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Chinese Economic Statistics—Caveat Emptor!

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Abstract

The Chinese government admitted in late 2001 that its statistical system was plagued with flaws. This has revived the age-old question of whether China's reported rate of growth is real. Some analysts have long argued that China's real GDP growth figures have been inflated, often because of false reporting by localities and systemic statistical distortions. This article highlights indicators which have shown signs of being questionable: gross domestic product (GDP), bilateral trade, unemployment, non-performing loans (NPLs) and FDI and capital flight. Reforms are now being undertaken, but while the long-term trend is positive, one should still exercise great caution when using Chinese statistics.

From the buzzing factories in Guangdong and spanking new skyscrapers in Shanghai, it is certain that the Chinese economy is in transition to a market economy and has in fact expanded over the last two decades. However, the robustness of the economy is really anyone's guess, given that the quality of Chinese economic statistics remains weak. To many sceptics, China's official economy could be almost fictional. Years of exaggeration to please Communist central planners have burdened the nation with mythical statistical measures that do not accurately describe even the most common indicators of economic output. This article attempts to highlight some of the key Chinese economic indicators that are the subject of controversy and draw some general conclusions on the usability of Chinese statistics.

China's Statistical System

Owing to its central planning legacy, post-1979 China inherited an extensive statistical reporting network throughout the country, from county to city to province and then up to the State Statistical Bureau (SSB) at the centre, which has now been re-named the National Bureau of Statistics (NBS). Beside the NBS there is also an independent ministerial system, which is mainly concerned with functional data related to the work of the individual ministries (see Figure 1). The NBS system today employs more than 60,000 full-time statistical workers whose job is to collect and compile various kinds of economic and social statistics. Under its direct control are three key sub-networks: the national enterprise survey unit, national urban survey

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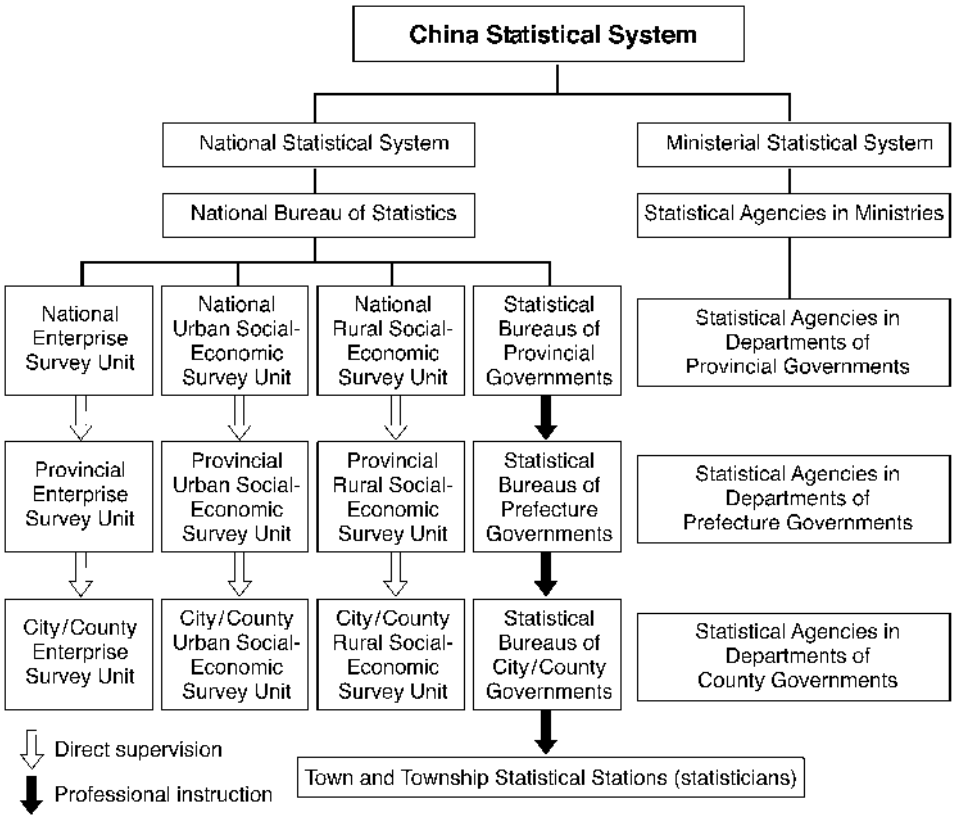


Source: John Wong, *Understanding Chinese Statistical System* (Singapore, East Asian Institute, National University of Singapore, 2000).

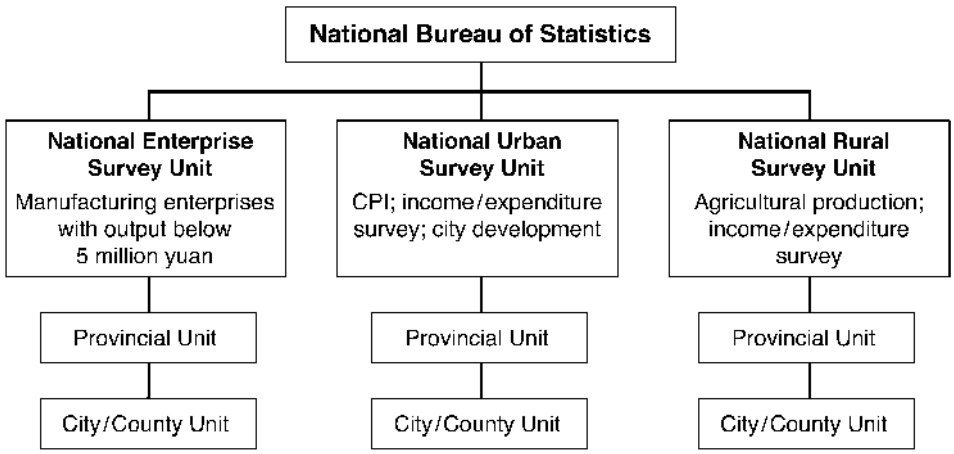
Figure 1. China's statistical system.

unit and national rural survey unit (Figure 2). Below the national level, individual provinces, cities and special economic zones also release their own statistical yearbooks. Even the smaller county towns publish statistical yearbooks. From the ministerial statistical networks, many ministries and state agencies regularly put out specialised statistical yearbooks. Major industries, such as the motor industry and the electronics sector, also publish their own statistical yearbooks.

China's ability to publish all these comprehensive national statistics speedily has never failed to amaze many observers. Key economic indicators like industrial output and consumer price index of the current month are normally released in the middle of the following month. Such quick release of important economic statistics, even well ahead of the more developed economies,[1] is truly unusual, considering the size and diversity of China's economy.

Despite having a fairly elaborate statistical system compared with many developing economies, China continues to be one of the poorer performers in terms of quality and regularity of data releases. According to the latest 1999 report by the Washington-based Institute of International Finance (IIF), a research consortium for the world's largest financial institutions, China only managed to meet six out of the 25 stringent IIF data release standards (see Tables 1A and 1B).

