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China's Economic Development and the Role of Foreign-Funded Enterprises

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Contents

China's Economic Development and the Role of Foreign-Funded Enterprises

Summary

1. China's rapid economic expansion has in recent years been perceived as a threat in Japan, while at the same time some observers have suggested that growth will reach a limit at some point and turn into a slow down. Japanese perceptions of Chinese development are thus highly polarized. The main aim of this report is to present an overall picture of the Chinese economy based on macro-economic statistics and other data.

2. China has maintained stable, rapid economic expansion since the government changed its policy towards reform and opening up to the outside world in 1978. In dollar terms it is now the world's seventh largest economy, and the second largest in terms of purchasing power parity. Per capita income is still only approximately one-fortieth the level of Japan, or around one-seventh in terms of purchasing power parity. Nevertheless, economic development varies widely by region within China, and some coastal regions exhibit income levels to rival NIEs (newly industrializing economies). These prosperous regions can be regarded as powerful competitors against Japan.

3. China's imports and exports of industrial products are growing. Both imports and exports of electric equipment and machinery are considerable, where China is a net importer. The next largest category of exports is light industrial products such as fibres and apparel, in which China is a net exporter. China is also a net importer of materials such as plastics and iron/steel, and its overall balance for goods is more or less zero.

Foreign direct investment towards China has been booming since acceleration of the government's trend towards reform and opening up in 1992. The largest part of foreign direct investment is in manufacturing industry, and the presence of foreign-funded enterprises (FFEs) in China is rapidly increasing.

4. Economic development involves not only a simple GDP expansion, but also structural changes in industry. Chinese economic development since 1992 has been concentrated in secondary and tertiary industries, and the main factor behind growth in secondary industry has been rising productivity. We regard this as largely attributable to introduction of modern production technology by FFEs. Within light industries, production has expanded in textile/leather goods, and wood processing/furniture; within processing and assembly industries, production has grown in transportation machinery, electric equipment, and electronics. Consequently, self-sufficiency rates as displayed in skyline graphs are particularly high in two industrial areas, the first being textiles, textile/leather goods, and the second being electric equipment and electronics. The self-sufficiency rate of the former is well over 100%.

5. Dependence on inflow of foreign capital is a major characteristic of economic development in China. Share of FFEs in mining and manufacturing production rose to 15.9% in 1999. By contrast, the share of state-owned enterprises (SOEs) has fallen to 28.2%. Among large enterprises, the production share of FFEs in 2000 had overtaken SOEs at 27.4% and 23.5% respectively. FFEs exhibit relatively high production shares in the electronics and textile/leather goods sectors. Labour productivity indicates that a large gap has opened up between FFEs and SOEs, with secondary industry in China now displaying a dual structure.

6. Foreign-funded enterprises (FFEs) are responsible for approximately half of China's overall imports and exports, and are principally involved in processing trade (exporting of products processed from imported parts and materials). Their balance of trade for goods was negative until around the middle of the 1990s, due to factors such as importation of capital goods.

However, the balance has recently gone into the black as a result of development of processing trade as scheduled. Within categories of traded goods, major import items include electronic components, plastics and chemical fibres, while major export items are home appliances, personal computers, fibre products and apparel. This trend fits in with the pattern of processing trade. FFEs exhibit high weightings in all of these categories, and processing trade by FFEs is thus estimated to be driving Chinese trade in these industries.

7. R&D investment is essential for autonomous economic growth over the long term, and the extremely low level of R&D in China is thus a major challenge to be overcome. In almost all industries, FFEs actually display lower rates of R&D expenditure to sales than SOEs. FFEs therefore appear to be contributing in only a limited way to R&D in China so far, despite their major contribution to the Chinese economy in terms of production and trade.

8. Reform of SOEs accelerated in 1998 and their number of employees is falling steeply. FFEs are taking on more employees, but not enough to compensate fully for workforce reduction at SOEs. In this respect as well, FFEs are only making a limited contribution. The real unemployment rate rises after including people laid off by SOEs, reaching 8.7% in 2001.

9. The Chinese economy thus displays a dual structure composed of FFEs and SOEs, but to grasp the full picture it is also necessary to consider private-sector enterprises, which show strong growth prospects. It is important to consider how these three groups will affect each other, and, in particular, how the increase in unemployment expected from SOEs will affect the competitiveness of the private sector, especially that of FFEs. A clear understanding of the situation requires examination of a broad spectrum of political, social and other issues, in addition to economic factors, and this is beyond the scope of this report.

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Introduction

The Chinese economy's dramatic progress in recent years has come to global attention. In Japan in particular, concerns have grown over "hollowing out" of industry as corporations have transferred plants to China, and China is widely perceived as a threat in Japan. On the other hand, not a few commentators have suggested that at some point growth will reach a limit and slow down, due to rising unemployment stemming from reform of state-owned enterprises (SOEs), and expansion in non-performing loans.

Views of the Chinese economy thus fluctuate between these two poles. This report aims mainly to shed light on the overall picture of Chinese economic power, using macro-economic statistics released by the Chinese government.

Chinese macro-economic statistics sometimes use different definitions compared to Japan and Western developed nations, and care is needed with regard to reliability and accuracy.

Nevertheless, we believe that analysis of these macro-economic statistics is essential, and that a largely correct picture is possible through examining a wide range of statistics.

Chapter I presents a summary of Chinese economic expansion and structural changes affecting industry, derived from basic macro-economic statistics. Chapter II focuses on the role of foreign-funded enterprises (FFEs) in Chinese economic development using a range of economic statistics, and reveals the dual structure in secondary industry, composed of FFEs and SOEs. In contrast to rapid progress among FFEs, the SOEs undergoing reform are burdened by inefficient production due to excessive staffing. This is creating non-performing loan and unemployment problems, and we examine the effects of these problems on the government's finances.

I China's Economic Growth and Structural Changes

1. Economic Growth and Regional Imbalances

1.1. Economic Growth

Over 50 years have passed since the establishment of the People's Republic of China in 1949. This can be divided up into three main periods (Figures 1-1 and Table 1-1): the period of reconstruction (1949-1965), the Cultural Revolution (1966-1978), and the period of reform and opening up (1979-).

The period of reconstruction refers to time from 1949, when Mao Tse-tung established the People's Republic of China and its Communist Party administration, until 1965, which marked the start of the Cultural Revolution. The socialist state was built up during this period. Mao Tse-tung initiated the Great Leap Forward[1] in 1958, which involved collectivization of agriculture, and successive monopolization of industry and commerce by state-run enterprises. However, production capacity actually fell during the Great Leap Forward, which set highly ambitious targets without providing labour incentives. Three years of natural disasters from 1959 also resulted in a severe famine, and the economy stagnated. According to official statistics, average real growth during the period of reconstruction was a high 6.0%. However, during the Great Leap Forward it is believed that

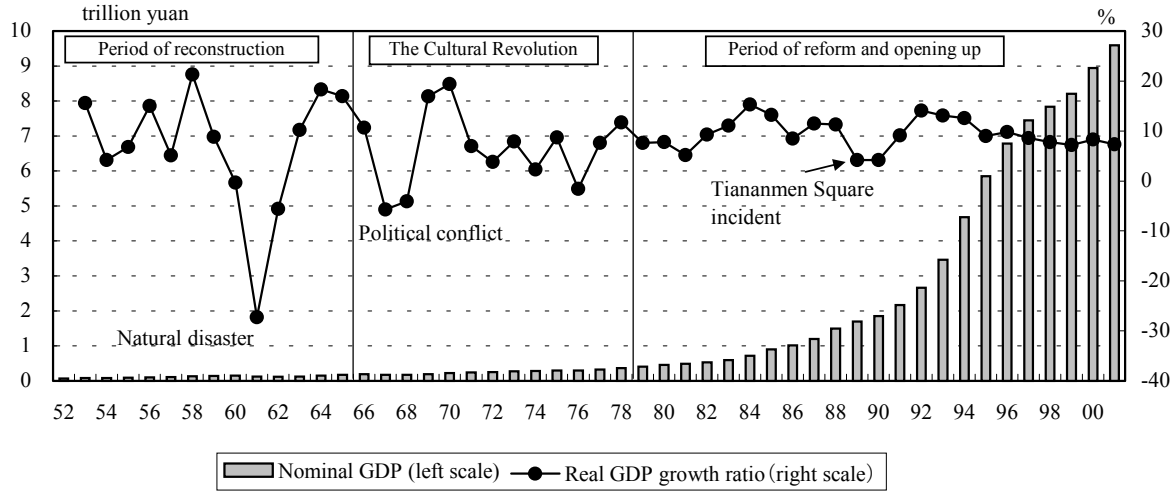


Figure 1-1 Growth in Nomibnal and Real GDP Trend

Source: "China Statistical Yearbook"

Table 1-1 The Chinese Economy's Long-Term Growth Trend

		Real growth rate	Growth rate of population	Note
Period of reconstruction	1949-65	6.0%	1.8%	Year 59-61 Natual disaster
Cultural Revolution	1966-78	6.3%	2.2%	Year 67-68 Political conflict
Period of reform and opening up	1979-92	9.4%	1.4%	Development in agriculture, Reform of state-run enterprises, 89 Tiananmen Square incident
	1993-01	9.3%	1.0%	Year 92: Tour to the shouth of China by Deng, year 01: accession to WTO

Note: Growth rates are geometric averages. Growth for the period of reconstruction is the average from 1953.

[1] Mao Tse-tung believed that socialist mobilisation of China's manpower under his Great Leap Forward concept would deliver dramatic expansion in production capacity, under the slogan of over-taking the UK in 15 years.

regional authorities reported artificially inflated figures to the central government, to give the appearance of meeting targets. The figures for this period should thus be treated with caution, especially during the Great Leap Forward.

Following the period of reconstruction, the Cultural Revolution era lasted 13 years from 1966 to 1978. This was a period of political chaos, accompanied by systematic destruction of business management upon capitalist lines, and other policies including sending urban dwellers into the countryside, known as the Rustication Movement[2]. These dramatic developments took place on a national scale, resulting in severe economic stagnation. The official Chinese figures claim strong average annual growth of 6.3%, higher than in the period of reconstruction, but the veracity and accuracy of GDP statistics during the Cultural Revolution is highly doubtful and it should be treated carefully.

The arrest of Jiang Qing, Mao Tse-tung's widow, and the other three members of the Gang of Four followed Mao's death in 1976. Deng Xiao-ping then took the helm of central government in December 1978, transforming economic policy into one of reform and opening up to the outside world. Reforms kicked off in agriculture with the dissolution of people's communes, while the government also pursued a policy of aggressive opening up to the outside world, such as through setting up special economic zones along the southern seaboard. This period of reform and opening up lasting from 1979 to the present has been a time of stable, high growth in excess of previous periods, at average real GDP expansion of over 9%.

GDP statistics during the period of reform and opening up appear to have become more accurate and reliable. We believe the average figure of over 9% to be largely credible.[3]

The current period of reform and opening up is normally divided up into two parts, with the dividing year being 1992. At Chinese New Year in 1992, Deng Xiao-ping visited Shanghai and other cities along the southern seaboard. During this tour, Deng declared that the course of reform and opening up would not change, and that further progress was needed. This marked the debut of the "socialist market economy"[4] concept, which brought in privatisation of state-owned enterprises and reform of the financial system, and also introduced indirect control methods for financial and fiscal policy to replace direct methods, which we examine later in this report. The process of opening up to the outside world was also accelerated, extending the special economic zones in coastal regions to the interior[5], and allowing gradual investment by foreign-funded enterprises in China's tertiary industries like retailing, distribution and real estate.

This acceleration in the process of reform and opening up resulted in investment in China from Japan, Western industrialised nations and Asian NIEs, who had been reluctant after the Tiananmen Square incident in 1989, reaching an unprecedented scale. The boom in foreign direct investment from 1992 resulted in China's taking its place among leading global economies.

1.2. International Comparison of Economic Scale

The economic growth prompted by reform and opening up policies resulted in China's presence in the global economy increasing. Tables 1-2 and 1-3 show global rankings by GNI[6] and per capita GNI. In 2000, China's GNI ranked

[2] The Rustication Movement involved the forced relocation of mainly young, urban workers to rural villages, in order to achieve their ideological reform.

[3] However, the debate on the accuracy of Chinese GDP data has recently re-started, through examining consistency with energy consumption figures (for example, see *The Economist* issue of March 16, 2002).

[4] The socialist market economy concept was introduced through Jiang Ze-min's report to the party congress in October 1992, which maintained that socialism does not necessarily equal a planned economy, nor capitalism a market economy, and that a market economy is possible under socialism.

[5] Shenzhen, Zhuhai and Shantou became the first special economic zones in 1979, providing incentives for foreign investment. This expanded to 14 coastal cities in 1984, and the seventh five-year plan starting in 1986 laid down rules for foreign investment all along China's coastal region. Opening up of opportunities in interior regions started in 1992.

[6] Gross national income: Net receipts from non-residents added to GDP, approximately the same as GDP in value terms.

seventh out of 207 countries at $1,063 billion. In the same year Japan's GNI was $4,519 billion, giving China roughly one-quarter of the economic scale of Japan. However, China's population of 1.27 billion people, the largest in the world, resulted in per capita GNI of only $840 (global ranking: 141st), putting it among low-middle income countries[7]. This is only around one-fortieth of Japan's $35,620 per person.

The data in the figures above shows that China's overall economic scale is extremely large, and if annual expansion of 7-9% continues China might present an economic threat to not just Japan, but to the whole world. On the other hand, per capita income presents a completely different picture of the Chinese economy.

China bases its economic management on five-year plans, and is currently in its tenth such plan spanning from 2001 to 2005. This plan's long-term target is doubling of 2000 GDP by 2010, en route to which its aims at 2005 GDP of RMB12.5 trillion ($1.5 trillion at the current exchange rate), and per capita GDP of RMB9,400 ($1,133). This target demands a real annual growth rate of around 7%.

Table 1-2 Leading Contries Ranked by GNI (2000)

(billion US$)

Rank	US dollar terms		Rank	PPP terms	
1	United States	9,602	1	United States	9,601
2	Japan	4,519	2	China	4,951
3	Germany	2,064	3	Japan	3,436
4	United Kingdom	1,460	4	India	2,375
5	France	1,438	5	Germany	2,047
6	Italy	1,163	6	France	1,438
7	China	1,063	7	United Kingdom	1,407
8	Canada	650	8	Italy	1,354

Source: The World Bank, "World Development Indicators 2002"

Table 1-3. Per Capita GNI Rankings

(US$/person)

Rank	US dollar terms		Rank	PPP terms	
5	Japan	35,620	3	United States	34,100
7	United States	34,100	12	Japan	27,080
	:			:	
54	Korea	8,910		(Shanghai)	19,442
	:		49	Korea	17,300
	(Shanghai)	4,174		:	
84	Malaysia	3,380	77	Malaysia	8,330
	:			:	
103	Thailand	2,000		(the coastal region)	6,393
	:		92	Thailand	6,320
	(the coastal region)	1,370		:	
	:		124	China	3,920
141	China	840		:	

Source: The World Bank, "World Development Indicators 2002"

[7] The World Bank's per capita GNI categories are: low income = $755 or less; low-middle income = $756-2,995; high-middle income = $2,996-9,265; high income = $9,266 and over.

International comparisons of economic scale must of course pay attention to exchange rate issues. GNI denominated in US dollars can change markedly depending on exchange rates, affecting the results of global rankings. One theory of "appropriate" exchange rates uses purchasing power parity (PPP), which states that exchange rates are appropriate when commodity prices are broadly the same in two countries. For example, the exchange rate between China and the US is currently around RMB8.3/$, but commodities are cheaper in China than in the US, so RMB8.3 in China has more value in real terms than $1 in the US. Consequently, an "appropriate" exchange rate allowing the same purchasing power would require RMB appreciation. In other words, the RMB is currently under-valued, and making allowances for this would give China greater economic scale in a global comparison.

We have therefore included the World Bank's ranking of economic scale using PPP in Table 1-2. This gives China a GNI scale of $4,951 billion, close to five times larger than using the usual exchange rate. This is higher than Japan's $3,436 billion and places China second behind the US. Furthermore, the gap in per capita GNI (Table 1-3) also shrinks, so that at $3,920 per person (global ranking: 124th). China's level becomes approximately one-seventh that of Japan's $27,080.

1.3. Regional Imbalances

Turning from China's overall economic scale to China's domestic economy, various imbalances can be found. These imbalances can be examined with reference to factors such as regional, type of industry and the urban/rural divide. We will examine here the regional imbalances, which should be noted in examining the Chinese economic power.

China can be divided into three regions: the coastal region, the centre, and the west. This is the same system used by the Chinese government for regional development planning and other purposes.[8] As shown in Figure 1-2, the western region[9] is by far the largest in area (72% of total area), followed by the central region (17%), and then the coastal region (11%). On the other hand, as shown in Table 1-4, China's population of 1.28 billion (end of 2001) is roughly equally divided between these three, with the coastal region containing 479 million people (38%), the centre 404 million (33%), and the west 364 million (29%). Consequently, the population density of the western region is the lowest (53 people per square kilometre), followed by the centre (242 people per square kilometre), with the coastal region having the highest density (450 people per square kilometre).[10]

Regional shares of GDP in 2001 were 64% for the coastal region, 28% for the centre, and 19% for the west. The national average per capita GDP figure was RMB7,543, and regional figures show income rising steadily in an eastern direction: west RMB5,007, centre RMB 6,712, coastal region RMB12,811. Incomes in the coastal region are thus double the levels of the west and the centre. The coastal region's per capita GDP is $1,548 after conversion into dollars, or at least $7,000 when converting according to PPP, which gives a level similar to Thailand.

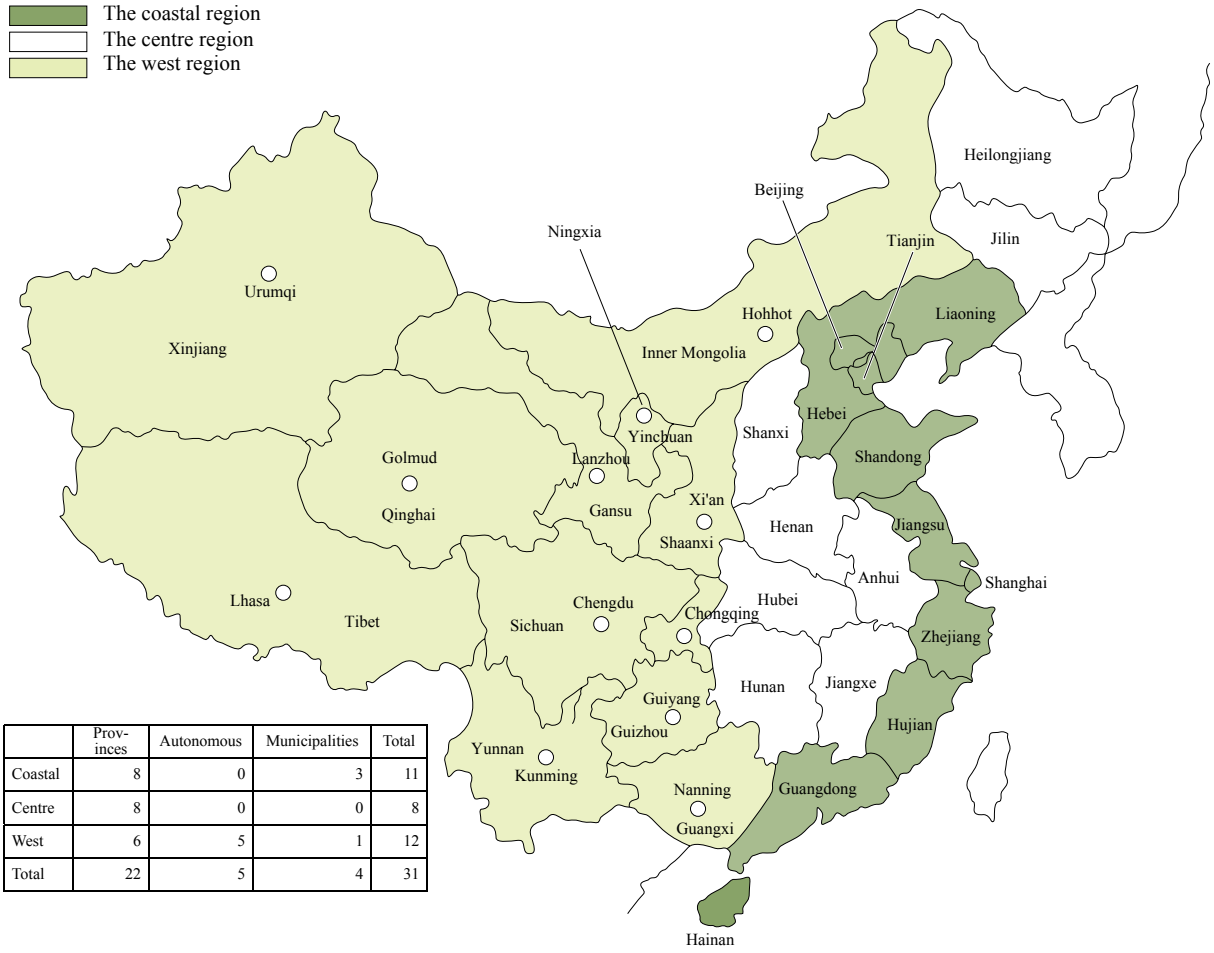
Differences become more marked when looking at data for individual provinces, as shown in Figure 1-3. China contains 22 provinces, five autonomous regions, and four municipalities[11], of which the most prosperous is Shanghai (6,000 square kilometres, population of 16.14 million people) with per capita GDP of RMB37,382. This is equivalent to $4,516, putting it close to the level of Malaysia. Conversion using PPP gives a figure $21,037 per person, putting it above South Korea if included

8 For example, the tenth five-year plan describes development strategies for these three regions in section two, chapter eight.

9 The Inner Mongolian Autonomous Region and the Guangxi Zhuang Autonomous Region were previously included in the central region, but were re-classified into the western region accompanying the Western Development scheme.

10 In 2000, Japan had a population of 126.92 million people and total area of 377,873 square kilometres, at a density of 335.9 people per square kilometre.

11 Hong Kong and Macau are treated separately in Chinese statistics and are not included here.



	Prov-inces	Autonomous	Municipalities	Total
Coastal	8	0	3	11
Centre	8	0	0	8
West	6	5	1	12
Total	22	5	4	31

Figure 1-2. China's Provinces, Autonomous Regions and Municipalities

Note: The Inner Mongolian Autonomous Region and the Guangxi Zhuang Autonomous Region were previously included in the central region, but were re-classified into the western region accompanying the Western Development scheme.

Table 1-4. Regional Economic Indicators (2001)

	Land Area (10,000sq.km)		Population (10,000 persons)		Nominal GDP (RMB100 million)		Per Capita GDP (RMB)	Real growth rate (1993-2000)	Trade Balance (100 Mil US$)		Direct Investment (100 Mil US$)	
		share		share		share				share		share
coastal	106.6	11%	47,922	38%	61,393	64%	12,811 (170)	9.7%	193	86%	403	86%
centre	166.9	17%	40,414	32%	27,125	28%	6,712 (89)	9.3%	30	13%	41	9%
west	687.0	72%	36,447	29%	18,248	19%	5,007 (66)	8.0%	2	1%	19	4%
errors	0.0	0%	2,844	2%	-10,833	-11%	-	-	0	0%	5	1%
National Total	960.5	100%	127,627	100%	95,933	100%	7,543 (100)	9.1%	225	100%	469	100%

Note: The cumulative total of regional figures differs from the overall figure. Bracketed figures in the per capita GDP column are index values, where 100 = the national average.
Source: "China Statistical Yearbook"

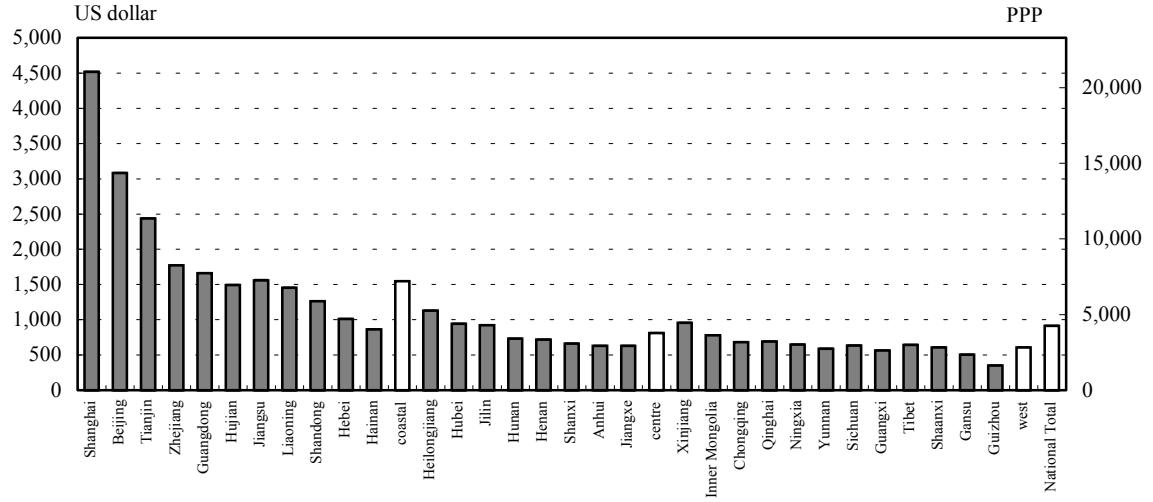


Figure 1-3. Per Capita GDP by Provinces (2001)

Note: The right-hand scale uses conversion by World Bank purchasing power parity for 2000. Using dollar conversions, Shanghai's per capita GNI is similar to Malaysia's, with Beijing similar to Thailand, the western region's average similar to Senegal, and Guizhou Province close to Uganda. Conversion according to purchasing power parity places Shanghai close to South Korea, the coastal region's average close to Thailand, the western region's average close to India, and Guizhou Province close to Cambodia.

Source: "China Statistical Yearbook"

in country rankings. By contrast, the least prosperous area is Guizhou Province (176,000 square kilometres, population of 37.99 million people) with per capita GDP of RMB2,895 (equivalent to $350, or $1,629 using PPP), only one-thirteenth the level of Shanghai.

In case of Japanese provinces, Tokyo has the highest per capita income at ¥4.230 million, while the lowest is Okinawa at ¥2.183 million[12]. Tokyo's income level is thus around double that of Okinawa. By contrast, China displays far larger regional imbalance in income, with some areas achieving the level of almost a developed country, and others only managing the level of the poorest countries. Furthermore, such regional variations are widening, with average annual growth in real terms since 1993 having reached 9.7% in the coastal region, 9.3% in the centre, and only 8.0% in the west. It is in response to this trend that the Chinese government formulated its Western Development scheme within the tenth five-year plan (2001-2005).

