

BOFIT Online
2008 No. 1

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China's inflationary pressures
and their impact on inflation
in euro area



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BOFIT Online
Editor-in-Chief Jouko Rautava

ISSN 1456-811X (online)
17.1.2008

Helsinki 2008

The opinions expressed in this paper are those of the authors and do not necessarily reflect the views of the Bank of Finland.

Contents

Abstract	3
1 Introduction	4
2 Price developments since 1994.....	5
3 Factors affecting inflation in the coming years in China.....	7
3.1 Strong currency inflows increase money supply in China.....	8
3.2 Cyclical factors behind inflation.....	10
3.3 Structural factors increasing price pressures	11
3.4 Trends in the productivity development.....	15
3.5 The level of competition and mark-ups in China.....	18
4 How does inflation in China affect inflation in euro area?.....	19
4.1 Earlier literature on the effects of globalisation on inflation in advanced economies	19
4.2 Trends in China's export prices	21
4.3 Considerations on the future impact of China's price development on inflation in euro area	22
5 Conclusions	25
References	27

Juuso Kaarevirta and Tuuli Koivu *

China's inflationary pressures and their impact on inflation in euro area

Abstract

China was able to combine slow inflation with very rapid economic growth for more than a decade. Finally, in 2007 inflation started to accelerate and there are a number of factors that may increase the pressure on China's price level in the near future. Most importantly, money supply growth is expected to remain rapid due to the ballooning foreign currency inflows. In addition, according to some estimates, economic growth has accelerated above its long-term potential and also a number of structural factors are likely to push production costs up. Counterbalancing part of the rising costs, productivity growth has somewhat accelerated during recent years. With low cost levels and fastly growing exports, China is believed to have exported deflation into its trading partners in recent years. However, due to the fact that the direct impacts of globalisation on inflation in the advanced economies have been moderate, also the effect of a possible rise in China's cost level on inflation in euro area is expected to remain small. However, the indirect impacts on price dynamics are much more difficult to forecast.

Keywords: China, inflation, monetary policy

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1 Introduction

Successful macroeconomic policies, tight competition between enterprises, improvements in productivity, excess supply of labour and high investment levels have kept inflation slow in China despite rapid economic development. For most part of last decade, consumer price inflation rates have been very low or even negative. A one-off leap in consumer prices in 2004 was mostly due to problems in grain production and restrictive macroeconomic policies prevented the surge in grain prices from spreading to other sectors.

At the end of 2006, however, inflation started to accelerate again and consumer prices were already 6.9% higher in November 2007 than a year before. Although the rapid price increases have again mostly been concentrated on foodstuffs and could be treated as a one-time happening, there are factors that may increase inflationary pressures in the coming years in China more generally. Most importantly, price pressures are boosted by the rapidly growing money supply, which is partly due to the strong inflow of foreign currency into China. Furthermore, low real interest rates have encouraged borrowing in the economy. At the same time, strong economic growth has finally started to raise the wage level more generally as the amount of excess labour has decreased in the most developed areas. Production costs are boosted by high raw material prices, which have remained high on a global level in last couple of years - partly due to the high demand generated by China. The mounting costs of land and real estate have also added to companies' costs. We would also expect some structural reforms, such as the unavoidable tightening of environmental regulations as well as relaxation of price controls in the energy sector, to affect costs and prices in the near future. On the other hand, rapidly increasing productivity has so far counterbalanced the rising costs in China. When considering future inflation, one of the nation's challenge thus lies in maintaining the fast pace of productivity growth also in the future.

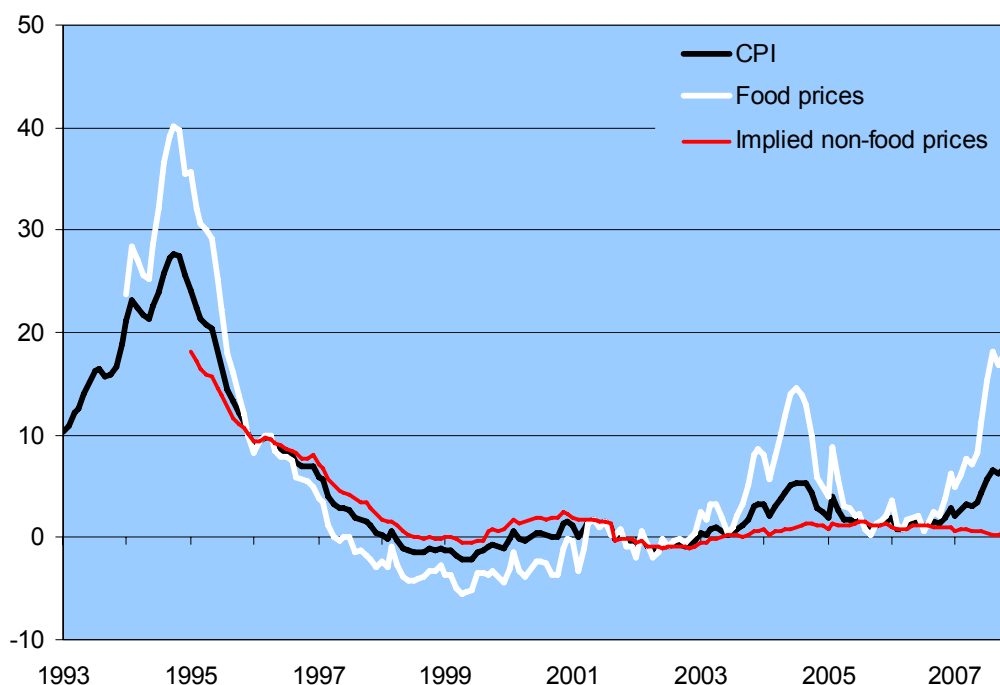
Development in China inevitably affects prices elsewhere in the world as the country has already become one of the world's largest economies. As mentioned, the high international raw material prices are partly a result of the growth experienced in China. On the other hand, the role of China and other countries with low cost levels has been instrumental in bringing cheaply-priced goods within consumers' reach. The impacts of China on overall inflation in eg euro area are reduced however, by the fact that the share of Chinese goods of the total consumption is still small. It has actually been estimated that the most significant effects of globalisation on inflation have manifested themselves in companies' reduced capacity to raise prices due to increased competition. Also the effect of domestic production bottlenecks on inflation has narrowed in the face of increasing global supply.

In this paper, we will first cast light on China's price development over the last decade or so. We will then analyse China's inflation prospects in the coming years and finally, we examine how prices in euro area might react to price changes in China.

2 Price developments since 1994

China started to gradually deregulate the price system and decrease the share of administratively fixed prices in 1979. The deregulation continued through 1980s and the last major reduction was made in the beginning of the 1990s. Chinese authorities estimate that between 1991 and 1995 the share of administratively fixed prices in retail sales was brought down by 12 percentage points to 9% of the transaction volume (OECD 2005). Deregulation of price system together with loose lending practices and fast economic growth accelerated Chinese consumer price inflation in the first half of 1990s. Annual consumer price inflation hit the record 27% in the autumn of 1994.

Figure 1 Consumer prices in 1993–2007, y-o-y % change.



Source: National Bureau of Statistics, CEIC, own calculations

In the late 1990s inflation moderated and turned even to deflation. The period continued until 2004, when inflation acceleration was triggered by food supply shock.¹ In 2003 the grain harvest was the lowest in over a decade, due to the shrunk sown-area and unfavourable weather conditions. As domestic grain inventories were gradually depleted and increased demand for imports raised international grain prices, domestic grain prices rose fast. The rise was also partly a correction back to the earlier price level, as domestic grain prices had fallen in 2002 and in the spring 2003. The consumer price inflation peaked on the third quarter of 2004, when prices rose over 5% year-on-year.

In response to accelerated consumer price inflation in 2004, authorities relied mostly on administrative measures. The People's Bank of China (PBC) raised interest rates only

¹ Disruptions in food supply have a large impact on Chinese consumer price index, since its weight in the consumption basket is large. The weight in the 2000s has been about a third, and was even larger in 1990s.

once by 0.27 percentage points and the reserve requirement ratio by 0.5 percentage point. Lending was, however, curbed through administrative measures such as window guidance, which means regular meetings between the central bank and commercial banks. At the meetings, commercial banks' lending policies are discussed and restricted in order to achieve lending targets set by the central bank. Among a number of other administrative policy measures, authorities froze state-controlled prices and restricted the use of land for construction purposes. In 2004, the policy measures seemed to work efficiently and inflation did not spread from grain prices to other products. As a result, China saw a return of low inflation rates.²

In autumn 2006, consumer prices started rise again for somewhat similar reasons as in 2004. This time domestic pork production faced problems in the form of blue ear disease (Porcine Reproductive and Respiratory Syndrome, PRRS). Also domestic grain prices started to rise in line with world market prices. In November 2007, pork prices were up almost 60% and grain prices 7% year-on-year, while world market price for wheat almost doubled. Price increases have spread to their substitutes too. Prices of poultry, vegetables and cooking oil have been rising fast (about 30% year-on-year, in November). Nevertheless, non-food prices have continued to rise very slowly. Many prices have even dropped somewhat (eg clothes, education, transportation and communication).