Similarly, according to a report by the Hong Kong-based Political & Economic



Source: John Wong, *Understanding Chinese Statistical System* (Singapore, East Asian Institute, National University of Singapore, 2000).

Figure 2. Three key national survey units.

Table 1A. Performance in meeting IIF data standards, December 1999

	Meeting the new IIF standards	
Major emerging market economies	Total of 25 variables	%
Argentina	23	92
Mexico	23	92
Thailand	23	92
Czech Republic	21	84
Indonesia	20	80
Malaysia	19	76
South Korea	15	60
Philippines	14	56
Hong Kong SAR	12	48
Kuwait	7	28
China	**6**	**24**
Egypt	4	16

Risk Consultancy in 1999, China's quality of economic statistics was also rated as one of the weakest (see Figure 3).

We shall attempt to evaluate a few of the key Chinese economic statistics in greater detail, and highlight the possible sources of inconsistency and inaccuracy of these critical indicators. From this assessment, we can reach some conclusions on the reliability and usability of China's economic statistics.

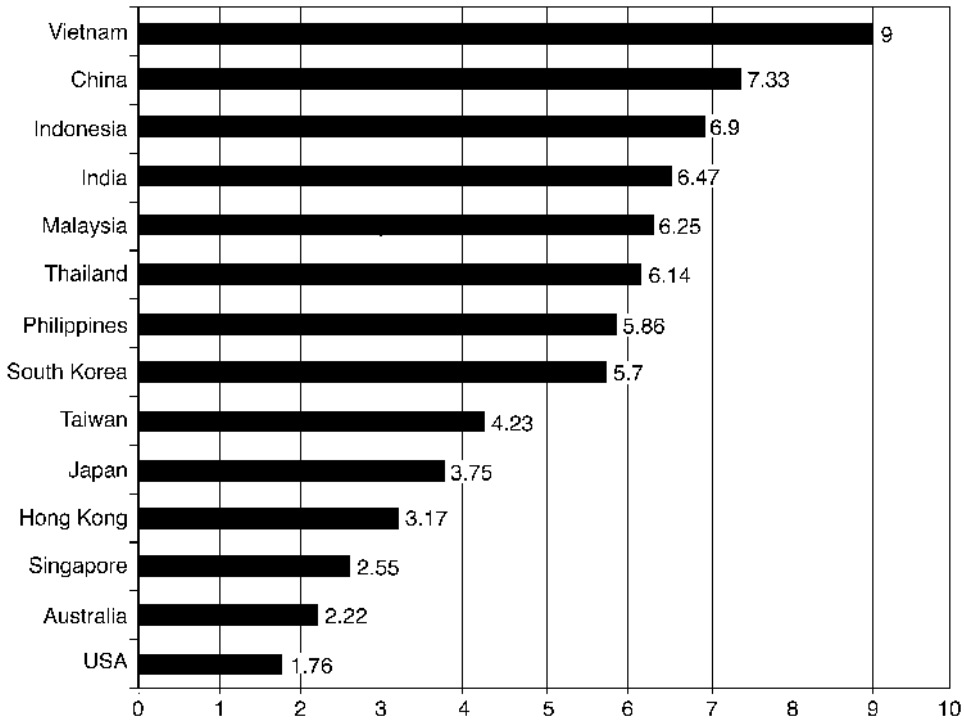
Gross Domestic Product

One of the major contributors to what is widely believed to be an exaggeration of China's GDP growth is the industrial production figures, which contribute about 40% of overall GDP. Chinese industrial production figures are alleged to have been

Table 1B. Meeting the IIF standards

	Standard (weeks lag)	China	Hong Kong	Indonesia	Malaysia	Philippines	South Korea	Thailand
Output	12	X	X	X	X	X	X	X
Expenditure	12		X	X	X	X	X	X
Production Index	6	X			X		X	X
CPI	2	X	(X)	X	X	X	X	X
PPI	2	…					X	X
Trade	4	X	X	X	X		X	X
Current account	12			X	X	X	X	X
Capital account	12		…	X	X	X	X	X
Reserves	1			X				X
Disposition of reserves	1	…		X			…	X
External debt	12		…	X	X		X	X
Public external liabilities	12		…	X	X	X	X	X
Private external liabilities	12		X	X	X		X	X
Private financial sector	12		…	X	X	X	X	X
Private non-financial sector	12	…	…	X	X		…	X
Short-term debt	12		…	X	X		X	X
Amortisation schedule	12	…	…		…	…	…	…
Monetary survey	4		X	X	X	X		X
Monetary aggregates	4	X	X	X	X	X	X	X
Domestic credit	4		X	X	X	X		X
Central bank balance sheet	4		X	X	X	X		X
Interest rates	1	X	X	X	X	X	X	X
Central government budget	4		X	X		X		X
Public sector accounts	12	…	X				…	
Public debt	12	…	…		X	X	…	X

Notes: X = meets IIF standard, (X) = within 1 week of meeting IIF standard for monthly data or 2 weeks for quarterly data, … = not reporting variable, blank = does not meet IIF standard.
Source: Institute of International Finance, *Data Release Practices of Emerging Market Economies: 1999 Assessment* (Washington, DC, IIF, 1999).



Note: All grades are on a zero to 10 scale, with zero being the best grade possible and 10 the worst.
Source: Political & Economic Risk Consultancy Ltd, Hong Kong, June 1999.

Figure 3. Quality of historical economic statistics.

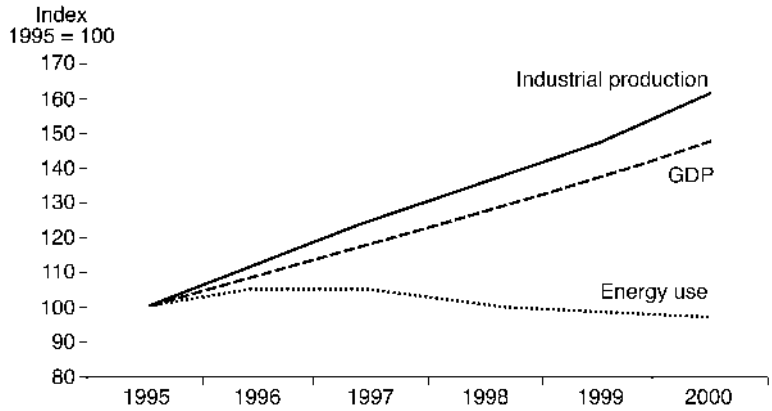
manipulated, as there has been evidence of fiddling by local bureaucrats in order to meet the central government's growth targets. For example, looking at the past trends of China's gross industrial production and freight traffic (air, sea and land) growth, industrial production was supposed to have risen at a high average annual rate of almost 14% over 1990–2000. Yet the growth of freight traffic over the same period was a mere 3.4%, a difference of 10.5 percentage points. This is highly inconsistent when we compare with the period 1980–89, when the discrepancy between industrial production and freight growth rates (10.5% and 6.1% respectively) was a much narrower 4.4 percentage points (see Table 2).

