<u>Section 3</u> <u>Sustainable development required in Chinese economy through acceleration</u> of efforts for harmonization of the domestic economy

The Chinese economy has continued to have a high growth rate averaging over 9% annually since its reform and opening-up in 1978, including a real GDP growth rate surpassing 10% for four consecutive years starting in 2003. Furthermore, expansion in terms of trade and investment following China's accession to the World Trade Organization (WTO) in 2001 has been notable, and China's presence in the world economy is increasing rapidly. Nevertheless, this high growth has meanwhile produced many imbalances and distortions, and concerns are pointed out regarding the sustainable development of the Chinese economy.

The sustainable development of the Chinese economy is now also an important factor for the stability and development of the Japanese economy and world economy. This section covers the current status and issues of the Chinese economy from the three perspectives of (a) economic growth that is over-dependent on investment and exports, (b) the problem of expanding disparities, and (c) energy and environmental constraints, while touching upon trends in efforts by the government.

Economy over-dependent on investment and exports: Need for well-balanced growth (1) Chinese economy continues to expand

(Increase in the weight of China in the world economy)

The Chinese economy has continued high growth, and its weight in the world economy has been progressively increasing in recent years. China's real GDP growth rate was 10.7% in 2006, surpassing 10% for the fourth consecutive year, and its nominal GDP in 2006 amounted to US\$2.6301 trillion.²³ Looking at China's GDP growth in recent years by demand component, the contribution of investment (fixed capital formation) was the largest, and investment-driven economic growth has been continuing. The degree of contribution of net exports, however, also rose in 2005 and 2006 (Figure 1-3-1). In 2006, China's export value amounted to US\$969.1 billion (up 27.2% from the previous year) and its import value amounted to US\$791.6 billion (up 20.0% from the previous year), both figures expanding significantly. China's trade surplus rose significantly from US\$102 billion in 2005 to US\$177.5 billion to hit a record high (Figure 1-3-2). Looking at the breakdown of China's balance of trade by country, while it has a trade deficit of US\$24 billion with Japan, it has a trade surplus of US\$144.3 billion with the United States and US\$91.6 billion with the European Union (EU) (Figure 1-3-3).

As a result, the share of nominal GDP and share of the trade value (total imports and exports) of the world as a whole accounted for by China were only 1.6% and 1.2% respectively in 1990.²⁴ In 2005, however, its share of the nominal GDP of the world was 5.0%, putting it in fourth place in the world following the United States, Japan, and Germany.

²³ International Monetary Fund (IMF), "World Economic Outlook Database, April 2007."

²⁴ World Bank, "WDI."

China's shares of the world's export value and import value were 7.3% and 6.1% respectively, putting it in third place in the world (Table 1-3-4, and Table 1-3-5). The amount of direct inward investment received has been expanding, and the amount of direct inward investment (flow) in 2005 amounted to US\$72.41 billion, making China the third-place country receiving investment in the world, following the United Kingdom and the United States (Table 1-3-6). The direct inward investment balance (stock) in 2005 was US\$317.87 billion, which was the tenth largest amount in the world.²⁵



Source: China Statistical Yearbooks, China Statistical Abstract 2007 (National Bureau of Statistics of China).

²⁵ United Nations Conference on Trade and Development (UNCTAD), "World Investment Report 2006." According to the "China's Balance of Payments Report for 2006" announced by the State Administration of Foreign Exchange in May 2007, China's total trade in 2006 the third highest in the world (export amount was 8.0% of the world total and import amount was 6.4% of the world total), and the amount to direct investment in China in 2006 was the fourth highest, after the United States, the United Kingdom, and France.





Figure 1-3-3 Changes in trade balance between China and respective countries and regions

Position	Country name	Nominal GDP	Share (%)
	World		100.0
1	US	12,455.8	28.0
2	Japan	4,557.1	10.3
3	Germany	2,791.7	6.3
4	China	2,243.7	5.0
5	UK	2,230.6	5.0
6	France	2,127.2	4.8
7	Italy	1,772.8	4.0
8	Canada	1,132.4	2.5
9	Spain	1,128.0	2.5
10	Brazil	882.0	1.8

Table 1-3-4 Ranking of GDP in countries worldwide (2005)

Source: World Economic Outlook Database, April 2007 (IMF).