It is thus clear that China's narrow coastal strip is driving economic expansion, and this is partly a result of the concentration of foreign direct investment and trade in this region. The coastal region is generating 86% of China's trade surplus and is attracting nearly 86% of foreign direct investment. Consequently, it makes more sense to regard the coastal region of China as Japan's economic partner or rival, rather than China as a whole. When appraising China's economic power in relation to Japan, we consider it wiser to use data for the coastal region alone, rather than average figures for the whole of China. This coastal region has a population of 490 million people with GDP of $672.8 billion (2000, dollar conversion), and can thus be regarded as a major country in its own right.

[12] According to the Cabinet Office's *Prefectural Economic Accounts* (1998).

2. Economic Trends, Financial and Fiscal Policy in the 1990s

2.1. Trends in GDP by Expenditure

We next examine China's economic trends and policies since 1990. Figure 1-4 shows the breakdown of expenditure categories for real GDP, with private consumption providing 47.1%, and fixed capital formation by private and public sectors providing 37.7%. China is typical of a developing country in its high weighting from fixed capital formation compared to Japan and the US, as shown in Table 1-5. Formation of fixed capital can be financed by domestic savings (Figure 1-5), and the average GDP weighting of fixed capital formation in 1990-2001 was 38.2%, compared to the average savings rate of 40.3%.

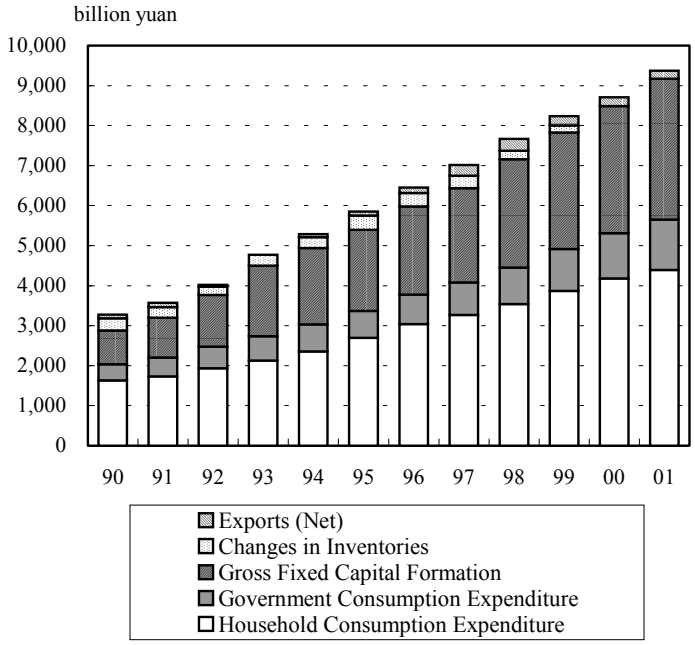


Figure1-4. Real GDP by Expenditure Categories (1995 prices)

Note: Converted into real terms using GDP deflator.
Source: IMF, "International Financial Statistics"

Table1-5. GDP by Expenditures for China, Japan and the US

(nominal)	China (2001, Bil yuan, %)		Japan (2001, Bil yen, %)		United States (2001, Bil US $, %)	
GDP	9,746	100.0%	503,304	100.0%	10,082	100.0%
Household Consumption Expenditure	4,589	47.1%	283,652	56.4%	6,987	69.3%
Government Consumption Expenditure	1,314	13.5%	88,312	17.5%	1,542	15.3%
Gross Fixed Capital Formation	3,672	37.7%	129,874	25.8%	1,963	19.5%
Changes in Inventories	-34	-0.4%	-1,708	-0.3%	-60	-0.6%
Exports(Net)	205	2.1%	3,174	0.6%	-349	-3.5%
Error	0	0.0%	0	0.0%	0	0.0%

Note: Fixed capital formation includes both private and public sectors.
Sources: IMF, "International Financial Statistics, China Statistics Abstract", and Cabinet Office, "Annual Report on National Accounts"

Figure 1-6 below shows that China's real GDP expanded at a high rate in excess of 10% in the early 1990s. Growth has subsequently slowed down, but still maintaining a high rate of 7.3% in 2001. Contribution by expenditure categories show that the driver of expansion in the early 1990s was fixed capital formation, reflecting the investment boom triggered by acceleration of reform and opening up policies. In the meantime, the contribution from private consumption held steady at a little under 5%. The central role of processing trade has resulted in imports rising in tandem with exports, so the weighting of net exports in GDP, and their contribution to GDP growth, is small. Chinese economic expansion thus largely depends on internal demand, and major changes in the growth rate mainly reflect trends in fixed capital formation.

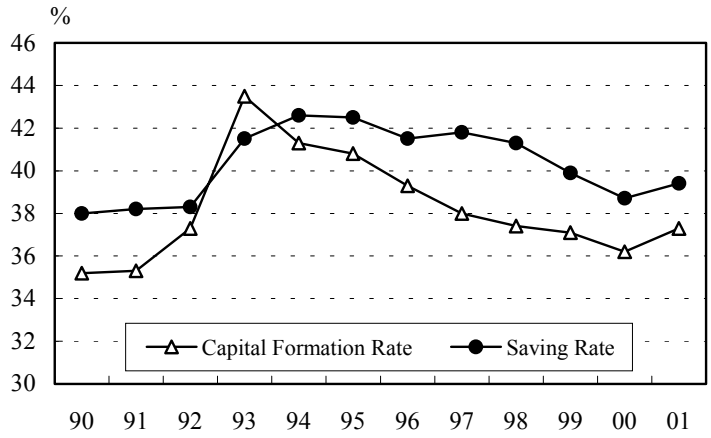


Figure 1-5. Capital Formation and Saving Rates

Sources: "China Statistical Yearbook," etc.

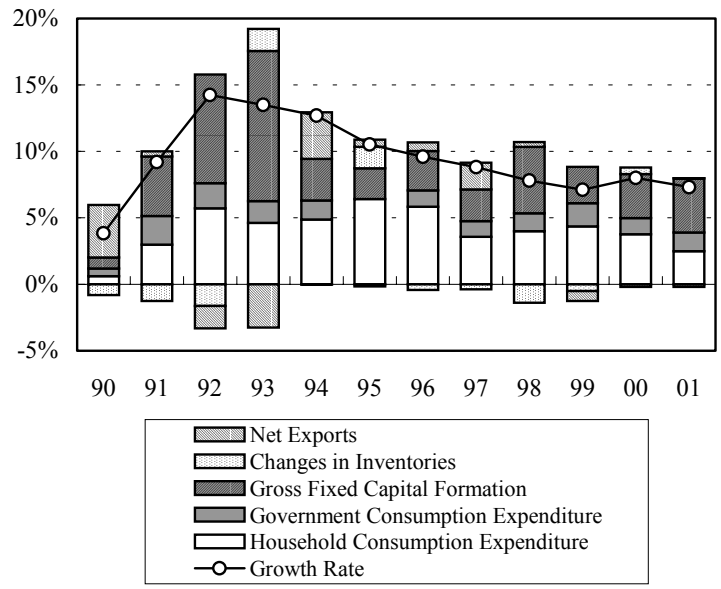


Figure 1-6. Real GDP Growth and Contribution by Expenditure Categories

Note: Converted into real terms using GDP deflator.
Source: IMF, "International Financial Statistics"

2.2. Monetary Policy and Deflation

China's financial policy measures are centred on control of standard interest rates for deposits and loans at commercial banks by the People's Bank of China (central bank). Up to 1998, the People's Bank of China formerly carried out direct control by regulating total lending by the state-owned commercial banks, but this has shifted to indirect control along the introduction of market economy principles. Manipulation of deposit reserve rates and open market operations are also introduced.[13]

The challenge faced by China's monetary policy was inflation in the early 1990s, switching to deflation in the late 1990s. The domestic economy over-heated in the early 1990s as the foreign direct investment boom resulted in sharply higher investment in real estate and facilities. The money supply also expanded rapidly as banks increased lending, resulting in inflation (Figure 1-7). Devaluation of the RMB against the dollar in 1994 also increased inflationary pressure. During this time money supply (M2) rose sharply: 31.3% in 1992 → 37.3% in 1993 → 34.5% in 1994. Growth in consumer price index then accelerated each year in response: 6.4% in 1992 → 14.7% in 1993 → 24.1% in 1994. In order to combat inflation, the People's Bank of China raised statutory interest rates on loans at state-owned banks (Figure 1-8), and by restricting overall lending. The central government also took measures to suspend independent development of industrial zones and such by local government. These measures took effect and inflation started to taper off in 1995.

However, the investment boom resulted in excess production capacity emerging in the late 1990s in manufacturing. This combined with economic slow-down from the Asian financial crisis in 1997, and the prices turned into deflation in 1998. The government initially responded through monetary measures including lowering of interest rates, but muted recovery prompted policy reform in 1998. The government embarked on fiscal expansion through supplementary issues of national bonds. Other measures included scrapping control of overall lending volume, and raising the prices of services such as transportation. Consumer price index stopped falling in response to these measures, and deflation halted for the time being in 2000.

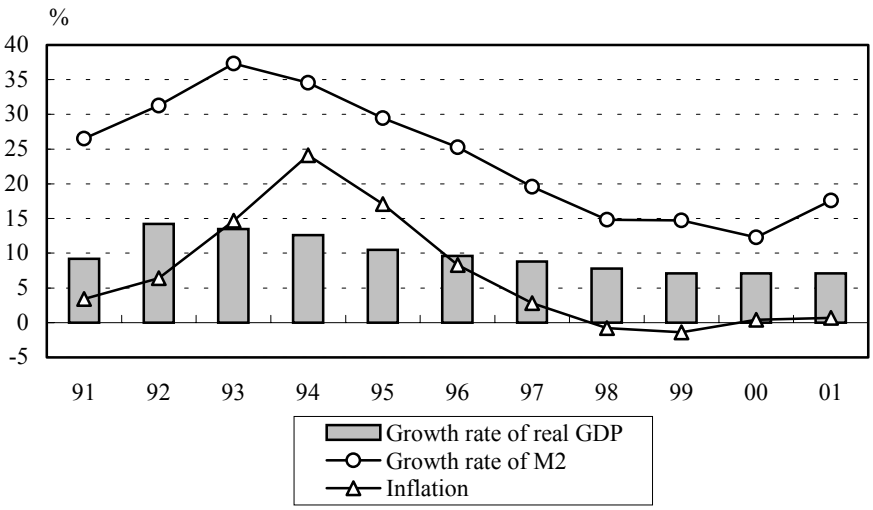


Figure 1-7. M2 Growth, GDP Growth and Inflation

Source: "China Statistical Yearbook"

[13] Open market operations started in 1996, followed by introduction of deposit reserve rates in 1998.

The differences in monetary policy between the early and late 1990s can be traced using Marshall's k. As shown in Figure 1-9, Marshall's k was below its trend line in 1993 to 1997, indicating monetary tightening. It subsequently rose above its trend line from 1998, indicating the switch to monetary loosening prompted by the Asian financial crisis.

Prices started falling again in 2002 as entry into the WTO pushed up price competition in industrial products. Retail Price index, Purchasing Price Index of Major Raw Materials and Ex-factory Price Index of Industrial Products are still falling, indicating that deflationary pressure is still present.

The People's Bank of China responded by lowering interest rates for the first time since 1999 in February 2002, with the rate on one-year loans down to 5.31% from 5.85%. The rate on one-year deposits also fell to 1.98% from 2.25%.

We attribute China's deflation more to supply-side factors rather than lower demand, since the economy has continued to expand

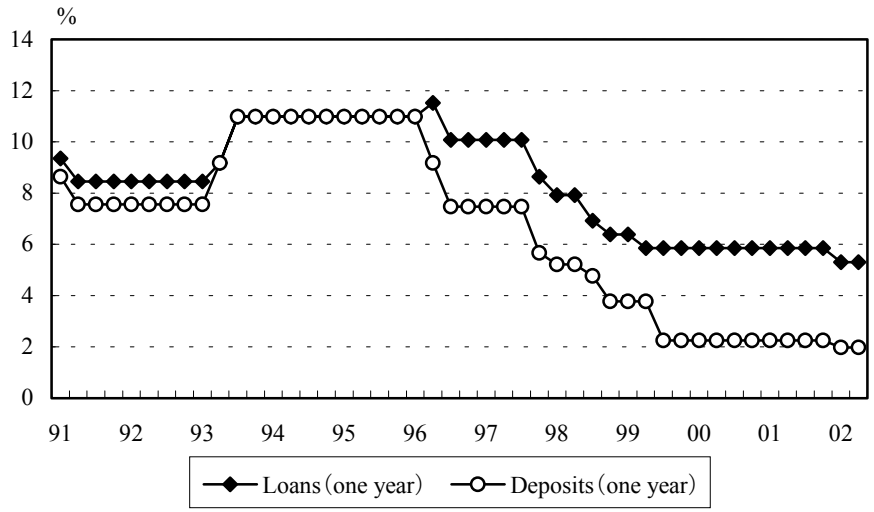


Figure 1-8. Interest Rates on Deposits and Loans

Sources: "China Statistical Yearbook," etc.

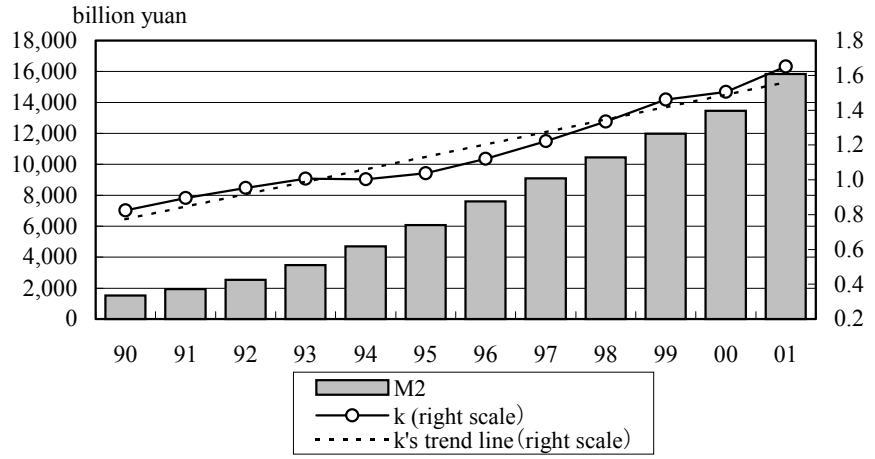


Figure 1-9. M2 and Marshall's k

Note: Marshall's k = M2 / GDP
Source: "China Statistical Yearbook"

strongly at around 7% per annum. In other words, prices appear to be falling in response to excess production capacity and increased price competition with foreign products, as a result of membership of the WTO.

2.3. Fiscal Policy, Government Deficit and Government Debt

Fiscal policy is another important part of economic policy. As shown in Figure 1-10, tax revenue forms the main part of overall income for central and local government. Tax revenue provided 93.9% of overall income in 2000. Industrial and Commercial Tax is the largest source of tax revenue (77% of overall fiscal income), of which 34% came from value-added tax (basic rate of 17%). The value-added tax is equivalent to consumption tax in Japan. As shown in Figure 1-11, fiscal expenditure in 2001 was mainly composed of Culture, Education spending (17.8% of expenditure excluding government bond costs), Capital Construction (13.3%), Government Administration (11.6%), National Defense (7.6%), Price Subsidies (3.9%), Science&Technology (5.2%), and Agricultual Production (9.9%).[14]

As shown in Figure 1-12, fiscal expenditure as a proportion of GDP tended to decline in the early 1990s, reaching 13.2% in 1995. This reflected the smaller role in the Chinese economy of state-owned enterprises, a major source of tax revenue. Over the same period, the central government's share of overall (central plus local government) fiscal revenue declined, raising concerns over diminished central government capacity to control the macro-economy. Fiscal reform in 1994 consequently aimed at raising the central government's share of tax revenue through reform of the tax system, and at expanding revenue through introducing value-added tax and tightening up tax collection. Fiscal expenditure relative to GDP started to expand as a result, climbing to 19.6% in 2001. Nevertheless, this still remains a low level compared to developed countries.[15]

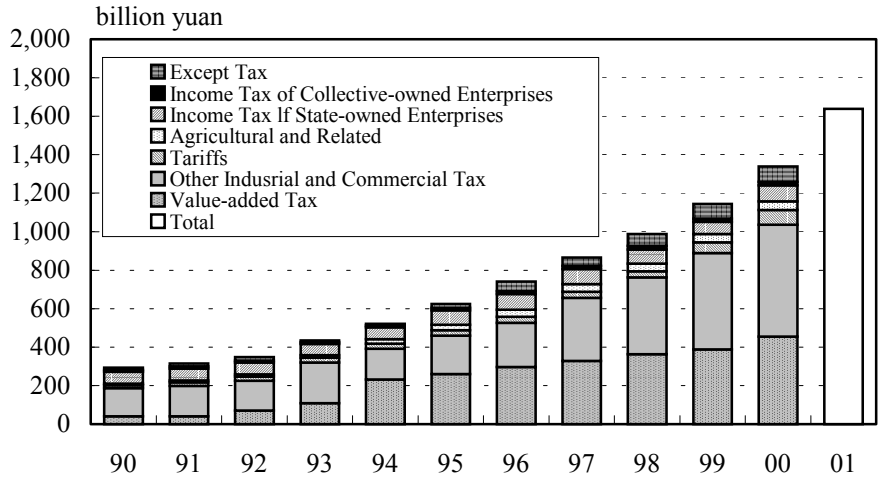


Figure 1-10. Fiscal Revenue Breakdown (Central + Local Government) (Excluding Government Bond Revenue)（2000）

Note: 2001 breakdown not available.
Source: "China Statistical Yearbook"

[14] Government support for state-owned enterprises is reported as negative fiscal revenue, and amounted to RMB30 billion in 2001.
[15] Fiscal expenditure as a proportion of GDP: Japan 38.1%, USA 30.0%, UK 39.1% (1999).

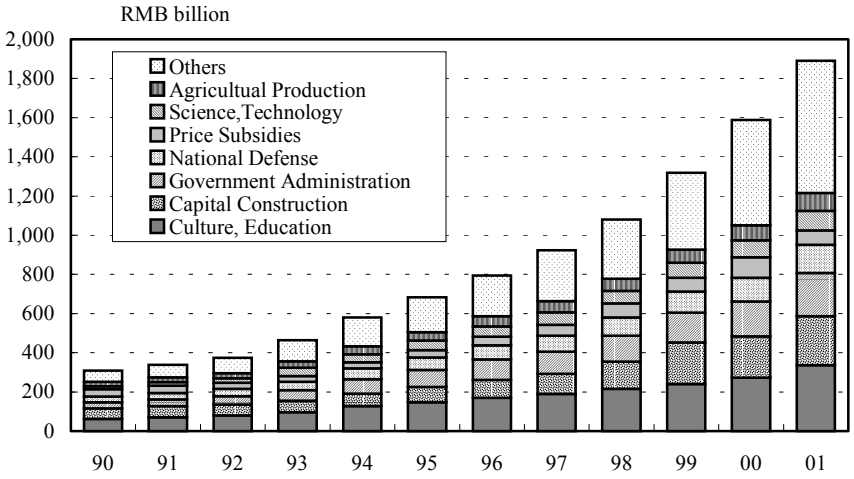


Figure 1-11. Fiscal Expenditure Breakdown (Central + Local Government) (Excluding Government Bond Costs)

Source: "China Statistical Yearbook 2001"

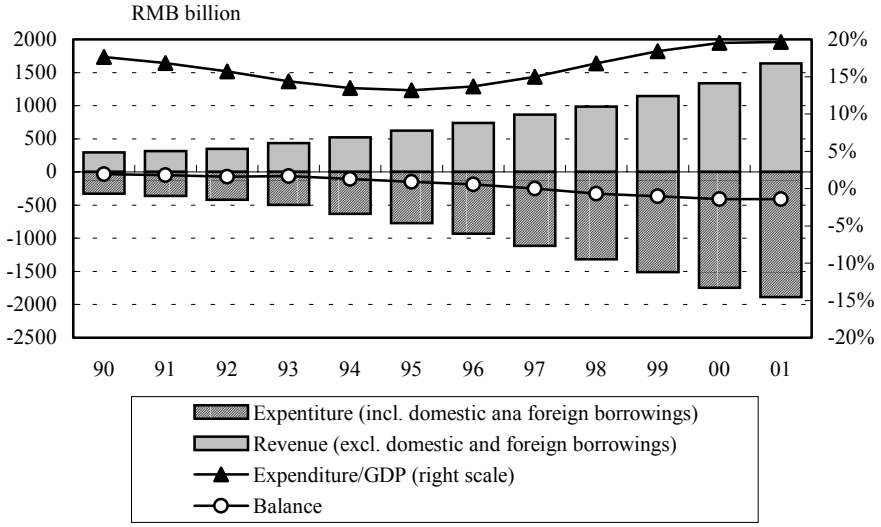


Figure 1-12. Fiscal Revenue and Expenditure in China (Central + Local Government)

Source: "China Statistical Yearbook 2001"

China's greatest fiscal problem is its chronic fiscal deficit (Figures 1-12 and 1-13). The deficit has consistently widened since acceleration of reform and opening up policies from 1992. In response to this, the ninth five-year plan (1996-2000) targeted wiping out of the primary balance deficit during the period of the plan. However, this target was shelved following the switch to aggressive fiscal policy in 1998, and each year since then the government has issued large volumes of long-term construction bonds (RMB100 billion in 1998, RMB110 billion in 1999, RMB150 billion in 2000, RMB150 billion in 2001, RMB150 billion scheduled in 2002).[16] Consequently, the

[16] GDP boosting effects from long-term construction bonds are estimated at +1.5% in 1998 (GDP 6.3% →7.8%), +2.0% in 1999 (GDP 5.2% →7.2%), +1.7% in

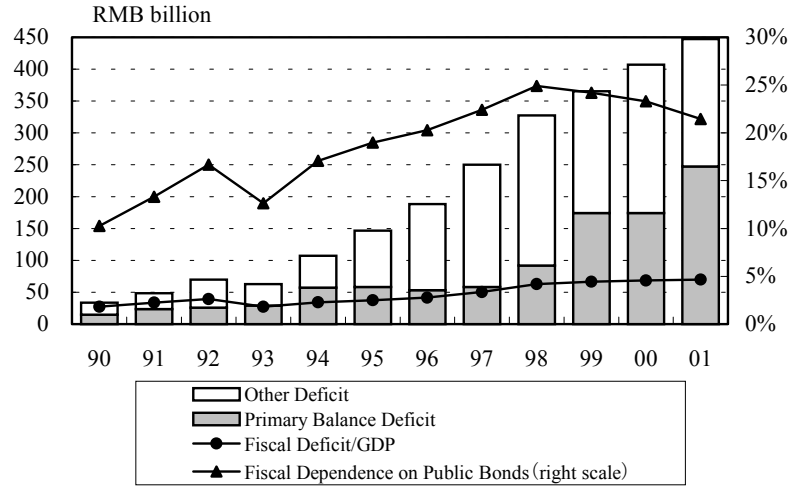


Figure 1-13. Breakdown of Fiscal Deficit (Central + Local Government)

Source: "China Statistical Yearbook 2001"

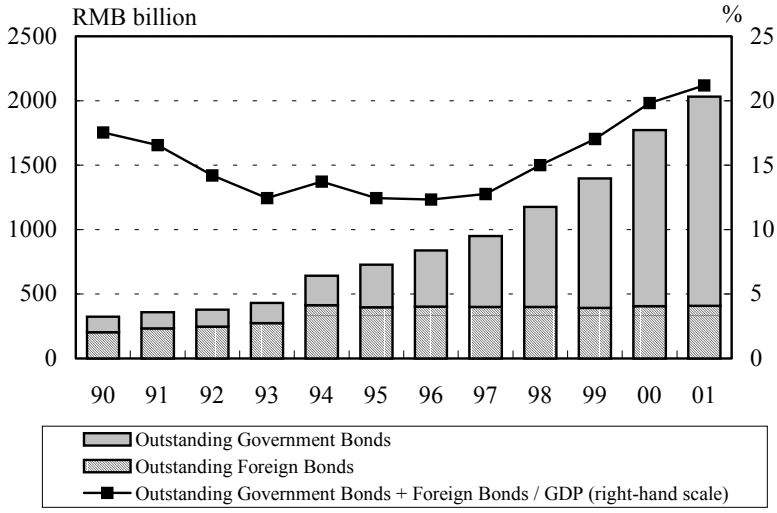


Figure 1-14. Outstanding Government Debt

Note: Outstanding national bonds estimated from issuance and redemption for 1980-1992, 1999, and 2001.
1998 does not include RMB270 billion in extraordinary bonds for capital injections into state-owned banks.
Outstanding foreign bonds estimated from issuance and redemption for years up to 1998, and 2001
Source: "China Statistical Yearbook"

2000 (GDP approximately 6.6% →8.3%), and +1.8% in 2001 (GDP approximately 5.5% →7.3%) (Xinhua Net, April 16, 2002).

primary balance remains in the red, with the deficit reaching 4.7% of GDP in 2001.[17] In recent years fiscal dependence on public bonds has been running at 23-25%, which is not as high as Japan's current level but higher than Western developed nations. The Chinese government used dollar-denominated foreign bonds[18] to finance its fiscal deficit from the late 1980s to the early 1990s, but it now depends on domestic bonds.

Higher issuance of national bonds resulted in rapid expansion of outstanding government debt in the late 1990s (Figure 1-14), and in 2001 this debt reached RMB203.3 billion including foreign bonds, equivalent to 21.2% of GDP. This is a low level by international standards[19], but latent government debt is growing rapidly from factors including rising unemployment accompanying reform of state-owned enterprises (examined later in this report), and non-performing loans at state-owned banks, so future developments require monitoring.

3. Trade and Foreign Direct Investment

3.1. Trade Trends and Structural Changes

To summarise the foregoing, the Chinese economy has achieved very rapid expansion, but also faces the major problems of regional imbalances, deflation and the fiscal deficit. Against this background, great progress has been achieved in China's economic relationship with foreign countries, such as through trade and foreign direct investment.

Since economic growth accelerated in 1993, trade has expanded at a high pace in excess of average annual GDP growth of 9.3%, with exports growing by an annual average 13.5% and imports rising 13.1% (Figure 1-15). The balance of trade fell into the red in 1993, but has consistently been in the black ever since, thanks to the around 30% devaluation of the RMB against the dollar in 1994. However, imports have expanded rapidly along with exports, so the scale of the trade surplus has remained slight.