Furthermore, some analysts have argued that China has a tendency to overvalue the stocks of unsold goods produced by state-owned enterprises (SOEs) or to

Table 2. Industrial production and freight growth rates (%)

	Industrial production growth	Freight growth
1980–89	10.5	6.1
1990–2000	13.9	3.4

Source: *China Statistical Yearbook*, 2001.



Source: China Statistical Yearbook, 2001.

Figure 4. China's GDP, industrial production and energy consumption, 1995–2000.

understate inflation. In 1998 the NBS also reclassified the coverage of industrial enterprises, to better reflect the changing ownership status of these enterprises. In one stroke, this rendered all time series comparisons of the years up to 1997 with those since 1998 impossible.[2]

Rawski is of the view that prior to 1998 China's statisticians were making slow but steady progress in improving the reliability of their data.[3] Then came Premier Zhu Rongji's pledge that China would hit 8% growth in 1998, despite the slowdown in the rest of Asia, which resulted in 'grossly exaggerated' official GDP data. Subordinates, fearing that failure to deliver the 8% target might endanger their careers, forced statisticians into upward revisions or simply fabrication of figures. This then shattered China's statistical reporting network.

In his study Rawski has also noted that GDP figures did not tally with other Chinese data. For example, trends in energy use are fairly closely correlated to GDP in most countries, but have been running in opposite directions in China. Between 1996 and 2000 official figures showed that China's GDP and industrial production grew cumulatively by 36% and 9.1% respectively, while energy consumption fell by 7.8% (see Figure 4). Despite massive deficit spending by the central government in recent years, Rawski suggests that the actual GDP result for 1998 was somewhere between -2.0 and $+2.0\%$, with a slight decline in 1999 and a slight improvement in 2000.[4] He has argued that since energy consumption contracted by 4.3% in 1998, the possibility of negative growth could not be dismissed, as most industrialised countries would always see a high correlation between industrial production growth, GDP and energy use.

Rawski's argument has also been supported by Wang Xiaolu, Deputy Director of the National Economic Research Institute of the China Reform Foundation, a quasi-independent think-tank in Beijing, who agrees that the problems of data collection in China were exacerbated by Premier Zhu's 1998 announcement. According to Wang, official data had overstated actual growth by an average of 2 percentage points throughout the 1990s.[5] In fact, the inflated growth was so apparent that Lin Xianyu, China's Chief Statistician, had to admit publicly that there were 'exaggerations' in reporting.[6] In 1998 only one of China's 31 provinces and administrative regions reported a growth rate below the official 7.8% target (see Figure 5).

According to the NBS, they had to 'squeeze out' the over-reported part to obtain

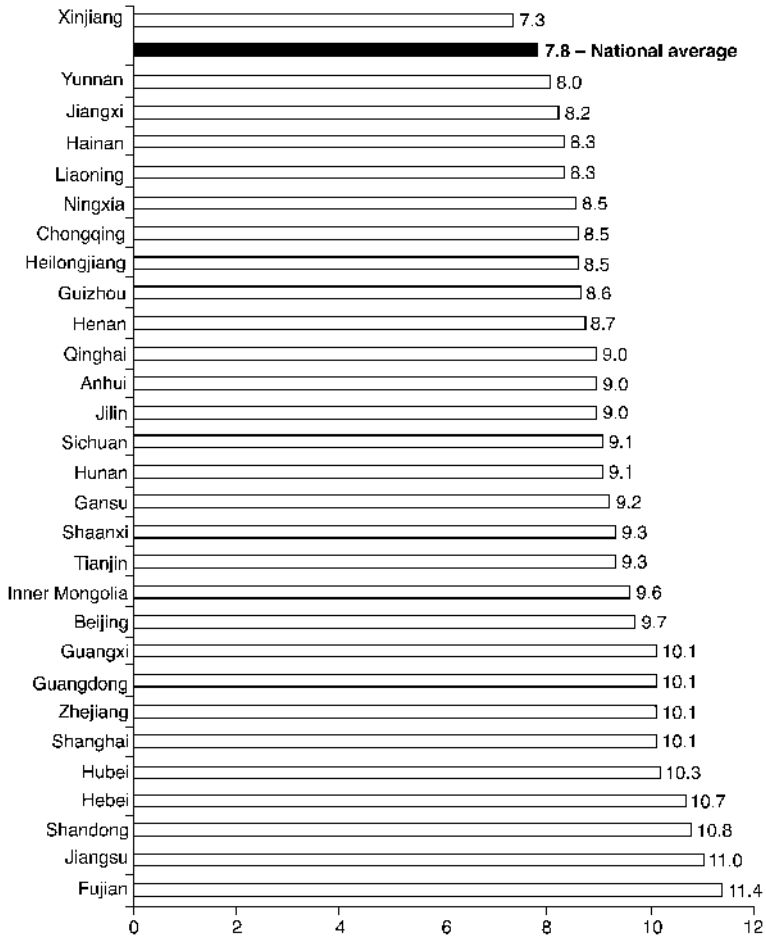


Figure 5. China's provincial growth rates in 1998 (%).

the official 7.8% in 1998.[7] Similarly, using reasonable alternative measures of price increases to deflate nominal GDP, a study by the World Bank found that China's average GDP growth may have been 1.3 percentage points lower than official figures during 1986–95.[8]

Comparing the various independent estimates (see Table 3), Rawski's estimates may be considered to be extreme. The World Bank, which has to be 'politically correct' with China, reflects a mild discrepancy of about 1.2 percentage points against China's figures. Amongst these estimates, the OECD's seems to be considered the most 'neutral'. The agency has estimated China's GDP to be 2.7 percentage points lower than its official figures between 1987 and 1995, largely attributable to substantially lower OECD estimates of industrial value added and labour productivity in services.

