period initiated by Deng Xiaoping, export growth in China was significantly

[4] For a similar evaluation, see IMF (2004).

slower than in other Asian countries during their catch-up periods (Rumbaugh/Blancher 2004). Figure 2 illustrates this point. While the Republic of Korea doubled its exports within four years following the take-off of exports in 1968, China needed the ten-year period until 1990 to increase its exports by "just" around 50 per cent compared to 1981. But since the mid-1990s the Chinese export growth has accelerated; after 1994 it took China only seven years to double its exports, even though the initial level in 1994 was 2.6 times higher than in 1981. Since 2000, Chinese exports have, by far, outpaced the performance of other countries in comparable periods. China almost doubled its exports in the three years from 2000 to 2003.

The development of imports reflects similar patterns during all the periods of high growth experienced by the countries under consideration (Figure 3).

Despite recent rapidly growing imports to China, large external surpluses seem to be a rather common feature of Asia's growth experiences. The Republic of Korea's surplus from 1983 to 1991 averaged at 1.3 per cent of GDP; Japan's surplus from 1961 to 1973 reached 0.7 per cent of GDP; and Hong Kong (China) achieved a staggering surplus of 7 per cent in the early 1970s. China recorded an average current account surplus of 2 per cent between 1994 and 2002 (WDI Online 2005).

The only major period of strong Asian growth with persistent current account deficits is the early growth period of the Republic of Korea which occurred between 1968 and 1973. The Republic of Korea's current account deficit at the time averaged 7.2 per cent of GDP. However, this large deficit was mainly a structural deficit, which the Republic of Korea had inherited from the 1950s; particularly, grain imports with small price elasticity contributed to the import surplus. At the time policy-makers in the Republic of Korea actively fought the deficit by stimulating exports and discouraging imports (Hong 1998). However, the country's high dependence on capital goods imports during the export promotion phase meant that the deficit was quite persistent. By contrast, the Chinese deficit of the 1980s was moderate in size and rather volatile compared to the structural nature of the Republic of Korea's deficit. In China, a deficit of about 4 per cent in 1985 was replaced by a surplus of about 3 per cent in 1990.

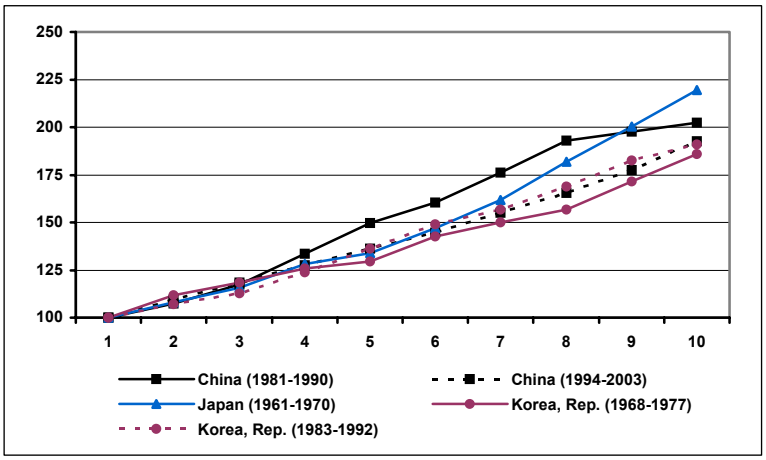
Table 1
MAIN ASIAN GROWTH EPISODES

Country	*Period*	*Length (years)*	*Average annual GDP per capita growth (in per cent)*	*Average annual exports (as a percentage of GDP)*	*Average annual investment1[1] (as a percentage GDP)*	*Average annual consumption (as a percentage GDP)*
China	1981-1988	8	9.1	10.5	29.3	65.4
China	1994-2003	10	7.9	25.1	36.7	58.0
Japan	1961-1973	13	8.5	10.0	33.1	63.4
Republic of Korea	1968-1979	12	7.2	22.2	26.8	79.5
Republic of Korea	1983-1991	9	8.0	32.6	31.5	66.8

Source: World Bank, *World Development Indicators* (WDI).

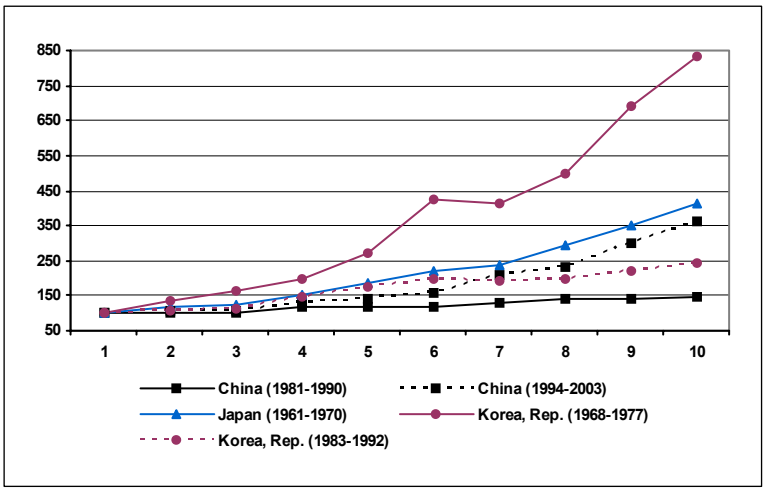
[1] Measured as growth rate of gross fixed capital formation (GFCF).

Figure 1
GDP PER CAPITA GROWTH, INITIAL + 10 YEARS



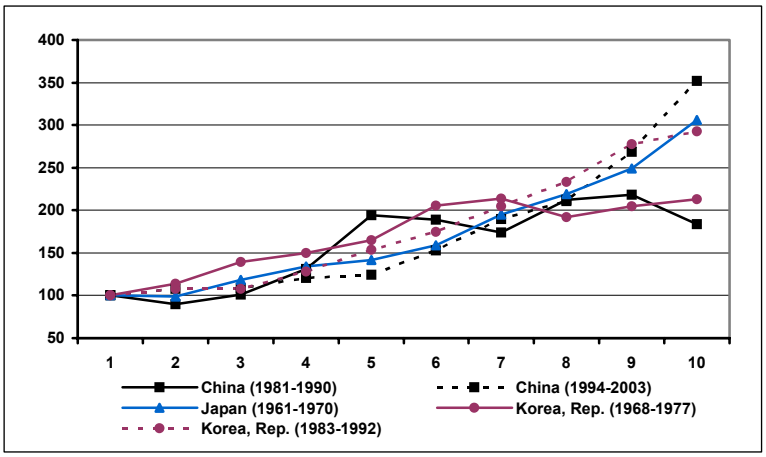
Source: World Bank, *World Development Indicators*.

Figure 2
EXPORT PERFORMANCES IN CHINA, JAPAN AND THE REPUBLIC OF KOREA



Source: World Bank, *World Development Indicators*.

Figure 3
DEVELOPMENTS OF IMPORTS IN CHINA, JAPAN AND THE REPUBLIC OF KOREA



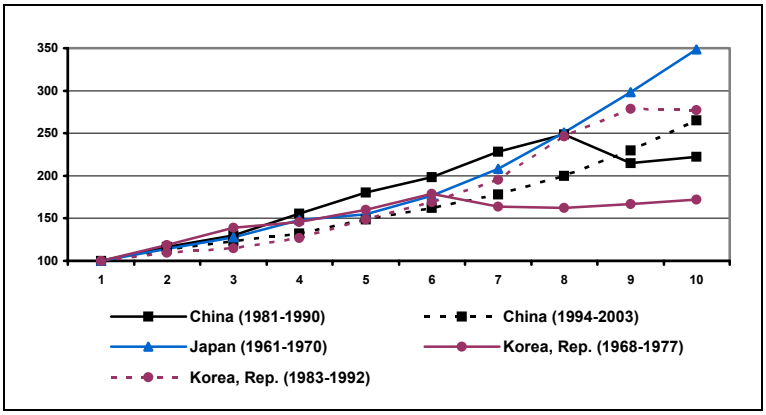
Source: World Bank, *World Development Indicators.*

From an Asian perspective, the pattern of Chinese foreign trade in the 1980s was an exception, while the trade pattern in the 1990s mirrors that of the traditional Asian growth experience. It is only recently that China began to record bouts in exports and imports that went far beyond the historical experience.

I.2. Domestic developments: investment and consumption

Similarly to the export pattern, China's performance in terms of domestic investment is not unprecedented in an Asian context either. Whereas, in a global perspective investment shares of 29.3 (in the 1980s) and 36.7 per cent (from 1994 to 2003) are outstanding, the performances of China's Asian neighbours were comparable. Japan's average investment share from 1961 to 1973 amounted to 33.1 per cent of its GDP. The Republic of Korea's investment ratio reached 31.5 per cent of GDP between 1983 and 1991. A comparison of the ten-year episode shows a similar pattern in the first 7 years of each period (Figure 4). As mentioned above, China's performance in the 1990s was less volatile than in the 1980s when investment growth fell after 8 years.