Compared to the situation in 2004, the PBC has increased the use of market based measures to try to control the recent surge in inflation. In 2007, it raised interest rates six times and commercial banks' reserve requirements ten times. The central bank's bond sales have also been sizable, as it has decreased liquidity by partly sterilising currency interventions from the market. The authorities increased the use of administrative measures in the second half of 2007 as inflation accelerated further. As in 2004, authorities have given restrictions on commercial banks' lending and introduced a freeze in government-controlled prices in September 2007 for the remainder of the year³. Moreover, authorities have distributed direct subsidies to eg farmers to increase production to ease price pressures.

In addition to consumer prices, the authorities have been worried over the rapid rises of the asset prices. While real estate price increases have varied considerably between the cities, the significant rise in the stock markets has multiplied the market value of most listed companies over the last one and half years. Also the land prices have risen considerably.

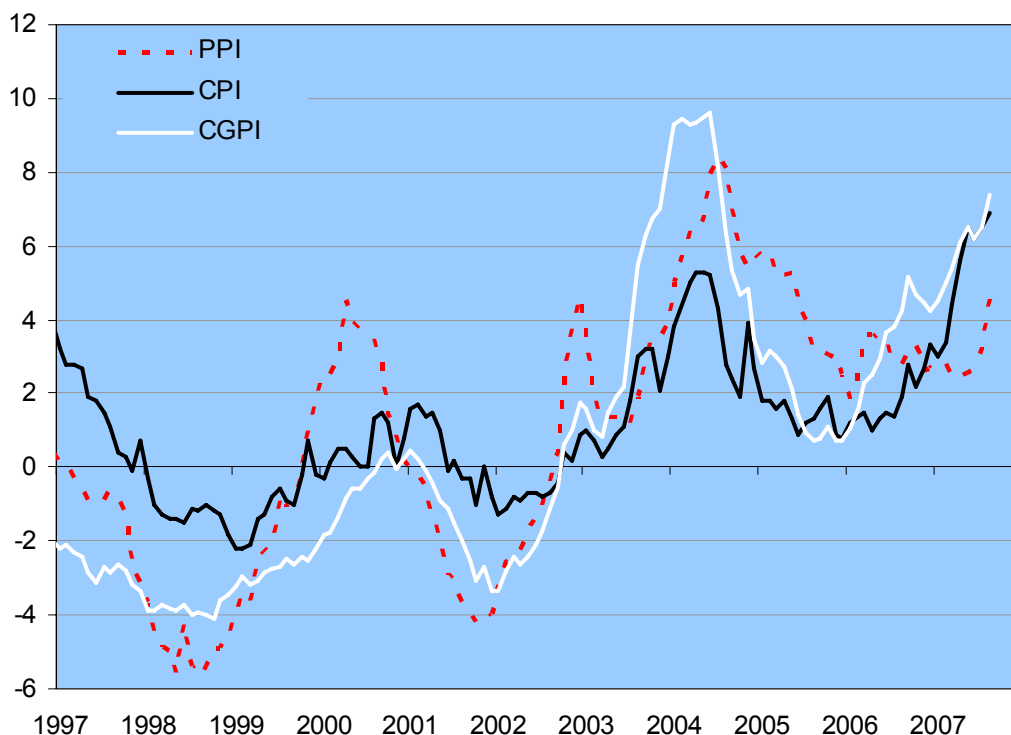
Looking at development of different price categories in the last decade (Figure 2), the trends in producer and consumer prices have been nearly parallel. Low inflation or even deflation also prevailed among producer prices in 1997–2002. The only peak in producer price inflation was seen in 2000 when international oil prices rose considerably. Since 2003, producer price inflation has been clearly positive. In 2003–2005, raw material prices were behind the increase. Coal, petroleum, metal and chemical industries had the largest increases, as other industries showed almost no increases in prices. In recent years, the statistical authorities' producer price index (PPI) has risen rather modestly while the central bank's wholesale price index (CGPI)⁴ shows similar rise as the CPI.

² Low inflation has been supported by the fact that grain production has risen every year since 2003.

³ Despite the freeze in regulated prices, the government was forced to hike gasoline prices by 10 % in November, due to the rapid raise in international oil prices.

⁴ Corporate goods price index covers capital and consumer goods used in transactions between companies in major cities.

Figure 2 Developments in consumer, producer and corporate goods price indices in 1997–2007, y-o-y % change.



Source: National Bureau of Statistics, People's Bank of China, CEIC

In sum, inflation has remained slow in China for most of last decade. Current period with higher inflation was originally triggered by a supply shock in pork production. However, opposite to the situation in 2004 when a decrease in grain supply increased inflation for the previous time, inflation has already broadened widely among food products. On the other hand, non-food prices are still rising slowly.

3 Factors affecting inflation in the coming years in China

If it is just food prices that are rising why should we be worried over the inflation in China? First, food prices play much larger role in the Chinese economy than in the advanced economies. Food still forms a major component in household expenditure in China and more than one third of the labour force still gains at least a proportion of their income from agriculture. Fluctuations in food prices thus have a major impact on the macroeconomic development in China.

Even more importantly, the situation today is different from the one in 2004 when inflation hardly spread from grain prices to the other products. First, the reasons behind the current fast growth in money supply, which in the long-run is assumed to define inflation, are somewhat different. The main pressure is coming from outside of China in the form of currency inflows and the already partly reformed banking sector may not be as receptive to

the administrative guidelines as a few years back. In addition, although the estimates of China's potential output growth have recently been lifted, arguments about overheating have restarted as the growth has remained very fast despite the numerous policy measures. Inflation is also pushed up by higher production costs although the productivity improvements will function as a counterbalance for them and thus play an essential role in the inflationary development in China in the coming years.

In this chapter, we will analyse what kind of inflationary pressures the Chinese economy is facing in the near future. We will first look into the monetary and demand factors behind China's inflation and then look at the cost factors affecting price development in China in the coming years.

3.1 Strong currency inflows increase money supply in China

According to the monetarist theory, inflation is defined by the money supply in the long-run. In support of this literature, studies of Chinese inflation have found a strong positive link between the money supply and the inflation rate.⁵ Since summer 2003, the money supply has been boosted mainly by the strong foreign currency inflows to China (Figure 3). The trade surplus, foreign direct investment and short-term capital inflows have carried foreign currency into China. To keep renminbi's value at the targeted level, the PBC has been forced to buy the excess foreign currency from the market and accumulate foreign exchange reserves. Correspondingly, the money supply has increased.

As we mentioned in Chapter 1, the PBC has tried to limit monetary growth by many policy tools. However, while the restrictive macroeconomic policies worked successfully in the beginning of 2004, the responsiveness of the market to the more recent efforts to slow down the growth has been rather weak. Furthermore, rising inflation rates have wiped off the interest rate hikes and rapid credit growth has been encouraged by close to zero level real lending rates. As a result, the growth rate of the broad money (M2) has exceeded the central bank's annual target continuously since April 2005 and thus increased inflationary pressure in the economy. (Figure 4)

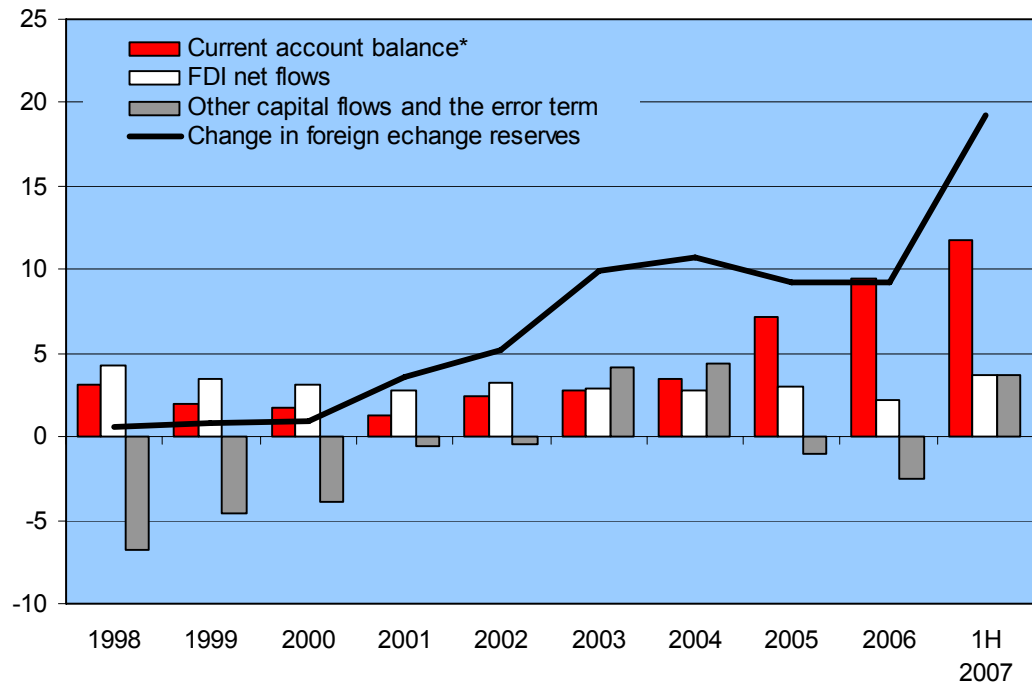
As a result, economists have started to ask whether Chinese authorities still have sufficient policy tools to control inflation. While administrative measures may have lost some ground in China as the economy has become more market-oriented, at the same time the link from the interest rate to the real economy in China is still found weak in a number of academic studies.⁶ Moreover, by gradually liberalising capital flows, China is approaching the point when it will clash with the concept of the impossible trinity according to which a country can only have two of the following three elements: independent monetary policy, a fixed exchange rate and liberalised capital flows. So far, China's capital controls have been considered binding⁷ but this may not be the case as liberalisation proceeds. To be able to retain its independent monetary policy, many specialists and international institutions have thus recommended China to move gradually towards a more flexible exchange rate regime.