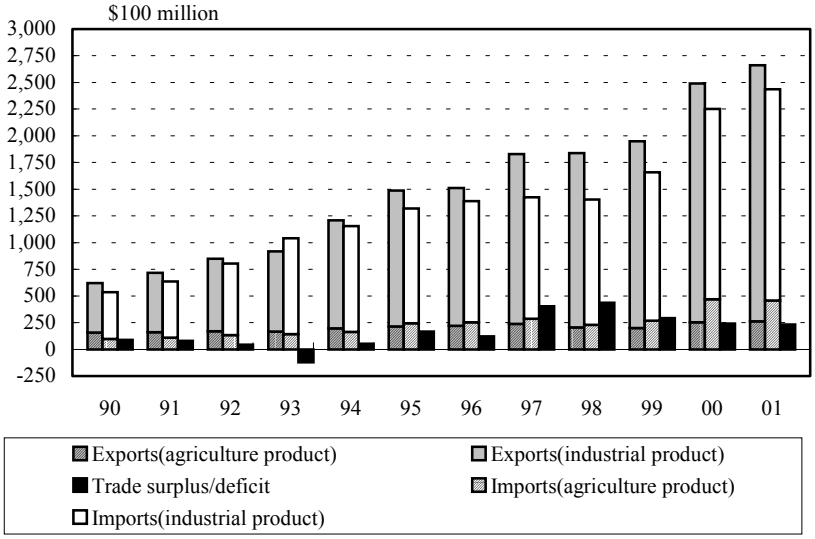


Figure 1-15. Imports and Exports

Source: "China Statistical Yearbook"

[17] Fiscal balances relative to GDP: Japan -7.0%, USA +0.2%, UK +1.9% (2000).

[18] The current credit rating for dollar-denominated foreign bonds is single-A (Fitch).

[19] Outstanding debt relative to GDP: Japan 123%, USA 59%, UK 54% (2000).

As shown in Table 1-6, Japan is the third largest destination for exports, and the largest source of imports. Combining exports and imports, Japan is China's largest trading partner, and is followed by the US, Hong Kong[20], South Korea and Taiwan.

China achieves a small surplus in its trade with Japan. It achieves significant surpluses with the second and third largest trading partners, the US and Hong Kong. On the other hand, it is consistently in the red in trade with fourth- and fifth-placed South Korea and Taiwan.

According to Chinese statistics, the balance of trade between China and Japan is close to zero (Figure 1-16). By contrast, Japanese statistics give Japan a large deficit (Figure 1-17), creating a large discrepancy between the two sets of figures. This appears to stem mainly from differences in trade definitions, which result in different handling of intermediary trade from Japan going through Hong Kong to China. Japanese export statistics are based on the initial destination, so exports through Hong Kong eventually destined for China are counted as exports to Hong Kong. By contrast, Chinese import statistics are based on the original place of production, so goods produced in Japan are counted as imports from Japan even if they come through Hong Kong. Adjustment of Japanese trade statistics is possible by calculating Hong Kong's re-exports to China of goods from Japan, using Hong Kong trade figures. This adjustment results in a balance of payments close to zero, agreeing with Chinese figures. The discrepancy is thus attributable to intermediary trade via Hong Kong.

Turning to categories of Chinese imports exports (Table 1-7), the largest 2001 categories in export value terms were electrical machinery and machinery, with respective shares of 19.2% and 12.6%. These two categories are followed by light industrial products: woven apparel

Table 1-6. China's Trading Partners (2001)

(100 mil US$)

		Total		Export		Import		Trade
		Value	Share	Value	Share	Value	Share	Balance
	Total	5,098	100	2,662	100	2,436	100	226
1	Japan	878	17	450	17	428	18	22
2	United States	805	16	543	20	262	11	281
3	HongKong	560	11	465	17	95	4	370
4	Korea	359	7	125	5	234	10	-109
5	Taiwan	323	6	50	2	273	11	-223
6	Germany	235	5	98	4	137	6	-39
7	Singapore	109	2	58	2	51	2	7
8	Russia	107	2	27	1	80	3	-53
9	United Kingdom	103	2	68	3	35	1	33
10	Malaysia	94	2	32	1	62	3	-30
	Other	1,525	30	746	28	779	32	-33

Source: Ministry of Foreign Trade and Economic Cooperation, "Import and Export Statistics"

[20] China includes Hong Kong in its foreign trade statistics, since it has retained economic independence after the return of sovereignty to China. According to the definitions used for Chinese trade statistics, intermediary trade is not included. However, the difficulty of distinguishing clearly between intermediary trade and general trade means that figures for Hong Kong may be inflated by a significant volume of intermediary trade passing through Hong Kong.

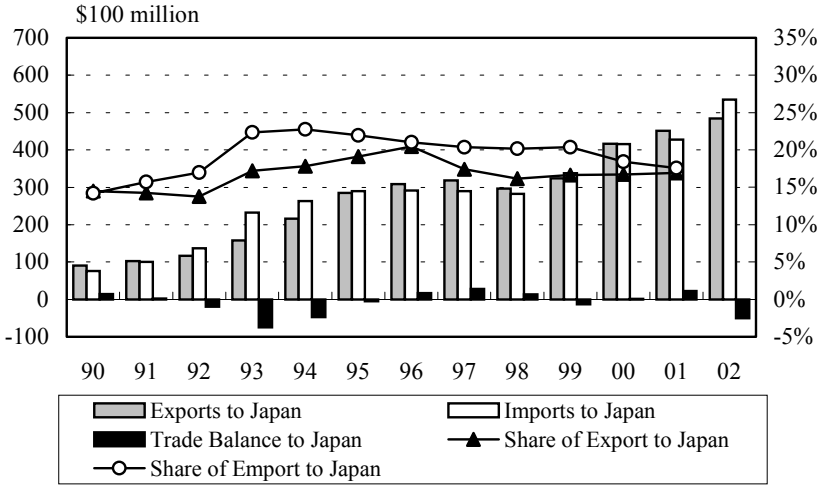


Figure 1-16. Trade between China and Japan (Chinese Statistics)

Note: Share values use the right-hand scale.
Source: "China Statistical Yearbook"

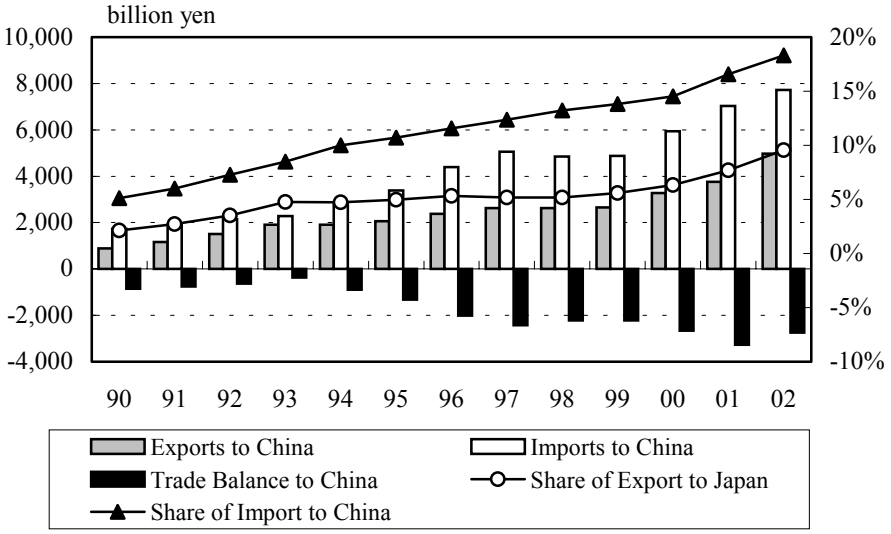


Figure 1-17. Trade between China and Japan (Japanese Statistics)

Note: Share values use the right-hand scale.
Source: "Trade Statistics"

(7.1%), knit apparel (5.0%), and footwear (3.8%). These five categories form the core of exports, providing 47.7% of the total. Among exports to Japan, the top category is again electrical machinery(16.6%), followed by woven apparel (15.3%), and knit apparel (10.1%). Average growth in exports to Japan was 16.2% between 1993 and 2001, surpassing growth in overall exports of 13.7%. Exports to Japan are thus driving overall export growth. Growth in exports of electric equipment has been particularly strong, with average annual expansion between 1993 and 2001 of 22.6% to all trading partners, and 37.9% to Japan.

Turning to categories of Chinese imports, the largest category is again electrical machinery (23.0%), followed by machinery (16.7%), and mineral fuels (7.2%). Among imports from Japan, the top category is electric machinery (30.4%), followed by machinery (21.0%), and iron and steel (6.2%). All imports of electric equipment expanded at an average rate of

Table 1-7. Import and Export Categories (2001)

With World — Mil US$

Export	Value	Share	92-01 avg. growth
Electrical Machinery	51,322	19.2%	22.6
Machinery	33,626	12.6%	29.1
Woven apparel	18,967	7.1%	6.8
Knit apparel	13,465	5.0%	12.6
Footwear	10,092	3.8%	10.1
Toys	9,084	3.4%	12.1
Mineral fuel, oil	8,506	3.2%	6.8
Furniture	7,562	2.8%	21.7
Leather art	6,991	2.6%	12.5
Plastic	6,699	2.5%	17.9
sum	166,314	62.4%	-
total	266,662	100.0%	13.6

With Japan — Mil US$

Import	Value	Share	92-01 avg. growth
Electrical Machinery	7,462	16.6%	37.9
Woven apparel	6,908	15.3%	15.4
Knit apparel	4,560	10.1%	21.1
Machinery	3,241	7.2%	48.0
Mineral fuel, oil	2,008	4.5%	-0.7
Prepared meat, fish	1,449	3.2%	26.4
Optic/Precision Instruments	1,352	3.0%	34.1
Other textile articles	1,163	2.6%	19.1
Footwear	1,010	2.2%	20.6
Fish	965	2.1%	4.1
sum	30,118	66.8%	-
total	45,081	100.0%	16.2

Import	Value	Share	92-01 avg. growth
Electrical Machinery	55,909	23.0%	21.7
Machinery	40,559	16.7%	11.7
Mineral Fuels	17,549	7.2%	19.4
Plastic	15,263	6.3%	13.8
Iron and steel	10,949	4.5%	13.2
Precision Instruments	9,778	4.0%	19.1
Organic chemicals	8,977	3.7%	19.0
Copper articles	4,887	2.0%	13.5
Transport Equipment	4,534	1.9%	2.6
Aircraft	4,431	1.8%	9.0
sum	172,836	71.0%	-
total	243,567	100.0%	13.1

Import	Value	Share	92-01 avg. growth
Electrical Machinery	13,008	30.4%	23.3
Machinery	8,999	21.0%	9.8
Iron and steel	2,633	6.2%	7.8
Precision Instruments	2,522	5.9%	18.5
Plastic	2,454	5.7%	19.0
Organic chemicals	1,888	4.4%	17.3
Transport Equipment	1,459	3.4%	2.1
Copper articles	882	2.1%	22.6
Manmade Staple Fibers	801	1.9%	10.0
Manmade Filament, Fabric	781	1.8%	7.6
sum	35,427	82.8%	-
total	42,805	100.0%	13.5

Surplus	Value	Share	92-01 avg. growth
Woven apparel	18,228	17.7%	6.6
Knit apparel	12,990	12.6%	12.5
Footwear	9,762	9.5%	10.8
Toys	8,813	8.6%	12.9
Furniture	7,240	7.0%	23.1
Leather art	6,907	6.7%	12.6
Iron steel products	3,946	3.8%	-239.8
Misc textile products	3,669	3.6%	9.1
Prepared meat	2,032	2.0%	20.1
Railway	1,991	1.9%	24.5
sum	75,578	31.0%	-
total	102,808	100.0%	-

Surplus	Value	Share	92-01 avg. growth
Woven apparel	6,655	25.3%	15.4
Knit apparel	4,548	17.3%	21.1
Mineral Fuels	1,730	6.6%	-1.8
Prepared meat, fish	1,448	5.5%	26.4
Other textile articles	1,160	4.4%	19.6
Footwear	1,003	3.8%	20.9
Furniture	928	3.5%	40.1
Vegetabls	900	3.4%	10.6
Leather art	870	3.3%	23.0
Fish	859	3.3%	3.1
sum	0	0.0%	-
total	26,258	100.0%	-

Deficit	Value	Share	92-01 avg. growth
Mineral fuel, oil	-9,043	11.3%	-226.1
Iron and steel	-8,699	10.9%	15.0
Plastic	-8,564	10.7%	11.4
Machinery	-6,933	8.7%	-5.5
Electrical Machinery	-4,587	5.8%	14.6
Organic chemicals	-4,371	5.5%	28.1
Copper articles	-4,266	5.4%	13.9
Ores and slag	-4,086	5.1%	16.3
Aircraft and parts	-3,865	4.8%	9.8
Optical instruments	-3,320	4.2%	12.8
sum	-57,734	72.4%	-
total	-79,713	100.0%	-

Deficit	Value	Share	92-01 avg. growth
Machinery	-5,758	24.0%	4.8
Electrical Machinery	-5,546	23.1%	15.2
Iron and steel	-2,300	9.6%	8.4
Plastic	-1,785	7.4%	16.1
Organic chemicals	-1,487	6.2%	19.2
Optic/Precision Instruments	-1,170	4.9%	11.1
Copper articles	-859	3.6%	23.5
Transport Equipment	-786	3.3%	-4.5
Manmade Filament, Fabric	-753	3.1%	7.3
Manmade Staple Fibers	-705	2.9%	11.2
sum	-21,149	88.2%	-
total	-23,982	100.0%	-

Source: "China Customs Statistics"

21.7% between 1993 and 2001 (13.1% of overall imports), while imports from Japan alone expanded a strong 23.3%.

Light industrial products such as apparels are the main categories in which China achieves surpluses from trade, while the main categories resulting in net imports include machinery and electrical machinery. Raw materials such as plastics, organic chemicals and manmade fibres are also categories resulting in net imports.

The specialisation coefficient is an indicator of international competitiveness in categories of imports and exports. This is calculated through dividing the trade balance by the total value of imports and exports for each category. The coefficient ranges between minus one and one, and the value gets closer to one as imports drop relative to exports, indicating comparative advantage. The value gets closer to minus one as exports drop relative to imports, indicating comparative disadvantage.

Specialisation coefficient = (exports – imports) / (exports + imports)

Looking first for trade with all trade partners (Figure 1-18), the specialisation coefficient of primary products has fallen sharply from positive to negative values since 1992, indicating a shift from competitive advantage to disadvantage. Within primary products, the leading categories are agricultural products and mineral fuels. As shown in Figure 1-19, agricultural products have maintained competitive-

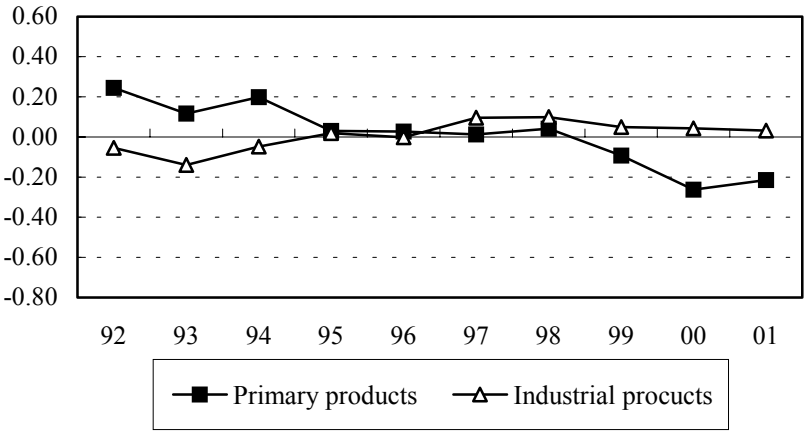


Figure 1-18. Specialisation Coefficients (Global Trade)

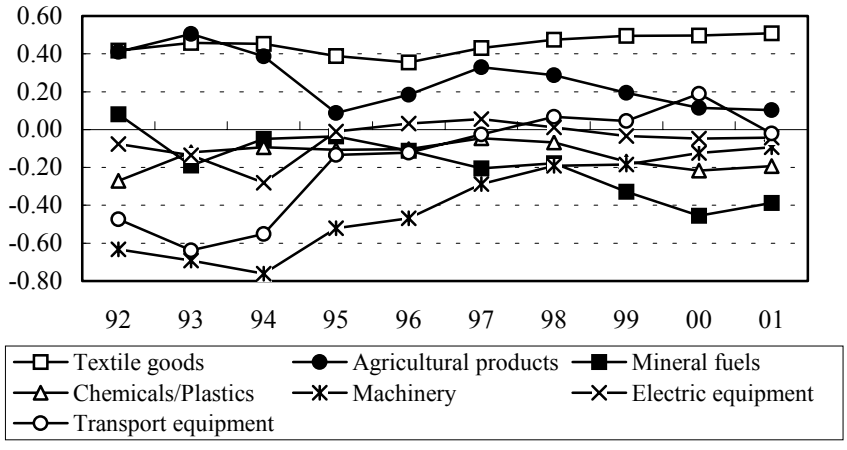


Figure 1-19. Specialisation Coefficients (Global Trade)

Note: HS single-digit basis. HS 1-3 and 5 are primary products, HS 6-19 are industrial products.
Source: "Chinese Customs Statistics"

ness and stayed in positive territory. By contrast, mineral fuels have become a category of relative disadvantage, after China switched from crude-oil exporter to importer from 1993 as rapid economic growth pushed up its domestic demand. This is the main factor behind the overall specialisation coefficient for primary products slipping into negative territory. On the other hand, industrial products have risen into a position of modest relative advantage since the late 1990s. Textile goods have maintained relative advantage since 1992, but electric equipment and machinery display a value of close to zero. The specialisation coefficients of machinery and transportation equipment are on a rising trend, and these two categories are in the process of crossing over into positive territory.

Furthermore, industrial products are usually regarded as capital-intensive goods, but as examined in detail in Chapter II, China's electric equipment and electronics industries are engaged in processing trade. That is to say they import components, assemble the finished products, and then export them. China is thus the site for the labour-intensive stages of production, resulting in its pattern of competitive advantage.

Figure 1-20 shows specialisation coefficients for trade with Japan. China has relative advantage in primary products, but is generally

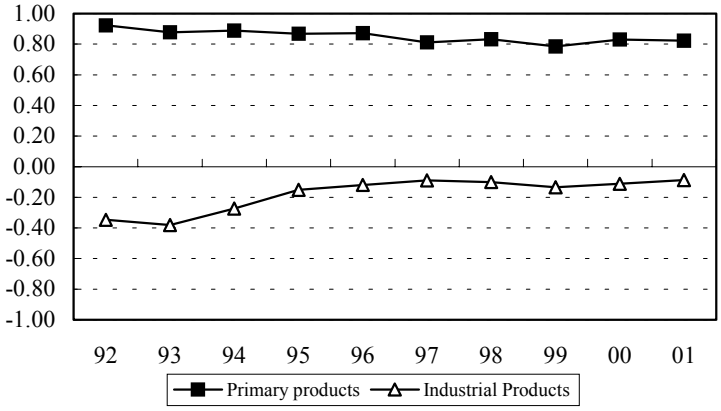


Figure 1-20. Specialisation Coefficients (Trade with Japan)

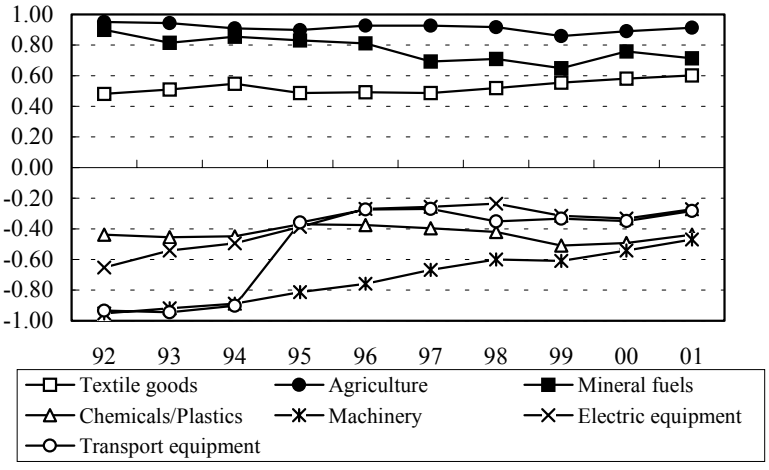


Figure 1-21. Specialisation Coefficients (Trade with Japan)

Note: HS single-digit basis. HS 1-3 and 5 are primary products, HS 6-19 are industrial products.
Source: "Chinese Customs Statistics"

disadvantaged in industrial products. Figure 1-21 shows specialisation coefficients for individual categories of goods, showing relative advantage in primary products such as agricultural products and mineral fuels[21], and in industrial products such as textile goods. Elsewhere, categories of relative disadvantage include electric equipment, machinery, chemicals/plastics and transportation equipment. Nevertheless, specialisation coefficients have been rising rapidly in industrial products such as electric equipment, machinery and transportation equipment since 1992.

3.2. Foreign Direct Investment in China

As mentioned at the start of this report, Deng Xiao-ping's tour of the southern seaboard in 1992 marked the start of a succession of polices including gradual approval of investment in tertiary industries, and measures to encourage introduction of foreign capital into interior regions. This resulted in growing recognition of China's economic potential, and sparked off a boom in foreign direct investment in China (Figure 1-22). To start with, both the number of projects and their value shot up from 1992, and then the actually utilized value of investments expanded up to 1998. The value then slackened off in 1999 and 2000, but the contract value started to expand again from 2000 in response to WTO membership prospects. Actually used value consequently exceeded its 1998 level in 2001, reaching a new record high. As a result, China was the recipient of $46.8 billion in foreign direct investment in 2001, out of the global total of approximately $760 billion. This gave China the highest share among developing countries.[22]

Figure 1-23 shows foreign direct investment in China broken down by country of origin. At the start of the investment boom in the early 1990s, other ethnically Chinese territories such as Hong Kong[23] and Taiwan took the leading role and provided nearly 80% of actually utilized value. However, the investment boom spread to other countries, and from the late 1990s Japan, Europe, the US and South Korea successively joined the ranks of major investors. The high value of investment from

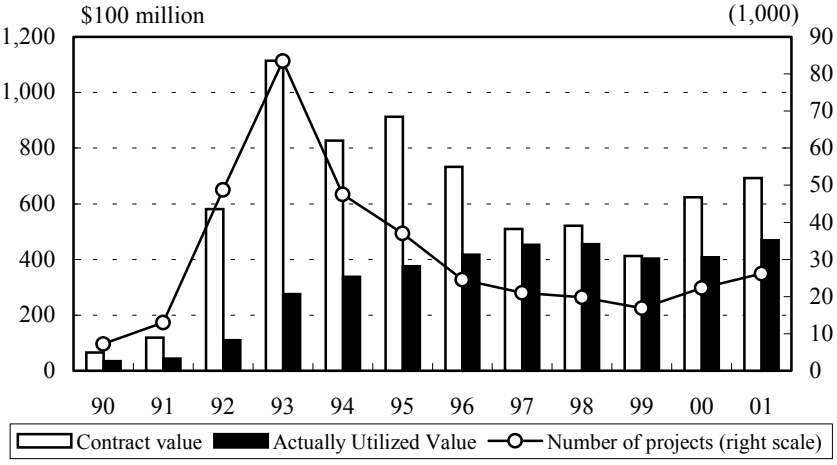


Figure 1-22. Foreign Direct Investment in China

Source: "China Statistical Yearbook 2001"

[21] China has become a net importer of crude oil, but it exports crude oil to Japan under a long-term trade agreement.

[22] UNCTAD estimate.

[23] Preferential conditions for investment in China from Hong Kong make it likely that Chinese capital was moved clandestinely into Hong Kong, to return to China under the guise of foreign investment.

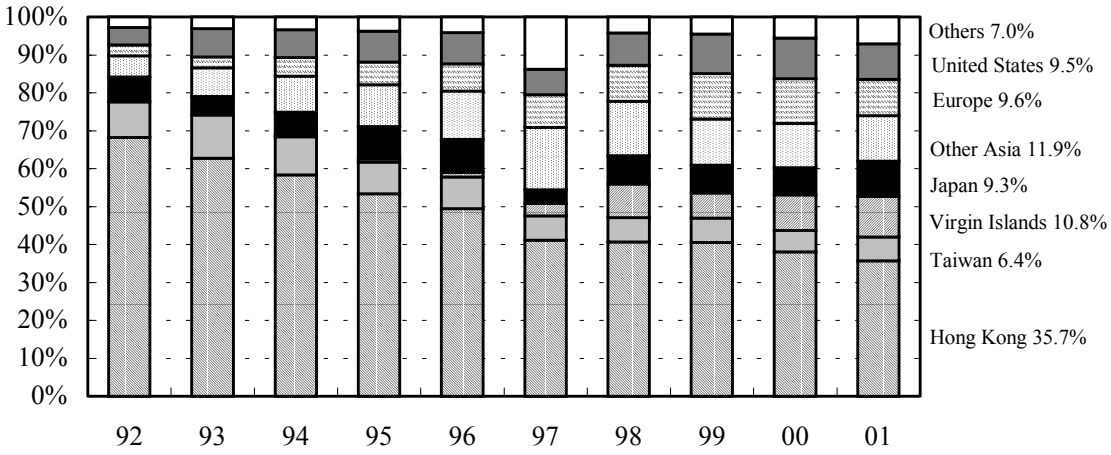


Figure 1-23. National Shares of Investment in China (Actually utilised Investment Value)

Source: "China Statistical Yearbook"

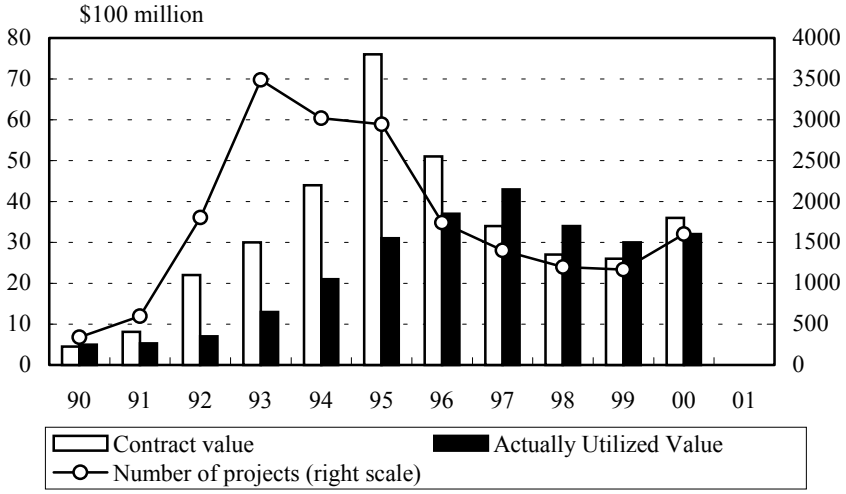


Figure 1-24. Foreign Direct Investment by Japan in China (Chinese Statistics)

Source: Ministry of Foreign Trade and Economic Cooperation materials

the Virgin Islands is probably attributable to Taiwanese investors evading their government's ban in high-tech investment in China. The combined investment share of Taiwan and the Virgin Islands was 17.2% in 2001.