Figure 4
INVESTMENTS IN CHINA, JAPAN AND THE REPUBLIC OF KOREA
(Initial year = 100)

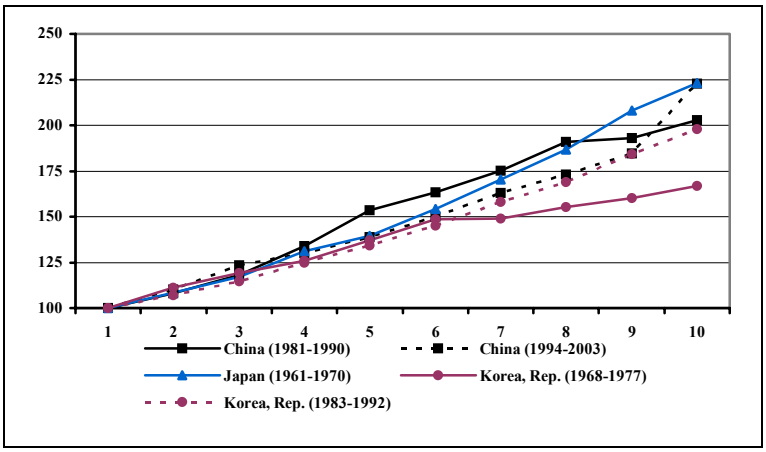


Source: World Bank, *World Development Indicators.*

China's performance with regard to private consumption resembles the traditional Asian pattern for the whole catching-up period since the beginning of the period of reforms (Figure 5). While consumption grew at a slower pace than GDP at the beginning of the growth acceleration in all the observed episodes, the size and the stability of the growth rates of private consumption are still remarkable: In all the countries and periods of catching-up, the real growth rate of the expenditure of private households consistently exceeded 8 per cent. Between 1994 and 2003, real private consumption expenditure in China rose by more than 9 per cent per year. This mirrors the developments in the Republic of Korea and Japan as well as in China during the first reform era (WDI Online 2005).

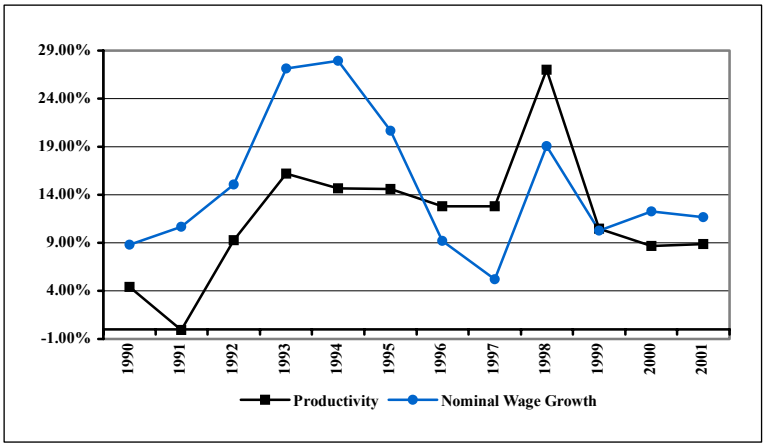
For China, as for the rest of Asia, the strong growth in consumption was associated with an adequate growth of real wages. For example, from 1994 to 2002 nominal wages in Chinese manufacturing, including bonuses and additional payments, rose by an annual rate of 12.5 per cent. Even after allowing for an annual inflation rate of 3.1 per cent (measured with the consumer price index), this leaves an annual real wage increase of more than 8 per cent. Similar wage increases are recorded in the services and finance sectors. Even though employment in these sectors covers a relatively small part of

Figure 5
CONSUMPTION GROWTH IN CHINA, JAPAN AND THE REPUBLIC OF KOREA
(Initial year = 100)



Source: World Bank, *World Development Indicators.*

Figure 6
WAGE INCREASE AND PRODUCTIVITY GROWTH IN CHINESE MANUFACTURING



Source: Authors' calculations based on World Bank, *World Development Indicators* and ILO, *LABORSTA*.

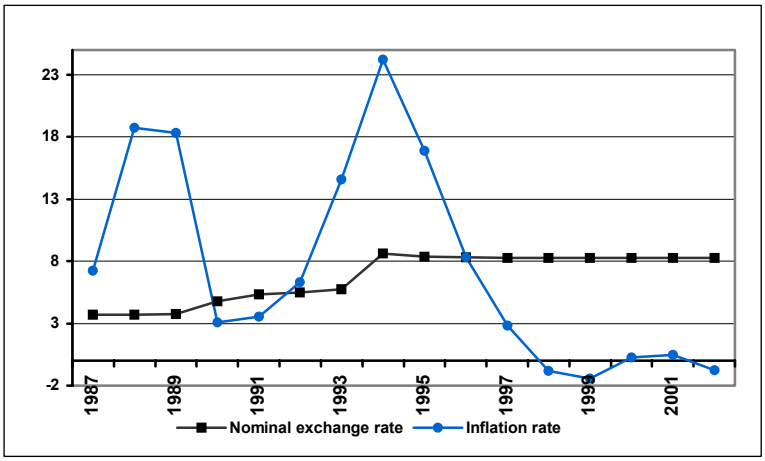
the working population (according to official statistics, almost half of the labour force still works in agriculture), the stable real wage rates enabled a significant increase of purchasing power of private households. Recently, people living in rural areas have also experienced an increase of their purchasing power, spurred by wage increases in urban areas. This is explained by the fact that firms in certain areas and sectors, e.g. the construction sector, rely heavily on rural migrant workers who commute back and forth to their home areas and thereby increase the purchasing power there. The remittances of urban populations to relatives in rural areas play an increasingly important role. Certainly, while the flow of funds into the poorer regions is not sufficient to prevent the income gap between urban and rural population from widening, it does help to explain the growth in consumption throughout the whole country over the past decade.

All in all, strong consumption and investment growth explain the virtuous circle China entered at an early stage of its development experience: High investment triggered rapid productivity growth and allowed for suitable wage and profit increases (Figure 6) without jeopardizing international competitiveness and domestic price stability. Consumption and export growth in turn created new incentives to invest. Some simple econometric evidence shows that investment is rather strongly correlated to the growth of private domestic expenditure (see Table 2 and below). Thus, it appears that the interaction between buoyant domestic and external demand in an environment of extremely stable and accommodative interest-rate and exchange-rate conditions is crucial to understanding China's investment dynamics and its capital accumulation in the 1990s.

I.3. Price and exchange-rate developments

Price and exchange-rate developments in China have to be split into two distinct episodes over recent decades. The first period, ranging from 1987 to 1994, was characterized by highly volatile monetary conditions with inflation reaching peaks of almost 20 per cent in 1988 and close to 25 per cent in 1994. The exchange rate was devalued in several steps. After 1994, however, the inflation rate fell dramatically and has been stabilized around the zero line, sometimes even indicating deflationary pressure. The nominal exchange rate before

Figure 7
INFLATION AND NOMINAL EXCHANGE RATE, 1987–2002



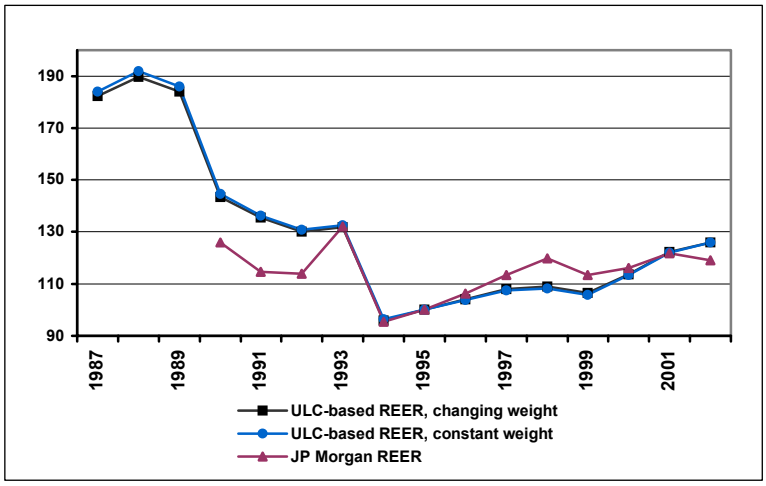
Source: IMF, *International Financial Statistics.*

1994 has been frequently adjusted within a system of multiple exchange rates and strong exchange-rate controls. After 1994 the Renminbi (RMB) remained stable to the United States Dollar. From 1994 to mid-1995 the exchange rate appreciated from RMB8.7/US$1 to RMB8.3/US$1. Since then the exchange rate was kept stable at a rate of RMB8.3/US$1. Eventually, in the wake of the Asian crisis a de facto peg at RMB8.28/US$1 was established (Figure 7).