⁵ See, for example, Mehrotra, 2007.

⁶ See, for example, Koivu 2007.

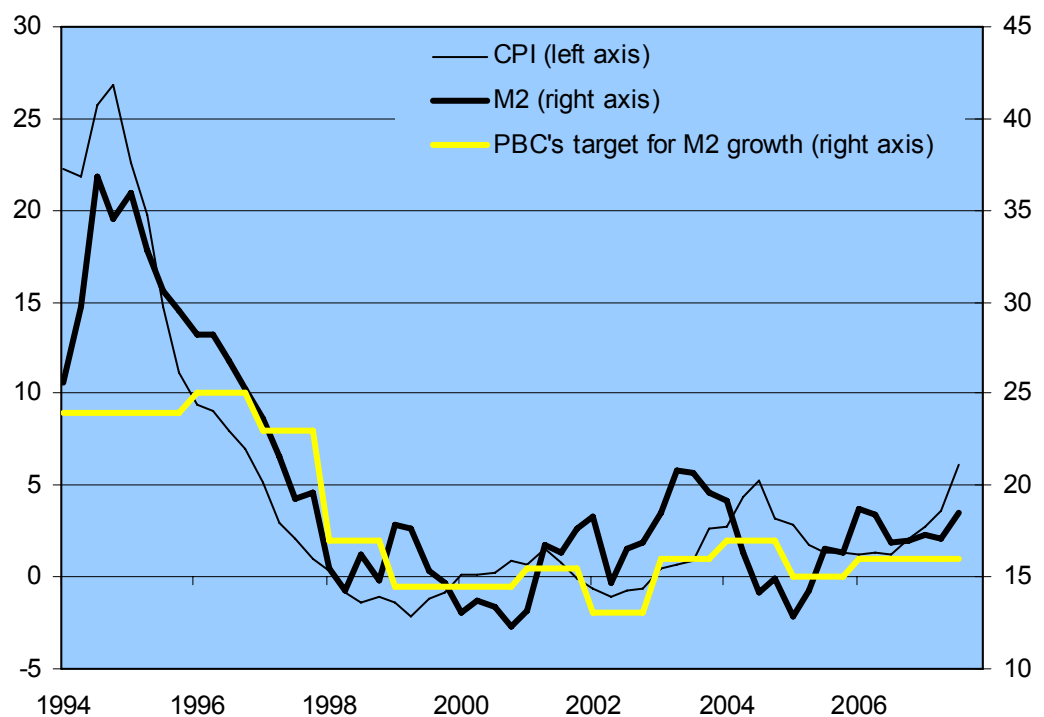
⁷ McCauley and Ma, 2007.

Figure 3 The major components behind the increases in the foreign exchange reserves in 1994–2007, % of GDP.



Source: People's Bank of China and own calculations.

Figure 4 Broad money (M2) supply and consumer prices in 1994–2007, y-o-y % change.



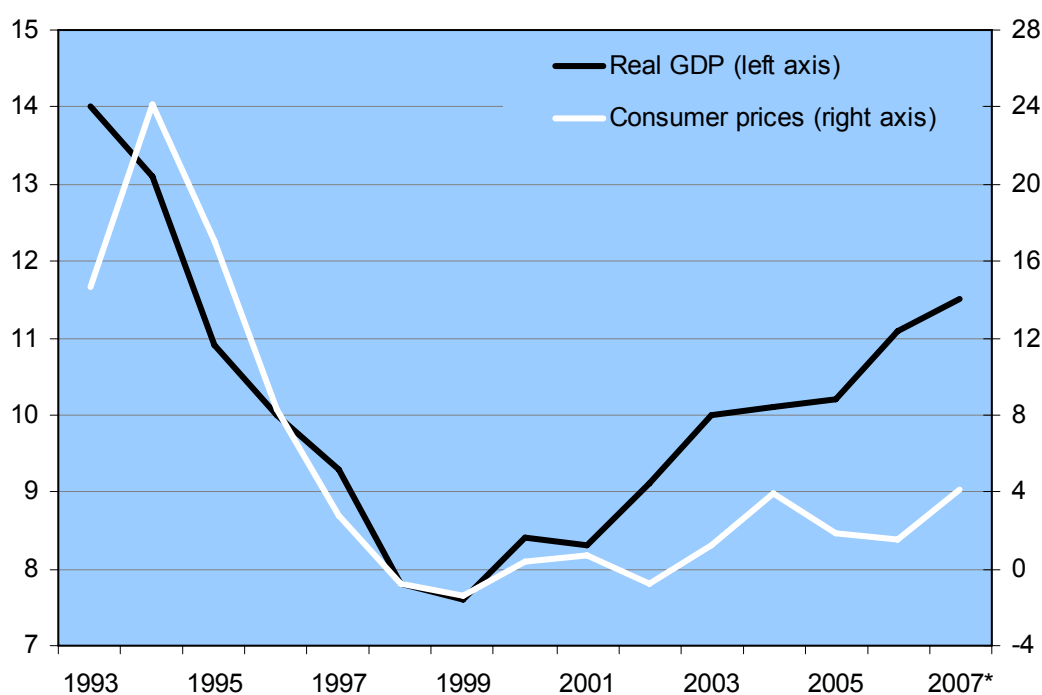
Source: National Bureau of Statistics and People's Bank of China

3.2 Cyclical factors behind inflation

Large investments in production capacity and the labour surplus have increased the responsiveness of Chinese economy to positive demand shocks. As a result, production has been able to grow rapidly without immediate pressure on prices. Nevertheless, a number of academic studies have found a statistically significant link from business cycles to inflation in China. Estimations for Phillips Curve usually find the expected relationship between the output gap and inflation, (ie demand-pull inflation occurs in an economy growing above potential) although this finding seems to be somewhat dependent on the exact measure of the output gap used in the estimation.⁸

As we can see from Figure 5, the current acceleration in inflation is also linked to very strong economic growth. From this perspective, the price pressures do not seem to ease in the near future as the fast growth is expected to continue as eg urbanisation and rising income will boost both investment and domestic consumption. However, if we take into account the possibility that the potential output growth has increased along with the reforms, as well as due to the considerable investment in the infrastructure, fast economic growth with low inflation could be a surprisingly persisting phenomenon in China.

Figure 5 Real GDP and consumer prices in 1993-2007, % change y-o-y.



*) The data on 2007 is a forecast.

Source: National Bureau of Statistics

⁸ Summarised, for example, by Mehrotra, Peltonen and Santos Rivera, 2007

3.3 Structural factors increasing price pressures

We will now turn to look at some structural factors affecting production costs in China.

3.3.1 Shrinkage of the amount of excess labour rising wages

One of the major forces driving production costs up in China is the rising wage level.⁹ An analysis of the general wage level is, however, complicated by the fact that the official statistics only provide information on wages in the state-owned sector which in many parts of the economy plays a secondary role. Official information on wages for eg migrant workers (estimated to be 150 million people) does not exist. We thus have to rely on surveys, newspaper articles and other diverse information when analysing the wages of unskilled migrant workers.

Both the official data (Figure 6) and the informal data sources indicate that wages for urban skilled population have grown rapidly already for a number of years and the rise accelerated further in 2007. However, the picture looks very different for unskilled workers. According to the information available, the wage level of low-skilled labour force used to rise very slowly.¹⁰ A few years ago it was still common to say that the migrant workers' nominal wage level had basically been stagnant for the preceding decade. However, all available signs indicate that the trend is changing.¹¹ According to some estimates, the average annual increase in the low-skilled workers' nominal salary in 2005 was already close to 6% in China's richest cities and the more recent information reports even faster wage increases.¹²

Support for the view that wages are rising can also be found from the income statistics. As we can see from Figure 7, income growth has accelerated particularly among the rural population over recent years. Although part of the increase in rural income is due to higher food prices and increasing grain crops since 2004, also wages have increased rapidly. Over the last 2.5 years, nominal wage income per person has increased at an annual rate close to 20% in rural areas. Although the rise in the number of employed persons outside agriculture partly explains the average wage increase, it can hardly explain the considerable acceleration of the wage growth during recent years. Private transfers to the rural areas have also increased rapidly, further supporting the evidence of migrant workers' rising wages.¹³

⁹ As there are already studies finding a significant link from the wage level to the inflation in China, we can expect that the rising trend in wages will also influence prices in China in the future (Ha, Fa and Shu, 2003 and Kojima, Nakamura and Ohyama, 2005).