Table 1-3-5 Ranking of trade value in countries worldwide (2005)

Share (%)

100.0

16.1

7.2

4 :

4.7

4.6

3.5

3.3

3.0

3.0

<6 Expo	rt>		_	<pre>(Import)</pre>			
Position	Exporting country	Value (\$100 million)	Share (%)		Positior	Importing country	Value (\$100 million)
	World	104,310	100.0			World	107,830
1	Germany	9,699	9.3		1	US	17,324
2	US	9,044	8.7		2	Germany	7,738
3	China	7,620	7.3		3	China	6,600
4	Japan	5,949	5.7		4	Japan	5,149
5	France	4,602	4.4		5	UK	5,102
6	Holland	4,024	3.9		6	France	4,979
7	UK	3,828	3.7		7	Italy	3,798
8	Italy	3,672	3.5		8	Holland	3,591
9	Canada	3,594	3.4		9	Canada	3,197
10	Belgium	3,343	3.2		10	Belgium	3,187

Source: International Trade Statistics 2006 (WTO).

Table 1-3-6 Ranking of direct investment in countries worldwide (2005)

(Direct inward investment) (Direc						t outward investment)			
	Position	Countries accepting investment	Value (\$100 million)	Share (%)		Positior	Investing country	Value (\$100 million)	Share (%)
		World	9,162.8	100.0			World	7,787.3	100.0
	1	UK	1,645.3	18.0		1	Holland	1,194.5	15.3
	2	US	994.4	10.9		2	France	1,156.7	14.9
	3	China	724.1	7.9		3	UK	1,011.0	13.0
	4	France	635.8	6.9		4			
	5	Holland	436.3	4.8		5	Germany	456.3	5.9
	6	Hong Kong	359.0	3.9		6	Switzerland	428.6	5.5
	7	Canada	338.2	3.7		7	Italy	396.7	5.1
	8	Germany	326.6	3.6		8	Spain	387.7	5.0
	9	Belgium	236.9	2.6		9	Canada	340.8	4.4
	10	Spain	229.9	2.5		10	Hong Kong	325.6	4.2
	•					•			
						17	China	113.1	1.5

Source: World Investment Report 2006 (UNCTAD).

(Investment and exports driving high growth)

Looking at the status of investment and exports in the Chinese economy, which continues

to expand in this way, the amount of fixed asset investment in China as a percentage of nominal GDP rose from 33.2% in 2000 to 52.5% in 2006. Exports as a percentage of nominal GDP remained around 20% in the 1990s, but rose steadily from 2000 onward to amount to 37.1% in 2006, which is an extremely high percentage even compared to Japan and the United States in the past. Meanwhile, consumption as a percentage of nominal GDP has been on a trend of declining year by year (36.5% in 2006) (Figure 1-3-7). As such, it appears that particularly from 2000 onward, the vigorous expansion of investment and exports has been driving the high growth of the Chinese economy.



Note: The investment data is Total Investment in Fixed Assets. The consumption data is Total Retail Sales of Consumer Goods. Source: China Statistical Abstract 2007, (National Bureau of Statistics of China); National Accounts, (Cabinet Office); website of Bureau of Economic Analysis, Department of Commerce,

(Changes required: realization of well-balanced growth)

As mentioned above, the Chinese economy is seeing high growth, but there are two main concerns in terms of demand structure which are pointed out regarding the sustainability of this growth. First is the risk of excessive investment that is not accompanied by actual demand causing excess production, the problem of bad debt and so forth; the second is the risk of excess reliance on external demand, increasing vulnerability to changes in the foreign economic situation in addition to causing the problem of external imbalances and the problem of trade friction.

In order to appropriately handle these risks and for the Chinese economy to achieve sustainable development, there is a need for the realization of well-balanced growth that is based on market functions. The following outlines the current status of trends in investment and exports and covers specific policies for correcting a structure that is overly dependent on investment and exports.

(2) Economic growth that is overly dependent on investment (Decline in investment efficiency)

As stated earlier, China's Total Investment in Fixed Assets as a percentage of nominal GDP amounted to 52.5% in 2006. This type of high-level investment is evoking concerns regarding inefficiencies.

Comparing China's incremental capital-output ratio,²⁶ which can be obtained by dividing investment as a percentage of nominal GDP by the real GDP growth rate, with that of Japan, South Korea, and ASEAN4 during high-growth periods, in order to see investment efficiency, China's investment efficiency has been gradually declining, and it can be seen that China's investment efficiency from 2000 through 2006 was lower than that of these Asian countries (Table 1-3-8). The continued expansion of investment despite the decline in investment efficiency may suggest the possibility that investment in China is occurring in businesses with a low expected rate of return.