Placed with a longer-term perspective, the decision of the Chinese authorities to peg the nominal exchange rate against the dollar after a strong devaluation in 1994 represented an attempt, once and for all, to abandon the volatile monetary conditions and the danger of monetary destabilization that had shaped the 1980s. The real exchange rate based on unit labour costs,[5] the broadest measure of international competitiveness, fell drastically after 1994 when the dual exchange-rate system was abandoned (Figure 8) and has since remained at a rather low rate. The devaluation in 1994 and the absolute fixing

[5] For an explanation of the concept of the real exchange rate based on unit labour cost, see UNCTAD (2004).

Figure 8
DIFFERENT MEASURES FOR CHINA'S REAL EFFECTIVE EXCHANGE RATE



Sources: JP Morgan; authors' calculations.

of the Chinese RMB to the US$ in 1998 constitute a key factor in China's macroeconomic management and its extraordinary growth performance.

A somewhat similar approach can be found in other success stories in Asia. The Republic of Korea devalued its currency in the early 1960s by almost 50 per cent and defended its favourable position afterwards with a crawling peg arrangement, allowing a domestic rate of inflation above the United States rate without losing competitiveness. According to several studies, Japan (in the same way as Germany and some other European countries) entered the Bretton Woods system with a very favourable currency valuation (Williamson 1999), and kept domestic inflation reasonably low to defend this position in subsequent years.

By contrast, China's exchange rate management in the 1980s can hardly be considered a success story as the country neither had a competitive real exchange rate nor did it try to increase its competitiveness by managing the exchange rate. Instead, the official exchange rate was most likely significantly overvalued as was

indicated by the large spread between the official and the swap market rate over much of that period.

II. CHINA'S SUCCESSFUL HETERODOX POLICY MIX

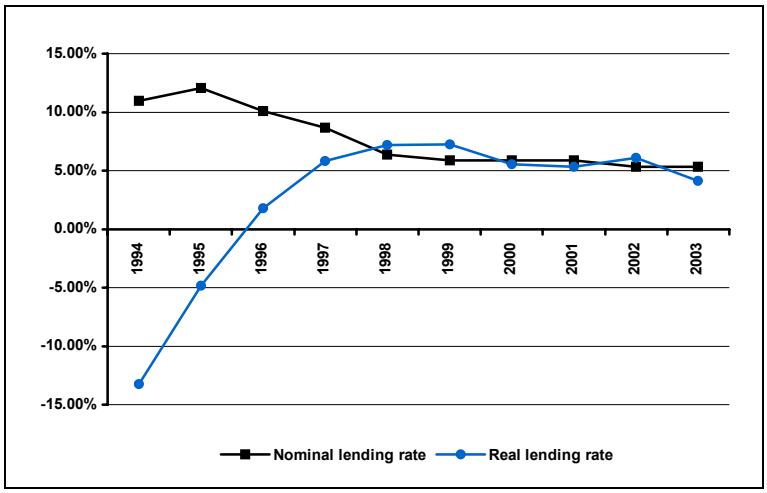
Since 1994, China's special policy mix of a stable and competitive exchange rate and a prudent anti-cyclical demand management, flanked by very stable and low, real interest rate level, is outstanding.[6] In particular, the unilateral fixing of the exchange rate at a very competitive level reflected a degree of investment-biased macroeconomic policy stance that remained unrivaled in the 1990s, in fact there are only a very few examples in earlier periods. The objective raised against an excessive use of monetary stimulation is the inflationary danger normally invoked by such an arrangement under traditional, Washington consensus-like, conditions. Indeed, in China the employment of a high dose of growth-oriented monetary policies was made possible by a successful implementation of non-orthodox instruments, including several types of incomes' policy and wage controls (see Section II.2 for a detailed discussion of the wage regime). The Chinese authorities were able to manage the inflation rate with non-orthodox instruments to free monetary policy from the strict obligation of inflation control without sacrificing the inflation target as such.

The development of nominal and real lending rates in China from 1994 to 2003 is telling (Figure 9). Due to high inflation rates in 1994 and 1995, the short-term real interest rate was negative until the new monetary regime took over. After the devaluation in 1994, nominal interest rates came down and real rates went up. Both remained at a very stable positive level throughout the 1990s. With real lending rates of between 4 and 7 per cent between 1997 and 2003 in an economy that was growing briskly at rates of 8 to 10 per cent, monetary policy was clearly accommodative. The second remarkable aspect of this way of managing monetary policy in an opening economy was the stability of interest rates. Even during the turmoil of

[6] UNCTAD (2004).

the Asian crisis in 1997 and 1998 stable real and nominal rates ensured that the pro-growth approach remained on track.

Figure 9
NOMINAL AND REAL INTEREST RATES, 1994–2003



Source: Authors' calculations based on IMF, *International Financial Statistics*.

II.1. The exchange-rate regime and its influence on exports and capital accumulation

The main element of China's successful strategy came in 1994 when it shifted to a radically new exchange-rate regime. Until 1994, two exchange rates existed: An official rate and a rate in the swap market, where firms could trade their foreign exchange against domestic currency.[7] Under this scheme domestic enterprises had to hand over a share of their foreign earnings at the official exchange rate, but were allowed to trade the rest in the swap market. By means of a number of strong nominal depreciations, the official rate was brought down

[7] In fact, the development of the swap market took several years, and only from the early 1990s onwards a unified and liquid swap market existed (cf. Lin/Schramm, 2003).

close to the swap rate before the two were unified in 1994 at a rather low level and the dual system was replaced by an arrangement resembling a crawling peg – the exchange rate was allowed to fluctuate within a narrow daily band – which still is in place today. With relatively larger trading bands between 1994 and 1996 the crawling peg arrangement was used and the RMB appreciated slightly from RMB8.7 per US$ in 1994 to RMB8.3 per US$ in 1996. Since 1997 and the Asian financial crises, China has maintained a *de facto* peg of the RMB to the US$ with very small variations. According to Anderson (2003) the peg needs to have the add-on of *de facto* or *quasi*, since the official regulation still allows the RMB to fluctuate within a certain bandwidth.[8] Facing the outbreak of the Asian crises, the People's Bank of China (PBC) narrowed the trading band and established a *de facto* peg of the RMB versus the US$ with a trading band of 0.4 per cent around the RMB8.28/US$ peg. The trading band was further tightened in November 2000 and stands at about 0.01 per cent fluctuation around the central parity of RMB8.277/US$. Still, the RMB is not completely fixed, but the actual trading band is very narrow at the moment.

Overall competitiveness of the Chinese economy, measured by the real exchange rate against the main trading partners, improved by almost 50 per cent between 1987 and 1994. Unit labour costs in dollar terms fell in China during this time and the currencies of main trading partners, such as Japan or Germany, appreciated strongly against the dollar. Although the actual impact of the change in competitiveness differs according to the underlying measurement (e.g. the IMF and JP Morgan base their indices on consumer or industrial prices instead of unit labour costs), the general conclusion of all studies remains the same. Due to productivity increases, adequate wage growth and the strong nominal devaluation in 1994, China has been able to increase its competitiveness significantly. The steep increase in exports discussed in Section I underlines the fact that the nominal depreciation of the exchange rate in combination with the non-inflationary reaction of other cost variables, mainly nominal wages and other stabilizing heterodox macroeconomic policy instruments, constituted a breakthrough for Chinese exporters and foreign firms producing or planning to produce in China.

[8] Anderson (2003), p. 4.

Nevertheless, for a lasting achievement in terms of growth and catching-up it is critical to turn the export success into a process of sustained capital accumulation. In China, the expectation of steady and pro-growth macroeconomic conditions, combined with an expanding domestic market in a non-inflationary environment, offered domestic and international investors the kind of stable profit expectations needed for investment in fixed capital on a large scale.[9] International investors were attracted to bring in capital-intensive production processes from their home countries and combine it with the cheap Chinese labour. Servén (2002) provides empirical evidence for the stability bias of international investors. For example, in his sample of developing countries, private investment reacts negatively to an increase in real exchange-rate volatility. Moreover, the author shows that private investment is particularly negatively affected in countries that experience large, real exchange-rate gyrations as a result of high inflation rates or distinctive nominal exchange-rate volatility.

China has managed to achieve a real exchange rate position, sometimes referred to as "optimal path of real exchange rate" movements, for a developing country that aims at industrialization (Larraín 1999). Accordingly, after an initial devaluation, the real exchange rate should only be allowed to recover gradually; and that is exactly what happened in China since the early 1990s. After an initial large devaluation, the real, effective exchange rate has until recently remained on a relatively stable but flat upward trend.