Inaccurate measures of GDP-related indicators make it extremely difficult for analysts to predict the Chinese economy. Also affected are billions of foreign investment dollars, since official Chinese data are often all that overseas companies have. This would create a distorted impression of the general health of the economy, resulting in undesirable or misled public policies as well as business strategies. For

Table 3. Official vs independent estimates of China's GDP growth (average annual % change)

	China official estimate	Independent estimate		Percentage point differential
1978–95	9.4	World Bank	8.2	1.2
1987–95	9.8	OECD	7.1	2.7
1978–98	9.1	Chinese National Economic Research Centre	8.4	0.7
1998	7.8	Rawski	− 2.0 to + 2.0	5.8 to 9.8
1999	7.1		− 2.5 to + 2.0	5.1 to 9.6
2000	8.0		2.0 to 3.0	5.0 to 6.0
2001	7.3		3.0 to 4.0	3.3 to 4.3

Sources: World Bank, *China 2020: Development Challenges in the New Century* (Washington, DC, World Bank, 1997); Angus Maddison, *Chinese Economic Performance in the Long Run* (Paris, Organisation for Economic Co-operation and Development, 1998); Tan Hongkai, 'Moderate Economic Growth Predicted', *China Daily*, 12 June 2000; National Bureau of Statistics, *China Statistical Yearbook* (1999); Thomas Rawski, 'How Fast is China's Economy Really Growing?', *China Business Review*, 29, March–April 2002.

example, high-level ignorance or concealment of the failure of the Great Leap Forward in the late 1950s only compounded its catastrophic effects, as statistics on grain and iron and steel went totally awry, resulting in a subsequent famine in China. If China's economy is not booming as claimed by its bullish GDP data, foreign companies may need to re-evaluate their China strategies.

Bilateral Trade

Just as confusing as the country's real economic growth, China's bilateral trade figures are often disputed by many of its trading partners. The most commonly cited example is the US, which in 2000 reported that the bilateral trade deficit with China reached $84 billion. The Chinese, on the other hand, put the deficit at only $30 billion. However, recent studies have indicated that neither side has given a true picture. This can better be gained by looking at Hong Kong's role as a middleman in China's trade with the US, with Hong Kong companies playing a big role in selling manufactured goods such as toys, textiles and footwear to the US. More than two-thirds of China's exports to the US are estimated to have been re-exported from Hong Kong, yet Chinese trade figures count such re-exports only as goods shipped to Hong Kong as the final destination. They therefore hugely understate sales to the US. The US makes the same error in calculating its own exports to China. All US goods exported to Hong Kong are counted as exports to Hong Kong as the final destination, even though some are later re-exported to China. The amount of US goods that are re-exported to China via Hong Kong is about one-quarter of all American goods that end up in China.

In a 1994 study Lardy recalculated trade flows between China and America after taking into account re-exports through Hong Kong and stripping out any value added in Hong Kong (typically about 25%). He concluded that since 1990 the US Department of Commerce had consistently overstated the bilateral deficit by a third (see Table 4).[9]

Similarly, analysis by the IMF has concluded that while China's overall trade

Table 4. Adjusted US trade flows and deficit with China (billion $)

	US Department of Commerce figures			Adjusted figures		
	Exports	Imports	Trade deficit	Exports	Imports	Trade deficit
1990	4.8	15.2	10.4	6.0	13.4	7.4
1991	6.3	19.0	12.7	7.8	16.2	8.4
1992	7.5	25.7	18.2	9.6	21.5	11.9
1993	8.8	31.5	22.8	11.7	25.9	12.2
1994	9.3	38.8	29.5	12.8	32.5	19.7
1995	11.7	45.6	33.8	16.5	38.7	22.2
1996	12.0	51.5	39.5	17.5	44.0	26.5
1997	12.8	62.6	49.7	18.4	54.5	36.1
1998	14.3	71.2	56.9	19.1	63.2	44.1
1999	13.1	81.8	68.7	18.1	73.6	55.5
2000	16.3	100.1	83.8	21.9	90.7	68.8

Notes: 1. Imports are based on US Customs Service general customs value—the actual cost of the goods, excluding import duties, freight, insurance and other charges.
2. Updated information from Nicholas Lardy, Brookings Institution, for data in 1999 and 2000.
Source: Nicholas Lardy, *China in the World Economy* (Institute for International Economics, 1994).

with the rest of the world is broadly captured by its trade statistics, partner countries' data more accurately reflect bilateral trade flows.[10] Nevertheless, the analysis has also shown that trading partners' data have done injustice to China's statistics by (1) overstating imports from China by including the value added in Hong Kong on imports from China and (2) understating trading partners' exports to China by not taking account of their re-exports to China through Hong Kong.

According to Fung & Lau, the discrepancy is also partially due to the peculiar method the US uses in calculating the values of its exports.[11] Unlike most countries (including China), which record their exports on a free-on-board (FOB) basis, US exports typically are calculated on a free-alongside-ship (FAS) basis. The FAS value does not include loading, insurance and freight costs. Both China and US imports are measured using a cost, insurance and freight (CIF) basis. In their study Fung & Lau argue that, for large volumes of trade, FOB-CIF differences can generate rather inaccurate measures. Therefore, all import and export values must first be converted to the FOB basis by adjusting US exports upwards by 1% and US and China imports downwards by 10%.[12] Like the earlier studies, Fung & Lau also adjust for re-exports through Hong Kong and value added in Hong Kong (about 25%). Table 5 shows that, after making the adjustments, the discrepancy between the US and Chinese bilateral trade balance data in 2000 narrowed from $54.1 billion to $6.3 billion. The study has estimated that the US–China bilateral merchandise trade balance for 2000 was $58.9 billion in China's favour. Although still a large figure, this is much smaller than the official US estimate of $83.8 billion.

Like the US, bilateral trade data between China and Japan (China's largest trading partner) also differ significantly owing to the treatment of Hong Kong as a re-export base. The discrepancy is typically about 10 times and there were years when China even recorded a trade deficit with Japan (see Table 6). The discrepancy was greatest in 2000 and 2001, when Japan reported a trade deficit of $26.8 billion with China while Chinese data showed Japan's trade deficit with China as only $2.3 billion, a gap of $24.5 billion.

Table 5. Comparison of alternative estimates of China–US trade balance (billion $)

	Official US–China trade balance (US source)	Official US–China trade balance (China source)	US–China trade balance FOB basis adjusted for re-exports and markups (US source)	US–China balance FOB basis adjusted for re-exports and markups (China source)
1990	− 10.4	1.4	− 5.6	− 6.3
1991	− 12.7	1.8	− 6.2	− 7.6
1992	− 18.3	0.3	− 9.1	− 11.9
1993	− 22.8	− 6.3	− 11.0	− 20.3
1994	− 29.5	− 7.5	− 15.8	− 24.0
1995	− 33.8	− 8.6	− 17.7	− 25.8
1996	− 39.5	− 10.5	− 21.6	− 28.0
1997	− 49.7	− 16.4	− 30.2	− 35.5
1998	− 56.9	− 21.0	− 37.4	− 40.7
1999	− 68.7	− 22.4	− 47.5	− 42.6
2000	− 83.8	− 29.7	− 58.9	− 52.6

Note: Negative sign indicates a trade deficit against the US. Positive sign indicates a trade deficit against China.
Sources: K.C. Fung & Lawrence J. Lau, 'China–United States Bilateral Trade Balances 1990–2000', *Hong Kong Centre for Economic Research Letters*, No. 67–68, 2001; US Department of Commerce, 2001; Hong Kong Census and Statistics Department, *Hong Kong Review of External Trade*, 2001; General Administration of Customs of the People's Republic of China, *China's Customs Statistics*, December 2000.