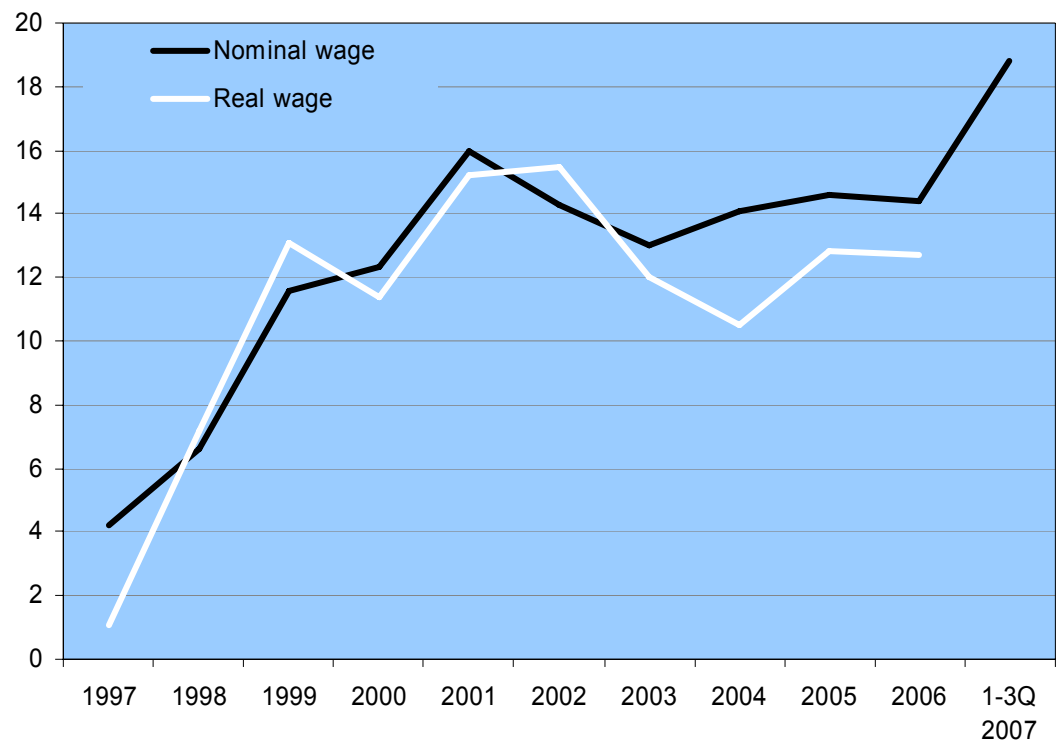
¹⁰ For example, Beijing Review 16.2.2006.

¹¹ Interviews with a number of Finnish companies operating in China over 2004–2007, Stephen Green 27.9.2007 On the Ground – Asia, On the Shenzhen Factory Floor, Part II, Standard Chartered.

¹² The China Business Review, March–April 2006.

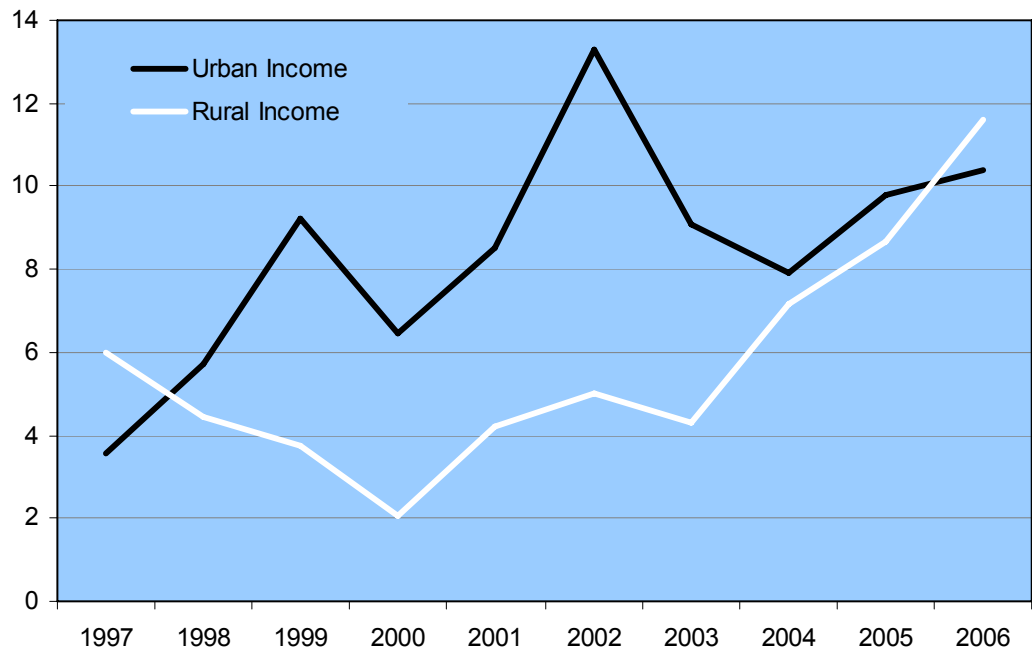
¹³ Unfortunately, also income statistics seem to have number of problems. For example quarterly rural income statistics released for 2007 have not been comparable with previous statistics.

Figure 6 Official nominal and real average wages in 1997-2007, y-o-y % change.



Source: National Bureau of Statistics

Figure 7 Per capita urban and rural real income in 1997-2006, y-o-y % change.

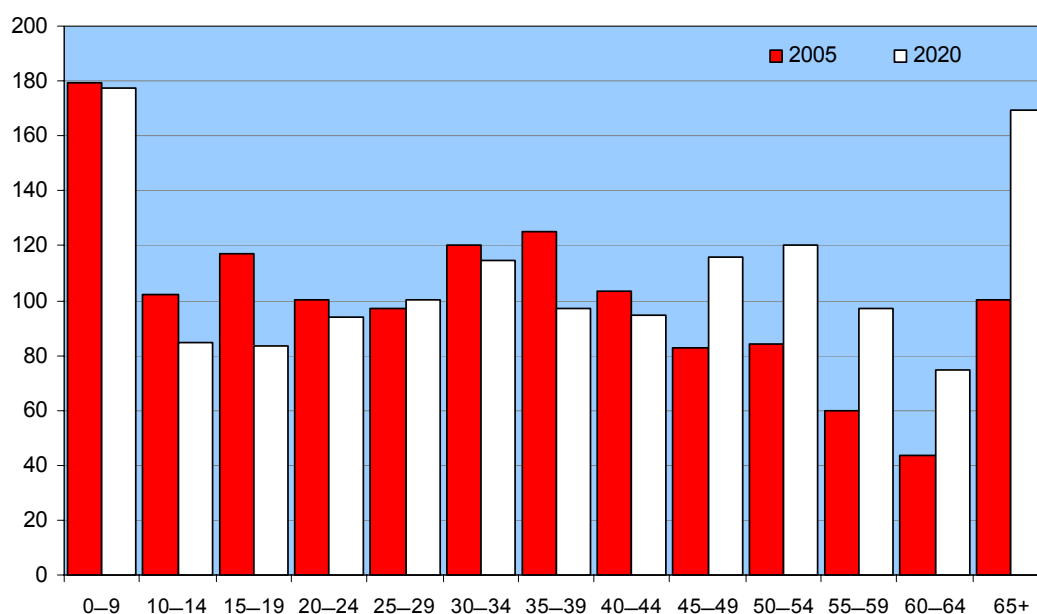


Source: National Bureau of Statistics

We estimate that the upward pressure on wage levels will increase in the coming years in China. The main reason behind this argument is that the general view on the labour supply in China has dramatically changed during the last couple of years. A while ago it was still common to argue that cheap labour force will be available in China for the next twenty years, but the most recent estimates put the number of surplus labour at only around 40 million people (World Bank, 2007). That is a rather small number compared to the estimate of 150 million migrant workers or to the number of employed persons of 764 million.

Some coastal areas have already reported suffering from a labour shortage. However, the shortage can not be generalised to include the whole country and mainly refers to young female workers that have, so far, been working long hours in factories at extremely low rates of pay. The supply of young workers has already declined, partly because of the one-child policy that has reduced the size of the young generations in China (Figure 8) and partly due to the fact that the young generations are entering the labour force later than earlier generations as they study longer. Actually, China's labour force will increase very slowly for the next few years and turn to a declining trend already in 2011 (World Bank 2007).

Figure 8 Population of different age groups in 2005 and 2020, millions.



Source: United Nations <http://esa.un.org/unpp/index.asp?panel=2> (1.12.2007)

Obviously, there are also a number of ways to increase the labour supply in China. A crucial tool would be to increase productivity in agriculture. As long as cheap labour is available and farm sizes are extremely small, farmers do not have the motivation to invest in machinery. The question is also closely related to the highly political question of a land ownership reform. Liberalisation of the currently strict migration policies between rural and urban areas could also increase the labour supply to the cities. Another stock of potential labour exists among people aged over 50. Currently, the participation rate of these people in China is very low (World Bank 2007). A move of production further to inland closer to the existing stock of underemployed people could, of course, also make the

use of country's labour force more efficient. A possible long-term solution to turn the declining trend in the labour supply would, obviously, be to give up the one-child policy.

The considerable hikes in the regional minimum wages have also increased the wage level. For example, Shenzhen (a city near Guangzhou with the highest minimum wage in China) has raised minimum wage level from 610 yuan to 810 yuan during the last two years. The trend is likely to continue as the authorities have already given guidelines to the local governments to ensure that wage increases keep up with the rate of consumer price inflation. At the same time, increased communication possibilities have increased the awareness of Chinese workers of the prevailing wage level and they can now select more carefully the companies with whom they want to work. Already now, labour turnover in China is the highest in Asia.

Overall, China's shift to a trend of increasing nominal and real wages is expected. The strong economic growth has continued for nearly 30 years and it was more surprising that the nominal wage level was stagnant for a large share of population for a long time. It is also useful to bear in mind that China's average wage levels, when compared internationally, are still very low and it will take years before they will converge to wage levels in advanced economies. In addition, the rising wages are also welcomed from the point of view of a more stable structure for economic growth. While the share of labour income of GDP in China has declined over the last years, a rise in wages could stop this trend and finally increase the role of consumption in the economy.