However, the stable and competitive position of the Chinese economy not only serves as an investment incentive for exporters but also helped domestic private companies obtain (extra) finance for their (new) investment projects. As domestic private companies in China still face higher barriers in accessing bank credits than state-owned enterprises (SOEs), they have traditionally relied heavily on internal

[9] This argument is in line with a recent contribution to the theory of investment (Dixit and Pindyck 1994). They show that increasing volatility can lead to less investment if a significant part of the investment is irreversible and deviations from a constant return-of-scale/competitive market model are allowed. This is obviously increasingly the case where the more training the production of a certain good requires. Thus, investments in skill-intensive and capital-intensive (as the workers have to learn to use the capital) production lines are most likely to be affected by higher volatility.

finance – a situation that still exists to this day.[10] Thus, increased competitiveness after 1994 has helped them earn extra profits through increased export shares and/or higher profit margins, which in turn build the basis for the internal financing of new investments.

The effects of the pro-growth monetary policy stance in China can be shown empirically. Estimating an aggregate investment function shows that the overall investment can be reasonably well explained by private consumption-induced demand, the demand for Chinese exports, the real interest rate and a dummy for the period from 1995 onward. The empirical investment function of Table 2 shows that the 1994/1995 shift of macroeconomic policy towards a more expansionary stance had a highly significant positive effect on investment. The table reveals that the overall outcome of the policy shift could be compared to the effect of a permanent reduction of the real interest rate by 8 percentage points.

As increased investment demand hits an economy with a lot of underutilized labour, its positive effects is translated directly into higher real output growth and higher real incomes. Moreover, the increase in investment, associated with the macroeconomic turnaround, was not only a short-run demand phenomenon, but also provided China's economy with the necessary savings to finance this investment. People's absolute savings increased with higher wages[11] but, more importantly, profits increased even more than overall income – with real wages, despite strong increases lagging behind productivity growth. Hence, companies initially created savings by retaining profits, which in turn could be used to finance surging investment during this period.

The Chinese approach of stabilizing a competitive exchange rate, which triggered export growth, stimulated capital accumulation and induced second round effects on wages and private consumption, is

[10] According to *World Business Environment Survey 2000*, the problem of obtaining finance, and especially long-term bank loans, is the most pressing issue for private business in China.

[11] Nevertheless, as a World Bank study of 2000 shows, the saving ratio of private households in China is rather normal and as low as 10 per cent throughout most of the 1990s (Kraay 2000).

Table 2
EMPIRICAL INVESTMENT FUNCTION

Dependent Variable: LINV				
Method: Least Squares				
Date: 04/14/04 Time: 16:05				
Sample (adjusted): 1990 2003				
Included observations: 14 after adjusting endpoints				
Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	-1.431585	0.904111	-1.583416	0.1478
R	-0.010904	0.001092	-9.982887	0.0000
LEX	0.476212	0.051449	9.256019	0.0000
LPC	0.627450	0.109262	5.742603	0.0003
DP95	0.083741	0.020490	4.087002	0.0027
R-squared	0.999234	Mean dependent var		14.00722
Adjusted R-squared	0.998893	S.D. dependent var		0.530379
S.E. of regression	0.017647	Akaike info criterion		-4.964018
Sum squared resid	0.002803	Schwarz criterion		-4.735783
Log likelihood	39.74813	F-statistic		2933.374
Durbin-Watson stat	2.081142	Prob (F-statistic)		0.000000
Variables				
C	Constant			
R	Real interest rate (lending rate)			
LEX	Log exports			
LPC	Log private consumption			
DP95	Dummy: 0 for 1990 to 1994; 1 for 1995 onwards			

not a completely new approach. Williamson (1999) and UNCTAD (2003) highlighted this profit-investment nexus at work in other successful Asian economies such as Japan, the Republic of Korea and Taiwan Province of China. Rodrik (1996) and many others even attribute the so-called "German miracle", the rapid catch-up and rebuilding of Germany's economy after World War II, to such an exchange rate plus heterodox policy elements strategy.

II.2. The role of the wage regime

Since 1994 the Chinese authorities have been able to combine an aggressive growth-orientated macroeconomic policy with a combination of a stable and competitive exchange rate, a low interest rate and low domestic inflation. In short, China has managed to

implement a policy strategy of monetary laxity without losing control over its key monetary policy target of price stability. This strategy, we shall argue in this Section, was made possible by the new wage regime that the Chinese government introduced after 1994.

In light of the inflationary intermezzo before 1994, authorities realized the crucial importance of the stability (of the growth rate) of the domestic wage level. In fact, China's wage reform in 1994/1995 killed at least three birds with one stone: It helped control the inflation rate by linking wage development to productivity; it helped to keep the nominal exchange rate at a competitive level; and it further strengthened China's international position by very closely aligning nominal wage increases to productivity growth. This monetary environment created extraordinarily attractive conditions for domestic and foreign investors. Indeed, China's ability and willingness to control and to discourage short-term speculative capital flows have directly contributed to the attraction of long-term and fixed capital investments.[12]

Using the non-orthodox instrument of wage controls to fight inflation freed monetary policy from going after its traditional domestic target and stabilizing the nominal exchange rate. Despite a vigorously growing economy, inflationary pressure was kept at bay throughout the 1990s and accelerated only after 2002 when, in conjunction with a strong recovery of the world economy and soaring commodity prices, the Chinese economy approached a stage of overheating. Whereas the costs and benefits of the Chinese unilateral peg to the dollar have quickened interest in many countries and regions, the fact that the success of this approach was based on income policy has been overlooked by most observers.

II.2.1. Main features of the wage regimes in the reform period

China's wage regime in 1978 was characterized by a centrally regulated salary system that, among others, determined the wages according to regions, occupations, industries and sectors. The heart of the system was a classification scheme with more than 300 standardized occupational classifications used for salary formation.

[12] An empirical assessment of the amount of discouragement for short-term flows can be found in UNCTAD (2004).

After the beginning of the reform process in 1978 the wage regime underwent three sets of reforms in 1985, 1992 and 1994/1995, respectively.[13] This paper will mainly focus on the reform in 1994/1995. However, a short explanation of prior reforms helps to better understand the strategic role of the 1994/1995 reform.

The main and common feature of the two earlier reforms of 1985 and 1992 was a backward-looking indexation of wages to inflation. The 1985 reform, for instance, introduced profit-oriented factors as well as regional aspects to the wage-finding process. For example, the centrally planned budget dealing with the allocation of wages explicitly considered regional differences. The dynamics of the local consumer price index constituted an important regional factor, in addition to unemployment and regional growth rates. Later, in the reform of 1992, enterprises were given the authority to set wages according to their own needs by allowing them to relate discretionary wage setting to their individual economic performance and enabling enterprises to propose a wage budget based on their own calculations. These were then reviewed by the central authorities who took inflation and other local wages into account.[14] The important commonality of both reforms was the indexation of wages to the development of the consumer price index generating the well-known vicious circle of backward-looking indexation: a shock, affecting inflation, impacts the wage level, and rising nominal wages trigger a new round of inflationary acceleration.[15]

In light of the inflationary bout in 1994/1995, the authorities decided to de-couple nominal wages from the inflation rate. This attempt to break the vicious circle of accelerating inflation and rising inflation expectations was successful. The reform can be divided into a stricter rules-based part (1994/1995 I) and a more blurred recommendations-based part (1994/1995 II). Companies eligible to set their wages under the rules-based component could use their discretion within the framework of two standards: Firstly, the growth rate of the total salaries of an enterprise had to remain below the growth rate of after-tax profitability. Secondly, the growth rate of per-capita wages ought

[13] Cf. Yueh (2004), p. 151ff.
[14] Ibid.
[15] For a detailed discussion of the development of the inflation rate in China for the period of 1978 to 1995, please refer to Imai (1997).

to be less than the growth rate of labour productivity. Within the recommendation-based part of the reform, the "MOL [*Ministry of Labour*, the authors] suggested that enterprises should set wages not only in relation to occupation and rank, but also based on skills and [*individual*, the authors] productivity."[16]

Publicly listed companies on the Shanghai or Shenzhen stock exchange were eligible for the 1994/1995 I reform; however, a considerable proportion of publicly-listed companies are subject to state control. Thus, the scope and impact of the reforms depend on the Government's willingness and ability to enforce wage rules. Companies eligible for the 1994/1995 II reforms were those SOEs that underwent (in full or in part) an ownership-transformation without being listed on the stock exchange.[17] The number of companies and employees falling under the 1994/1995 II wage reform scheme was much higher than under the 1994/1995 I reform.