Table 6. Comparison of China–Japan trade balance (billion $)

	Official Japan–China trade balance (Japan source)	Official Japan–China trade balance (China source)
1993	− 3.3	7.5
1994	− 8.8	4.8
1995	− 14.0	0.5
1996	− 18.5	− 1.7
1997	− 20.1	− 2.8
1998	− 17.0	− 1.4
1999	− 19.5	1.4
2000	− 24.7	− 0.09
2001	− 26.8	− 2.3

Note: Negative sign indicates a trade deficit against Japan. Positive sign indicates a trade deficit against China.
Source: CEIC database.

The large differences between the two sides' data on trade between China and its major trading partners such as the US and Japan will remain an area of contention if left unresolved. For many years the Americans and Japanese have always used their huge trade deficit with China as an instrument to press Beijing to lower its high barriers against foreign goods. Although the Chinese have indeed been exporting more than they were importing, the level of bilateral trade balances has been somewhat distorted, primarily due to the treatment of re-exports via Hong Kong. The

Americans have somewhat 'exaggerated' the extent of China's protection of its market. Unlike Japan, China does not run a persistent trade surplus with all its trade partners, and has adopted a rather open policy with regard to economic development.[13]

However, in order to better reflect the trade patterns between China and its major trading partners, and to avoid unnecessary tensions or trade wars, China should collaborate with its major trading partners in coming up with a consensus on the way all trade data are recorded as well as to reconcile all previous data.

Unemployment

Rapid structural change in the Chinese economy has increasingly led to under-employed and laid-off workers, most severely in the state-owned enterprises (SOEs). An indicator of the success of municipalities in retraining workers, creating jobs and transforming industries would be declining unemployment rates. However, primarily for political reasons, official unemployment rates have been suspiciously low. Furthermore, the use of a broad array of differentiating labels for people laid-off makes both the numbers of redundancies and the numbers unemployed at any given time virtually unknown.[14] Official statistics claim that only 3.6% of China's working population had no jobs in 2001. However, it is highly unlikely that this figure reflects the true picture, as official unemployment rates count only registered unemployed in the cities, leaving out the entire rural population and various categories of blue-collar workers,[15] who make up about 80% of the population. Even among the urban working population, workers who have been laid off from SOEs, forced to retire early or put on indefinite leave due to the poor performance of their companies are also not officially considered jobless. *Xiagang* workers who have lost their jobs but keep a legal link to their enterprises and receive a small fraction of their original salary and benefits are not considered as part of the officially unemployed. In 2000, when *xiagang* workers were included, urban unemployment was about 13 million, or about 6.5% of the urban labour force. The average percentage differential between the adjusted and official unemployment between 1997 and 2000 is about 4.8 percentage points (Table 7). Some observers believe that actual urban unemployment is even higher, mainly because of significant unemployment among the 60–80 million of 'floating population'.[16] According to the latest statistics from China's Ministry of Labour and Social Security, rural unemployment has hit about 160 million, with nearly 20% of Chinese farmers jobless. This would therefore bring the unofficial national (both rural and urban) unemployment rate to near 20%.

One of the main culprits of the under-reporting is once again local government officials who seek to add lustre to their performance as local administrators. Some officials are reported to have gone to the extent of refusing to let people register as unemployed, for fear that they would lose their own jobs.[17]

It is obvious that China's current statistical system is still unable to present the real unemployment situation. With such understated unemployment rates, policy planners will not be able to get a clear picture when developing budgets for social security policies, such as the National Social Security Fund, which has been established to finance the transition costs of the pension reform programme. Furthermore, it is almost impossible to gauge the success of the SOE reforms, given such inaccurate unemployment data. Failure to contain the social costs of such reforms within tolerable levels could increase the country's vulnerability and erode public

Table 7. Urban unemployment

	1995	1996	1997	1998	1999	2000
Registered unemployed in urban areas (million)	5.2	5.5	5.7	5.7	5.8	6.0
Registered unemployment rate in urban areas (%)	2.9	3.0	3.1	3.1	3.1	3.1
Xiagang workers (end of period, million)	–	–	9.9	9.0	9.4	6.6
Adjusted unemployment rate (%)	–	–	8.5	8.5	8.2	6.5
Difference between adjusted and official unemployment rate (% point)	–	–	5.4	5.4	5.1	3.4

Notes: Data unavailable.
Source: National Bureau of Statistics, China.

support for the government's reform programme as well as social stability. In fact, labour unrest is at a record high now in China. Statistics show a jump from 8,150 labour disputes in 1992 to 120,000 in 1999.[18] More recently, such problems appear to have become more serious, with tens of thousands of workers across north-eastern China (Liaoning and Daqing) protesting in a more or less organised demonstration.[19] If there is one nightmare that haunts the Communist government, it is a picture of China's masses out of work, surly and on the march. With prosperity only benefiting a small number of urban elites, some Chinese academics, such as Wu Guogang, have warned that some of the angry urban elites who have not benefited from China's growth might soon be leading political movements by gathering the unemployed farmers and *xiagang* workers.[20]

Non-Performing Loans (NPLs)

Statistics on China's NPLs, which are an indicator of its financial health, have always been well veiled from the public. The veil might not have been lifted very high, but an alarming picture is already forming. Dai Xianglong, the former central bank governor, has recently claimed that after transferring many of the banks' NPLs to state-owned asset management companies (AMCs), the combined NPL ratio had successfully been reduced from 35% at the end of 1999 to 25% by the end of 2000. In total, RMB 1.3 trillion ($160 billion) of NPLs was transferred by the end of 2000. However, another RMB 400 billion ($48 billion), or more than 4% of GDP, emerged in new bad loans in 2000.[21] Hence it is doubtful whether the absorption of bad loans by the AMCs would be a one-off exercise, as the Chinese authorities have claimed.

However, looking at the NPL figures in greater detail, it becomes apparent that the official NPL estimates have been understated. The Bank of China (BOC), which is striving to become a more transparent and commercially viable bank, has recently published data based on a newly defined five-category asset classification system, which is modelled after the US system, in its annual report.[22] It becomes apparent from the figures disclosed that China's NPL problem is indeed a potential time bomb that could cause the collapse of the Chinese economy if mishandled. After substantial cleaning, there is still a big pile of bad assets with the BOC, amounting to RMB394 billion ($47.5 billion), or 29% of all loans on the books, a ratio that is much higher than most observers expected.[23] Given that the BOC is considered one of the best managed Chinese state-owned banks, many now question the NPL positions of the other banks in China.