Foreign direct investment from Japan reached $4.35 billion in 2001 (9.3% of the total), making Japan the biggest investor after Hong Kong, Taiwan (including the Virgin Islands), Europe and the US.

Figure 1-24 shows Chinese data on Japanese foreign direct investment in China, while Figure 1-25 shows data from Ministry of Finance and Japanese international balance of payments. Unlike global investment, Japanese investment peaked in 1995. The two sets of data have different coverage and time periods, with Japanese figures showing approximately half the number of agreements and one-third of the value of Chinese figures, but their overall patterns look similar.

Figure 1-26 shows actually utilized foreign direct investment in China broken down by industry sectors, showing that investment is mainly in manufacture (63.5% share). Figure 1-27 shows a more detailed breakdown for investment from Japan, in which the top shares are held by electric equipment including elec-

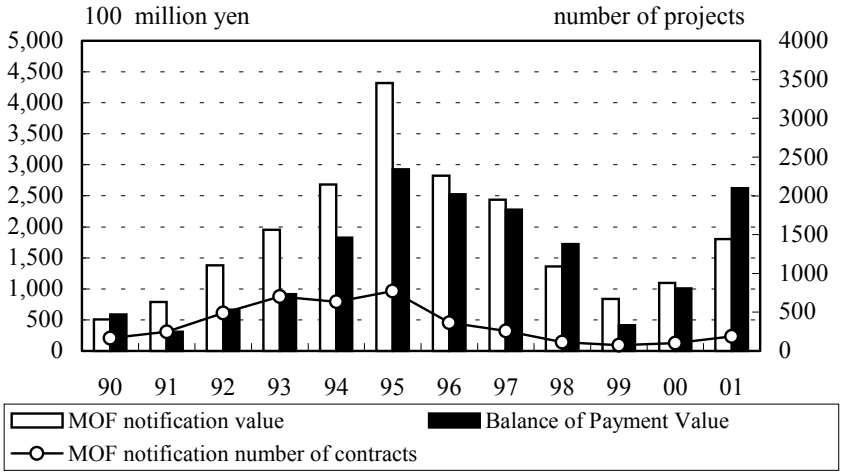


Figure 1-25. Foreign Direct Investment by Japan in China (Japanese Statistics)

Note: Financial year-basis data for Ministry of Finance notification value and number of contracts, calendar year-basis data for Bank of Japan data.
Sources: Ministry of Finance, "Foreign Direct Investment," and Bank of Japan, "Balance of Payments statistics"

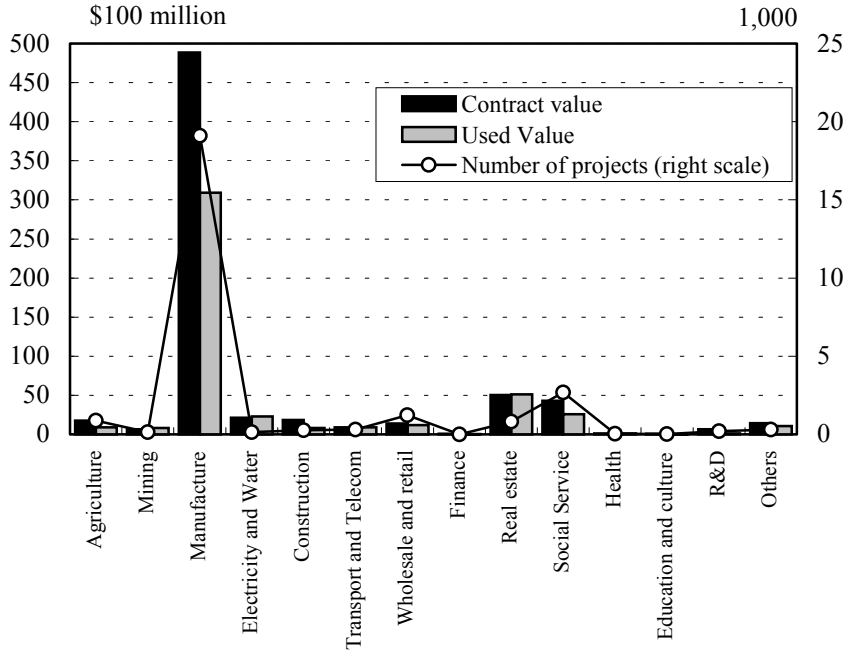


Figure 1-26. Global Foreign Direct Investment in China by Industrial Sector (2001)

Source: "China Statistical Yearbook"

tronics (58.2%), followed by transportation equipment (23.0%) and chemicals (16.9%).

In global foreign direct investment by sector, real estate (11.4% share) is the most prominent sector after manufacturing. This presumably reflects rapidly growing investment of overseas Chinese capital in hotels, commercial buildings and the like in places like Shanghai. In non-manufacturing sectors, Japan displays a relatively large investment in commerce, which includes the like of convenience stores and department stores.

Figure 1-28 shows the level of capitalisation of foreign companies in China broken down by industry sectors. Manufacturing has by far the greatest presence, followed by real estate and services. Foreign-funded enterprises number approximately 202,000 overall, of which 70.0% are engaged in manufacture, 8.0% in services, and 5.9% in real estate. The capitalisation of manufacturing companies is the largest at a total of $305.3 billion (60.4% share), followed by real estate ($72.2 billion, 14.3%) and services ($34.0 billion, 6.7%). On average, 71.1% of the total capitalisation of these foreign-funded enterprises in China is held by foreigners.

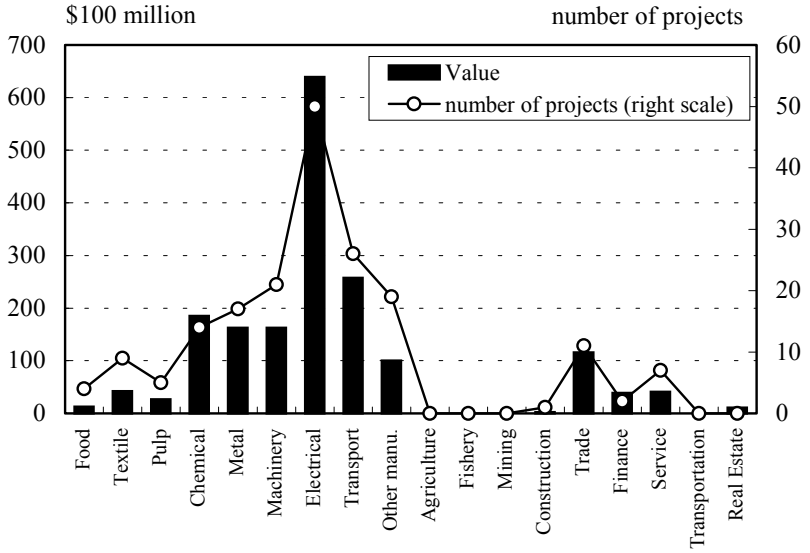


Figure 1-27. Japanese Foreign Direct Investment in China by Industrial Sector (2001)

Source: Ministry of Finance, "Foreign Direct Investment"

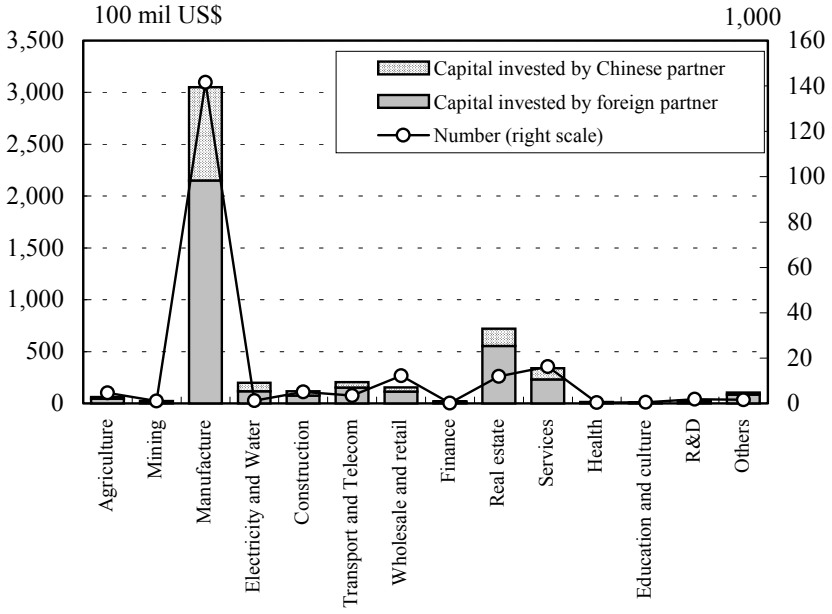


Figure 1-28. Number of Foreign-funded enterprises in China, and Their Capitalisation, by Industry Sector (2001)

Source: "China Statistical Yearbook"

3.3. International Balance of Payments and Exchange Rate Policy

The international balance of payments data in Table 1-8 and Figure 1-29 illustrate trends in trade and foreign direct investment discussed above.

The trade balance has broadly stayed in the black over the past ten years, as mentioned earlier. The balance on services such as transportation and insurance is in the red. The balance on income also remains in the red, but we attribute this to expanding payments of returns on cumulative direct investment from abroad during the 1990s. The overall current account balance including these items was in the black by $17.4 billion in 2001, as surpluses in goods and transfers more than compensated for deficits in services and income.

The capital account surplus expanded in the early 1990s due to steep expansion in incoming direct investment, but then contracted in the late 1990s due to a growing deficit in areas like securities investment. The capital account went temporarily into the red in 1998 as capital was pulled out of China as a result of the Asian currency crisis, but it had recovered to a large surplus in 2001.

Table 1-8. China's International Balance of Payments (2001)

($100 million)

Current Account			174
	Goods & Services		281
		Trade Balance	340
		Services	-59
	Income		-192
	Current Transfers		85
Capital Account			348
	Direct Investment		374
	Portfolio Envestment		-194
	Other Investment		169
Net Errors and Omissions			-49
Reserves and Related Items			473

Source: IMF, "International Financial Statistics"

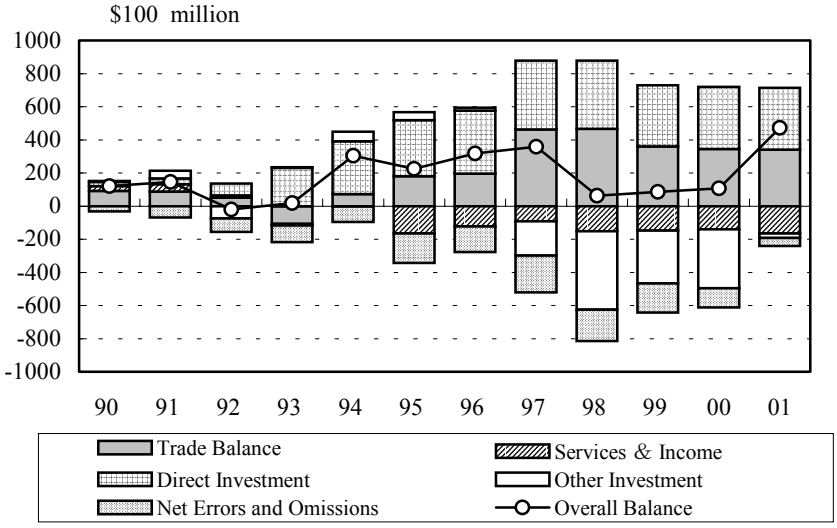


Figure 1-29. China's International Balance of Payments

Source: IMF, "International Financial Statistics"

China's international balance of payment contains large errors and omissions, which shows deficit of $22.1 billion in 1997 shrank to $4.9 billion in 2001. The main sources of errors and omissions probably include capital flight[24] carried out wealthy Chinese individuals and corporations.

Turning to China's foreign exchange policy, China used to have official and market rates up to 1993, but then lowered its official rate by around 30% against the dollar unifying with the market rate. China officially uses a managed floating system to regulate exchange rates, where variation from the previous day's rate is permitted within a range. In reality, however, free movement of capital is not permitted in China, and the exchange rate has been pegged at approximately RMB8.3/$ since the middle of the 1990s, through intervention by the Peoples Bank of China (Figure 1-30). The exchange rate against the yen reflects the dollar/yen rate, and is currently roughly

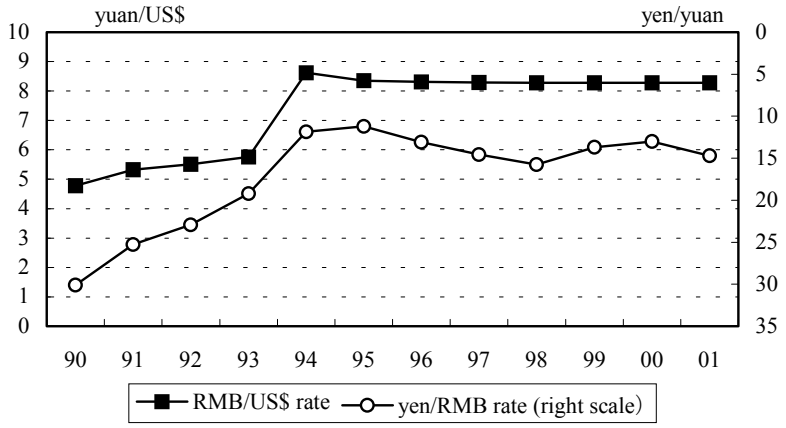


Figure 1-30. Exchange Rate

Note: Dollar/yen rate can be calculated from dollar/RMB and RMB/yen rates.
Source: "China Statistical Yearbook"

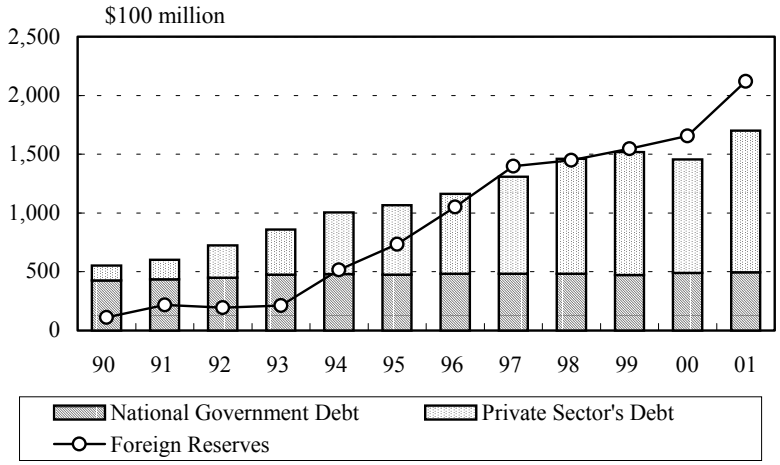


Figure 1-31. Foreign Reserves and Foreign Debt

Note: Outstanding government debt before 1995 is calculated from bond issuance and redemption.
Source: "China Statistical Yearbook"

[24] This probably includes capital transferred clandestinely to Hong Kong, as mentioned previously.

¥14-15/RMB.

China is thus maintaining surpluses in its current and its capital accounts, so its foreign reserves are accumulating (Figure 1-31). At the end of 2001, China's foreign reserves were second only to Japan ($402.0 billion) at $212.2 billion, and in recent years the level has been fully sufficient to cover outstanding foreign debt in both the public and private sectors. We judge that this accumulation of foreign reserves indicates that the RMB is under-valued at its current pegged exchange rate.

4. Changes in Industrial Structure

4.1. GDP by Industry

China's economic development does not simply consist of GDP expansion; China's industrial structure is also changing. We will examine such structural changes with reference to industrial categories as shown in Table 1-9.

Figure 1-32 shows real GDP performance by types of industry in the 1990s. In the nine years of accelerated reform and liberalisation between 1993 and 2001, primary industry re-

Table 1-9. Industrial Categories

Large Groups	Medium Groups	Small Groups	30 Industries
Primary Industry			Agriculture
Secondary Industry	Mining		Coal Mining Crude oil and natural gas Metal ore mining Non-metal ore mining
	Industry	Light Industry	Food products Textile goods Wearing apparel and leather Sawmills and furniture
		Materials, Energy	Paper and products Electricity and hot water Petroleum processing Coal processing and products Chemicals Non-metal mineral products Metals smelting and products Metal products
		Processing Industry	Machinery and equipments Transport equipment Electric equipment Electronic equipment Instruments and meters Maintenance and repair Other manufacturing products
	Construction		Construction
Tertiary Industry			Transport and communication Commerce and restaurants Social services Finance and insurances Public administration

Source: The 30 categories shown above are taken from "Sector Analysis of Chinese Economic Development, & New Input-Output Rankings Using Comparable Prices."

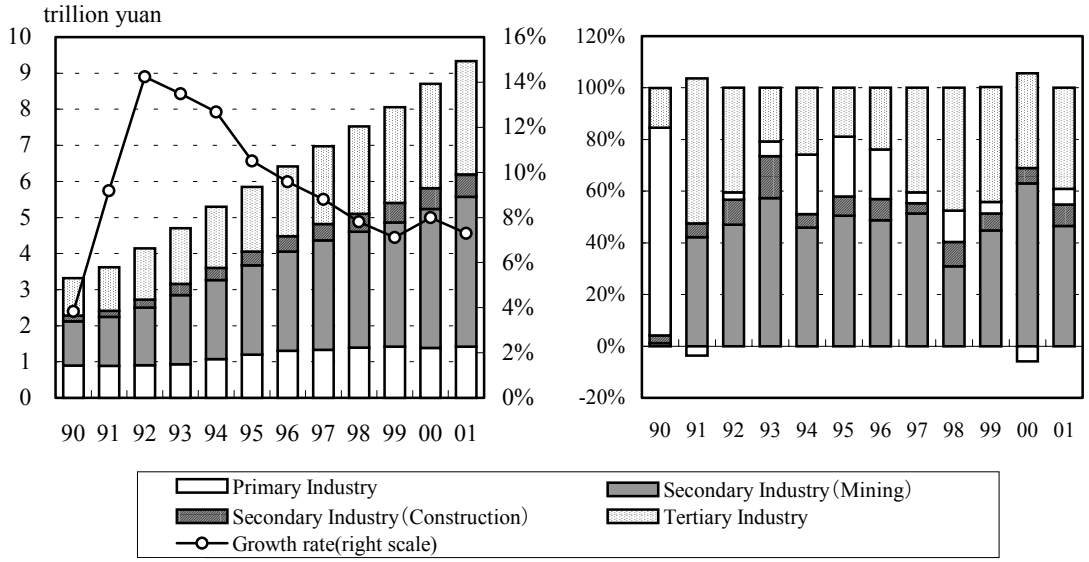


Figure 1-32. Real GDP Broken Down by Type of Industry (1995 Prices)

Figure 1-33. Real GDP Contribution Rate by Type of Industry

Note: Converted into real terms using GDP deflator.
Sources: "China Statistical Yearbook 2001," and IMF, "International Financial Statistics"

corded expansion of 60% (average annual growth rate of 5.2%). Secondary and tertiary industries expanded faster than this in the same period, recording growth of 160% (annual average of 11.3%) and 120% (annual average of 9.2%) respectively.

Contribution rates shown in Figure 1-33 demonstrate that secondary industry (with mining and manufacturing playing the leading role), provided an average of around 57% of overall economic expansion in the same nine-year period. The average contribution rate from tertiary industry was 33% over the whole period, although this rises to 42% in the period from 1997. By contrast, primary industry only made an average contribution of 10% over the nine-year period.

The relative weightings of primary, secondary and tertiary industries within GDP changed from 22:44:34 in 1992 to 15:51:34 in 2001. This suggests a picture of rapid industrialisation, as decline in the weighting of primary industry more or less exactly matched expansion in the weighting of secondary industry.

Moreover, the Chinese government's tenth five-year plan running from 2001 to 2005 targets an industrial structure ratio of 13:51:36 in 2005, so the weighting of service industries is likely to rise. The industrial structure ratio for Japan in 1999 based on real GDP[25] was 1:29:70. Looking back at Japan's economic history since the Second World War, the structural changes undergone by in the Chinese economy during the 1990s are rivalled by Japan in its period of rapid growth between 1960 (11:48:41) and 1970 (5:56:39).

In Table 1-10 we have analysed[26] growth factors for each type of industry, using real GDP growth ($\Delta Y/Y$), employment growth ($\Delta L/L$), and growth in labour productivity ($\Delta[Y/L]/[Y/L]$). The number of people employed in primary industry stayed unchanged

[25] Calculated from nominal values for 1999 in the SNA Input-Output Table.
[26] If GDP is Y and the number of people in employment is L, labour productivity is Y/L. These two share a growth relationship of $\Delta Y/Y = \Delta L/L + \Delta(Y/L)/(Y/L)$.

Table 1-10. GDP and Labour Productivity by Type of Industry

		1992	2001	92-01 average growth growth rate	01/92 ratio
Real GDP (bl yuan)		4,140	9,336	9.5%	2.3
	Primary Industry	901	1,422	5.2%	1.6
	Secondary Industry	1,818	4,775	11.3%	2.6
	Tertiary Industry	1,420	3,139	9.2%	2.2
Employed (10,000) (10,000 persons)		65,554	73,025	1.2%	1.1
	Primary Industry	38,349	36,513	-0.5%	1.0
	Secondary Industry	14,226	16,284	1.5%	1.1
	Tertiary Industry	12,979	20,228	5.1%	1.6
Labour productivity (yuan/person)		6,316	12,784	8.1%	2.0
	Primary Industry	2,351	3,894	5.8%	1.7
	Secondary Industry	12,782	29,324	9.7%	2.3
	Tertiary Industry	10,944	15,517	4.0%	1.4

Table 1-11. Economic Indicators by Region (2001)

	GDP (100 Mil US$)				Employed (10 thou.)				Labour productivity(yuan／person)			
		Primary Industry	Secondary Industry	Tertiary Industry		Primary Industry	Secondary Industry	Tertiary Industry	Average	Primary Industry	Secondary Industry	Tertiary Industry
	(Share %)				(Share %)				(Average=100)			
Coastal Region	61,393	6,710	29,878	24,806	23,935	10,064	6,600	7,271	25,650	6,667	45,267	34,118
	(64)	(7)	(31)	(26)	(33)	(14)	(9)	(10)	(195)	(51)	(345)	(260)
Centre Region	27,125	4,998	12,547	9,580	20,832	11,744	3,646	5,441	13,021	4,256	34,408	17,606
	(28)	(5)	(13)	(10)	(29)	(16)	(5)	(7)	(99)	(32)	(262)	(134)
West Region	18,248	383	7,431	6,985	18,286	11,166	2,355	4,766	9,979	3,433	31,557	14,655
	(19)	(0)	(8)	(7)	(25)	(15)	(3)	(7)	(76)	(26)	(240)	(112)
National Total	95,933	14,610	49,069	32,254	73,025	36,513	16,284	20,228	13,137	4,001	30,133	15,945
	(100)	(15)	(51)	(34)	(100)	(50)	(22)	(28)	(100)	(30)	(229)	(121)

Note: The cumulative total of the three regions differs from the national figure.
Source: "China Statistical Yearbook 2001"

between 1992 and 2001, while those employed in secondary industry rose 10%, and those employed in tertiary industry rose 60%. Over the same period, labour productivity expanded 70% in primary industry, 130% in secondary industry and 40% in tertiary industry, so secondary industry made much more rapid progress than the other two types. In other words, greater labour productivity played a major part in overall expansion of secondary industry, while in tertiary industry employment of more people played a greater role than growth in labour productivity. The strong rise of labour productivity in secondary industry looks likely to have reflected rapid introduction of foreign capital. On the other hand, the labour productivity of primary industry is markedly low, raising concerns over effects from China's WTO membership going forward.

We mentioned the regional imbalances within China earlier in this report, and it is instructive that the coastal region has a high weighting of people employed in secondary industry boasting high labour productivity. By contrast, the central and western regions have high weightings in primary industry (Table

1-11). It appears that this difference in industrial distribution is a factor behind regional imbalance in growth rates.

4.2. Production by Industry

Table 1-12 shows shares of GDP (value-added) and production (value-added + intermediate input) by type of industry, based on the latest input-output table currently available (1997)[27]. This shows that secondary industry provides 52.1% of GDP and 66.2% of production, with the largest part of this coming from manufacturing at shares of 40.8% and 54.1% respectively. Secondary industry's share of production is higher in GDP than in production because China's secondary industry requires a high level of intermediate input.

Figure 1-34 presents a closer look, showing that chemicals provides the largest share of domestic production value within secondary industry, and 7.6% of overall production. Following chemicals, the sectors with the highest shares in overall production are food products (6.9%), textile goods (4.6%), non-metal mineral products (4.4%), and machinery (4.1%).

We next examined inducement of each industry's production value according to the final demand sectors of domestic demand, exports and imports (imports are displayed as negative values). We define domestic production value thus:

Domestic production value = production value induced by domestic demand + production value induced by exports + (negative) production value induced by imports

Export demand induces a large volume of production in textile goods, and wearing apparel and leather. The materials and energy, and processing and assembly segments enjoy strong production inducement from exports as well, but their negative inducement from imports is also strong. Traditional industries like textile goods, wearing apparel and leather have an established presence as important export industries displaying developed production bases and good availability of raw materials within China. On the other hand, the materials and energy, and processing and assembly segments do not have sufficient domestic supply bases, and they are therefore forced to rely on imports from foreign countries.

Table 1-12. Shares of GDP and Production by Type of Industry (1997; Nominal)

			Share of GDP	Share of Production
Primary Industry			19.5%	12.3%
Secondary Industry			52.1%	66.2%
	Mining		4.7%	3.4%
	Industry		40.8%	54.1%
		Light Industry	11.8%	15.7%
		Materials, energy	16.2%	24.2%
		Processing Industry	12.7%	14.2%
	Construction		6.6%	8.7%
Tertiary Industry			28.5%	21.4%

Source: "China Input-Output Table 1997"

[27] China compiles its inter-industry relations table every five years, in years ending in 2 and 7, with continuation data issued in intervening periods. The Input-Output Table for 2000 is currently being prepared for scheduled publication during 2003.