3.3.2 Structural reforms pushing up prices

Production costs and retail prices will, in the near future, also be affected by certain structural reforms. First of all, many prices are yet to be liberalised in China. Fuel, gas, electricity, water and public transport prices as well as tuition fees are closely controlled by the authorities. In addition, the state-owned companies dominate in eg the telecommunication sector and the authorities may thus have a broad impact on prices also in this sector. According to the official data gathered by the OECD (2005), only 3% of the transaction volume of private consumption had administratively fixed prices and 1% had administratively guided prices in 2003. Among farm commodities, the share was similar, but in producer goods more than 10% of the transaction volume was accounted for by administratively fixed or guided prices. However, we would assume that in practice, the role of the government to be much larger than could be deduced from official numbers. In addition to price controls, authorities tend to manipulate supply (and demand), when prices are increasing "too fast" by selling for example more grain from state inventories to market.

Table 1 Share of transactions conducted at market prices, % of transaction volume

	1978	1985	1991	1995	1999	2003
Consumer goods and services	3	34	69	89	95	96
Industrial materials	0	13	46	78	86	87
Agricultural materials	6	40	58	79	83	97

Source: OECD (2005), National Reform and Development Commission, Price Yearbooks

The price for which upwards pressure is particularly expected is the fuel price. During the current period of high crude oil prices, China has kept the price of fuel under the world-market level. As a result, the oil companies that have only a limited access to the domestic crude oil production have been forced to buy expensive crude oil from the world market and refine it with a negative profit margin. To keep the oil companies satisfied and to eliminate fuel shortages, the government has given substantial subsidies to a few oil giants in China.¹⁴ We thus expect that when prices are finally liberalised the fuel price will rise.

Another reform that will have a significant impact on production costs in China concerns environmental legislation. So far, the legislation has been loose and the implementation of the rules weak but as the environmental problems become increasingly serious and awareness of the problems increases, stricter requirements will inevitably raise production costs in China, too. Stricter environmental regulations can also decrease the production and supply of some energy-consuming or highly polluting products and thus increase their prices.

The new labour contract law is also likely to increase production costs in many sectors as it will restrict the use of rental labour force – presuming that the law will be implemented. Nowadays, rental labour is often used for example in the electronic industry and limitations on its use will definitely push up production costs in that sector.

All of the structural reforms we have discussed here are expected to increase production costs and thus inflation. Overall, the loosening of the tight bonds between administration and enterprises is likely to increase the profit-orientation of the enterprises and thus perhaps lead to price increases in certain sectors. On the other hand, the reforms among publically owned companies are expected to increase the companies' productivity and thus ease upward pressure on prices.

3.4 Trends in the productivity development

So far, wage increases and higher raw material prices have been counterbalanced by considerably improved productivity in China. A major factor behind productivity improvements has been the move of a significant share of labour force from low productivity agriculture to industry and service sector. The Chinese government has also been active to raise productivity. It has encouraged domestic companies to learn from their foreign counterparts¹⁵ and in recent years tried to close down inefficient (and polluting) production units. There has also been a considerable increase in resources for education and R&D activities.

According to the OECD (2005), the increase in total factor productivity (TFP; including in the education, technological improvement and sectoral change) contributed nearly 3 percentage points of GDP growth in 1998–2003 (Table 2). Thus, TFP growth contributed about third of the GDP growth, while increase in capital inputs remained the main source of GDP growth. A study by Zheng, Bingsten and Hu (2006) shows similar results for productivity growth in 2000–2005. However, it appears that the total factor

¹⁴ BOFIT Weekly Review 22/2007.

¹⁵ In some strategic sectors it is still impossible to establish completely foreign-owned companies, as authorities try to improve domestic companies' productivity through joint ventures.

productivity growth has actually picked up a little bit in recent years. We calculate that total factor productivity growth has accelerated to 4% in 2004–2006.¹⁶

Table 2 Sources of output growth, percentage points

	1988–1993	1993–1998	1998–2003	2004–2006*
GDP growth	8.9	9.8	8	10.5
Employment contribution	1.0	0.3	0.3	0.4
Capital contribution	4.5	5.5	4.9	6.1
Residual factors	3.4	4.1	2.8	4.1
– sectoral change	0.8	-0.3	0.5	
– education	0.9	0.9	1.1	
– multi factor productivity	1.7	3.4	1.3	

Source: OECD (2005), *own calculations

Total factor productivity calculations in general but particularly for China are subject to a number of problems. First, results are critical to the assumptions made on the physical capital stock for which official data does not exist. Second, data also on the contribution of labour is scarce and does not cover the hours worked. Third, changes in elasticities of the factors used in calculation have considerable impact on the results. Fourth, the total factor productivity figure is a mere residual of the estimation and as such, it consists of more information than just productivity. Thus, we should be very careful not to make too rash interpretations.

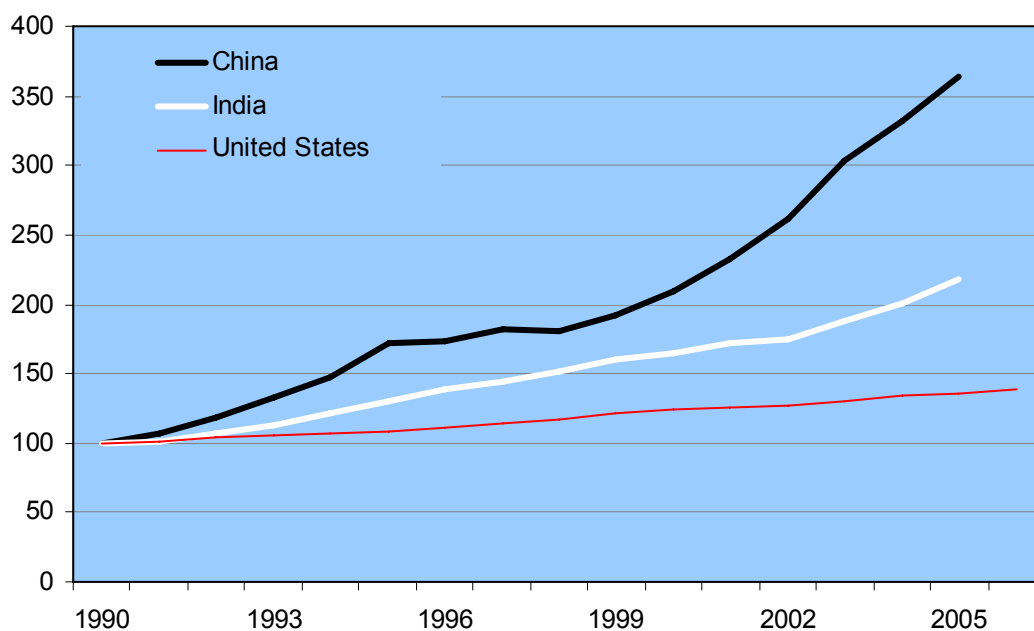
Chinese labour productivity measured as output per worker has been on rapid rise since late 1990s (Figures 9 and 10). Labour productivity has been boosted by education and the sectoral change although the amount of people officially working in the primary industry diminished by only 14 million between 1996 and 2005. However, Chinese official employment statistics have a number of problems and the statistics are believed to overestimate employment levels, so that the output per worker ratios could actually be higher than officially argued.¹⁷ The Conference Board estimates that Chinese labour productivity has increased 8–9% in 2005 and 2006, when for example in the EU countries the increase has been 2%.¹⁸ Unfortunately, the data needed to calculate unit labour costs in China do not exist.

¹⁶ We used the same elasticities for physical capital and labour as the OECD (2005) and our calculations are in line with the OECD's results for the preceding years.

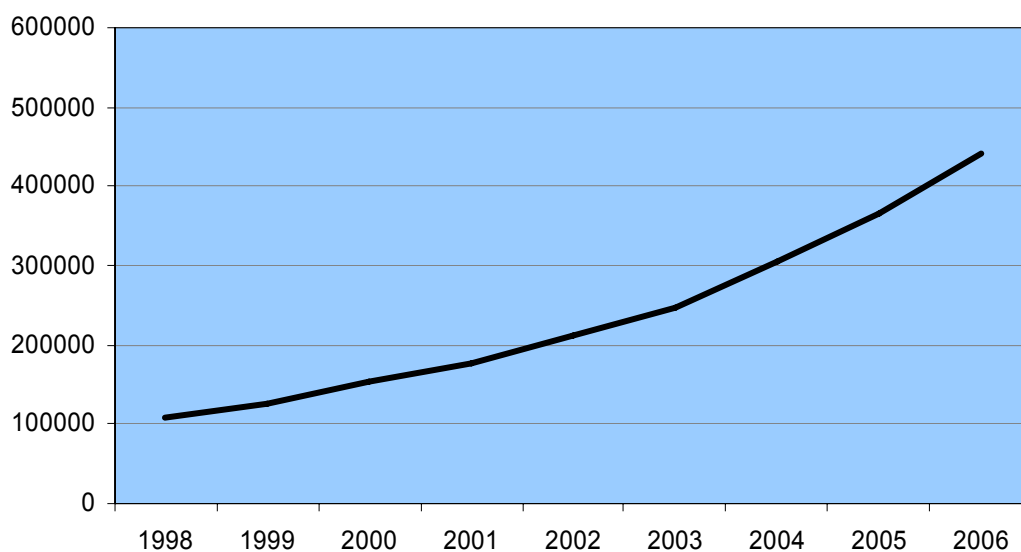
¹⁷ Besides the already mentioned lack of worked hours, migration workers are often counted in the agricultural work force. In addition, workers have little or no incentives to register as unemployed.