All these NPLs are increasingly becoming a huge burden to the state. In order to help restore banks to financial health and prevent households from suffering massive losses on their deposits, the government had issued RMB 270 billion ($33 billion) worth of bonds to bolster bank capital in 1998. It is also the implicit guarantor of RMB 1,400 billion ($169 billion) in bonds issued by the four AMCs in 1999 and 2000. In addition, the big four banks still have almost RMB 2,000 billion ($242 billion) in NPLs on their balance sheets. Using international standards, that figure could be as high as RMB 5,000 billion ($604 billion). In total, this would amount to 40–75% of China's GDP in 2000.[24]

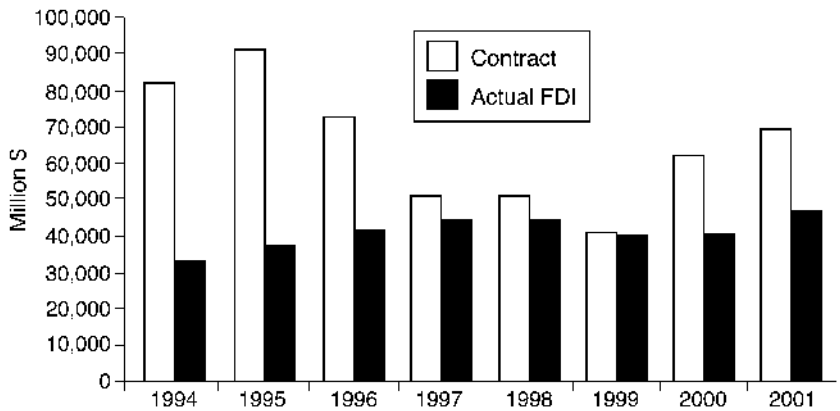
By the end of 2000 the AMCs had disposed of RMB 90 billion ($11 billion) in bad loans. However, the cash recovery on these sales was only RMB 8.3 billion ($1 billion). This was far below the interest due on the bonds issued by the AMCs to banks, which was in excess of RMB 30 billion ($3.6 billion) a year. To aggravate the situation, these AMCs appear to have financed most of their interest and other obligations by borrowing from the central bank. Besides, according to Lardy the official budget deficit and government debt outstanding of 3% and 15% of GDP respectively are understated.[25] First, the true budget deficit would be closer to 7% if AMCs' borrowings were included. Second, government debt outstanding excludes bonds issued by the AMCs, bonds of the state-owned policy banks created in the mid-1990s, as well as implicit government debt (such as its huge implicit pension debt). As a result, in 1999 and 2000 the central government financed more than half of its own expenditure by net bond issuance. Research houses such as Japan's Nomura have suggested a total bail-out bill of RMB 1.97 trillion ($238 billion), or about 22% of China's GDP in 2000, for the Chinese government.[26] Similarly, measured by international standards, Standard & Poor's has estimated that China's NPLs reached RMB 5,364 billion ($681 billion), around 60% of China's 2000 GDP. Assuming that only 20% of NPLs are recoverable, recapitalising the banks would cost no less than RMB 4,470 billion ($540 billion), or around 50% of overall GDP in 2000, according to the rating agency.

The Chinese government has long covered SOE losses to ensure high levels of employment. But this has the undesirable effect of prolonging the life of inefficient enterprises. For a longer-term solution, the government needs to accelerate the restructuring of its loss-making SOEs—the underlying cause of most of the NPLs in the banking system—and to develop a fully commercial credit culture in its state-owned banks. As the problem of NPLs will directly affect China's public finance policies, it is essential for China to develop proper and fairly robust indicators to reflect the severity of the NPL problem before the country finds itself in a full-blown fiscal crisis.

In/Outward Foreign Direct Investment and Capital Flight

There is no doubt that China has become one of the largest absorbers of foreign direct investment (FDI) in the world. Despite the global economic downturn in 2001, China's utilised FDI continued to grow by 15% to hit $47 billion.[27] Figure 6 illustrates the discrepancy between contract and utilised FDI, which can partly be explained by the time lag between signing the contracts and the realisation of actual investments, and partly by some of the contracts not being translated into actual investments. In addition, the gap between contract and actual FDI has narrowed quite substantially throughout the 1990s. Typically, it takes about a 6-month time lag in the realisation of FDI in China (Figure 7).

Nevertheless, Beijing probably does not really know what is the real level of foreign direct investment flowing into the country, as an unknown proportion of that investment is not foreign at all. It is Chinese 'hot money' finding its way back to the mainland. It is routed through offshore intermediaries for tax avoidance reasons, for insurance against a volatile financial and fiscal system in the mainland, or for reasons of personal gain. Hence, the official figures are often inflated by investments of



Source: CEIC.

Figure 6. Contract and actual FDI in China.

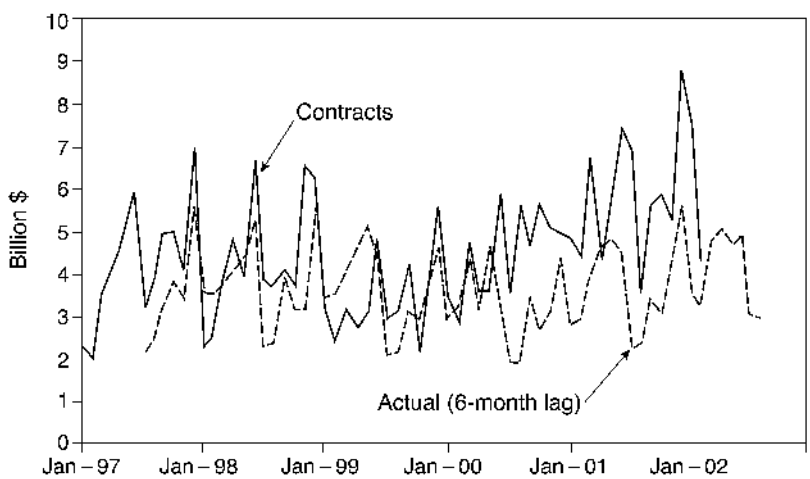


Figure 7. Lag between contract and actual FDI.