	Economic growth era (year)	Average of real GDP growth rate during the era (%)	A verage of investment ratio during the era (% of nominal GDP of fixed asset investment)	Marginal capital coefficient
South Korea	1986~1990	9.65	30.09	3.12
Indonesia	1989~1993	8.30	26.79	3.23
Malaysia	1992~1996	9.56	40.37	4.22
The Philippines	1986~1990	4.74	19.01	4.01
Thailand	1987~1991	10.94	34.99	3.20
Japan	1966~1970	11.56	33.50	2.90
	1091 - 1090	0.05	26.80	2 (0

Table 1-3-8 Comparison of marginal capital coefficient of Asian countries during the economic growth era

Note: 1. Economic growth era refers to the five-year-time during which the average real GDP growth rate marks the highest for the country 2. China's investment ratio is calculated by: Total investment in fixed assets/nominal GDP

10.00

9 57

31.66

41.29

3.17

4 3 1

(Structure of excess production brought about by excess investment)

1990~1999

2000~2006

China

Concerns have been pointed out that perhaps excess investment is creating a structure of excess production. Looking at fixed asset investment in China by sector, there appears to be a high rate of growth centering on the manufacturing sector and property sector, including the share of the overall amount of investment accounted for by the manufacturing sector in particular expanding to approximately 28% in 2006, and it can be seen that these sectors are driving the growth of investment. (Concerns regarding a housing bubble will be stated later on) (Figure 1-3-9). In manufacturing industries as well, fixed asset investment in industries such as electrical machinery and taxtile in particular, is continuing to grow approximately 50% year-on-year (Figure 1-3-10).

Source: WDI (World Bank), China Statistical Yearbooks (National Bureau of Statistics of China), Website of National Bureau of Statistics of China

²⁶ The incremental capital-output ratio expresses the investment (as a percentage of nominal GDP) that is necessary to achieve a 1% increase in the real GDP growth rate. It can be said that the smaller the figure is, the higher investment efficiency is.



Figure 1-3-9 Changes in industry-by-industry fixed asset investment

Notes: Shares related to infrastructure is calculated from the sum of fixed asset investments of transporation/elecricity, and power, gas, water supply Source: CEIC Database



Figure 1-3-10 Changes in industry-by-industry fixed asset investment growth rates of China

The vigorous fixed asset investment is exposing excess production capacity (Figure 1-3-11). The Chinese government also sets forth some industries such as iron and steel, automobiles, and electrolysis aluminum as areas of excess production capacity, and is

adopting individual readjustment of the structure of production, though they are non-market measures.²⁷ The investment amounts in these areas, however, are large (Figure 1-3-12). For example, in regard to iron and steel, readjustment of the structure of production have been undergone, and the rate of growth of investment was kept low in 2006 (Figure 1-3-10, shown above). The amount of investment, however, amounted to approximately 2,247 billion yuan (urban areas in 2006), accounting for 8.5% of that of manufacturing industries overall. This type of rapid increase in production capacity had led crude steel production to expand rapidly in the past several years to account for one-third of that of the world in scale, and there are concerns that this will put deflationary pressure on the global steel market (Figure 1-3-13).²⁸

Table 1-3-11	The situation of	excess production	capacity in major	industries of China	(2005)
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Steel	2005 production capacity: 470 million tons Production amount: 370 million tons Excess production capacity: 100 million tons Constructing 700 million tons, planning 80 million tons
A lum in um e le c tro lys is	2005 production capacity: 10.3 million tons (domestic demand 6.0 million tons, external demand 1.02 million tons, idle capacity 3.26 million tons) constructing projects 11, planning projects 14
Iron alloy	End of September 2005 production capacity: 22.13 million tons (constructing/planning included 24.97 million ton) 2005 domestic demand: 12 million ton, operation rate 40%
Coke	2005 production capacity: 243 million tons (domestic demand 232million tons, production exceeding demand 11million tons) newly constructed, large scale projects 240, coke oven 390 Production capacity expected to increase around 100 million tons
Carbide	2005 production capacity: 10.426 million tons average manufacturing operation rate around 60% production capacity of constructing and planning: 12-22 million tons
Automobiles	2005 production capacity 8 million units, unit sales: 5.7 million units Excess production capacity: 2.3 million units Constructing: 2.2 million units Planning: 8 million units

Quoted by: Kan (2006) SEISANNOURYOKU NO KAJOU GA NAZE HASSEISURUNOKA Original source: National Development and Reform Commission release.