¹⁸ Conference Board 23 January 2007, http://www.conference-board.org/utilities/pressDetail.cfm?press_ID=3049 (14.12.2007)

Figure 9 Real GDP per person employed in selected countries in 1990-2006, index 1990=100.



Source: ILO

Figure 10 Industrial output per worker in 1998–2006,¹⁹ yuan

Source: National Bureau of Statistics

The OECD (2005) estimates that productivity in private companies grew at about the double the pace of state-controlled companies in 1998–2003. According to official statistics, also state-owned industrial companies seem to have improved their labour productivity quite rapidly in recent years. However, it might be at least partly due to higher crude oil and raw material prices and fast production growth in some monopolistic sectors. Also in private companies, the growth rate has accelerated.

¹⁹ Companies with over 5 million yuan annual sales and all state-owned companies.

While the main factor behind China's GDP growth is still very high investment growth, China's productivity growth has accelerated during recent years. However, the productivity growth has also been accompanied by fast income growth. As the wage rise is not expected to slow down significantly in the near future, productivity growth will play an important role behind price development in China. There is still plenty of room for China to increase productivity and to avoid price increases, as many sectors, agriculture in particular, remain inefficient.

3.5 The level of competition and mark-ups in China

Despite rising production costs, it is also of course possible to avoid price increases if there is room for companies to reduce their profit margins. Overall, the general attitude seems to be that the level of competition in China is high as enterprises have been making a lot of investments and new production capacity has been created. According to the official data, profits as a share of gross industrial output value have remained nearly constant at around 5–6% since 2000. Among state-owned companies, the ratio of profits to industrial output is extremely high for enterprises operating in monopolistic sectors such as mining, petroleum and metal industries and very low or even negative in food, communication equipment, computer, rubber and plastic industries. Among private enterprises, profits are much more evenly distributed among sectors. Their profits as a share of gross industrial output value have remained at around 4% since 1998. If we look at the foreign companies, their profitability according to China's official statistics seems to be slightly lower than the average profitability of the state-owned companies. According to the balance of payments data, the profit repatriation increased significantly in 2006 when the investment income sent out from China amounted to 37 billion US dollars which corresponds to 6% of total foreign direct investment to China in 1997–2006.²⁰

According to a survey, 73% of the US companies operating in China made profits in 2006. More than a third of companies claimed they had higher profit margins in China than in other countries. These numbers seem to have remained rather stable since 2002.²¹ In addition, the Bureau of Economic Analyses collects data on the US companies operating abroad but has, unfortunately, released data only until 2004. According to that data, the US companies' net income as a share of sales in China jumped above 10% in 2004 which is considerably higher than the figures for other countries (Table 3).

Table 3 Net income/sales ratio of US companies in selected countries in 2000-2004, %.

	2000	2001	2002	2003	2004
China	6.1	5.6	7.3	8.6	10.2
Argentina	0.3	-0.4	-23.0	5.0	6.7
India	1.4	3.3	1.6	3.6	4.8
Japan	2.3	2.9	3.4	4.0	4.8
Mexico	5.0	4.8	4.2	5.2	5.5

Source: US Bureau of Economic Analysis, own calculations

²⁰ This figure, of course, contains also other investment income than the one from the foreign direct investment. However, due to the capital account restrictions we assume the share of other profits to be small.

²¹ Joe Studwell (2005): Let me down slow, China Economic Quarterly, Q42005

Obviously, it is impossible to draw any general conclusions about the mark-up power of the companies operating in China due to the considerable differences between the sectors and lagging data on this issue. However, we would argue that although there has been a lot of discussion on possible overinvestment and shrinking profit margins since 2004, this has not appeared in figures. In addition, foreign companies' operations in China seem to be more profitable than in some other big markets. Thus, the profit margins could indeed work to some extent as buffers against cost-price increases in the coming years.

Complicating the pricing issues in China even further, multinational companies can move income inside the company and between countries through the so-called transfer pricing. As China has capital controls in place, transfer pricing can be a tempting way to move capital in and out of China but at the same time the already weak statistics on companies' profits are mixed up completely.

4 How does inflation in China affect inflation in euro area?

China is about to become the third biggest economy in the world by next year. Its share of the world nominal GDP is over 5% and it is already one of the biggest exporting countries. It is a major supplier of many electronic products, toys and textiles. Due to its large size, China is already affecting inflation across the world. The direct effects of China's rise on the international price level have been ambiguous. On the one hand, demand for energy and raw materials has increased and caused an upward pressure on these prices. On the other hand, China's integration into the world economy has decreased the price of many labour-intensive products.

In this chapter, we will analyse how the possible price increases in China will affect inflation in euro area. We will first go through the general literature on impacts of globalisation on inflation and then concentrate on analysing the role of China in this development.

4.1 Earlier literature on the effects of globalisation on inflation in advanced economies

There are a number of papers studying the impacts of globalisation on inflation in developed economies. A useful survey of the earlier papers can be found in eg Pula and Skudelny (2007). Many of the papers find a statistically significant link from globalisation to a lower inflation. In a number of papers, however, the impact is found to be small; but when also taking into account the indirect effects from the globalisation, the impact becomes considerable.

Chen, Imbs and Scott (2004) found that increased openness to foreign trade has decreased inflation in selected EU countries. According to their estimations for 1988–2000, the increase in trade during the whole period decreased manufacturing prices, however, only by 2.3%, by decreasing mark-ups and increasing productivity in the selected countries. The impact on annual consumer price inflation was -0.14%.

Also the IMF (2006) verified that with respect to broad price indices that include the prices of domestically produced goods and services, import prices have declined during the last decades. However, the relative changes have not become stronger during the last

decade when globalisation has actually intensified. According to the IMF estimation, the decrease in the relative non-oil import prices brought down inflation in advanced economies by 0.25–0.5 percentage points in 1998–2002, first during the Asian crisis and later on due to the global slowdown. Since 2002, however, the effect has been close to zero. The study also finds that due to the different level of openness, impacts of the globalisation on inflation vary considerably among advanced economies.

The IMF studies also the price development between different sectors and finds that in the sectors that are more open to foreign trade (textiles, telecoms, electrical and optical equipment), producer prices have decreased with respect to producer prices in other sectors. A rise in trade openness over the last 15 years in one sector has reduced producer prices in this sector by about 0.3 percentage points annually compared to the producer prices in other sectors.

A recent paper by Pula and Skudelny (2007) uses a number of different methods in trying to estimate the impact of the increasing share of imports coming from cheap-cost countries on euro area inflation. They take into account the fact that the biggest impact on euro area inflation is not coming from changes in import prices as such, but from changes in the market shares of low-cost countries, such as China. Interestingly, according to the results by Pula and Skudelny, this market-share effect has been much larger for producer price inflation than for consumer price inflation in euro area. Estimates on the negative impacts on producer price annual inflation vary between 0.1 and 0.3 percentage points in 1996–2004 depending on the used econometric method. The impact on annual consumer price inflation would have been only 0.05–0.07 percentage points in average. In the panel-data estimation, Pula and Skudelny (2007) also try to capture the indirect price effects into their model. By doing so, they indeed find much more considerable impact of globalisation on price levels in Europe. For example, the annual effect of globalisation on the producer prices could have been up to -1 percentage point in 1978–2003.

In addition to Pula and Skudelny, also the other above mentioned papers have argued that the indirect impact of globalisation on inflation have actually been more significant than the direct impact of increased cheap imports. The IMF (2006) paper for example finds that the sensitivity of inflation to domestic economic business cycles has decreased for the last 20 years due to the increasing foreign trade. Borio and Filardo (2007) came into the same conclusion.²² Chen, Imbs and Scott (2004) found that globalisation puts more pressure on pricing and argued that this indirect impact was actually more significant than the direct impact of increased imports.

²² Borio and Filardo (2007) also found that the global output gap had become a significant factor behind inflation but this result has been later on questioned by a number of other studies.

4.2 Trends in China's export prices

The only paper studying the particular impacts of China on prices at aggregate level in other countries that we are aware of is the one by Kamin, Marazzi and Schindler (2004). According to their results, China's impacts on prices in other countries vary considerably among countries mainly depending on the degree of the trade links the countries have with China. Overall, however, the impact of Chinese exports on inflation in other countries is estimated to have been rather modest.