The two reform approaches differed in content and scope. The second part was a guideline rather than a strictly enforced regulation. Unfortunately, due to lack of data it is impossible to determine the proportion of those enterprises actually following the guideline. Particularly, the number of employees falling under the reform agenda at all is an open question. Nevertheless, the next Section provides a very rough assessment of both, the number of employees subject to the reforms as well as their income.

II.2.2. The scope of the wage reforms in the mid-1990s

A useful assessment of the impact of the wage reforms has to establish the scope of the reform measures in terms of the number of employees and their wage bill in relation to the total Chinese wage bill within the 1990s.[18] The share of the SOEs in the total wage bill has been falling rapidly in the last decade (Table 3).

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[16] Yueh (2004), p. 153.

[17] Ibid.

[18] Even though the 1994/1995 I reform scheme affects state-owned as well as privately-owned companies, we have lumped them together as state-owned companies. This is justified by the fact that the share of purely private enterprises within the public listed companies is only between 16 and 35 per cent, and that the overall impact of the 1994/1995 I wage reform was very limited and the reported wage spread was only 8 per cent.

Table 3
THE SHARE OF STATE-OWNED INDUSTRIAL ENTERPRISES OF THE TOTAL CHINESE WAGE BILL

Year	*SOEs' employment (Million)*	*Average wage/year (RMB)*	*SOEs' wage bill (Million RMB)*	*Total wage bill (Million RMB)*	*SOEs' share of total wage bill (Per cent)*
1991	44.72	2,477	110 771	332 390	33.33
1992	45.21	2,878	130 114	393 920	33.03
1993	44.98	3,532	158 869	491 620	32.32
1994	43.69	4,797	209 581	665 640	31.49
1995	**43.97**	**5,625**	**247 331**	**810 000**	**30.53**

Source: Authors' calculations based on *China Statistical Yearbook* (various issues) and Datastream.

State-owned units contributed around 33 per cent of all Chinese wages paid in 1991 and to 17 per cent in 2001. This declining share constitutes the upper limit of the wage reform's impact: If it is assumed that the wage reform had a guiding influence on all state-owned units in the industrial sector, it impacted on around a third of all the companies in 1995 and less than a fifth in 2001. However, as shown above, the wage reform did not apply to all state-owned units.

According to the China Securities and Regulatory Commission (CSRC) there have been 1,160 listed companies on China's stock exchanges in 2001. Out of this group, 415 had no state shares or no shares subscribed by the state, which accounts for one third of all listed companies.[19] As non state-controlled publicly-listed companies should welcome any increase in productivity-linked discretion in wage setting, we assume that all non-state companies and all state-controlled public companies adhered to the 1994/1995 I reform scheme.[20] In this case, the 1994/1995 I wage reform affected around 3 million employees with a wage of around RMB35 billion, representing 3 per cent of the total Chinese wage bill in 2001 (Table 4). The available data is insufficient to estimate the impact in

[19] China Internet Information Centre (2003); Qu (2003).
[20] The reported average wage level of state-owned units and non state-owned units in 2001 is rather similar at RMB11,178 and RMB12,140, i.e. we use the first wage level for the whole calculation.

1995. But, as there were considerably fewer companies falling under the 1994/1995 I wage scheme compared to 2001, one can assume that the influence in 1995 fell short of, or was up to 3 per cent.

Table 4
POTENTIAL SCOPE OF 1994/1995 I WAGE REFORM

Year	*Companies*	*Average employment in sample*	*Projected employment (Million)*	*Listed companies' wage bill*	*Listed companies' share of total wage bill (Per cent)*
1995	323		*(Insufficient data available)*		
2001	1,160	2,704	3.14	35,099	2.97

Source: Authors' calculations based on *China Statistical Yearbook* (various issues) and Datastream.

The evaluation of the 1994/1995 II wage reform is based on a much broader statistical coverage. In the mid-1990s around 40 per cent of SOEs could be classified as forming part of the so-called recommendation-based wage regime.[21] In 2001 around 65 per cent of all SOEs underwent an ownership transformation without being listed on one of the stock exchanges.[22] Based on these two figures, the effect of the 1994/1995 II wage reform, in terms of its impact in percentage of the total Chinese wage bill in 1995 and 2001, was considerable (Table 5).

In 1995 around 17.6 million employees were affected by the recommendation-based part of the wage reform and earned an average wage of RMB5,625 in 1995, which generated a wage bill of around RMB99 billion. Due to the serious concerns about the inflationary environment of the mid-1990s (discussed in more detail below) the potential scope of the wage reform was actually used. Thus, according to the 1994/1995 II wage reform, the authorities could directly influence RMB99 billion of wages. This constituted a share of 12.21 per cent of the total Chinese wage bill in 1995 and 11.20 per cent in 2001.

[21] Yueh (2004).
[22] China Internet Information Centre (2003).

Table 5
POTENTIAL SCOPE OF 1994/1995 II WAGE REFORM

Year	*SOEs' employment (Million)*	*Average wage/year (RMB)*	*SOEs' wage bill (Million RMB)*	*1994/1995 II employment (Million)*	*1994/1995 II wage bill (Million RMB)*	*Total wage bill (Million RMB)*	*1994/1995 II share of total wage bill (Per cent)*
1991	44.72	2,477	110 771	n.a.	n.a.	332 390	n.a.
1992	45.21	2,878	130 114	n.a.	n.a.	393 920	n.a.
1993	44.98	3,532	158 869	n.a.	n.a.	491 620	n.a.
1994	43.69	4,797	209 581	n.a.	n.a.	665 640	n.a.
1995	**43.97**	**5,625**	**247 331**	**17.59**	**98,933**	**810 000**	**12.21**
1996	42.78	6,280	268 658	n.a.	n.a.	908 000	n.a.
1997	40.40	6,747	272 579	n.a.	n.a.	940 530	n.a.
1998	27.21	7,668	208 646	n.a.	n.a.	929 650	n.a.
1999	24.12	8,543	206 057	n.a.	n.a.	987 550	n.a.
2000	20.96	9,552	200 210	n.a.	n.a.	1 065 620	n.a.
2001	**18.24**	**11,178**	**203 887**	**11.86**	**132,526**	**1 183 090**	**11.20**

Source: Authors' calculations based on *China Statistical Yearbook* (various issues) and Datastream.

PRICE CONTROLS AS A SECOND NON-MONETARY POLICY TOOL

Price controls were the second non-monetary policy tool used by the Chinese authorities to keep inflation low in the 1990s.

Even in the modern and transformed Chinese economy, three kinds of prices can be identified: [1]

(a) *Market-regulated prices,* which are set solely by market forces without any intervention of authorities.
(b) *Government guided prices,* which can come either as a benchmark price or a floating range set by the government. The floating band is usually between 5 and 15 per cent.
(c) *Government prices,* which are fixed prices set by the responsible government authorities and are changeable only through approval of this authority.

Article 26 of the Price Law of the People's Republic of China states that price controls are designed to influence the general price level. In the chapter on 'Control and Adjustment to General Price Level' the article states: "To stabilize the general price level is one of the major objectives of macro-economic policy." In the following articles the law leaves no doubt that price controls are considered as an instrument of macro-economic policy to influence the general price level.

Evidence exists of the government's active use of the tool of price controls in the post-WTO era as well. The recent threat of an overheating economy with growing inflation rates in 2004 prompted the authorities to employ price control measures more frequently again. Accordingly, controlling the prices can be directly or indirectly pursued, e.g.:

- The National Reform and Development Commission (NRDC) in China instructed provincial authorities in March 2004 to freeze any approval for price increases for the next quarter of the year. The freeze applies if either the m-o-m local CPI growth reaches 1 per cent or higher or y-o-y monthly local CPI reaches 4 per cent or higher for three consecutive months.[2]
- Using a more indirect measure, the NRDC also asked local governments to set ceilings for profit rates for fertilizer wholesales, e.g. 3 per cent in Heilongjiang and 2 per cent in Hunan Province. Additionally, a 50 per cent rebate on VAT in the fertilizer industry was re-introduced. The move was aimed at raising the output of crop and thus to reduce the inflationary prices in the food sector.[3]

These recent developments reflect similar discussions on more effective price controls during the high inflation period of 1993-1995. In June 1995 the China Daily published an article with the title "Strong measures need to guide pricing system".[4] article quotes a research fellow in a State Council research centre who pointed out that the lack of price controls in the market economy had a

strong influence on the acceleration of inflation at that time. Subsequently, despite some success of traditional instruments to fight inflation, the Price Law of the People's Republic of China was introduced in 1998. Later on, the scope of the controls was incorporated in the legal framework produced to accompany Chinese WTO negotiations.