Table 8. China's balance of payments, 1990–2000, selected items ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Current account balance	11,997	13,270	6,401	− 11,903	7,658	1,618	7,242	29,717	29,324	15,667	20,519
Exports of goods	51,519	58,919	69,568	75,659	102,561	128,110	151,077	182,670	183,529	194,716	249,131
Imports of goods	42,354	50,476	64,385	86,313	95,271	110,060	131,542	136,448	136,916	158,510	214,657
Financial account balance	3,255	8,032	− 251	23,474	32,644	38,675	39,967	22,979	− 6,275	7,668	1,958
Long-term inflows	4,557	9,431	7,467	30,586	36,214	41,676	43,834	60,370	35,230	44,372	58,044
Direct investment in China (net)	3,487	4,366	11,156	27,515	33,787	35,849	40,180	44,236	43,752	38,752	38,399
Foreign purchases of Chinese bonds and stocks (net)	0	565	393	3,647	3,923	711	2,372	7,703	97	− 699	7,317
Other foreign investments (net)*	1,070	4,500	− 4,082	576	− 1,496	5,116	1,282	8,430	− 8,619	6,319	12,329
Long-term outflows	− 1,302	− 1,399	− 7,717	− 7,111	− 3,569	− 3,002	− 3,868	− 37,391	− 41,505	− 36,704	− 56,087
Direct investment abroad (net)	− 830	− 913	− 4,000	− 4,400	− 2,000	− 2,000	− 2,114	− 2,562	− 2,634	− 1,774	− 916
Chinese purchases of foreign bonds and stock (net)	− 241	− 330	− 450	− 597	− 380	79	− 628	− 899	− 3,830	− 10,535	− 11,307
Other investments abroad (net)*	− 231	− 156	− 3,267	− 2,114	− 1,189	− 1,081	− 1,126	− 33,929	− 35,041	− 24,395	− 43,863
Errors and omissions (net)	**− 3,205**	**− 6,748**	**− 8,252**	**− 9,804**	**− 9,775**	**− 17,812**	**− 15,566**	**− 16,952**	**− 16,576**	**− 14,804**	**− 11,893**
Overall balance	12,047	14,554	− 2,102	1,767	30,527	22,481	31,643	35,724	6,426	8,505	10,548
Change in reserves	− 12,047	− 14,554	2,102	− 1,767	− 30,527	− 22,481	− 31,643	− 35,724	− 6,426	− 8,505	− 10,548

Notes: Negative numbers indicates an accumulation of official reserves.
*Other investments include trade credits, currencies & deposits, loans and others.
Source: CEIC.

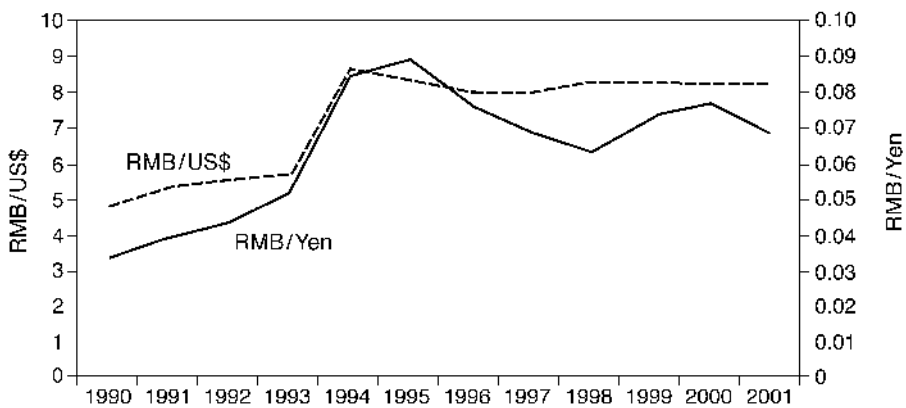
mainland subsidiaries in Hong Kong to take advantage of China's investment incentives, as well as illegal money laundering activities on the mainland. World Bank officials have estimated that as much as 25% of foreign investment could in fact be due to 'round-tripping'.[28]

Moreover, billions of dollars that are officially categorised as FDI are often, in fact, foreign borrowings arranged by mainland bodies like the provincial and municipal investment trust corporations. With some of the largest investment trust corporations collapsing, this problem has increasingly come to light. Beijing has been cracking down hard. However, putting an end to the practice of dressing up foreign loans as foreign direct investment could cause a double-digit fall in the total reported value of FDI inflows.[29]

As for outward investment by Chinese companies, this is notoriously difficult to ascertain owing to differences in the methods of data collection used by different agencies. Furthermore, there is no Chinese agency that captures illegal capital outflows concealed among its outward FDI figures. The stagnant growth of China's official foreign exchange reserves, only $6 billion despite a healthy trade surplus of $46.6 billion and FDI inflows of $43.8 billion in 1998, is strong evidence that there is a large leakage from the Chinese economy.[30] However, no one can tell for sure the amount of capital that is flowing out of China, which would have a significant impact on in its exchange rate policy.[31]

The potential size of unauthorised capital outflows is usually taken to be indicated by the 'errors and omissions' item in balance of payments statistics. This item has been growing over the years, reaching a high of $18 billion in 1995. In recent years, however, tightened regulations have seen 'errors and omissions' decreasing substantially to $12 billion in 2000, though the amount is still large in comparison with the State Administration of Foreign Exchange Control (SAFEC) outward investment statistics of only $916 million in the capital account (see Table 8).

The factors underpinning capital flight in China are mainly domestic in nature. Chinese citizens and business entities involved in the illegal transfer of funds out of the country usually do so not only because of higher returns available abroad but also because of domestic uncertainties such as corruption/smuggling, concerns over policy oscillations and possible devaluation. Because of strong FDI inflows and current account surpluses, however, China was able to withstand devaluation pressures throughout the 1990s (see Figure 8).[32]



Source: CEIC.

Figure 8. Movement of the RMB.

However, with the current slowdown in the global market and sharp depreciation of the Japanese yen, there are speculations that China might be compelled to devalue, although Dai Xianglong, former governor of the PBOC, had repeatedly refuted such speculations. Nevertheless, if China is to continue with a stable exchange rate policy and not suffer a similar fate to Argentina and Mexico, it is imperative for the country to solve its capital leakage problem and implement effective measures.[33] Furthermore, with such large outflows of capital from China, not only has the government lost tax revenue which it could use to finance development projects but it might also end up borrowing more foreign funds to make up for any shortfall, thus unnecessarily increasing the financial burden for future generations.

Efforts by the Chinese Government

Hitherto, Beijing has responded to the country's statistical problems over the years with only piecemeal steps. However, since early 2002 Chinese officials have started to overhaul the nation's numbers-gathering procedures, as information becomes increasingly crucial for pushing through the next phase of reforms. Indeed, Premier Zhu has been critical of the rampant falsification of data and has since stopped making public pronouncements on growth targets. The government now seems to understand that statistics cannot possibly be kept accurate in the face of such pressures on economic targets, and now just announces expected growth rates instead of setting targets for local governments.

As the antiquated provincial reporting system is deemed too politicised to be relevant, independent statistical agents now report directly to the Beijing-based bureau. Hence there is a separate independent system for collecting GDP data at the national level to provide some checks and balances.[34] In 2001 the agency also revamped the way it calculated the consumer price index, doubling the number of goods it tracked—including such items as motorcars, once a rare purchase, and education and healthcare costs, which not long ago were free.

After the 1998 fiasco on China's GDP figure, NBS commissioner Liu Hong also announced a major adjustment in the way the agency would collect data.[35] Statistical sampling, more reliable than the current method, is likely to be put in place for small industrial enterprises in a third of the provinces over the next 2 years. This means that, rather than trying to collect data from every single firm, the NBS will get figures from sample companies within a given sector. The NBS will require 17,000 huge industrial firms to report financial data monthly, and the agency will collect data more aggressively from non-state firms, which were largely ignored in previous counts. Some 5,000 large industrial firms will file monthly financial reports electronically to the NBS.