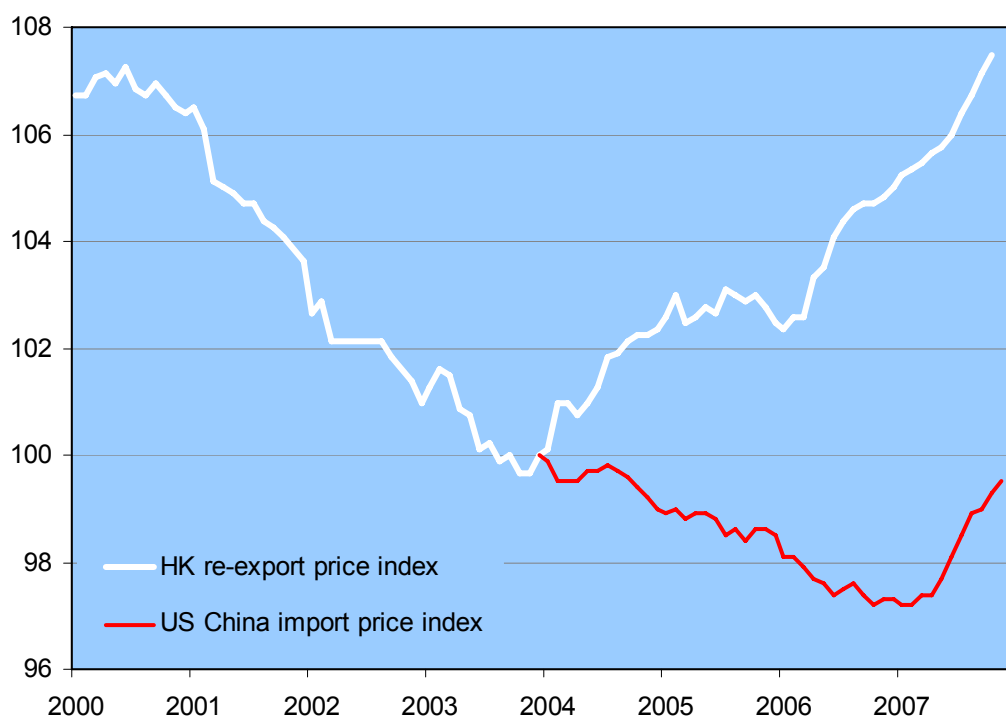
One of the reasons for the caveat in the literature probably is the lacking data on export price development in China. Although China recently started to publish unit price data on its exports, it is still difficult to analyse the price developments using that information. Due to the shortness of the time series and the lacking quality corrections, it is impossible to say whether an increase (decrease) in China's export prices is due to a quality improvement (deterioration) or if it really indicates higher (lower) prices for the same products. In practise, Chinese exports have probably experienced a fast quality improvement together with declining prices for the most part of last decade. In this case, the unit price index would underestimate the real decrease in prices.

We thus have to analyse the data available from other countries to capture an idea of price developments of Chinese exports. China still exports a large share of its products via Hong Kong. Thus, by looking at the re-export prices of Hong Kong we might be able to capture an idea of what is happening to exports from mainland China (assuming that the share of value-added produced in Hong Kong has remained constant). The most illuminating statistics from the euro area point of view are the price statistics of US imports from China. While this data takes into account the quality corrections, there is, however, a problem regarding the short time series of US data.

As we can see from Figure 11, the Hong Kong re-export price index decreased by 7% from 2000 until 2003. Since then, the trend has been upwards. If we look at the US data which makes corrections for the quality changes, price increases remained negative longer and the trend turned positive only in the summer 2007. In any case, the price changes over the recent years have been rather small. From the beginning of 2004 until summer 2007, import prices declined only around 3% and since then they have basically recovered to the level that prevailed in 2004.

Obviously, we have to be very careful before drawing any final conclusions about the rising export price trend as the rise in both Hong Kong export prices and in US import prices can be largely explained by the gradual appreciation of the renminbi against the HK dollar and US dollar since July 2005. Actually, if we switch US import prices into yuan terms, the prices have continued to decline.

Figure 11 China's export price development in 2000-2007, index 12/2003=100.



Source: U.S. Bureau of Labour Statistics, Hong Kong Census and Statistics Department, own calculations

4.3 Considerations on the future impact of China's price development on inflation in euro area

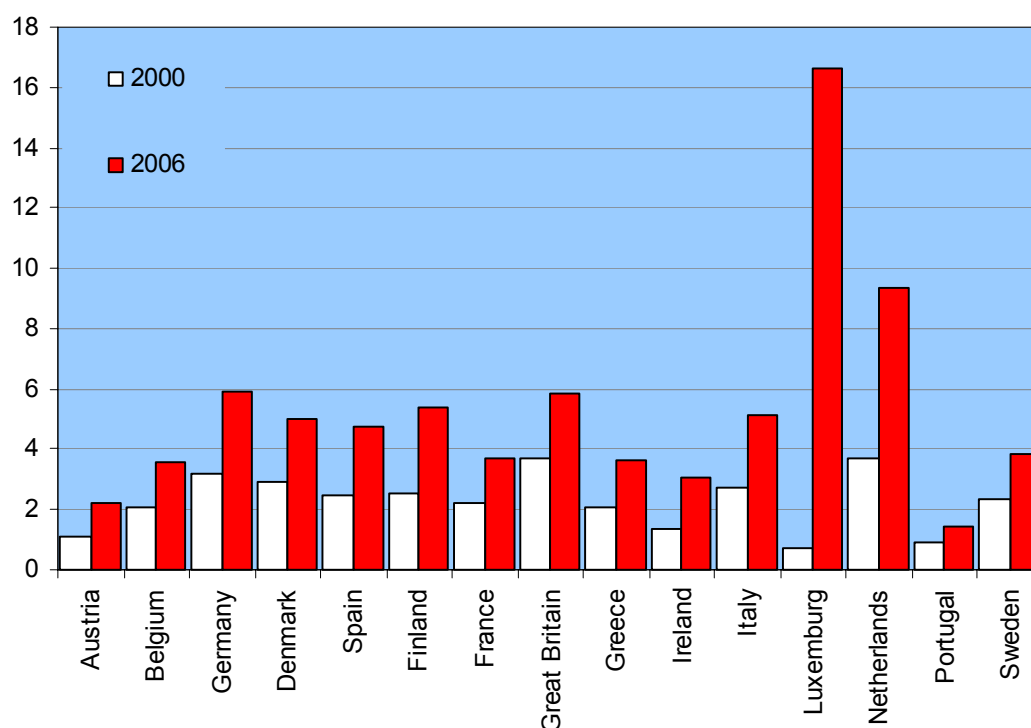
As we have seen from earlier studies, the impact of globalisation varies significantly among countries. The dominating factor for the direct impact is obviously the degree of the country's trade openness. From the point of view of the general price level, the value of Chinese imports is still less than 2% of GDP in most EU countries which gives support to the studies that estimate the direct impact of the cheap import products from China on inflation in advanced countries to be small. Thus, while the impact from the possible rise in China's price level is also expected to have only a limited impact on prices in, for example, euro area, much more important from this perspective is to look at the development of the market share of products that are coming from countries with lower cost level. If the cheap goods are substituting the expensive ones, the impact on inflation is larger than if there are only changes inside the prices of the cheap goods.

As we can see from the Figure 12, the share of imports coming from China has increased substantially in the EU15 countries from 2000 to 2006. On average, the share of imports from China of total imports was 5% in 2006 compared to less than 3% in 2000. If we drop Luxembourg and Netherlands²³ –that seem to be outliers here– from our comparison, Finland has seen the largest increase in the market share of Chinese products, at nearly 3 percentage points. Thus, if we assume that Chinese products are cheaper than

²³ The various ports of the Netherlands are significant transit entry points for goods from China to the other European countries.

the products coming from other countries, the impact of China's increasing market share has had a more substantial impact on prices in Finland than for example in France or in Sweden where the rise in China's market share has been slower. On the other hand, one could assume that in the coming years, the impact of China will be actually larger in the countries which so far have traded relatively little with China and where the Chinese products have more room to gain market share in the future.

Figure 12 Imports from China in EU15 countries, % of total imports in 2000 and 2006.



Source: Eurostat

Despite the fact that direct impacts of globalisation on inflation in the advanced economies are estimated to be rather small, on some specific sectors and products these effects can be considerable. For example, China is one of the biggest consumers of raw materials and energy and the boom in China has influenced many raw material prices in the world market (Figure 13). According to a study made in the Bank of Canada, raw material prices and in particular oil price have started to follow the cycles of the industrial production of emerging Asia more closely than those of the OECD countries since the Asian crisis (Cheung and Morin, 2007).

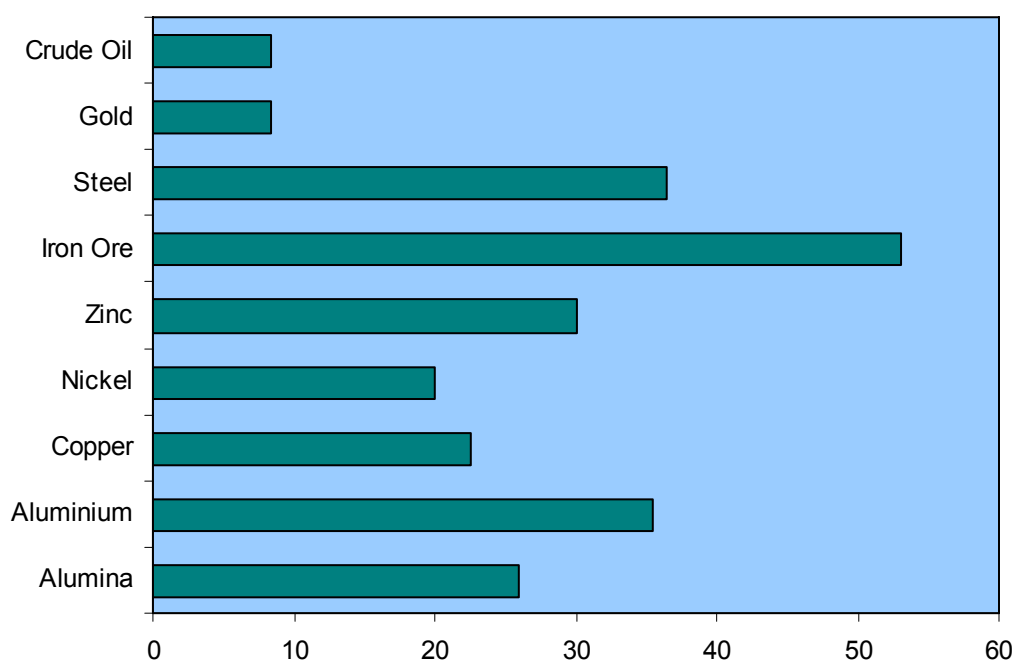
In the coming years, China's demand of energy, raw materials and also food will increase rapidly.²⁴ However, the price pressures can considerably differ among sectors as China itself has made huge investments to increase the production capacity of certain products (eg steel and aluminium). An economic slowdown could lead to a substantial oversupply of these products and thus cause a negative price impact to the world market.