While there is no sign that the authorities want to re-introduce controls beyond the Price Law and the WTO agreement, it is evident that they use their discretion in setting price controls more actively in times of inflationary or deflationary pressure. In 1998, for instance, the first year of the deflationary period of the late 1990s, the authorities used the instrument and set minimum prices in 21 industries to ease the deflationary pressure.[5] However, the results were moderate as the deflationary environment lasted for four years.

It is a difficult, if not impossible task, to assess the exact impact of the price controls on China's rate of inflation. However, in a recent HSBC study Qu (2004) estimates that the effect of the price controls in the overheating economy in July 2004 kept the inflation rate on a level of almost half of the level without controls: "Without the government's controls over the prices of electricity, coal and transportation, both the producer price index (PPI) and the consumer price index (CPI) would have been rising at close to 10 per cent rather than the official July figures of 6.4 and 5.3 per cent, respectively."[6]

It is important to note a major macroeconomic downside of the instrument of price controls: If price controls prevent rising prices in an overheating economy, the automatic stabilizer of decreasing demand for certain products cannot play its role. Current reports about shortages in certain sectors and energy blackouts suggest that price controls in those sectors may have prevented the built-in stabilizer to work effectively.[7]

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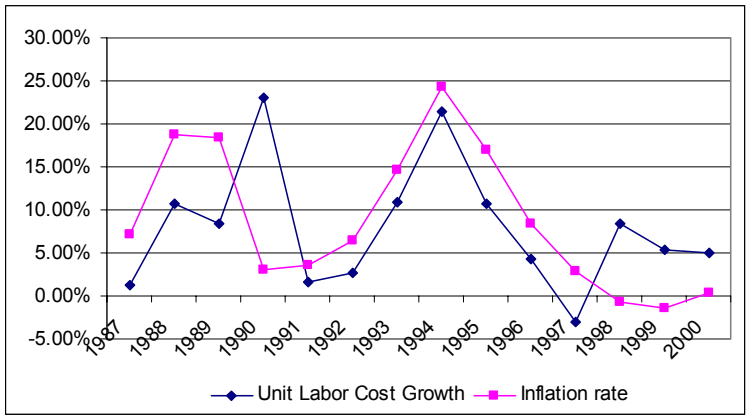
[1] According to the report of the working party on the accession of China into the World Trade Organization (WTO) of October 1, 2001.
[2] Cf. Wu (2004).
[3] Cf. People's Daily (2004); Tan (2004).
[4] Cf. Fu (1995).
[5] Cf Roberts (1998)
[6] Cf QU (2004) p. 5.
[7] Cf. Areddy (2004); Qu (2004), p. 5.

To summarize, both reforms may have impacted between 12 and 15 per cent of the total wage bill in 1995 and around 14 per cent in 2001.

II.2.3. The Macroeconomic effects of the 1994/1995 wage reform

In China, as elsewhere, nominal unit labour cost growth (ULC)[23] is one of the most important determinants of the inflation rate. The growth of nominal wages in relation to productivity is decisive for the inflation rate, as the overall domestic cost level in a vertically-integrated economy more or less exclusively consists of labour inputs in different forms. Figure 10 shows the close links between unit labour cost changes and the inflation rate. Thus the authorities were able to set an upper limit for inflation through the control of nominal wages – the objective of the wage reform – that would only be in danger to be perforated if the demand-pull effect in the economy would dominate the cost-push component. However, since the beginning of the reform this has not been the case.

Figure 10
UNIT LABOUR COST GROWTH AND INFLATION RATE, 1987–2000



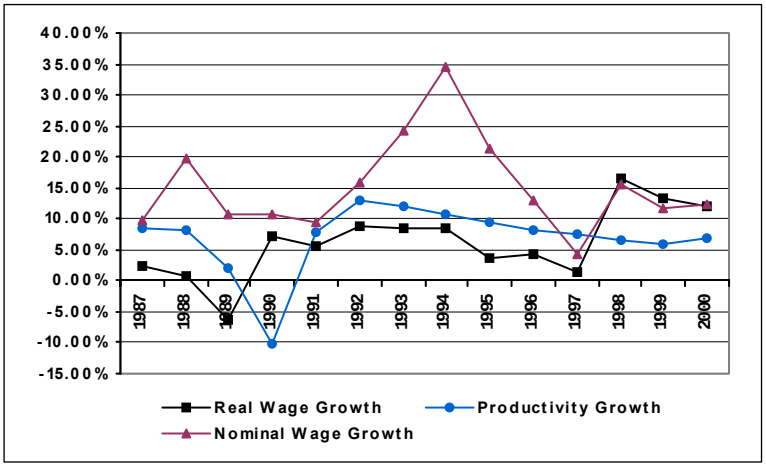
Source: Authors' calculation based on ILO, *Laborsta Internet Database* and IMF, *International Financial Statistic.*

[23] Change rate of gross income of employed population divided by the real GDP in RMB.

Whereas in the late 1980s and the early 1990s the growth rate of unit labour was volatile and high, in the aftermath of the reforms of 1994, volatility and growth of this important cost component was brought under control. The last inflationary bout of 25 per cent in 1994 marked the end of the old era of macroeconomic stabilization. In subsequent years unit labour cost growth fell to 4.37 per cent in 1996 and to -3.03 per cent in 1997. The inflation rate mirrored this development with 8.32 and 2.81 per cent in 1996 and 1997, respectively. In 1997 and 1998 unit labour cost and nominal wage growth jumped by almost 10 per cent again, well above the inflation rate.

From 1998 onwards deflationary pressure was a main feature of the Chinese economy with real wages making good on some of the income losses that labour had suffered from in previous years. The de-coupling of the inflation rate from the development of the unit labour costs and the implied de-coupling of the real wage from productivity may reflect the growing scarcity of labour after twenty years of vigorous growth (Figure 11). Additionally, the end of the

Figure 11
REAL WAGE AND PRODUCTIVITY GROWTH, 1987–2000



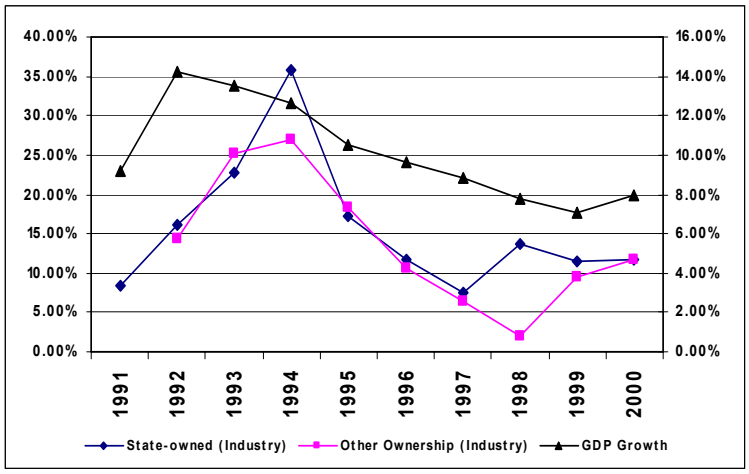
Source: Authors' calculation based on ILO, *Laborsta Internet Database* and IMF, *International Financial Statistics.*

slowdown of real wage growth in 1997 marks the return to a phase of a briskly growing Chinese economy without facing the inflationary difficulties of the early 1990s. In 1997 real wage growth had fallen to 1.34 per cent, this was before the effects of the wage reform on nominal wages faded successively.

Overall, the wage reform was a success. Obviously, despite the absence of government instruments to enforce strict adherence to the reform, the majority of companies that were eligible for the recommendation-based wage reform 1994/1995 II actually incorporated skill- and productivity-levels into the factors determining wage-setting decision.

Nevertheless, the overall pattern of wage development was strongly influenced by the economic cycle (Figure 12).

Figure 12
THE ECONOMIC CYCLE AND THE WAGE DEVELOPMENT



Source: *China Statistical Yearbook*, various issues

One of the main reasons for the success of the reform was the general unease about the inflation that prevailed at the time. The official inflation rate in 1994 had reached 24 per cent. At the same time, unemployment was rising due to growing numbers of migrant

workers and accelerating lay-offs in SOEs.[24] The mix of social insecurity and high inflation rates led to increasing incidents of social unrest in the mid-1990s. According to a poll conducted by the Chinese Academy of Social Sciences and the National Statistical Bureau of China, 84 per cent of those polled found inflation to be the main reason for people being unsatisfied.[25] For the Government the situation must have been comparable with 1988/1989 when rising unemployment of state-owned workers, stagnating social benefits and high inflation rates of between 10 and 20 per cent led to noticeable social unrest.[26] As an observer put it: "One explanation why workers joined the huge demonstrations that China saw in 1989 … is unhappiness over inflation."[27] In 1994 the situation was just as serious, and the government authorities were looking for a means to fight inflation that would not magnify the unemployment problem.[28] It must have been due to that constellation that the choice was made to use non-monetary instruments to tackle inflation and to fix the exchange rate at a competitive level to avoid dependence on the international capital market.