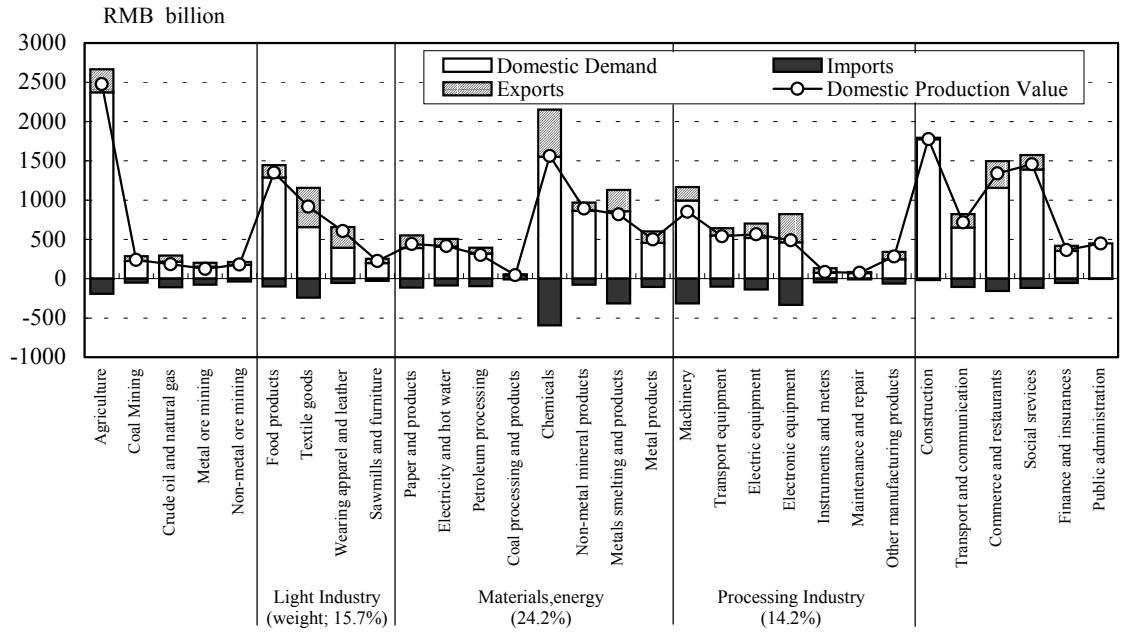


Figure 1-34. Domestic Production Value by Industry Sector, and Production Inducement Value by Demand Sector (1997)

Source: "China Input−Output Table 1997"

4.3. Analysis of Production Inducement Factors (Silkin Analysis)

Figure 1-35 shows expansion in nominal production value for each industrial sector between 1990 and 1997. Secondary industry as a whole achieved growth of 25.4% during this period. Within secondary industry, all categories achieved high expansion with light industry at 24.0%, materials and energy at 24.7%, and processing and assembly at 27.6%. Within individual sectors, extremely high growth rates were recorded by traditional industries such as wearing apparel and leather (31.6%), and sawmills and furniture (31.7%); and cutting-edge industries such as transportation equipment (including bicycles and motorbikes) (34.6%), electronic equipment (32.6%), and electric equipment (28.5%).

Figure 1-36 examines the demand factors responsible for production growth in each industry. The figures are derived from Silkin analysis, which is a way of determining demand factors behind production growth, based on the following formula:

Domestic production growth = domestic final demand factors + export expansion factors + import replacement factors + technological innovation factors

Examination of real production growth between 1990 and 1995[28] indicates that production inducement by exports was instrumental in industries including textiles, textile/leather goods, chemicals, machinery and electronics. On the other hand, industries where domestic demand was the main inducement factor include agriculture/forestry/fisheries, foods and construction. Technological innovation is indicated by changes of input coefficient in the input-output table, but this factor had little visible impact on production since the period covered is only five years. Only in chemicals

[28] According to Sector Analysis of Chinese Economic Development, & New Input-Output Rankings Using Comparable Prices.

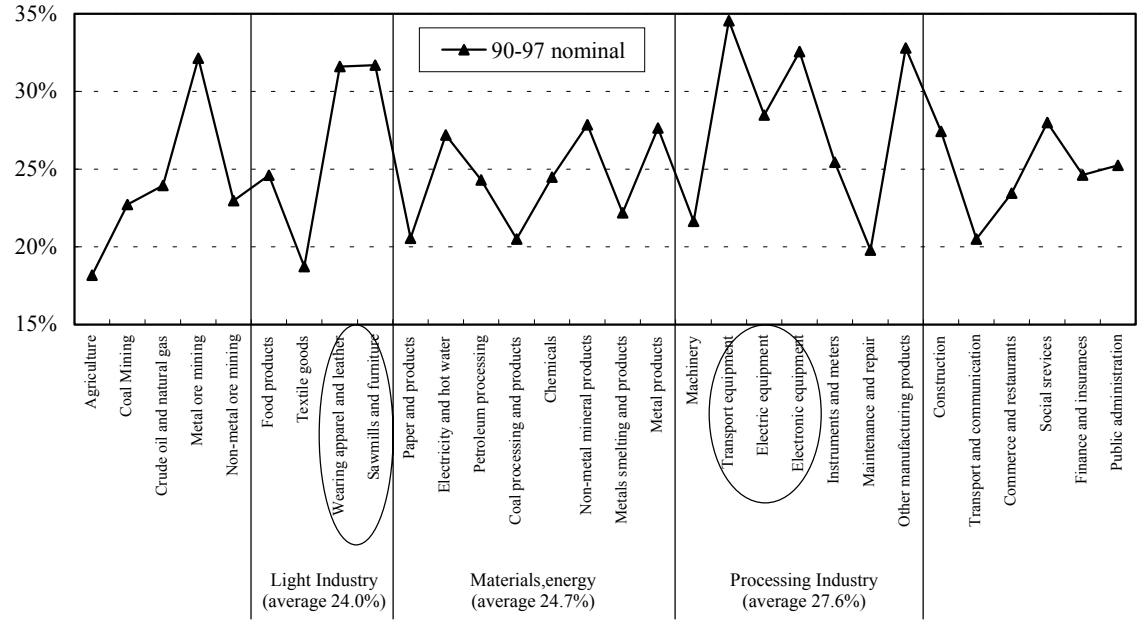


Figure 1-35. Domestic Production Expansion by Industry Category (Average Annual Rates)

Sources: "China Input-Output Table 1997," "Sector Analysis of Chinese Economic Development," and "New Input-Output Rankings Using Comparable Prices"

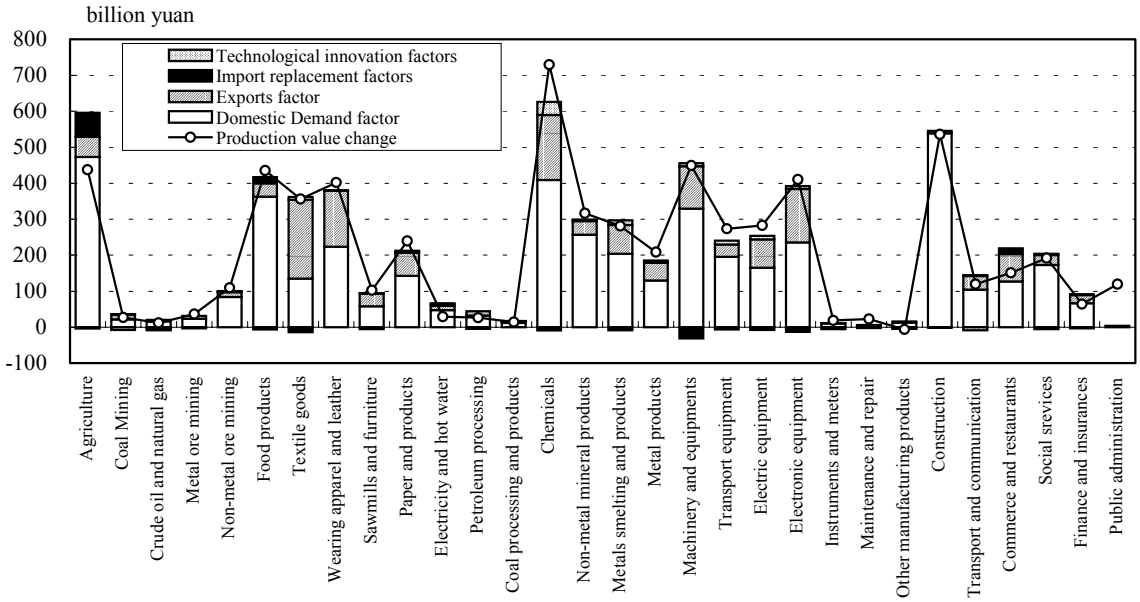


Figure 1-36. Analysis of Production Inducement Factors (Silkin analysis; 1990-1995)

Sources: "Sector Analysis of Chinese Economic Development," and "New Input-Output Rankings Using Comparable Prices"

manufacturing did technological innovation noticeably stimulate production growth. This probably reflects factors like replacement of natural fibres with chemical fibres, and the switch to production using industrial machinery, resulting in greater consumption of plastics.

4.4. Analysis of Self-Sufficiency Rates (Skyline Analysis)

We next examine self-sufficiency rates for Chinese industries using skyline graphs. These base production inducement stemming from domestic demand factors at 100. Values over 100 represent that of exports, and the dark-shaded sections represent that of imports. The self-sufficiency rate for each industry is thus represented by the height of the light-shaded section. Furthermore, the width of the columns is proportionate to each industry's production value.[29]

Figure 1-37 is a skyline graph for China in 1997. Light industrial sectors including textile goods and wearing apparel and leather, as well as electronic equipment and instruments and meters show a high weighting of production induced by export demand. These two groups of industries both tower above the rest of the graph. Sectors such as textile goods and wearing apparel and leather display greater export-induced production than import-induced production, which results in high self-sufficiency rates. These industries are major earners of foreign currency through trade.

By contrast, sectors within the materials and energy, and the processing and assembly segments display high weightings of imports (negative production inducement), and their self-sufficiency rates consequently only exceed 100% by a little. This situation greatly differs from the picture for light industry.[30]

Structural changes in Chinese industry can be traced by comparing the skyline graphs of 1990 (Figure 1-38) with 1997. While they show same two clusters of sectors protruding at the top, significant changes between the two include: 1) a greater 1997 weighting of production inducement from exports and imports in textile goods, electric equipment, and electronics; 2) the self-sufficiency rates in electric and electronic equipments rise from less than 100% in 1990 to over 100% in 1997, with significant expansion in their shares of overall industrial production; 3) a sharply higher weighting of production inducement from exports in tertiary industry such as commerce and restaurants, indicating stimulation of commercial activities through trade.

We believe comparison with Japan's skyline graph is useful for understanding China's industrial structure. For this purpose we have provided Japan's graph for 1960 (Figure 1-39), from the period of rapid economic growth, 1980 (Figure 1-40), when an industrial structure dependent on foreign demand was clearly in evidence, and 1995 (Figure 1-41).

1960 marked the start of a period of rapid economic growth, and at this time light industries such as textile goods, wearing apparel and leather, had a high weighting of production inducement from exports, and self-sufficiency rates well in excess of 100%. This pattern is similar to the China of today. The other common feature is high levels of production inducement from exports in sectors within processing and assembly, such as transportation equipment, electric and electronic equipments.[31] The Japanese economy subsequently developed towards a complete presence in all types of industry, with establishment of a foreign demand-dependent structure in the 1970s and 1980s, and rising self-sufficiency rates in manufacturing. Dependence on foreign demand is now gradually lessening, following the period of steep yen appreciation in the late 1980s.

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[29] See the appendix at the end of this report for details on interpretation of skyline graphs.

[30] The trade balance for chemicals is in the red, but the skyline graph shows a self-sufficiency rate of close to 100%. This results from the graph using production value including intermediate input. In other words, the products of the chemicals industry are used for intermediate input in, for example, home appliances, and are then exported embodied in home appliances. The skyline graph includes these exports via other industries within production inducement from exports for the chemicals industry, which means the self-sufficiency rate produces a different result to trade statistics.

[31] The electronics industry was in its development stage in 1960, and its production value did not have a significant weighting in the overall economy.

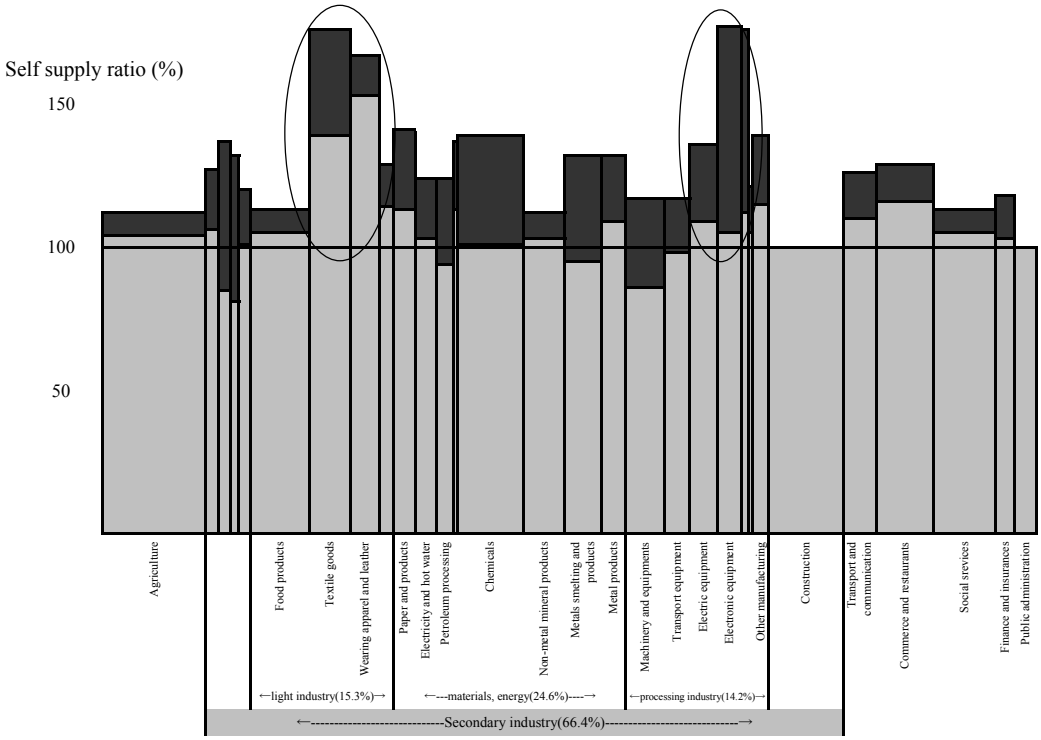


Figure 1-37. Skyline Graph for China (1997; Nominal)

Source: "China Input-Output Table 1997"

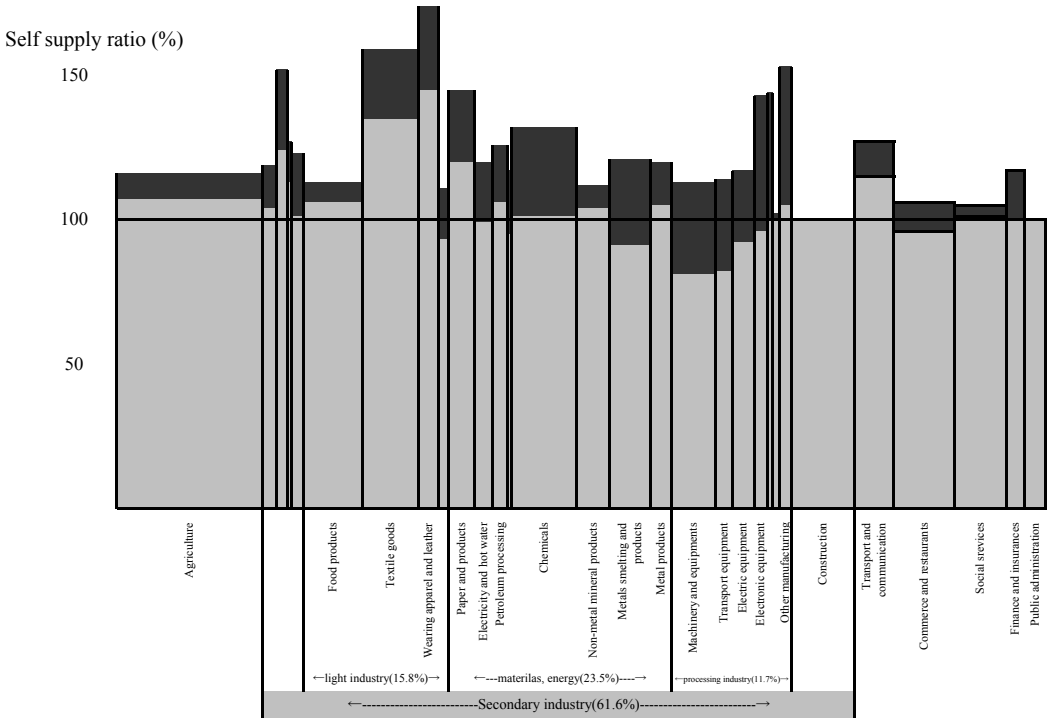


Figure 1-38. Skyline Graph for China (1990; Nominal)

Sources: "Sector Analysis of Chinese Economic Development," and "New Input-Output Rankings Using Comparable Prices"

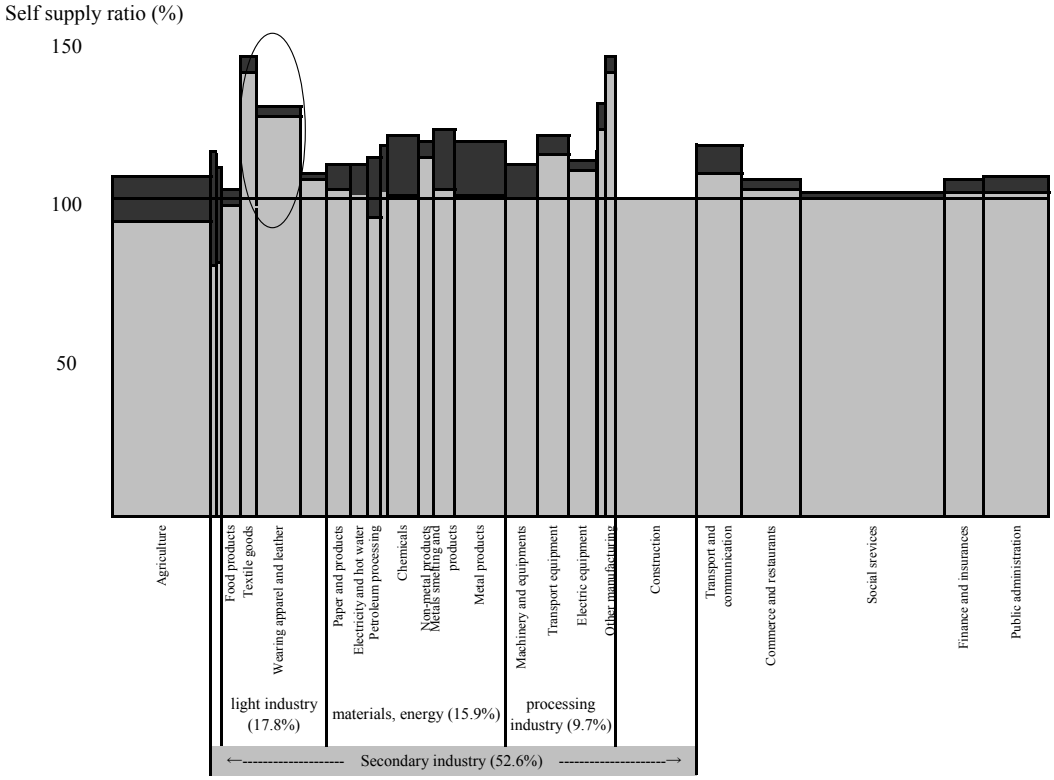


Figure 1-39. Skyline Graph for Japan (1960; Nominal)

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Input-Output Tables"

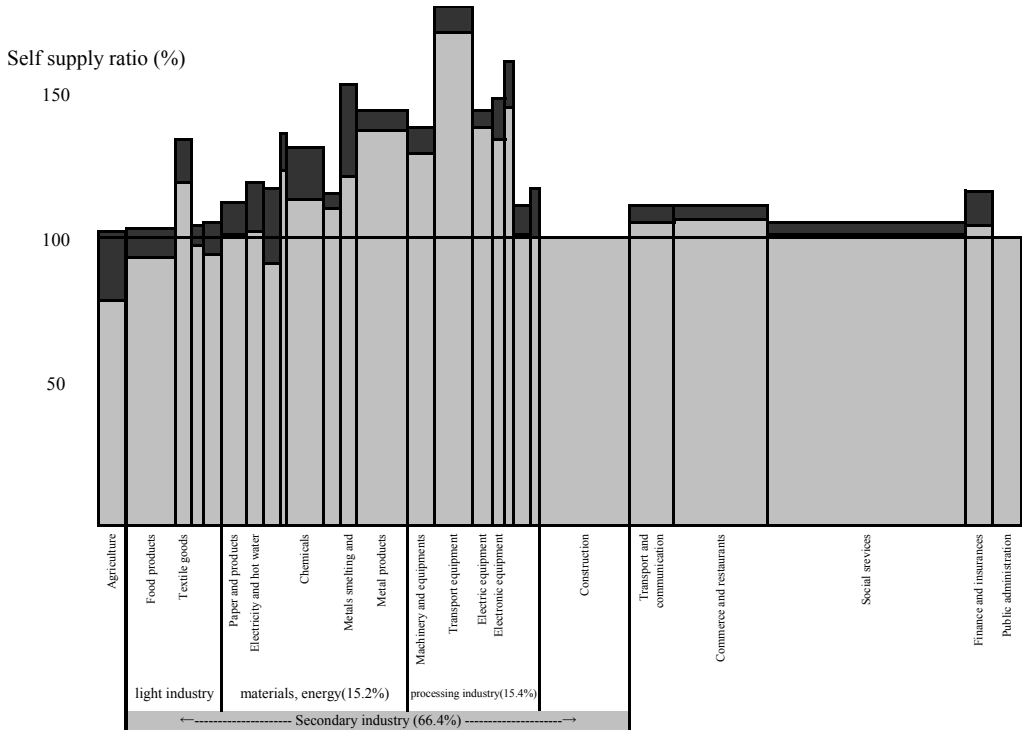


Figure 1-40. Skyline Graph for Japan (1980; Nominal)

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Input-Output Tables"

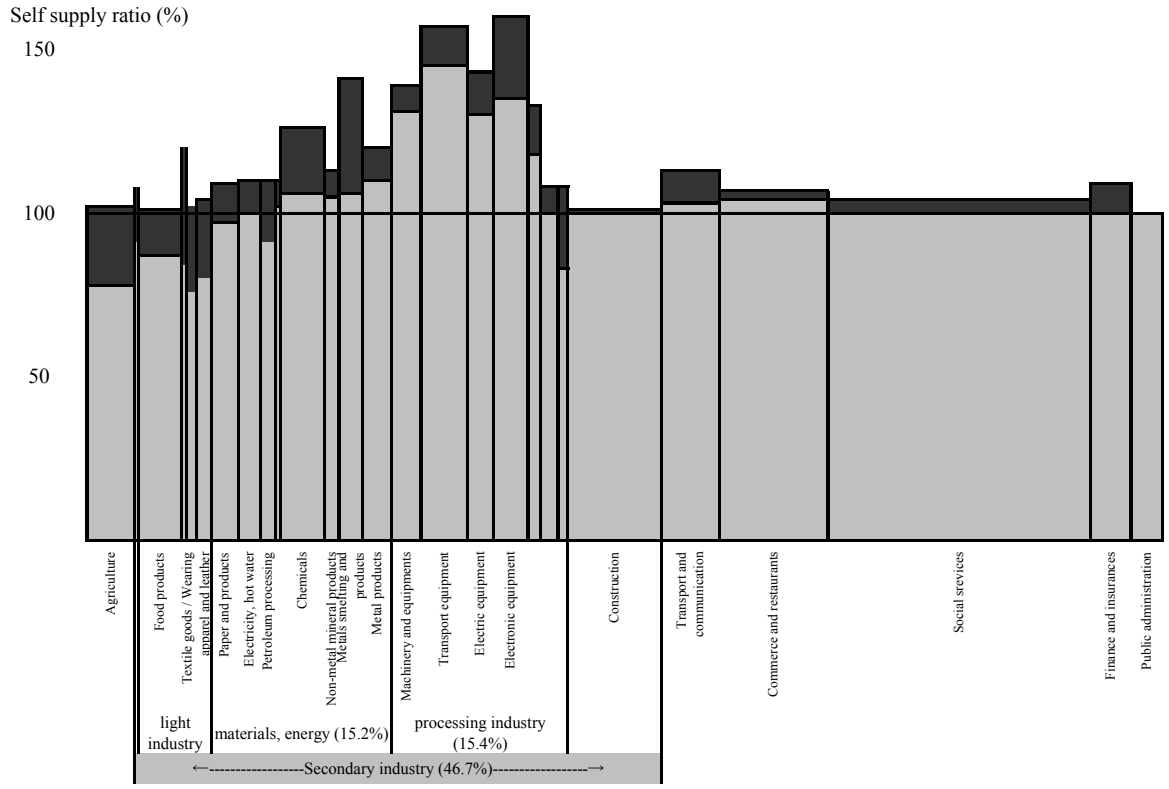


Figure 1-41. Skyline Graph for Japan (1995; Nominal)

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Input-Output Tables"

The salient features of the Japanese economy in 1995 were low self-sufficiency rates in. agriculture, oil and minerals, countered by high self-sufficiency rates in manufacturing sectors like transportation equipment, machinery and electric and electronics equipments. The skyline chart for 1995 consequently exhibits a broad and tall central segment.

Some observers have suggested that China today resembles Japan in the 1960s.[32] The relevant skyline graphs certainly show that like China today, Japan in the 1960s was shifting from traditional export-based industries like textiles towards cutting-edge industries such as machinery.

Closer examination, however, shows that China differs from Japan in the 1960s in its high weighting of production inducement from exports in textiles and machinery (in other words, higher columns in the skyline graph), and in machinery in particular its large volume of negative production inducement from imports (the dark-shaded part of the skyline graph), in addition to the large volume from exports.

Another discrepancy is China's relatively high weightings in primary and secondary industries, and rather low weighting in tertiary industry.[33] The large presence of secondary industry in China probably reflects the emphasis on industrialisation of previous economic plans, and the fact that China's opening up to the outside world focused on secondary industry. Furthermore, the high weighting of primary industry is probably attributable to factors including: 1) China's strong protectionism towards agri-

[32] For example, a *Nihon Keizai Shimbun* report of January 13, 2002, pointed out the similarity with Japan in the early 1960s of China's current per capita GDP, average lifespan, infant mortality rate, Engel's coefficient, and per capita annual electricity consumption volume.

[33] However, it should be remembered that corporations in China also provide education and medical services for local residents and employees, and little of this is recorded in statistics as tertiary industry activities.

cultural products up to its WTO membership in December 2001; 2) workers in rural areas being forced to stay in agriculture through the *hukou* system and other measures, despite the rapid industrialisation taking place in the coastal region.