As we have seen, the earlier papers have found that the indirect impact of the globalisation on inflation in advanced economies has actually been much more significant

²⁴On energy, see e.g. IEA World Energy Outlook 2007.

than the direct impact of increased trade. We would expect also the indirect impacts to vary between countries. Countries with a production structure closer to the one in China should have faced more pressure on pricing than countries that do not directly compete with the Chinese products.

Figure 13 China's Share of Global Consumption by Commodity, 2006 (%)



Source: Citi Investment Research

Unfortunately, we are not aware of studies that could answer this question profoundly. However, Soares Esteves and Reis (2006) have estimated how much the euro area countries' effective exchange rates, or in other words competitiveness, have been affected by the competition posed by countries like China. The competition has increased due to either same kind of export product specialisation or the same export markets. Obviously, all euro countries are competing in the same markets as are Chinese products. Thus, the weight of China in the euro area effective exchange rate should actually be larger than it is when the traditional calculation method, which takes into account solely the real exchange rate fluctuations between the two trading partners, is used. In addition, out of euro countries, Greece, Portugal and Italy compete in the world market with similar products to China, so that when measuring these countries' competitiveness, the prevailing price level in China plays even a larger role.

While the study by Chen, Imbs and Scott (2004) already revealed large differences among the large EU countries, a study using more detailed sectoral data with an updated time series would be needed to further analyse whether the competition coming from China has affected inflation differently in the euro area countries. More research is also needed to know how the possible new trend of rising costs in China will affect competition and pricing all around the world.

5 Conclusions

As we have seen, inflation remained slow in China for most of the last decade. Successful macroeconomic policies together with some specific characteristics of the Chinese economy made the combination of very rapid growth and low inflation a long-standing phenomenon. While a number of factors may increase the inflationary pressures in China in the coming years, gradually rising prices can be seen as fairly natural and, from some perspectives, even welcomed.

From the point of view of China's monetary policy, one of the near-term critical issues is the country's ability to cope with the external pressure on the money supply, which according to the monetarist theory defines inflation. The external pressure is expected to remain strong in the near future first of all because of the trade surplus is expected to moderate only along the years. Also the capital inflows are expected to continue if the forecasts of fast economic growth are realised and revaluation expectations remain strong. In a somewhat longer perspective, the reforms of the exchange rate regime and the financial sector, together with the liberalisation of capital flows will have major impacts on price dynamics in the country.

Structural reforms or supply shocks in some sectors may have considerable short-run impacts on inflation in China. A good example of a supply shock was seen in 2004 when a decrease in grain supply caused a temporary acceleration of inflation. The future price pressures can also be linked to strong demand growth that finally will cause the economy to run out of excess resources, eg surplus labour. In that case, the increase in inflation could be also partly due to the so-called Balassa-Samuelson effect. The theorem states that a higher productivity growth in the tradable sector (due to the high share of foreign-owned and private enterprises), which increases wages in that part of the economy, can push up wages also in the non-tradable sectors, where productivity growth is lower. While a gradual increase in the still very low wage levels could at least partly remove some structural weaknesses in the Chinese economy, continuous investment in education and R&D activities will support productivity growth and thus decrease the pressures on prices. After all, China still has a large room for productivity improvement in eg agriculture which would then release labour for other sectors of the economy.

One has to bear in mind that price fluctuations have been and still are a politically heated issue in China. The policies of the central government (together with the central bank) to keep inflation figures low are determined and the authorities are probably ready to take steps backwards in the reform policy to prevent an acceleration of inflation. Actually, we saw this in the autumn 2007 when the emphasis of the monetary policy shifted back towards the administrative guidelines after the numerous hikes of interest rates and reserve requirement seemed not to bring down inflation. While the policy tools to control inflation can thus be far stronger than what one might expect, the sometimes colliding aims of central and local governments can also harm the effectiveness of the policy tools.

Although China's increasing demand has raised raw material and energy prices in the world market, the impact of China's rise on inflation in advanced economies has mainly been negative as the cheap labour force has increased the global production capacity and the prices of many consumer products have declined. However, following the results from studies on China's impact on inflation in other countries, the direct impact of increased trade should not be overestimated and also the effects of the possible increase in the cost level in China on inflation in other countries is expected to remain small. In addition, what really matters for average import price developments in many countries is not so much the

change in Chinese export prices but the change in the market shares of Chinese products. Even if the prices of Chinese products were to rise more rapidly than before, this may not lead to an acceleration of import price inflation in eg euro area countries if the Chinese market share continues to increase. This reflects the generally much lower price level of Chinese products.

The magnitude of the future indirect impact of China on inflation in other countries is far more difficult to estimate. While studies have shown that the tougher competition resulting from China's increased role in the world economy has brought down prices in the past, it is not at all certain that these effects would work symmetrically in the case of rising costs in China. In particular, globalisation is not at all over and if production costs rise in China's coastal area, production can move further China's inland or to other even cheaper Asian countries. At the same time, China's developed areas will start producing technologically more advanced export products. It already has great plans to start exporting large quantities of cars and ships. When this happens, the level of competition in these sectors will probably become globally more intensive and negative impacts on inflation would continue.

Overall, the impact of globalisation on inflation should not be overestimated. Summarising the active discussion on this topic, Rantala (2007) concludes that it is monetary policy that ultimately determines the pace of inflation. Globalisation can only have short- and medium-term impacts on inflation if central banks keep their inflation targets unchanged.

References

- American Chamber of Commerce (2004, 2005, 2006 and 2007), Business Climate for U.S. Firms in China
- Borio, C. and Filardo, A. (2007) Globalisation and Inflation: New Cross-Country Evidence on the Global Determinants of Domestic Inflation. BIS Working Paper 227.
- Chen, N., Imbs, J. and Scott, A. (2004) Competition, Globalization and the Decline of Inflation, CEPR Discussion Paper 4695.
- Cheung, C and Morin, S. (2007) The Impact of Emerging Asia on Commodity Prices. Bank of Canada Working Paper 2007-55.
- Ha, J., Fa, K. and Shu, C. (2003) The Causes of Inflation and Deflation in Mainland China. Hong Kong Monetary Authority Quarterly Bulletin, September 2003, 23-31.
- IEA (2007) World Energy Outlook 2007 – China and India Insights.
- IMF (2006) "How Has Globalisation Affected Inflation?" in the World Economic Outlook – Globalisation and Inflation, April 2006.
- Kamin, S. B., Marazzi, M. and Schindler, J. W. (2004). Is China "Exporting Deflation?" Board of Governors of the Federal Reserve System International Finance Discussion Papers, No. 791.
- Koivu, T. (2008) Has Chinese Economy Become More Sensitive for Interest Rates? Studying Credit Demand in China. BOFIT Discussion Paper, forthcoming.
- Kojima, R., Nakamura, S. and Ohyama, S. (2005) Inflation Dynamics in China. Bank of Japan Working Paper No 05-E-9.
- McCauley, R. And Ma, G. (2007) Do China's capital controls still bind? Implications for monetary autonomy and capital liberalisation. BIS Working Paper 233.
- Mehrotra, A. (2007) Demand for money in transition: Evidence from China's disinflation. International Advances in Economic Research, forthcoming.
- Mehrotra, A., Peltonen, T. and Santos Rivera, A. (2007) Modelling Inflation in China – A Regional Perspective. BOFIT Discussion Paper 19/07.
- OECD (2005) Economic survey: China
- Pula, G. and Skudelny, R. (2007) The Impact of Rising Imports from Low-Cost Countries on Euro Area Prices and Labour Markets, Some Preliminary Findings. Paper presented at ECB conference "Globalisation and the macroeconomy", 23-24 July 2007.
- Rantala, A. (2007) Globalisaatio ja Phillips-käyrä: Vaikuttaako kotimainen tuotantokuilu enää inflaatioon? BOF Online 6/07. (Available in Finnish)
- Soares Esteves, P. and Reis, C. (2006) Measuring Export Competitiveness: Revisiting the Effective Exchange Rate Weights for the Euro Area Countries. Banco de Portugal Working Paper 11/2006.

World Bank (2007) Special Focus: Is China Reaching the End of Its Labour Surplus Phase? China Quarterly Update, September 2007.

Zheng J., Bingsten A., Hu A., (2006) Can China's growth be sustained? A Productivity Perspective. Göteborg University Department of Economics, Working paper no. 236

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