II.3. Complementary macroeconomic management

II.3.1. The role of fiscal policy

The basic stability of the Chinese economy since 1994 was mainly the result of the stable and pro-growth monetary environment. However, there were other policies that assisted monetary and exchange rate policy. The most important element supporting the remarkable stability of the rate of growth and inflation in China was the efficient and prudent use of fiscal demand management. As the traditional instrument of monetary policy, the short-term interest rate was not available, due to the unilateral fixing of the exchange rate, a larger burden of adjustment had to be borne by fiscal policy.

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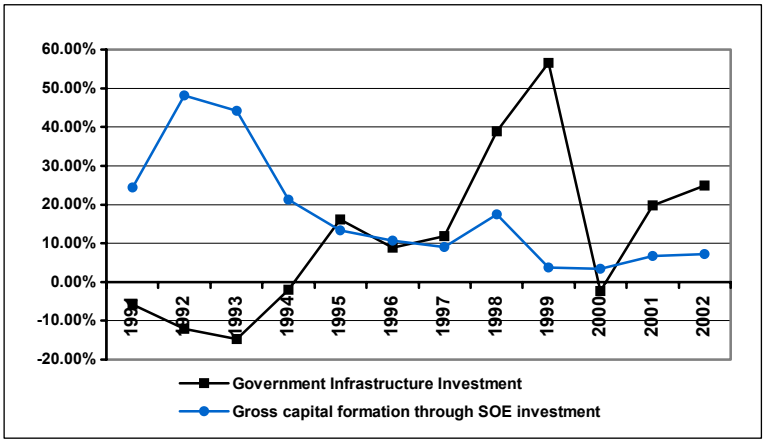
[24] Zhang (1995).
[25] Cheng (1995).
[26] Wang (2002).
[27] Areddy (2004).
[28] The negative inflation bias of Chinese decision-makers may be due to their experience with the period of hyper-inflation in the second half of the 1940s (Burdekin et al., 2001, p. 4).

The active cooling down of the economy in 1994/1995 represents a good example of the effective use of budgetary tools. Investment at the time was growing rapidly and was fuelling inflationary risks. Consumer price inflation had accelerated from 3.5 per cent in 1991 to 14.5 per cent in 1993 and climbed to 24 per cent in 1994. Despite a hike in bank lending rates – increased from 8.6 per cent in 1991 to 12 per cent in 1995 – the acceleration of inflation overcompensated the increase in the nominal rates and real interest rates fell. Although the central bank restricted lending requirements, it withdrew refinancing credits and reduced special-project loans (Lin and Schramm 2003), fiscal policies were introduced to cool the boom.

Government expenditure in infrastructure investment was significantly driven down to rein in the boom.[29] Figure 13 also displays the development of SOEs' investments and shows that the

Figure 13
CHANGE IN GOVERNMENT AND SOE INVESTMENT, 1991–2002



Source: National Bureau of Statistics; SIC Data at www.xinhuaonline.com.

[29] Unlike in a more marketized economy, the Government's budget deficit is not necessarily the best indicator for fiscal policy in China. This is due to the fact that a vast array of policy goals is pursued by using the lever of SOEs' investment and employment changes. Thus, the Government's actual budgetary expenses traditionally only represent a relatively small share of GDP (11.5 per cent in 2002) with a much higher share hidden in SOE budgets.

growth rates declined significantly from 1992 to 1994. It is obvious that the Government used SOE investment expenditures to influence the business cycle too. Thus, Chinese fiscal policies disposed of a substantive leverage through the interaction of official governmental and SOE expenditures.

By contrast, in the wake of the Asian crisis of 1997/1998, the Government used active fiscal policy to increase demand. With important trading partners and competitors being forced to devalue their currencies and to restrict overall expenditure, China was hit by an adverse demand shock, mostly in manufacturing. Within one year roughly 10 per cent of the workforce in the manufacturing sector was laid off. Economic policy reacted strongly and quickly. Interest rates were sharply cut, the bank rate fell from 8.6 per cent in 1997 to 3.2 per cent in 1999 and the lending rate from 8.6 to 5.9 per cent, but the strongest anti-cyclical effect stemmed from fiscal policy. Government investment in infrastructure rose by 38.9 per cent in 1998 and by an additional 56.5 per cent in 1999 (Figure 13). Investments among SOEs also increased. From 1997 to 1998 the growth rate increased from 9 to 17.4 per cent. However, compared to the early 1990s the impact of SOE's investment diminished because growth rates again decreased to 3.8 per cent in 1999. This reflects the decreasing economic weight of SOEs as market reforms took hold in the course of the 1990s.

II.3.2. The role of industrial policy and deregulation

The macroeconomic policy of the 1990s was flanked by specific industrial policy and deregulation measures. Some of these measures were explicitly designed to promote exports, encourage foreign investment and to develop relative advantages in some manufacturing sectors. The end of the dual exchange rate regime and the unification of the official and the swap exchange rate in 1994 were of particular importance in the promotion of exports as it removed what had in effect been a tax on exports. Before the reform, exporters had to hand over a certain part of their foreign exchange revenue at the official exchange rate, which was above the swap rate. Thus, they were subsidizing state-owned importers, which could obtain foreign exchange at the official rate (Lin and Schramm 2003). The reform stopped these implicit and costly subsidies and hence promoted exports.

In addition to this the Government intervened heavily in favour of certain export industries. To this end, the Chinese authorities used various industrial policy instruments. For example, all levels of governments were allowed to use direct financial support for key industries. Also, different taxes and levies were imposed on different activities. In the early 1990s, for example, a tax was levied on domestic enterprises conducting investment businesses. The "Coordination Tax for Directions of Fixed Capital Investment" was introduced in 1991 and represented a surcharge on investment varying from 0 to 30 per cent, depending on project categories and the state industrial policy. In addition, the tax burden varied by industry due to different charges levied for city maintenance and construction, consumption tax, resource tax and education. According to Lu (2000), in the late 1990s these charges ranged from an implicit sales tax level of roughly 20 per cent for manufacturers in electronic and telecommunication equipment to 77 per cent for petroleum processing and coke refinery.

In retrospect, the attempts of Chinese authorities to foster certain industries over others have not ended up in hopelessly distorted production structures. Many of those sectors which benefited from lower tax burdens, e.g. companies manufacturing office machinery, instruments, electronic and telecommunication equipment as well as ordinary machinery, appear to have been particularly successful in terms of export performance in the last decade.

Foreign enterprises played a special role in this strategy. They were attracted in the hope of delivering know-how in technology-intensive sectors and in access to world markets. To attract the desired companies, in 1986 the authorities divided foreign activities into three different classes: (a) Those that should be encouraged; (b) those that should be tolerated; and (c) those that should be banned. Activities in the export sector and in high-technology sectors were especially favoured. Thus, foreign-owned enterprises active in these sectors received various benefits such as tax obligations, credit access, input charges, labour management and export rights (Huang 2003). The special treatment of favourable FDI meant that some foreign companies received more substantial guarantees than domestically-owned private companies. For example, the Chinese Government made a constitutional commitment in 1982 not to nationalize or expropriate the assets of foreign investors without "due cause and compensation". For domestically-owned property, in contrast, a

similar proposition was only added into the constitution in March 2004. Huang (2003) shows that in the manufacturing industry, including electronics and machinery, but excluding the automobile industry, foreign companies have to pay significantly lower local government taxes than domestic private firms. Moreover, the author also finds indications that foreign-owned firms are treated more favourably than domestic private firms in terms of public auditing standards, as well as within the judiciary system. Accordingly, this special treatment has led to significant better export performance of foreign companies compared to domestic enterprises. Paradoxically, the combination of an open foreign sector with a skeptical attitude towards domestic private activities eventually led to a better business environment for foreign than for the Chinese enterprises.

III. THE ROLE OF FDI

Many elements of China's growth experience have been similar to those of other Asian countries, but the strong reliance on foreign direct investment in China has been quite distinct.[30] While none of the other countries concerned had large inflows of FDIs during their strong growth-periods,[31] foreign direct investment to China averaged 4.9 per cent of GDP from 1991 to 2002.

Meanwhile, according to Lemoine (2000), foreign-owned enterprises have gained a decisive role in China's export sector. At present more than half of the country's exports come from foreign owned firms, and the share is still rising (Figure 14). Additionally, since the beginning of the 1990s FDI has gained ever-growing importance in China's domestic economy. Between 1991 and 1994 the share of FDI in the country's gross fixed capital formation increased from 3.9 to more than 17 per cent.[32] Over the same time, its share in GDP grew from 1.5 to 6.7 per cent.