As fixed prices and production quotas are now largely replaced by millions of entrepreneurs who routinely ignore official requests for information, while some local officials still fudge figures to improve career chances, the Chinese statisticians have been prompted to look for outside help, even if it means revealing gaping holes in the system. In late 2001 the NBS finally acknowledged that it would adopt data systems recommended by the IMF.

Conclusion

It is apparent from the above illustrations that official Chinese statistics are not the result of a systematic, government-sponsored padding exercise but a problem that

exists at various levels in the country. The Chinese statistical system has been tainted by officials who fake figures to cover up economic problems or to please the central authorities. Furthermore, Chinese statistics are still lacking in quality, mainly due to deficiencies in data compilation caused by under-qualified statistical workers operating at the local level. Economic reform has also resulted in a new form of statistical abuse—some enterprises under-report profits to evade taxes, while others hide losses for different reasons.

Senior Chinese leaders have now come to realise that the lack of good statistics makes it difficult to diagnose China's economic ills and therefore to know what kind of medicine to prescribe for them. With China's entry to the WTO, the reform of China's statistical system is all the more urgent, given that there are many potential bubbles that could burst if Beijing does not carefully deal with them. Moreover, in order to continue to attract investment, China must ensure a transparent statistical system, as investors will require better data before they commit millions of dollars.

In conclusion, the long-term trend is definitely improving. However, we should also note that China is not likely to have 'bullet-proof' data at all soon. Therefore, in order to make the best use of Chinese statistics, users still need to be keenly aware of their limitations. Perhaps the best that can be said about Chinese data is that they correctly show the direction of the growth trend. But analysts should not be overwhelmed by headline growth rates. When it comes to Chinese statistics, the watchword will continue to be 'caveat emptor'.

Notes

1. In the US, for example, preliminary GDP data for the preceding quarter will not be released until the end of the following month, and the complete revised report will not be issued for another month after that.
2. Carsten A. Holtz & Yi-min Lin, 'Pitfalls of China's Industrial Statistics: Inconsistencies and Specification Problems', *China Review*, 1, Fall 2001, pp. 29–71.
3. Thomas G. Rawski, 'What is Happening to China's GDP Statistics?', *China Economic Review*, 12, 2001, pp. 347–354.
4. Official figures put GDP growth at 7.8% in 1998, 7.2% in 1999 and 8% in 2000.
5. Wang Xiaolu & Meng Lian, 'A Reevaluation of China's Economic Growth', *China Economic Review*, 12, 2001, pp. 338–346.
6. Brian Palmer, 'China by the Numbers', *Fortune*, 6 December 1999, p. 100.
7. *Ibid.*
8. World Bank, *China 2020: Development Challenges in the New Century* (Washington, DC, World Bank, 1997).
9. For example, Hong Kong re-exported $36.4 billion in Chinese goods to the US in 2000. Subtracting the 25.7% value added in Hong Kong, $9.4 billion, from the value of US imports from China results in an adjusted figure of US$90.7 billion for US imports from China in 2000. Similarly, in 2000 Hong Kong re-exported $6.1 billion worth of US goods to China. Adding this amount less the value added in Hong Kong ($421 million), to the value of US direct exports to China ($16.3 billion), an adjusted figure for US exports to China of $21.9 billion is derived.
10. Vivek B. Arora & Kalpana Kochhar, 'Discrepancies in Bilateral Trade Statistics: The Case of China', IMF Paper on Policy Analysis and Assessment, June 1995.
11. K.C. Fung & Lawrence J. Lau, 'China–United States Bilateral Trade Balances 1990–2000', *Hong Kong Centre for Economic Research Letters* No. 67–68, 2001.
12. Adding 1% to the FAS export value and deducting 10% from the CIF import value are conventional methods of conversion used by the World Bank and IMF respectively.
13. One measure of the openness of an economy is the import content of its exports.

According to PRC customs statistics, imports accounted for 60% of the content of PRC processed exports in 1998.

14. Dorothy J. Solinger, 'Why We Cannot Count the "Unemployed"?', *China Quarterly*, 167, September 2001.
15. For example, blue-collar workers whose factory has collapsed, but which has not formally gone through bankruptcy procedures, are not considered to be 'officially unemployed'.
16. Asian Development Bank, *People's Republic of China: Country Economic Review*, December 1999.
17. The Chinese Ministry of Labour and Social Security indicates that when it determines the funds to allocate to local governments to help them set up re-employment programmes, based on the number of dismissed workers reported, the local officials concerned ask to revise their data upwards.
18. Matthew Forney & Neil Gough, 'Working Man Blues', *Time*, 1 April 2002.
19. 'Protests But No Bullets', *The Economist*, 6 April 2002.
20. Thomas Crampton, 'As China Rises, Some Ask: Will It Stumble?', *International Herald Tribune*, 18 December 2001.
21. Nicholas Lardy, 'China's Worsening Debts', *Financial Times*, 22 June 2001.
22. People's Bank of China (PBOC) issued a guideline requiring the big four banks in China to complete introduction of the new classification by the end of 1999.
23. The 29% of NPLs is apparently reached using international accounting standards.
24. Lardy, 'China's Worsening Debts'.
25. *Ibid*.
26. 'On Track to be a Superpower', *Euromoney*, September 2000.
27. Hong Kong remains China's largest source of FDI, accounting for about 49% of total accumulated FDI in China (1979–2000).
28. 'Making Sense of Chinese Statistics', Economist Intelligence Unit, 2 May 1994, pp. 5–6.
29. 'Transparency Problems in Asia', Political and Economic Risk Consultancy, 25 November 1998.
30. There are signs that the problem of capital flight is under control in China, as its official foreign exchange reserves increased by $46.6 billion, with a healthy trade surplus of $22.5 billion and FDI inflows of $46.9 billion, in 2001.
31. In general, persistently large and volatile capital outflows could lead to external imbalances, causing a currency to come under attack, and ultimately be devalued.
32. During the 1990s the only time China undertook a major devaluation exercise was in 1994 in an effort by the government to cool the 'overheating' economy.
33. One reason why the extent of Mexico's troubles went unnoticed for so long was that the government treated its evaporating foreign reserves and exploding money supply figures as state secrets. In early December 1995, before the peso was devalued, the latest published reserve figures were those for June 1995, and they suggested that Mexico had a comfortable cushion of $17 billion; in fact, by December 1995 the reserves had already dwindled to $6 billion.
34. Because China's official economic growth is now derived using the independent system, aggregating all the GDP figures reported by the individual provinces and administrative regions will not tally with the official central government figure. According to Xu Xianchun, director of the Department of National Economic Statistics of the NBS, local GDP data are nearly two percentage points higher than the national figure, which is 'beyond the scope of reasonable error'.
35. Palmer, 'China by the Numbers'.