Although China's industrial structure resembles Japan in the 1960s in some respects, China's high dependence on imports in sectors driving economic development like textiles, electric equipment and electronics is in contrast to the self-sufficient structure that the Japanese economy was once heading towards. We attribute this to China's development resulting from activity of foreign capital, and expansion of trade while building up of close relationships based on division of labour with neighbouring countries such as Japan. In the following chapter we attempt to assess the contribution of foreign-funded enterprises to China's economic development using a range of statistics.

II The Role of Foreign-Funded Enterprises and Problems of State-Owned Enterprises

1. The Dual Structure of Foreign-Funded Enterprises and State-Owned Enterprises

In Chapter II we look at areas where China's economic development has benefited greatly from foreign direct investment, focusing on the activities of foreign-funded enterprises (FFEs).

Foreign direct investment does not merely involve introduction of foreign capital and facilities, but comprehensive introduction of production technology, production systems and business expertise, and at times even the complete transplantation of alien business models. Such introduction of production system and business expertise affects operations at existing rival corporations, and is likely to have the side-effect of driving up overall economic efficiency.

State-owned enterprises (SOEs) were for a long time the main providers of goods and services in China, under the direct control of the government. The operating principles, ethos, and other aspects of these SOEs are consequently radically different from FFEs run on capitalist principles, and even today the two groups co-exist as separate entities within the Chinese economy. A dual structure has clearly emerged as advanced, efficient FFEs have rapidly expanded their share of production, while backward and inefficient SOEs have declined at increasing speed. Comparing production efficiency by means of labour productivity [34], the performance of FFEs at RMB71,403 per person is roughly twice as good as SOEs with RMB36,681 per person. This illustrates the wide gulf between FFEs and the rest of the economy including SOEs.[35]

Among theories of economic development, dualism attempts to explain the pattern and course of per capita income expansion in an economy with both modern (industrial) and traditional (agricultural) sectors. We suggest that the rapid introduction of foreign capital in China has resulted in a similar dual structure within secondary industry.

This report will not go so far as to consider what dualism can tell us about China's course of economic development in recent years, but will merely confirm the existence of a dual structure composed of FFEs and SOEs within secondary industry in China. We summarise trends among FFEs, and consider the salient features of China's economic development.

2. The Role of Foreign-Funded Enterprises

2.1. The Role of Foreign-Funded Enterprises in Production

The rapid expansion of foreign direct investment in China since 1992 has resulted in sharp growth in production by foreign-funded enterprises (FFEs). Chinese statistics divide enterprises into state-owned enterprises (SOEs), collective-owned enterprises, joint-venture enterprises, private enterprises, FFEs, and others. SOEs are enterprises whose assets are owned by the state; collective-owned enterprises are enterprises whose assets belong to state collectives. Village enterprises are included within this collective-owned enterprises. FFEs are enterprises with registered foreign ownership, and this includes joint ventures, collaborations and 100% foreign-owned enterprises.[36]

[34] Defining labour productivity as manufacturing value-added / number of employees (*China Industrial Statistics Yearbook*).

[35] The average labour productivity figure of RMB45,679 should be treated with caution because of this gulf between foreign -funded enterprises and state-owned enterprises. The average labour productivity figure for all industries and enterprises including non-manufacturing and medium and small enterprises is even lower at RMB12,565, demonstrating the very low labour productivity among enterprises not included in manufacturing statistics.

[36] As defined by the *China Statistical Yearbook.*

Figure 2-1 shows mining and manufacturing production in each of the above categories of enterprise, with FFEs steadily expanding their share of production in the late 1990s. Other categories including private enterprises and joint-venture enterprises also achieved similar expansion in production value.[37] By contrast, SOEs and collective-owned enterprises failed to expand production value in the late 1990s, pushing down their share of overall production.

Table 2-1 shows the shares commanded by FFEs within mining and manufacturing production, which were 27.4% of production value and 24.0% of value-added in 2000. FFEs are thus responsible for around one-quarter of China's production. In these statistics which cover SOEs and non-SOEs with annual sales of at least RMB5 million, the share of FFEs exceeds that of SOEs.

Figure 2-2 present a breakdown of mining and manufacturing production by FFEs. Processing and assembly has the largest weighting (47%), followed by materials and energy (31%), and then light industry (22%). SOEs and other non-FFEs display a weighting in light industry (20%) that is very similar to FFEs, but a relatively low weighting in processing and assembly, and relatively high weightings in both materials and energy, and mining. This illustrates the structural difference between FFEs and non-FFEs provision of strong incentives for FFEs to enter the processing and assembly sector, with the aim of obtaining foreign currency through exporting. The entry of FFEs the energy and materials sector has been lukewarm by comparison, reflecting government protection of domestic industries.

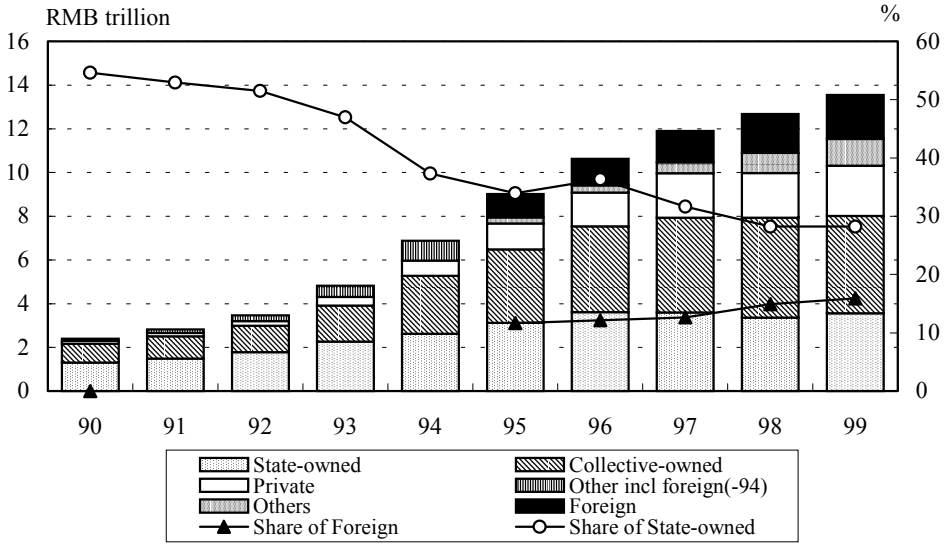


Figure 2-1. Mining and Manufacturing Production by Enterprise Category

Notes: 1. Data up to 1994 did not distinguish between joint-venture enterprises and foreign-funded enterprises.
2. Includes non-state-owned enterprises with annual sales of less than RMB5 million.

Source: "China Statistical Yearbook"

[37] The new emergence of private and joint-stock enterprises is a significant development, but this report will focus on foreign -funded enterprises.

Table 2-1. Foreign-funded enterprises' Share of Mining and Manufacturing Production (2000)

	Gross Industrial production (RMB100 million)		Industrial value-added (RMB100 million)		Number of employed (10,000)		Labour product ivity (yuan/ person)
		Share		Share		Share	
State-owned	20,156	23.5%	7,213	28.4%	1,966	35.4%	36,681
Collective-owned	11,908	13.9%	3,072	12.1%	863	15.5%	35,581
Share	10,090	11.8%	3,584	14.1%	400	7.2%	89,640
Private	5,220	6.1%	1,318	5.2%	346	6.2%	38,060
Foreign	23,465	27.4%	6,090	24.0%	853	15.3%	71,403
Others	14,834	17.3%	4,117	16.2%	1,131	20.3%	36,420
(large scale) Total	85,674	100.0%	25,395	100.0%	5,559	100.0%	45,679
Total	-	-	39,570	-	-	-	-
GDP base	-	-	89,403	-	71,150	-	12,565

Notes: 1. Includes state-owned enterprises and non-state-owned enterprises with annual sales of at least RMB5 million.
2. State-owned holding companies are included in others instead of state-owned enterprises.
3. Labour productivity is defined as manufacturing value-added / number of employees.
Source: "China Industrial and Economic Statistical Yearbook"

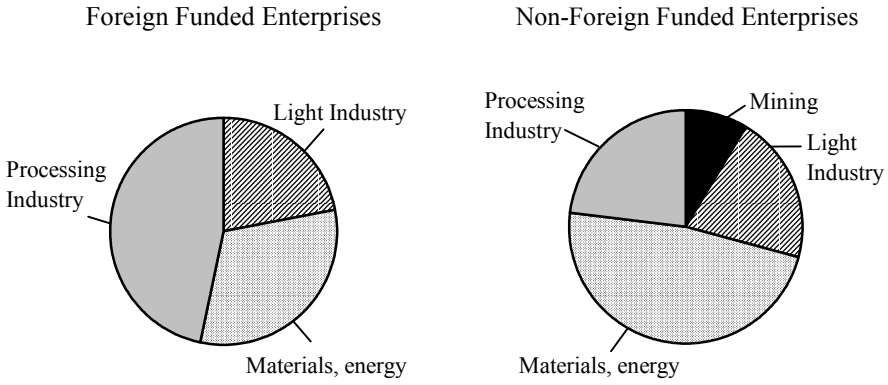


Figure 2-2. Mining and Manufacturing Production Weightings for Foreign and Non-Foreign-funded enterprises

Note: Includes state-owned enterprises, and non-state-owned enterprises with annual sales of at least RMB5 million.
Source:"China Statistics Yearbook"

Figure 2-3 shows production value for FFEs and non-FFEs in individual industries. FFEs display a high weighting in processing and assembly industries, providing over 40% of overall production. FFEs' share of electronic equipment is particularly high at 71.6%. Outside of processing and assembly industries, FFEs also command a high share of wearing apparel production at 51.5%. These are sectors that recorded rapidly expanding production in the 1990s (see Figure 1-35), and they are also the sectors that constitute the two spikes in the skyline graph (see Figure 1-37). We consequently judge that FFEs have played an extremely large and important role in improvement achieved in China's industrial structure.

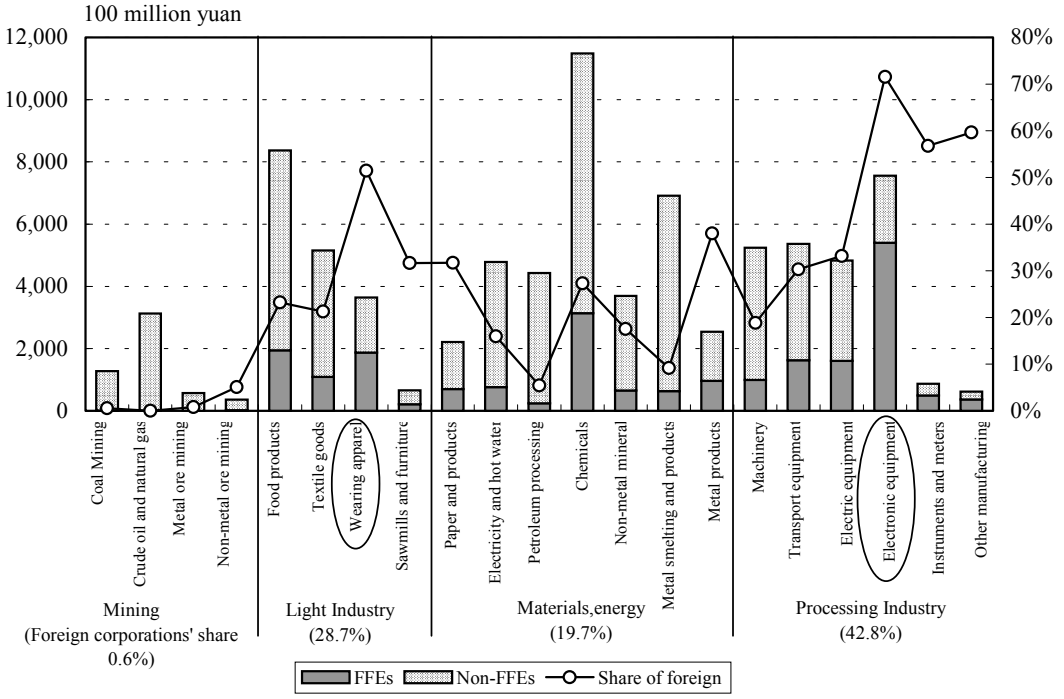


Figure 2-3. Foreign and Non-Foreign-funded enterprises' Shares of Mining and Manufacturing Production (2000)

Notes: 1. Includes state-owned enterprises, and non-state-owned enterprises with annual sales of at least RMB5 million.
2. Totals do not tally due to statistical inaccuracies.
Source "China Statistical Yearbook"

2.2. The Role of Foreign-Funded Enterprises in Fixed Asset Investment

Investment in fixed assets supports expansion of production. We examine the investment by foreign-funded enterprises (FFEs) with reference to foreign direct investment.

Figure 2-4 shows fixed asset investment in China. It reveals that fixed asset investment increased rapidly from 1992. Within this, investment in capital construction and innovation, which make up fixed asset investment, displayed strong real growth rates in excess of 30% in both 1992 and 1993.

Figure 2-5 shows fixed asset investment broken down by type of investor. The share of investment by FFEs rose rapidly from 1993 along with expansion in foreign direct investment, peaking in 1996 at 11.8%. This has diminished in recent years with petering out of the boom in direct investment, but the share has remained considerable at 8.5% in 2001.

Figure 2-6 shows that China's stock of fixed asset has grown rapidly, accompanying the acceleration in formation of fixed capital. According to Chinese statistics, the fixed-asset stock (market price-basis, as henceforth) of the mining and manufacturing sector expanded at a real average annual rate of 11.2% between 1992 and 2000, reaching RMB5,280 billion in 2000. The individual industries with largest shares are electricity and hot water (22.2%), chemicals (12.3%), and metals smelting. (10.5%).

FFEs' share of capital stock in mining and manufacturing industry is close to one-fifth at 18.8%, reflecting growing investment by FFEs, and putting them second only to state-owned enterprises (SOEs) at 40.7% (Figure 2-7). Within individual sectors, FFEs have outstanding shares in wearing apparel and leather (64.0%) and electronic equipment (55.7%). These are industries in which FFEs also command high shares of production.

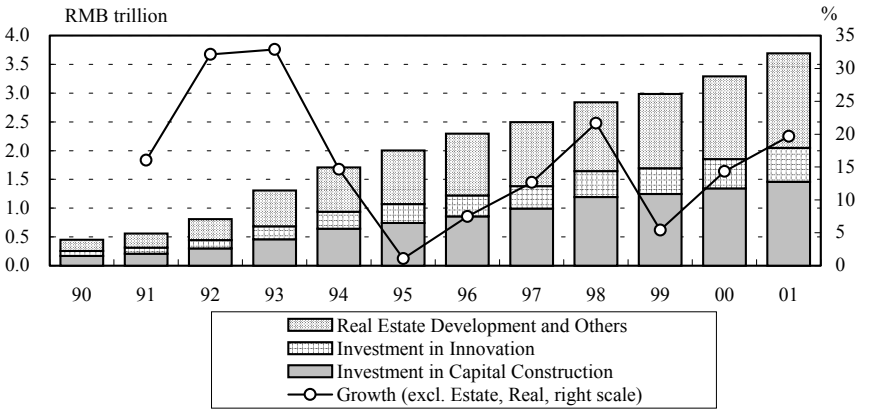


Figure 2-4. Investment in Fixed Asset (with Sub-Categories)

Note: All industries-basis, includes real estate investment.
Converted into real terms using GDP deflator.
Source: "China Statistical Yearbook"

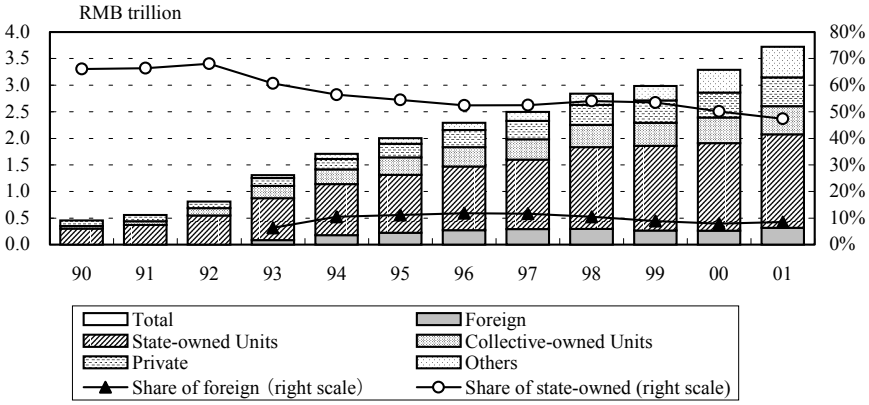


Figure 2-5. Investment in Fixed Asset (by Type of Investors)

Note: All industries-basis, includes real estate investment.
Foreign-funded enterprises are included in others up to 1992.
Source: "China Statistical Yearbook"

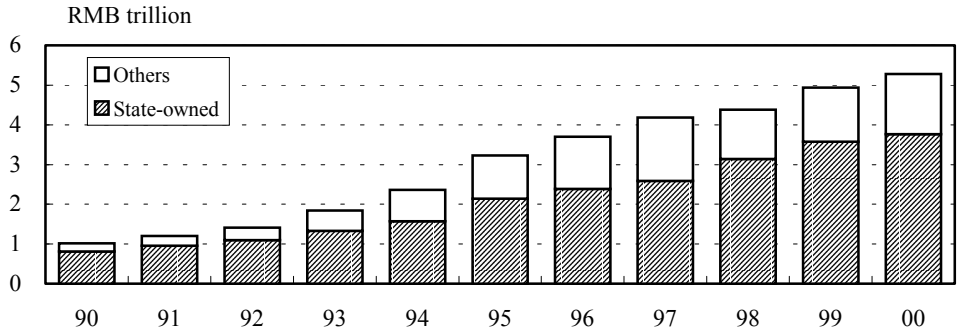


Figure 2-6. Fixed-Asset Stock

Note: Covers state-owned enterprises and others above a certain scale.
Source: "China Industrial Statistics Yearbook"

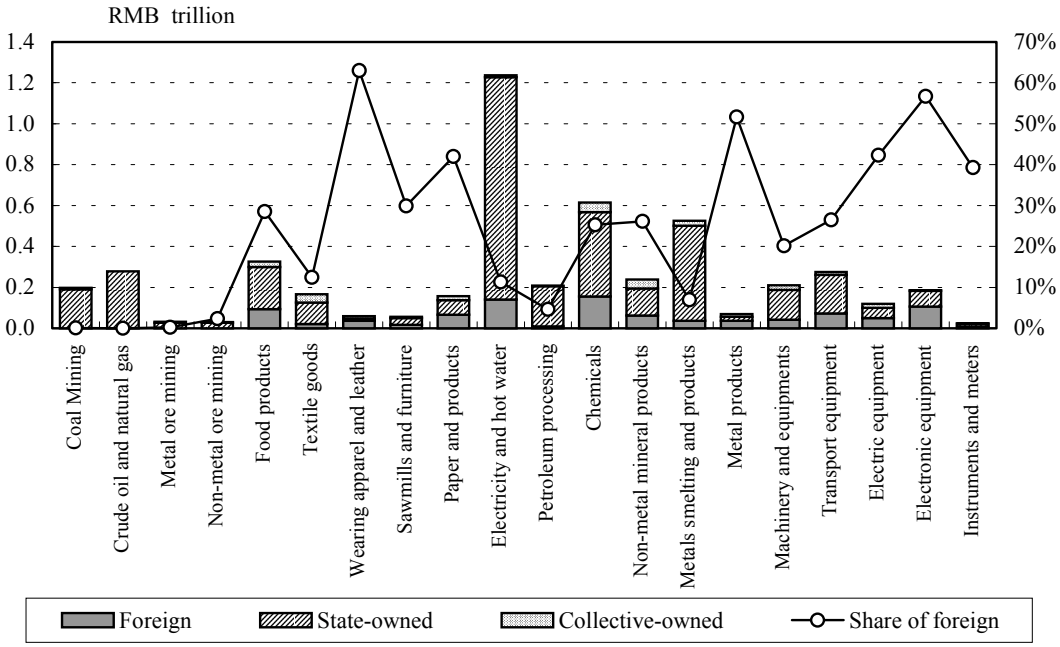


Figure 2-7. Fixed-Asset Stock (2000, Market Price-Basis)

Note: Covers state-owned enterprises and others above a certain scale.
Source: "China Industrial Statistics Yearbook"

2.3. The Role of Foreign-Funded Enterprises in Trade

Expansion of production by foreign-funded enterprises (FFEs) in China has been accompanied by growth in both exports and imports. Figure 2-8 shows the share of FFEs in overall exports and imports, and their shares of both are tending to rise. In 2001, FFEs were responsible for at least 50% of both export and imports.

Figure 2-9 shows trade balances by type of corporation, with FFEs having remained in the red until the middle of the 1990s, before going into the black in the past four or five years. State-owned enterprises (SOEs) are in the black, but the scale of their positive balance has been declining in recent years.

Figure 2-10 shows the trade balance for FFEs broken down by type of trade. The positive balance from processing and assembly is tending to expand, while imports are a recurring corollary of direct foreign investment. FFEs imported many facilities, equipment and other capital goods into China during the investment boom in the early 1990s, putting their trade balance into the red. Importation of capital goods is still continuing, but processing trade has expanded steadily as China-based production has got into its stride, and the overall trade balance has moved into the black.

Figure 2-11 shows the trade balance for SOEs. They appear to have maintained a certain

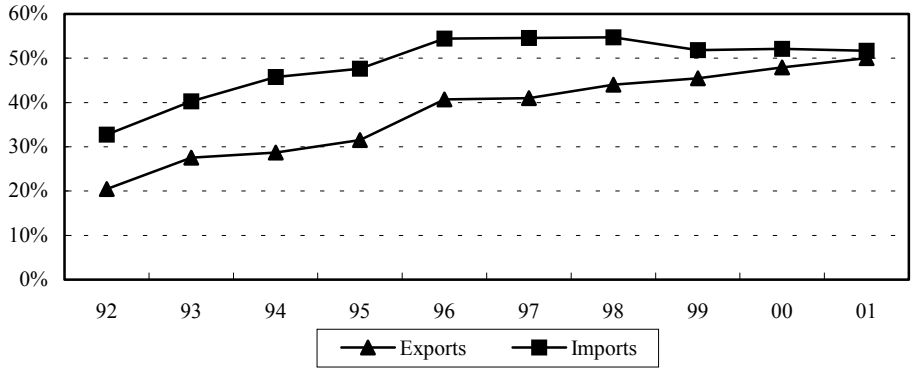


Figure 2-8. Foreign-funded enterprises' Shares of Exports and Imports

Sources: "China Foreign Economic Statistics Yearbook," and "China Customs Statistics"

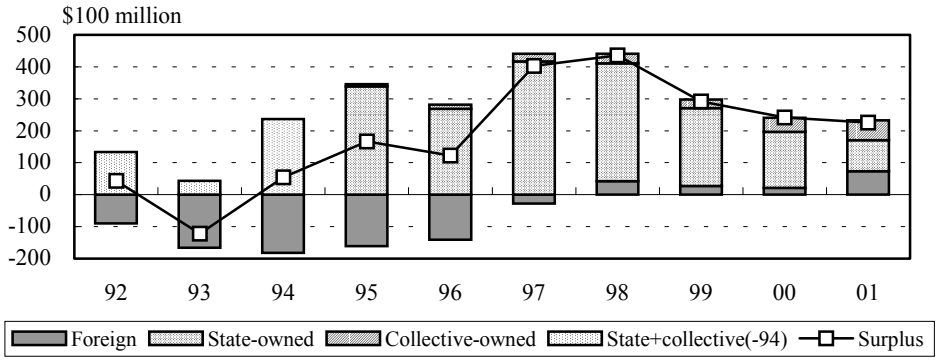


Figure 2-9. Trade Balances by Type of Corporation

Note: The breakdown of state-owned enterprises and collective enterprises is unknown before 1995.