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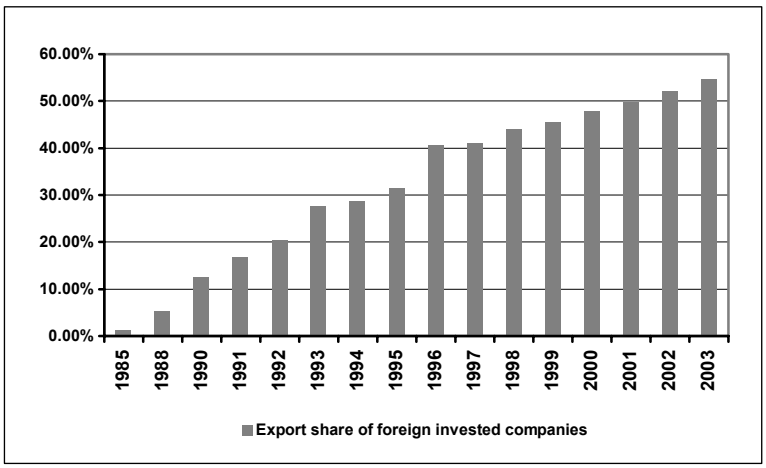
[30] Various issues of UNCTAD *World Investment Repor*t (WIR), in particular WIR 2001.

[31] Though detailed FDI data for Japan is not available, it is well known that the Japanese economy was rather closed during the period from 1961 to 1973 and FDI almost non-existent (Werner 2003).

[32] FDI does not transmit one-to-one into fixed capital formation as in some cases only the ownership of assets is transferred. However, the indicator gives an impression of the importance of FDI relative to overall investment.

Figure 14
EXPORT SHARE GENERATED BY FOREIGN-OWNED-FIRMS



Source: Ministry of Commerce of China.

In recent years, the relative importance of FDI has decreased. In 2002 real GDP has increased by roughly 90 per cent over 1994, while annual FDI inflow deflated with the investment deflator increased by "only" 40 per cent, which is still a significant rise, but clearly below GDP growth rates. However, the decline in the share of FDI in overall gross fixed capital formation understates the importance of foreign enterprises in some sectors: Foreign investors still carry out more than 20 per cent of all non-government and non-SOE investments. Finally, FDI stocks account for a significant share of the domestic capital stock. UNCTAD estimates that foreign companies own roughly 14 per cent of the capital stock.[33]

The policy approach behind the FDI boom is often described as the Chinese "open door policy", which entails actively encouraging foreign companies to invest in China. The rationale behind the policy

[33] The number is derived as follows: Inward FDI stock in dollars is converted into 1990 Yuan using the investment deflator. This number is set into relation to an estimated capital stock using the perpetual inventory methods from Chinese investment data going back to the 1960s. While this way might not be the most accurate method, given the large technological changes in China's investment during the past decade, it seems to be the best proxy available.

is the Government's hope to induce a leap-frog of the technological base. This policy has to be clearly distinguished from the approaches chosen earlier in Japan or the Republic of Korea, where active industrial policy in the development periods of the 1950s–1970s tried to build national champions that could compete technologically in certain sectors on world markets.

IV. POLICY CONCLUSIONS

China's experience in the past decade can be seen as a model of a successful development strategy. As in other Asian countries in the past, fixing the real exchange rate at a favourable level and promoting exports offers the possibility of penetrating world markets rapidly and experiencing strong growth and capital accumulation. The penetration of foreign markets brings about the rise in income needed to finance increased investment without recourse to net foreign capital inflows. However, such a strategy is not easy to put into practice, as there are a number of interacting elements to observe.

First, nominal wage increases have to be kept under control in order to maintain the overall favourable competitive position. If it is not possible to keep wage increases in line with productivity (in comparison with the most important trading partners), a crawling peg with a constant devaluation compensating for inflationary wage increases might be the second best solution. However, managing a constant slow depreciation and a constant exchange rate, are not easy to pursue with a completely open capital account (UNCTAD 2004). Volatile private capital flows induced by interest rate differentials or the expectation of exchange rate changes can force the central bank to intervene heavily and to find unorthodox ways to avoid overheating of the economy. Thus, capital controls might be unavoidable in such a strategy at a certain point of time.

Second, to use domestic macroeconomic tools such as monetary and fiscal policy to keep the domestic economy from overheating and thus wages from overshooting, a comfortable surplus in the current

account is an asset.[34] Deficits in the current account increase the dependence on foreign capital inflows and interest rate terms in international markets. Uncontrolled private capital inflows threaten to amplify booms even more than central bank intervention, thereby endangering the control of domestic monetary developments. Moreover, if volatile private capital flows reverse suddenly, restrictive macroeconomic tools need to be used to bring domestic demand down to the level at which the current account adjusts. Such a stop-and-start macroeconomic policy not only lowers welfare directly, but also reduces the incentive for long-term investment and thus dampens capital accumulation and long-term growth prospects.

One imminent problem for China might be a shift in the predominant type of FDI. While a large part of FDI hitherto used to be of the efficiency-seeking kind and targeted at the export sector, FDI can be expected to become increasingly market-seeking in the future. First, with the recent trend towards a slow real appreciation of the Renminbi, purchasing power in foreign currencies will increase and thus market opportunities in China will improve while efficiency-seeking investment in manufactures for export will become less attractive. Second, WTO accession gives foreign firms access to service sectors such as finance. Investment in these sectors will, by definition, be market-seeking.

This shift in FDI might pose problems for China. Different from efficiency-seeking FDI, which has actually helped China gain access to world markets and thus to earn foreign exchange, market-seeking FDI probably leads to profit repatriation later on, which might translate in the outflow of foreign exchange and burden the current account of the balance of payments. In order to minimize the negative impact of this shift in the structure of FDI, the capacities of domestic firms to successfully compete against the new market entrants need to be strengthened.

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[34] At first sight, one might believe that an undervalued currency cannot be observed at the same time as a current account deficit. However, this does not necessarily have to be true as the current account deficit can also stem from structural reasons (such as inelastic demand for some import commodity or a structural outflow of profit remittances).

Central to this goal seems to be the removal of legal and administrative discrimination against domestic private firms relative to foreign owned companies as described by Huang (2003). It may be helpful to enable easier access to bank credit which, to a large extent, seems to be targeted toward SOEs. According to the *World Bank Business Environment Survey 2000*, access to finance is the single most important obstacle to doing business in China. Almost half of those private Chinese firms surveyed complain about the lack of access to long term bank loans. Attempts to strengthen market-oriented loan allocation among banks might help to alleviate this problem.

Both of these steps would have the potential to improve the export performance of privately-owned domestic Chinese firms. While investment of domestic private firms is booming, their exports are growing much slower than those of foreign owned companies. With a removal of the discrimination, they might find the possibility to enhance their share of export markets. As for privately-owned domestic firms compared to partly or completely foreign-owned firms, this would also help to stabilize the surplus in the current account.

Another imminent issue is the need to improve macroeconomic management. As described above, with a shrinking weight of SOEs in total employment and therefore in the determination of overall wages and prices and an increasingly open (or porous) capital account, a larger weight to stabilize the economy (and the price level) should be placed on fiscal policy. Restrictive fiscal policy has the potential to slow a boom and dampen inflation without inducing new capital inflows. This might even become more important for China with the increasing operation of foreign banks after the WTO accession and the gradual liberalization of capital inflows.

In China, however, there have been signs that centrally controlling fiscal policy (and especially the investment of SOEs) has become a problem of late. It is to be feared this might lead to an overheating of the economy and present a danger to the exchange rate regime in the medium term. In the 2003/2004 boom, the Central Government has to an increasing degree been unable to slow the growth in investment. One problem seems to be that central and local governments often do not work hand in hand towards a common objective. While the Central Government is well aware of the need to slow the economy,

local governments seem to be reluctant to slow investments in their respective regions as they try to maintain high growth and employment. They even, to a certain extent, appear to counteract attempts by the Central Government to macro-manage the economy by encouraging local firms to increase investment despite the threats of an overheating economy.

Thus, if the current low real exchange set-up is to be sustainable, China needs to get better control over local government spending and local government-induced SOE investment. Tackling this problem would potentially help to alleviate other problems as well: There has been ample anecdotal evidence that a lot of parallel construction of capacities has been taking place, e. g. in the steel and aluminum sector as each provincial government has pushed the corresponding industry in its province into additional investment and encouraged banks to provide the necessary loans. A more centralized control over SOE capacity built-up and investment volumes (not microeconomic investment details) might help to reduce overlapping construction, the danger of a future fall of profitability in these sectors as well as the creation of new non-performing loans.

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