Sources: "China Foreign Economic Statistical Yearbook," and "China Customs Statistics"

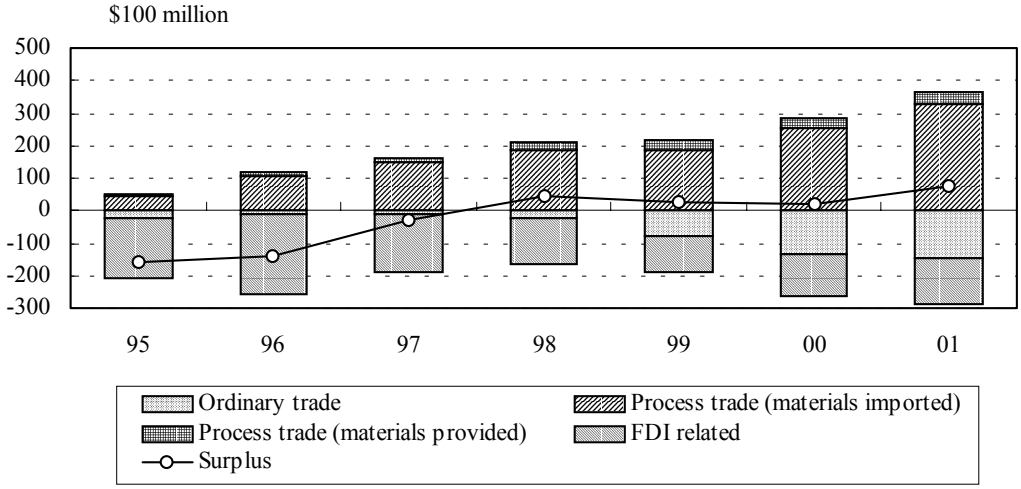


Figure 2-10. Balance of Trade at Foreign-Funded Enterprises

Note: Processing trade defined as "re-export after processing into finished or intermediate goods of raw materials, materials, complementary raw materials, components and packaging imported into China in return for foreign currency. This includes raw materials for processing imported from foreign countries by enterprises in export processing zones, and their exports of finished products after processing." (China Customs Statistics)

Sources: "China Foreign Economic Statistical Yearbook," and "China Customs Statistics"

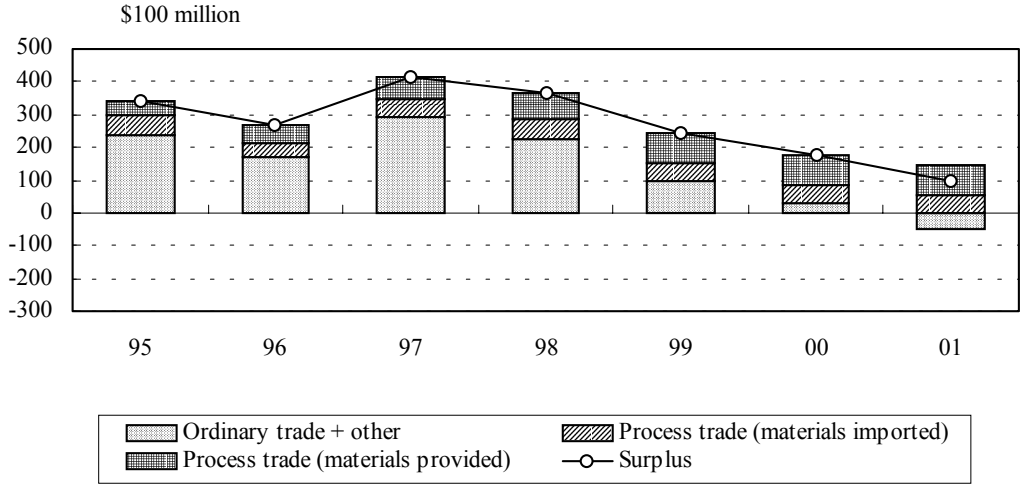


Figure 2-11. Balance of Trade at State-Owned Enterprises

Sources: "China Foreign Economic Statistical Yearbook," and "China Customs Statistics"

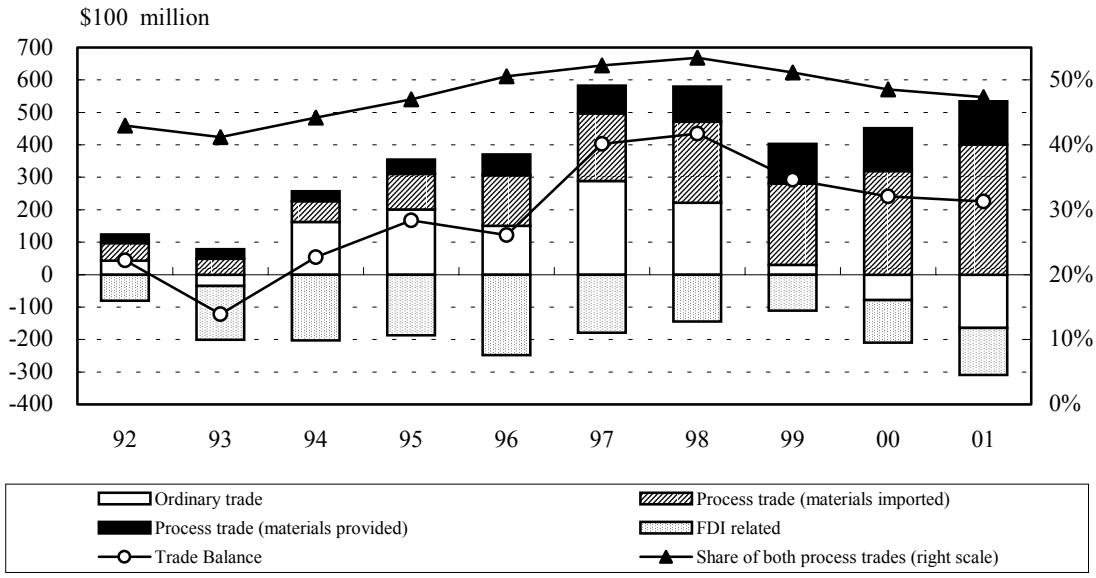


Figure 2-12. Balance of Trade by Type of Trade

Sources: "China Foreign Economic Statistical Yearbook," and "China Customs Statistics"

international competitiveness up to the middle of the 1990s, reporting positive balances, but this has been falling in recent years. Consequently, FFEs are becoming increasingly responsible for China's positive trade balance. Figure 2-12 illustrates the emergence of FFEs, with China's overall pattern of trade displaying a shift from general to processing trade.

2.4. The Role of Foreign-Funded Enterprises in Trade Structure

Table 2-2 shows goods with the highest and lowest trade balances in sectors with high weightings of production inducement from import and export, according to the preceding skyline graphs. This is useful for closer examination of processing trade conducted by FFEs.

Within the textile goods sector, negative trade balances are displayed by goods including chemical long fibres, chemical short fibres, and felt/non-woven textiles. The same sector also contains goods recording large, positive trade balances, such as textile goods and knit apparel. In the electrical/electronic equipments, negative trade balances are reported by goods including integrated circuits, diodes, photo tubes, and condensers; and positive trade balances are reported by goods including transmitter, receiver, videos and televisions. These two sectors thus typify vertically-integrated processing trade, by importing parts and materials, and then exporting finished products.

The chemicals sector displays a different structure. Plastics are widely used in many areas including products from the electrical/electronic equipments and PCs from the machinery sector. Rising production of the above goods appears to be inducing growing imports of plastics. Furthermore, it appears that capital goods such as mother machines are being supplied through imports, since the machinery sector displays negative trade balances in goods such as plastic processing equipment, printing equipment, and other equipment.

The iron and steel sector displays a pattern of importing high-tech goods and exporting low-tech goods, since it imports large volumes of high-quality materials such as flat-rolled steel(cold rolled), and largely exports low value-added, general-purpose goods like dining

Table 2-2. Breakdown of Principal Traded Goods (2001)

Textile Goods — Mil US $

	Exports	Imports	Surplus
Textile Goods	18,967	739	18,228
Knit apparel	13,465	475	12,990
Other	3,702	33	3,669
Yarn of Cotton・Cotton Fabrics	3,662	2,941	721
Silk	827	111	716
⋮	⋮	⋮	⋮
Felt/non-woven textiles	331	401	-70
Chemical short fibres	2,663	2,932	-269
fibre products	449	1,151	-702
Wool	1,083	1,898	-815
Chemical long fibres	1,626	3,330	-1,704
Total	49,869	16,260	33,609

Chemistry・Plastic — Mil US $

	Exports	Imports	Surplus
Inorganic Chemistry	2,880	1,644	1,236
Powder・Fireworks	285	2	283
Refined Oil・Cosmetics	410	176	234
Photograph・Movie Products	420	460	-40
Cleanser	402	450	-48
⋮	⋮	⋮	⋮
Dyestuffs	1,212	1,787	-575
Fertilizer	391	1,587	-1,196
Chemical Industry Goods	1,388	2,590	-1,202
Organic Chemistry	4,606	8,977	-4,371
Plastic	6,699	15,263	-8,564
Total	21,225	36,436	-15,211

Electrical/Electronic equipments — Mil US $

	Exports	Imports	Surplus
Transmitter	5,143	1,726	3,417
Electric Range	2,850	135	2,715
Receiver	2,653	61	2,592
Video	2,546	41	2,505
TV	1,592	40	1,552
⋮	⋮	⋮	⋮
Condenser	672	1,652	-980
Telephone	3,528	5,278	-1,750
Phototube	931	2,884	-1,953
Diode	1,377	3,733	-2,356
Integrated Circuit	2,629	17,003	-14,374
Total	51,322	55,908	-4,586

Iron and Steel Products — Mil US $

	Exports	Imports	Surplus
Kitchen-use goods	1,154	14	1,140
Other article of steel	1,046	301	745
Ferro-alloy	702	46	656
Structural Parts in Iron	724	129	595
Other cast article of steel	462	28	434
⋮	⋮	⋮	⋮
Semi-finished produts of iron	470	1,466	-996
Scrap ingots of iron	2	1,060	-1,058
Flat-rolled steel(clad)	112	1,634	-1,522
Flat rolled stainless	17	1,777	-1,760
Flat-rolled steel(cold rolled)	74	1,890	-1,816
Total	8,278	13,035	-4,757

Machinery — Mil US $

	Exports	Imports	Surplus
PCs	13,111	4,982	8,129
Parts for PCs	8,177	6,880	1,297
Air-Conditioner	1,303	282	1,021
Calculator	610	60	550
Cocks,Valves and Parts	1,106	701	405
⋮	⋮	⋮	⋮
Centrifuge	148	813	-665
Mold	181	1,051	-870
Printing Machine	37	1,245	-1,208
Plastic mother machines	193	1,553	-1,360
Other Machinery	226	4,024	-3,798
Total	33,627	40,560	-6,933

Transport Equipment — Mil US $

	Exports	Imports	Surplus
Bicycles	1,004	0	1,004
Motorbikes	747	1	746
Bicycle components	753	185	568
Trailar	313	18	295
Baby Carriage	286	2	284
⋮	⋮	⋮	⋮
Bus	54	92	-38
Truck	62	180	-118
Special purpose vehicles	47	189	-142
Parts for Motor Vehicles	1,351	2,515	-1,164
Passenger Cars	36	1,265	-1,229
Total	4,773	4,534	239

Source: "China Customs Statistics"

table- and kitchen-use goods, and other iron and steel products. The transportation machinery sector displays a similar pattern, in recording negative trade balances in the like of passenger cars and parts for motor vehicles, while being in the black in low-priced products: bicycles, motorbikes, bicycle components and prams. The transportation machinery thus also imports high-tech goods, and exports low-tech goods.

Among the six sectors mentioned in the preceding paragraphs, both the textile goods and the electrical/electronic equipments recorded major expansion in production during the 1990s, with FFEs commanding high shares in both. These two sectors consequently display the typical characteristics of processing trade carried out by FFEs.

3. R&D Investment in China

3.1. The Role of Foreign-Funded Enterprises in R&D

Technological innovation is a key factor behind autonomous economic growth continuing over the long term.

Figure 2-13 shows R&D expenditure as a proportion of GDP. China's R&D ratio of 1.0% in 2000 is low compared to 3.1% in Japan (1999), and 2.7% in the US. Furthermore, China's R&D expenditure as a proportion of sales by mining and manufacturing industry is only 0.7% (Figure 2-14), which is lower than Japan's level at the start of the 1960s (approximately 1%), let alone Japan's current level (3.7% in 1999).

Some observers point out that China's current economic structure resembles Japan in the 1960s. However, the low level of R&D investment appears to be a major weakness of the Chinese economy, since its current level of investment relative to GDP is significantly lower

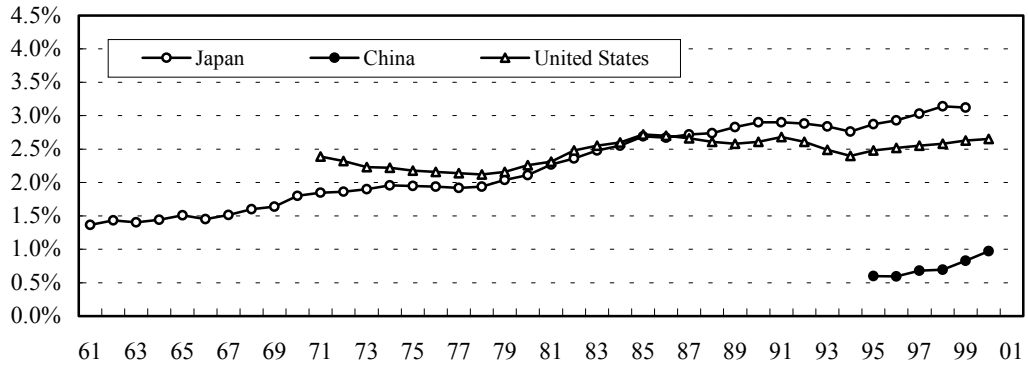


Figure 2-13. R&D Expenditure Ratio (against GDP)

Sources: "Science & Technology White Paper," and "China Statistical Yearbook on Science and technology"

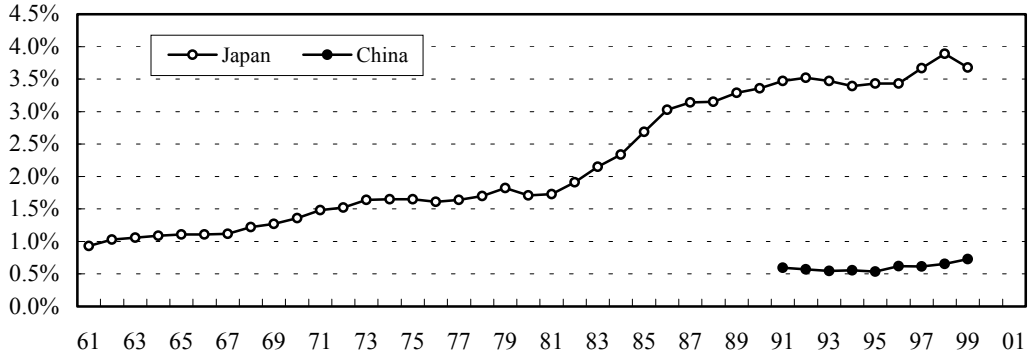


Figure 2-14. R&D Expenditure Ratio (against Sales)

Notes: 1. Japan defines the ratio as R&D expenditure within corporations as a proportion of their sales; this covers only corporations (special corporations not included), and software corporations are included from 1997.
2. China defines the ratio as expenditure on technological development as a proportion of sales; this covers large and medium corporations.
3. Chinese statistics cover mining and manufacturing industry, Japanese statistics cover manufacturing industry.

Sources: "Science & Technology White Paper (Japan)," and "China Statistical Yearbook on Science and technology (China)"

than Japan's level in the 1960s of approximately 1%.

Figure 2-15 displays R&D expenditure broken down by industrial sector. R&D expenditure is highest in the electronic equipment, followed by machinery, transportation equipment, and chemicals respectively. Investment patterns by type of corporation show foreign-funded enterprises (FFEs) concentrating expenditure on electronics, and providing over half of total R&D investment in electronics in China. On the other hand, state-owned enterprises (SOEs) tend to concentrate their R&D investment in processing and assembly sectors like transportation equipment, machinery and electronics, and also in the chemicals sector.

Figure 2-16 shows R&D expenditure as a proportion of sales in industrial sectors. Both FFEs and SOEs display rising R&D expenditure ratios in processing and assembly sectors. However, it is significant that FFEs display lower ratios than SOEs in almost all sectors, and even in the electronics sector where FFEs are investing aggressively in R&D. This probably reflects FFEs concentrating on production and processing China, while continuing to carry out most of their R&D within the parent company in the home country, or in other locations.

Independent R&D and technological innovation is essential for economic growth. This is borne out by the Chinese government targeting expansion in R&D as a proportion of GDP from the current 1.0% to at least 1.5% by 2005, in its tenth five-year plan.

3.2. R&D Personnel

If R&D is to expand, China must first cultivate and retain sufficient personnel for the purpose.

Figure 2-17 shows numbers of graduating university students in China. 950,000 students graduated from university in 2000, and of these

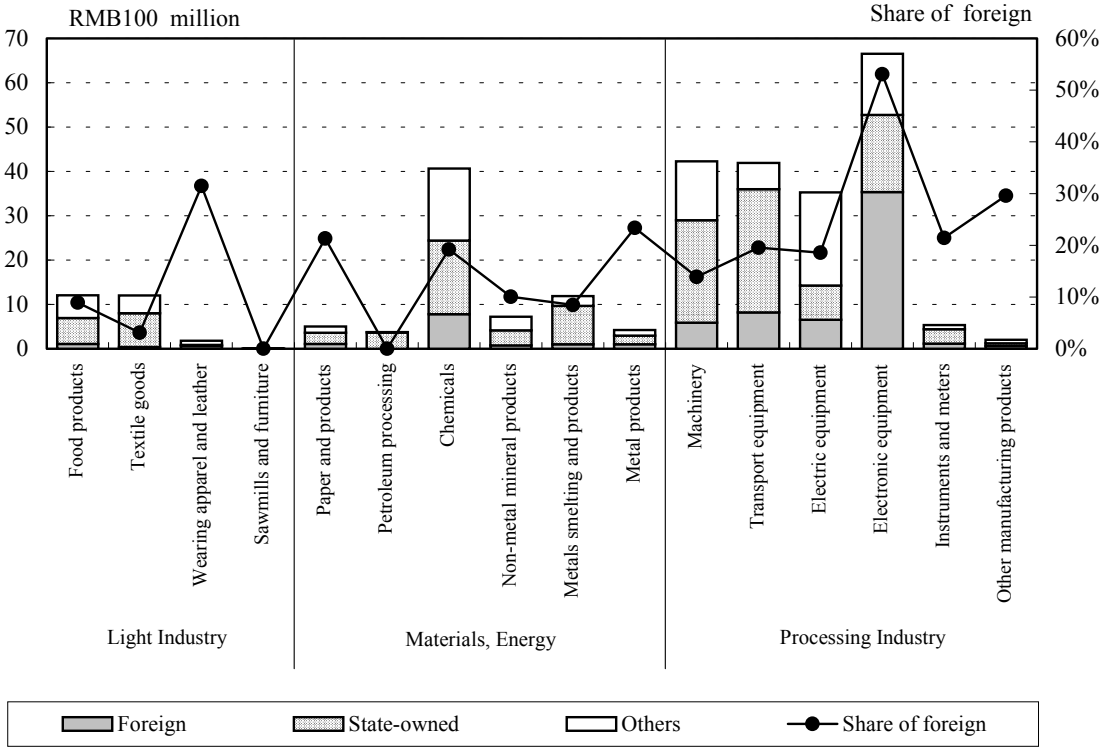


Figure 2-15. R&D Expenditure by Industrial Sector and Type of Corporation (1999, Manufacturing)

Note: Covers large and medium -funded enterprises.
Source: "China Statistical Yearbook on Science and technology"

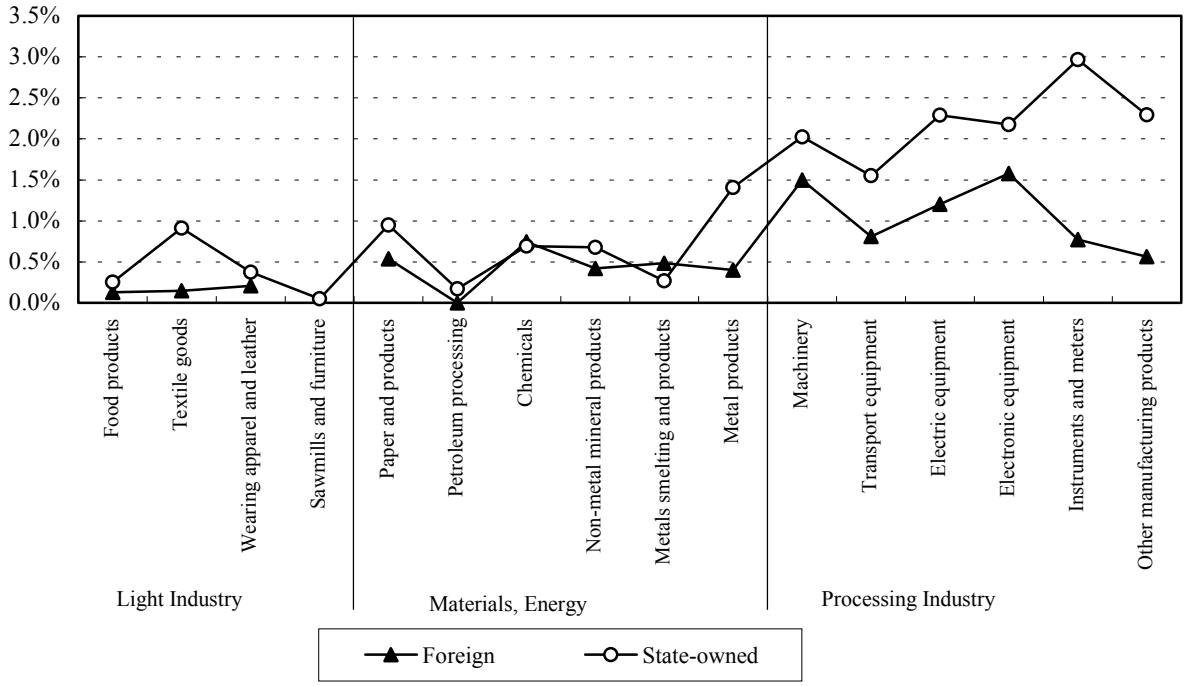


Figure 2-16. R&D Expenditure Ratio against Sales by Industrial Sector and Type of Corporation (1999, Manufacturing)

Note: Covers large and medium enterprises.
Source: "China Statistical Yearbook on Science and technology"

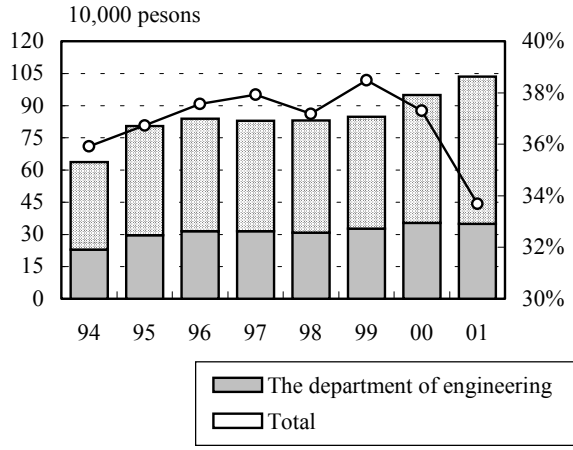


Figure 2-17. Numbers of Students Completing Under-graduate Degrees

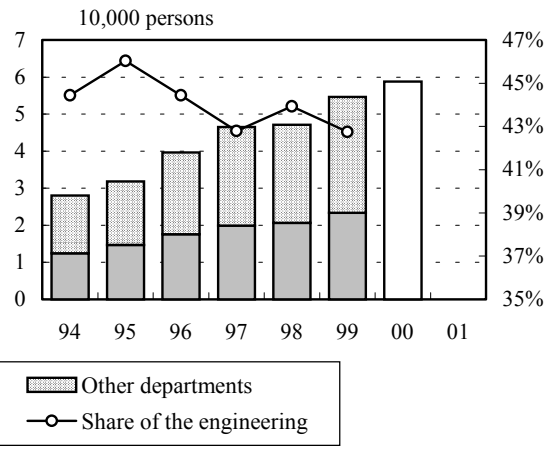


Figure 2-18. Numbers of Students Completing Post-graduate Degrees

Source: "China Statistical Abstract"

38% or 350,000 graduated in engineering subjects. For comparison, a total of 540,000 students graduated in Japan (1999), of which 19% or around 100,000 students graduated in engineering students. China's number of graduates was thus a little under double that of Japan, but China's number of engineering graduates was high at approximately 3.5 times that of Japan. Figure 2-18 shows numbers of students completing post-graduate degrees in 2000, with China and Japan at similar levels of 60,000 and 70,000 respectively. Within this, the numbers of student completing engineering subjects was also quite close at 23,000 for China (1999), and 28,000 for Japan.

Figure 2-19 shows numbers of enrolling students in China, in order to shed light on future numbers of graduates. The numbers of students enrolling in both undergraduate and post-graduate courses are increasing rapidly at present. This apparently results from the establishment in recent years of private-sector universities, in addition to existing national universities. 9.6% of high school graduates went on to higher education in 2000[38], and the tenth five-year plan targets raising of this rate to around 15%, so the number of students enrolling for higher education is set to expand. We consequently expect China's number of new graduates to start increasing rapidly a few years hence, and many of these are likely to become technological researchers.

On the other hand, Table 2-3 shows that many of these students wish to join for-

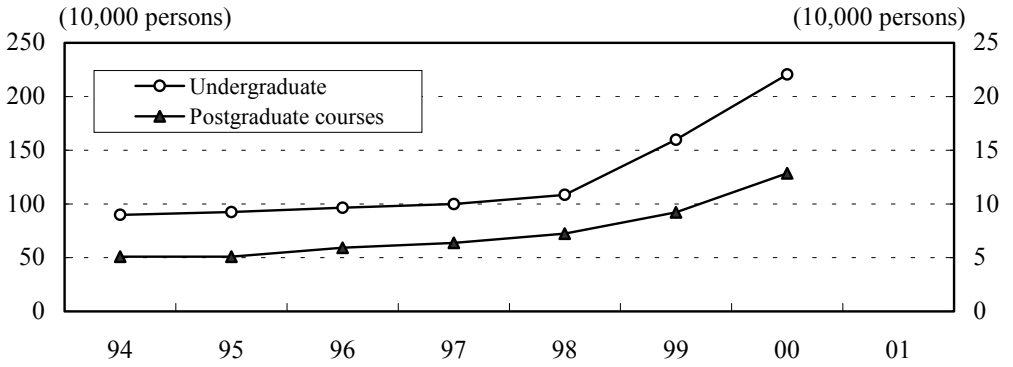


Figure 2-19. Numbers of Students Enrolling in Undergraduate and Post-Graduate Courses

Source: "China Statistical Yearbook"

Table 2-3. Chinese University Students' Top Choices of Future Employers

Rank	Company names	Rank	Company names	Rank	Company names
1	Microsoft (US)	11	China Unicom (China)	21	McKinsey & Company (US)
2	P&G (US)	12	China Telecom (China)	22	Du Pont (US)
3	Haier (China)	13	Intel (US)	23	Baosteel (China)
4	IBM(US)	14	Siemens (Europe)	24	CCTV (China)
5	Huawei (China)	15	Founder China)	25	Sony (Japan)
6	Legend (China)	16	Nokia(Europe)	26	Ericsson (Europe)
7	Motorola (US)	17	Zhongxing (China)	27	GM (US)
8	Bell (Europe)	18	Datang (China)	28	China Mobile (China)
9	Lucent Technologies (US)	19	Cisco Systems (US)	29	VW (Europe)
10	GE (US)	20	Yahoo (US)	30	Changhong (China)

Note: Parent company names used for foreign -funded enterprises.
Sources: *Chugoku Keizai*, March 2002, etc.

[38] The same tertiary education rate was 34.9% for Japan, or 40.7% including "others" such as students waiting to re-sit university examinations.

eign-funded enterprises (FFEs) engaged in electronics-related fields, which are believed to offer better salary and other working conditions.

Employment of researchers by FFEs in China has increased in recent years (Table 2-4). US and European enterprises have led the way in establishing R&D bases in China, and Japanese enterprises are now rapidly expanding their own R&D investment, principally in the field of software development. As shown by Table 2-5, China has in the past tended to do more research in product development closely related to production processes, and less basic research, compared to Japan and the US. Now, however, R&D centres for basic research are starting to be established.

It is also likely that talented students will aspire to working for the FFEs investing in R&D in China. By contrast, very few are likely to wish to work for state-owned enterprises (SOEs) undergoing reform, apart from the few

Table 2-4. Establishment and Expansion of R&D Centres by Foreign-funded enterprises in Recent Years

Name of the parent company	Starting date	City	Number of researchers	Area of study
Nokia	1998	Beijing	150	Mobile telecommunications technology
Microsoft	1998/11	Beijing	60	Basic research on multimedia, information processing and user interface technology.
Intel	1998/12	Beijing	40	Software for semi-conductor related technology.
HP	2000	Beijing	0	Technology of digitral signalling, etc.
Hitachi	2001	Beijing	40 in 3 – 4 years	Home use electric devices
NEC	2001/7	Dailian	80. 200 by year 2003.	Development of application software.
Toshiba	2001/7	Shanghai	1000 in year 2003.	Design of semi-conductors
Pioneer	2001/9	Shanghai	80 in 2 – 3 years.	Digital devices manufactured in China (DVD, etc.)
Toshiba	2001/10	Beijing	20 at the beginning.	Basic research on voice recognition systems
Michelan	2001/11	Shanghai	25	Wheel tire
Ericsson	2002	Beijing	–	Integration of 6 R&D center in China. More weight to be shift to China.
CSK	1905/6	Shanghai	410 in year 2004, 1000 in 2007.	Software of Information system
NEC	2002/3	Beijing・Shanghai	50. 500 in year 2005.	Middleware for telecommunication, development of application software.
Honda	2003/4	Shanghai	–	motorbicycle
Matsushita	2001/1	Beijing	100 in year 2001, 1500 in 2005.	Digital network
Matsushita	2002/4	Jiangsu	50 in year 2002, 250 in 2005.	Air conditioner, Household appliances

Sources: *Chugoku Keizai*, April 2002, pp. 19-20; newspaper reports, and websites

Table 2-5. R&D Breakdown by Type of Research (1999)

	Share of R&D type		
	China	Japan	United States
Basic	5%	14%	17%
Application	22%	24%	22%
Development	73%	62%	61%
Total	100%	100%	100%

Source: "China Statistical Yearbook on Science and technology"

achieving expansion.

The problem of a dual structure within secondary industry in China is thus clearly evident in students' employment aspirations. Over the long term China thus needs to improve the environment for retaining young talented researchers in China, and for cultivating their talents within SOEs. Such people are likely to play a leading role if China is to succeed in developing an autonomous economic structure in a full range of industries, and in accumulating technological expertise in a wide range of fields, rather than developing only in a narrow range of high-tech sectors.

4. The Problems of State-Owned Enterprises

4.1. Reform of State-Owned Enterprises and Non-Performing Loan

Having examined the presence of foreign-funded enterprises (FFEs) in China, we next turn to state-owned enterprises (SOEs). On the one hand the presence of FFEs in the Chinese economy is growing, while on the other SOEs are severely depressed due to delayed corporate reform, their leading role in the economy having been lost.

The condition of SOEs is attributable to their delayed reaction to the introduction of market economy, and inadequate management and administration systems. However, SOEs have been much more than mere producers of goods, also providing all kinds of social services to employees and their families, such as housing, health care, education and retirement benefits. Part of their problems was therefore attributable to their serious structural handicaps compared to the like of FFEs.

Reform of SOEs was consequently a major theme of the ninth five-year plan (1996-2000). This plan introduced support focusing on large SOEs, while small SOEs were sold off or merged. It also introduced modern corporations forms (for example, changing into a joint-stock companies and establishment of holding companies), with other measures including standardisation of the bankruptcy system and separation of the social security system from SOEs. This reform of SOEs got fully into its stride from 1998, and the tenth five-year plan (2001-2005) is continuing the process with further promotion of the joint-stock system (lowering of state shareholding rates)[39], improvement of corporate governance, thorough separation of ownership and business rights, dissolution of monopoly systems in industries such as railways, air transportation and communications, improvement of the social security system, and so on.

Reform has produced results including reduction in the number of unprofitable SOEs, and corresponding decline in the amount of fiscal support given by the government to unprofitable SOEs.[40] On the other hand, large-scale redundancies have become a problem, with 7.4 million people becoming newly unemployed in 1998, followed by 7.8 million in 1999, and 5.1 million in 2000. Redundancies are expected to increase going forward, as WTO membership results in intensifying competition from foreign countries.

The problem of non-performing loans (NPLs) at state-owned banks is inextricably linked with the problems of reforming SOEs. At the core of the state-owned banking system are four major banks: Bank of China, Industrial and Commercial Bank of China, China Construction Bank, and Agricultural Bank of China. These four command around 70% of all lending by commercial banks, and are also the major lenders to SOEs.

Before their reform and liberalisation, SOEs depended for funding upon interest-free state grants. In the 1980s the Chinese government then replaced this with loans from the state-owned banks, with the aim of encouraging profitability among SOEs, through their obligation to pay interest and repay capital. Nevertheless, the profit motive did not take deep root

[39] Listings of state-owned enterprises on the stock market were accompanied by the government selling off a tranche of its shareholding. This allowed the government to both introduce improvement in corporate governance and raise funds for social security. However, depressed stock market conditions prompted temporary suspension of the process in October 2001, with its cancellation announced in June 2002.

[40] RMB33.3 billion in 1998, RMB29.0 billion in 1999, RMB27.9 billion in 2000 (*China Statistics Yearbook*).

among SOEs, resulting in expansion of NPLs to SOEs at state-owned banks.

In response to these NPLs problems, the Chinese government injected a total of RMB270 billion in public funds to boost the capital of the big four state-owned banks in 1998. It then set up asset management companies at each of the banks in 1999. Before their transition into purely private-sector commercial banks in 1994, the big four state-owned banks already had NPLs on their books. RMB1.4 trillion out of these NPLs were transferred at book value to the asset management companies (AMCs).

The banks' asset management companies (Table 2-6) carry out normal loan recovery functions, exchange NPLs for equity, and since 2001 have started to sell NPLs to overseas investors. However, up to September 2001 they had only disposed of a little under RMB100 billon out of the NPLs total of RMB1.4 trillion, with loan recovery only amounting to RMB40.2 billion. We expect the loan recovery rate to fall further, and disposal of losses will probably in the end become the responsibility of the government.

Furthermore, the big four state-owned banks found it difficult to improve the business of SOEs, which have constantly sought to evade repaying loans, and NPLs have continued to expand. According to The People's Bank of China[41], the NPLs rate at the big four commercial banks was an extremely high 25.37% at the end of 2001, with NPLs making up RMB1,765.6 billion out of total lending of approximately RMB7 trillion (Table 2-7).

Table 2-6. Conditions at the Big Four Asset Management Companies (September 2001)

(RMB100 million)

4 AMCs	NPL transferred from bank	Bank of origin	NPL handled	Recovered assets	Rrecovered assets in cash
Oriental	2,674	Bank of China	154	66	32
Huarong	4,077	Industrial and Comercial Bank of China	185	89	56
Cinda	3,756	China Construction Bank、National Development Bank	362	181	117
Grate Wall	3,458	Agricultural Bank of China	257	67	28
Total	13,965	–	958	402	233

Source: *People's Daily*, November 5, 2001

Table 2-7. The Big Four State-Owned Banks (2000-End)

4 Big State Banks	Number of Institutions	Number of Staff and Workers	Non-performing loan ratio (%)
Bank of China	12,925	471,097	28.9
Industrial and Comercial Bank of China	31,673	192,279	25.1
China Construction Bank	25,763	509,572	15.7
Agricultural Bank of China	50,546	427,566	35.0
Total	120,907	1,600,514	26.0

Sources: Numbers of branches and employees from "China Statistical Yearbook 2001; " non-performing loan rates estimated by Fitch (*Nihon Keizai Shimbun*, November 10, 2001)

[41] Taken from a speech by the governor of The People's Bank of China, Dai Xiang-long, in Hong Kong on February 18, 2002.

4.2. The Labour Market and Unemployment

Reform of state-owned enterprises (SOEs) and unemployment problems are inextricably linked. Expansion in the number of employed people has exceeded population growth since the start of the 1990s. As shown in Figure 2-20, the number of employed people reached 730.3 million at the end of 2001 [42], equivalent to 57% of a total population of 1,276.3 million people. The number of people employed in secondary and tertiary industry is tending to rise, while the number working in primary industries is tending to decline. As a consequence, the ratio of people working in urban areas has been expanding continuously, reaching 33% and 239.4 million people in 2001.

Going forward, eight to ten million people are expected to enter the urban labour market each year. The Chinese government's tenth five-year plan targets creation of employment for eight million people each year, behind which lies an assumption of 7% annual economic expansion[43]. China is thus obliged to maintain challengingly high economic growth to alleviate continuously growing pressure from labour supply.

Figure 2-21 shows numbers of people in employment, broken down by type of corpora-

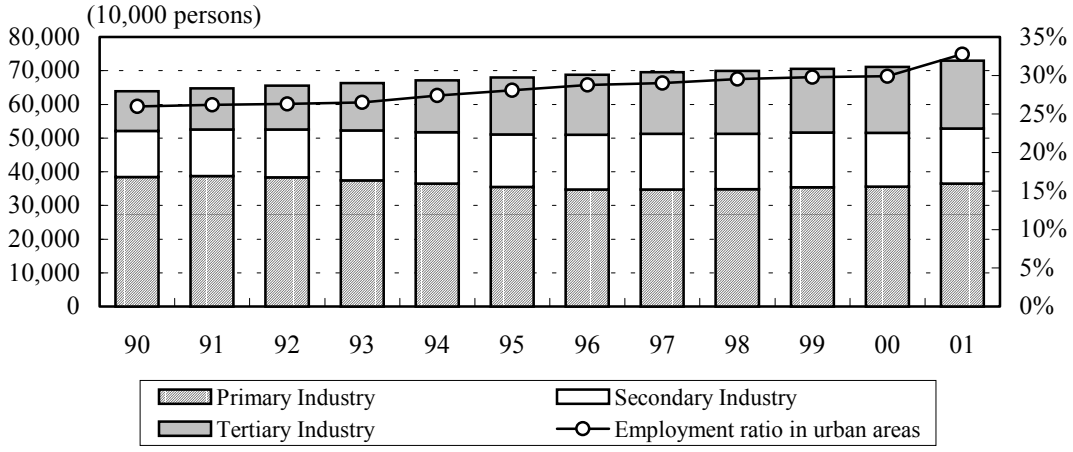


Figure 2-20. Numbers of People Employed by Type of Industry

Source: "China Labour Statistical Yearbook"

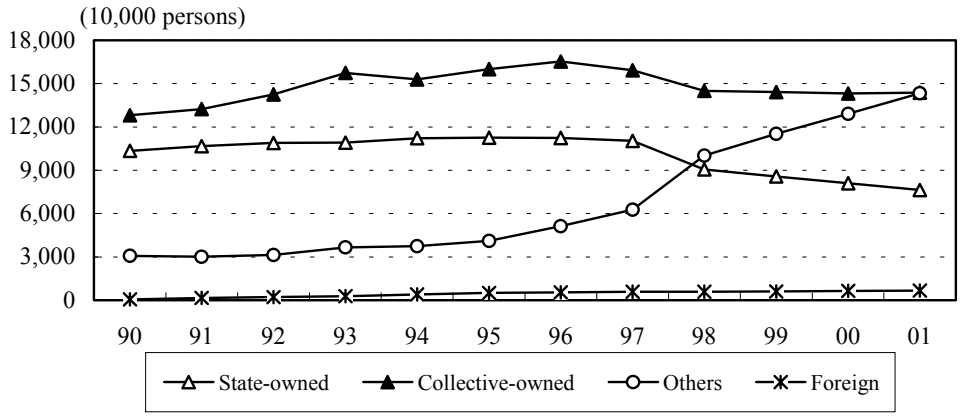


Figure 2-21. Numbers of People Employed by Type of Corporation

Note: The state-owned enterprises category includes state-owned holding companies.
Source: "China Statistical Abstract"

[42] Figures from the white paper, *Labour and Social Security Conditions in China.*

[43] According to the PRC's Ministry of Labour and Social Security (*Yomiuri Shimbun*, May 9, 2002).

tion. The number of people employed in SOEs has fallen rapidly since 1998 as reform has resulted in redundancies. Foreign-funded enterprises (FFEs) are regarded as being the prime movers of China's dramatic economic progress in recent years, but the scale of their ability to provide employment is still modest compared to their outstanding growth rates. FFEs are consequently failing to absorb fully labour laid off by SOEs.

Figure 2-22 shows China's number of registered unemployed people in urban areas, which appears to be extremely low compared to other countries at 5.95 million or 3.1% at the end of 2000, and 6.81 million or 3.6% at the end of 2001. However, these statistics do not include 9.61 million people laid off by SOEs[44], and the broad-based unemployment rate was 8.7% in 2001 after including such people. It is also believed that unemployment is extremely high among rural people migrating to urban areas in search of work[45], but such people are not included in the official statistics. The real unemployment rate is thus probably higher than 10%.[46]

Figure 2-23 shows regional conditions for unemployment and redundancies. Urban areas display little regional variation in the official unemployment rate, but large variations are apparent in broad-based unemployment including redundancies. Such unemployment is relatively low in cities in the coastal region like Beijing, Shanghai and cities in Guangdong Province, but is over 10% in Liaoning Province and other parts of the north-east, and in central provinces like Hubei, Hunan and Sichuan, which have concentrations of heavy industrial, military demand-related and other SOEs undergoing rapid rationalisation. In these less fortunate regions, frequent occurrences of labour demonstrations against restructuring of SOEs have been reported in recent years.[47]

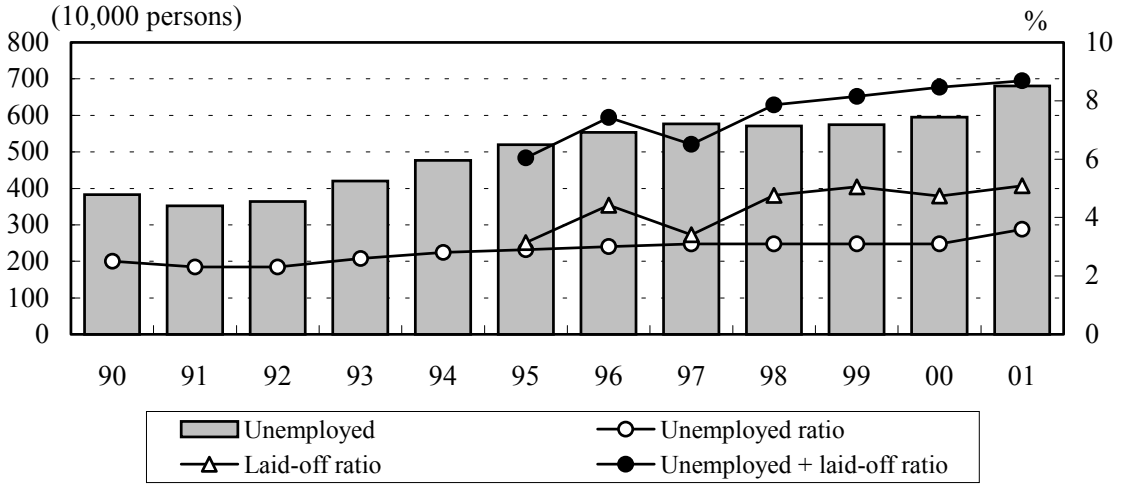


Figure 2-22. Numbers of Unemployed People in Urban Areas, Unemployment and Redundancy Rates

Note: 2001 data calculated from numbers of people laid off and released.
Source: "China Labour Statistical Yearbook"

[44] Figures for the end of 2001 calculated from Ministry of Labour and Social Security data.

[45] Some movement of labour from rural to urban areas is officially recognised in forms including seasonal labour, but illegal movement in search of work is also extremely common, and these workers are believed to be exerting downward pressure on wages in urban areas. This migrant work force is estimated to have reached 78 million people in 2001 (State Council Publicity Office, People.com February 5, 2002).

[46] According to Professor Xiao Zhuo-ji of Beijing University, the real unemployment rate in China's urban areas is 15-20% (Searchina, March 12, 2002). Furthermore, around 30% or 150 million of the 500 million people employed in rural areas are regarded as surplus labour. This surplus rural labour could emerge as unemployment as imports of cheap agricultural products start in earnest with WTO membership.

[47] For example, Liaoyang in Liaoning Province was the

In Table 2-8 we have broadly calculated the likely scale of surplus labour if SOEs push up their labour productivity to the level of FFEs, using the labour productivity data at the start of Chapter II. If labour productivity at SOEs reaches RMB70,000 per person, we project surplus labour of approximately 20 million people at the current level of production. This projection should be treated with a certain amount of caution, since it makes no allowances for differences in industrial structure between FFEs and SOEs[48], but it suggests that

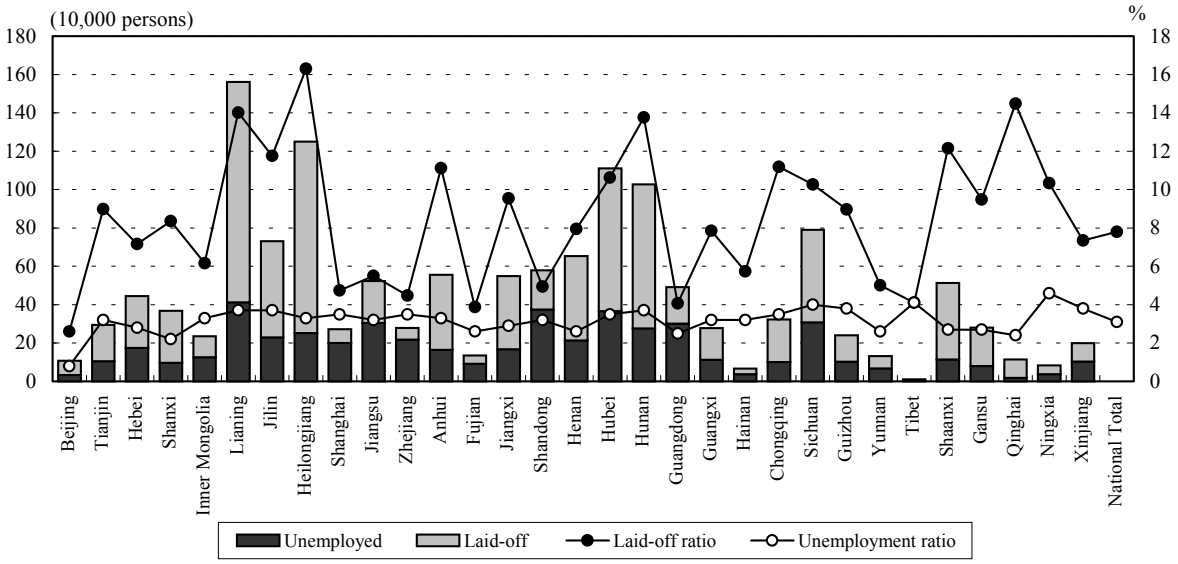


Figure 2-23. Unemployment by Region at 2000-End and Redundancies (Urban Areas)

Source: "China Labour Statistical Yearbook"

Table 2-8. Numbers of Employed People if Labour Productivity Rises (Mining and Manufacturing Industry; State-Owned Enterprises + Non-State-Owned Enterprises above a Certain Scale)

	Value added (RMB100 million)	Labour Productivity (yuan/person)	Number of Workers (10,000)	Necessary workers under labour productivity rise		
				50,000	60,000	70,000
State-owned	7,213	36,681	1,966	1,443	1,202	1,030
Collective-owned	3,072	35,581	863	614	512	439
Stock Company	3,584	89,640	400	400	400	400
Private	1,318	38,060	346	264	220	188
Foreign	6,090	71,403	853	853	853	853
Others	4,117	36,420	1,131	823	686	588
Total	25,395	45,679	5,559	4,397	3,873	3,499
Surplus labour	-	-	-	1,162	1,686	2,061

Note: Numbers of employed people at joint-stock companies and foreign -funded enterprises are assumed to remain unchanged.

scene of large-scale demonstrations in March 2002 (*The Economist*, April 6-12, 2002).

[48] As explained in Chapter II, foreign-funded enterprises are concentrated in electronics where productivity is generally high; state-owned enterprises have high weightings in materials and energy industries, so simple projection of labour productivity reaching the same level as foreign -funded enterprises results in an excessively large figure for surplus labourers.

further reform of SOEs could result in numbers of unemployed people far in excess of the 6.81 million currently registered as unemployed in urban areas.[49]

4.3. Latent National Debt

As mentioned in Chapter I, China's outstanding debt including foreign debt in 2001 was low by international standards at 21.2% of GDP. On the other hand, the government may finally find itself responsible for the costs of all the problems examined above relating to state-owned enterprises (SOEs), non-performing loans (NPLs) and unemployment. It is consequently advisable to examine latent national debt (the government's broad-based obligations).

For example, statistics on outstanding national bonds do not include the RMB270 billion (equivalent to 3.0% of GDP) in extraordinary national bonds issued when the big four state-owned banks received capital injections in 1998. Nevertheless, the government is clearly obliged to redeem this bond issue. Furthermore, costs incurred by the banks' asset management companies in disposing of NPLs will also probably end up being the government's responsibility. The big four state-owned banks also still display a significant level of NPLs, and they may need government funds to dispose of them. Moreover, social security costs are set to expand as a result of factors including unemployment benefits expanding with the number of unemployed people, and insufficient reserves for retirement benefits. Latent national debt thus stands to expand further due to continuing reform of SOEs, and if SOEs are exposed to international competition as a result of WTO membership.

Outstanding government debt including latent debt can be calculated in a number of ways, and it is variously estimated at 50-150% of GDP.[50] The Chinese government has given recognition to its latent debt[51], and has indicated that it will adjust its currently aggressive fiscal policy over the medium and long terms.[52]

[49] Although not examined in this report, China's agricultural sector is inefficient, and some estimates put the number of surplus labourers at 150 million people. Greater agricultural efficiency as a result of WTO membership is likely to result in emergence of this surplus labour as unemployment, and this could push up overall unemployment in addition to effects from reform of state-owned enterprises.

[50] For example, the IMF's calculation for 2000 puts China's fiscal deficit at 8% of GDP and outstanding government debt at 50% of GDP, including disposal of non-performing loans and social security costs such as retirement benefits. City Group calculates outstanding government debt at the end of 2000 at 83.5% of GDP (City Group materials, January 2002).

[51] According to the PRC's Minister of Finance, Xiang Huai-cheng, in a declaration at the High-Level Investigative Commission on Chinese Development, March 25, 2001.

[52] According to declarations by to the PRC's Minister of Finance, Xiang Huai-cheng (Searchina, May 29, 2002; *Nippon Kogyo Shimbun*, May 2, 2002).

Conclusion

As laid out in Chapter II, secondary industry in China displays a dual structure of foreign-funded enterprises (FFEs) and state-owned enterprises (SOEs). Concentration on developments among FFEs tends to result in alarmist views of China as an economic threat, while on the other hand concentration on SOEs struggling to reform tends to produce views that China's development will reach a limit.[53] We pointed out this polarisation in opinions on China's prospects at the very start of this report, and we attribute this polarisation to the dual structure evident in secondary industry. We believe that a balanced view of the threat posed by China and the challenges it faces, is only possible after correct understanding of this dual structure.

When appraising the overall Chinese economy containing this dual structure, it is advisable to examine the relationship between FFEs and SOEs, to assess how they are likely to develop, and also to examine the likely development of private-sector corporations in China (a subject this report does not tackle). The competitiveness of foreign and other enterprises in China could suffer through higher social unrest and government risk, and a heavier burden from social costs like unemployment insurance, stemming in particular from the biggest problem faced by SOEs; unemployment.[54] We believe that this point holds the key to Chinese economic prospects.

A full understanding of this point requires examination of a wide range of areas including political and social trends, in addition to economic aspects, and this remains a topic for future research.

[53] Some observers are pessimistic about China's prospects because of agricultural factors.

[54] Conversely, a large number of surplus labourers could keep wages low, becoming a factor in maintaining the competitiveness of China's labour-intensive industries.

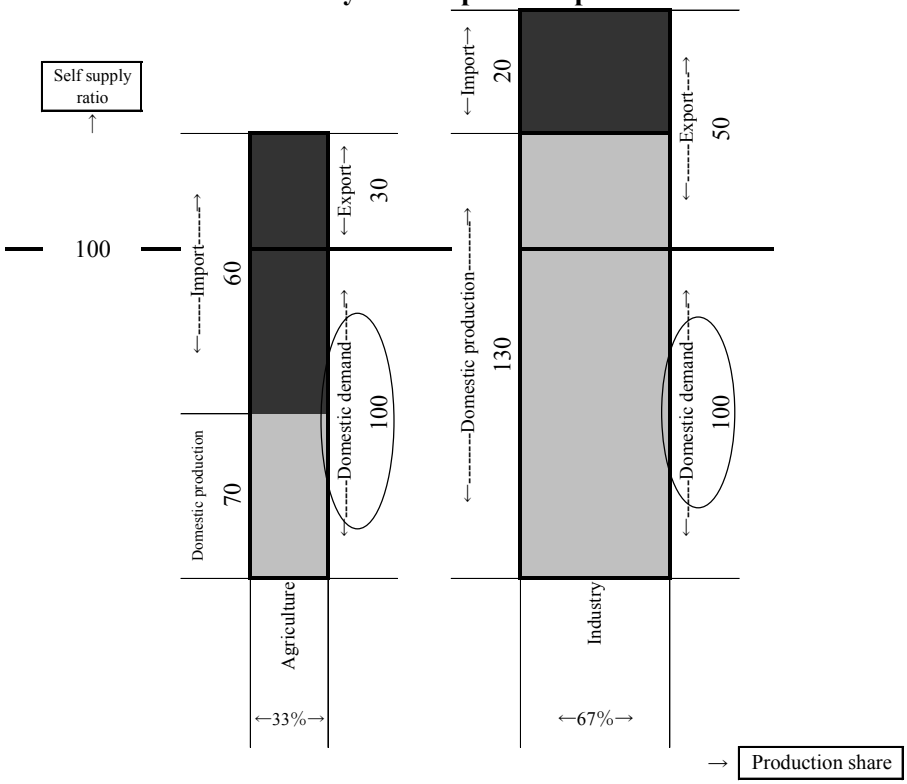
Appendix: Interpretation of Skyline Graphs

The graph below gives a simplified example using two sectors: agriculture and industry. If production volume sufficient to satisfy direct and indirect domestic demand for agricultural products in both agriculture and industry is set at 100, then domestic production volume of 30 is required to satisfy direct and indirect export demand. Furthermore, suppose that direct and indirect reduction of domestic production volume in agriculture as a result of imports by both agriculture and industry was 60. The height of the agriculture column is 130, representing the total of domestic and export demand, which are 100 and 30 respectively. Import volume of 60 is marked by the dark-shaded area of the column, and this area extends downwards from the top of the column. The remaining light-shaded area corresponds with domestic production volume in agricultural products of 70. Consequently, domestic production volume is 70 out of the total volume required to satisfy domestic demand of 100, giving a self-sufficiency rate of 70%.

Similarly, suppose that production volume sufficient to satisfy direct and indirect domestic demand for industrial products in both agriculture and industry is set at 100, then production inducement from exports is 50 and (negative) production inducement is 20. Domestic production volume indicated by the light-shaded area is therefore 130. Domestic production volume of 130 against 100 satisfies domestic demand results in a self-sufficiency rate of 130%.

Furthermore, column width indicates production share. In the example below, agriculture has production share of 33% compared to 67% for industry. The industry column is thus approximately twice as wide as the agriculture column.

Skyline Graph Example



Notes: 1. Domestic production, exports and imports in the graph represent the value of production inducement from these sources.
2. Production induced by domestic demand is given an index value of 100, with inducement from exports and imports given proportionate index values.

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