²⁷ In the "Circular on Promoting the Structural Adjustment of Industries with Excess Production Capacity" (Guo Fa [2006] No. 11), which was announced in March 2006, iron and steel, aluminum, carbide, iron alloy, coke, and automobiles were stated as industries with significant overcapacity, and cement, coal, electricity, and cotton spinning were named as industries with potential overcapacity. It is stated that structural adjustments will be carried out based on new restrictions on investment, the weeding out of obsolete production capacity, mergers and acquisitions, and so forth. In August, "Guidance Opinions on the Adjustment of New Construction Projects" (Fa Gai Tou Zi [2006] No. 1538) was announced, and it was stated that focused inspections would be carried out on these industries, including the "Circular on the Acceleration of Structural Adjustments through Total Volume Control and Weeding Out in the Iron and Steel Industry" (Fa Gai Gong [2006] No. 1084) in June and the "Circular on Opinions on Structural Adjustments in the Automobile Industry" (Fa Gai Gong [2006] No. 2882) in December.

²⁸ According to various media reports, the Chairman of the German Steel Federation, the Vice President of the European Commission (responsible for enterprises and industry) and others have expressed concerns regarding excess production capacity in China.



Figure 1-3-12 Fixed asset investment in manufacturing industries of China (2006, urban area)



Figure 1-3-13 Changes in production volume of crude steel in major countries

Note: Compiled from *Crude Steel and Iron Production for February 2007*, (Japan Iron and Steel Federation). (1) Source: METI; National Bureau of Statistics of China; Taiwan Steel & Iron Industries Association; AISI (USA); International Iron and Steel Institute.

(Concerns over a housing bubble)

Looking at the impact of this type of excess investment in terms of prices, against the backdrop of significant increases in supply capacity and continuous increases in labor supply, while there has been a rise in global material prices and so forth, on the whole, the rising trend in producer price index (PPI), capital goods price index (CGPI), and consumer price index (CPI) has been limited (Figure 1-3-14). Nevertheless, asset prices have been rising significantly, and concerns have been pointed out regarding a housing bubble (Figure 1-3-15).

Notes: The division of industries is from Wada, T. (2004) "CHUGOKU KEIZAI KANKETSU SURU KOTEISHISAN TOUSHI NO ZOUKA YOUIN BUNSEKI," Mini Report of Economic & Industrial Research Department of the Development Bank of Japan. Source: CEIC Database.

For example, real estate prices, which increased rapidly from the end of 2003 through 2004, are starting to see a decline in the pace of increase on the nationwide level as a result of a series of investment control measures, but with the exception of Shanghai, which already saw an extreme increase, the increasing trend is continuing to remain (Figure 1-3-16 and Figure 1-3-17). A factor pointed out as being behind this type of increase in real estate prices the over-dependence of the economies of urban areas on real-estate development.



Figure 1-3-14 Changes in prices of China













(11) Economic growth overly dependent on exports

(Trade surplus hits record high)

In 2006, China's export value amount to US\$969.1 billion (up 27.2% from the previous year) and its import value amounted to US\$791.6 billion (up 20.0% from the previous year), both figures expanding significantly.

In 2006, China's export value amounted to US\$969.1 billion (up 27.2% from the previous year) and its import value amounted to US\$791.6 billion (up 20.0% from the previous year), both figures expanding significantly. China's trade surplus rose to US\$177.5 billion to hit a record high (Figure 1-3-2, shown above). This is also significantly above the highest amount of the trade surplus that Japan had in the past (US\$120.9 billion recorded in 1994). Until 2004, the gap between export value and import value did not change significantly, and remain more or less stable, but from 2005 onward, exports increased significantly, and the trade surplus expanded. Comparing the growth of fixed asset investment and exports, there is a high degree of correlation, and there appears to be a possibility that the growth of exports has been driving the growth of fixed asset investment (Figure 1-3-18). Based on this, the Chinese economy has a makeup in which it heavily depends on exports, and it can be seen that the degree of this dependency has been increasing in recent years.



(Expansion of exports of capital and technology-intensive products)

Next, looking at changes in the ratio of destinations of Chinese exports by country, approximately 50% of exports overall go to developed countries, such as Japan, the United States, and EU countries. While exports to the EU have expanded to slightly below 19%, the share of exports to Japan has been in a declining trend, and fell to below 10% in 2006 (Figure 1-3-19). Looking at the figures by product, while the share of miscellaneous products, which had accounted for slightly below 40% of exports overall in the latter half of the 1990s, subsequently declined, the share of machinery increased rapidly, and in 2006, machinery

came to account for 47.1% (Figure 1-3-20).

Factors behind this type of expansion of exports of machinery include China's actively accepting direct inward investment and shifting toward more capital-intensive industries through capital accumulation and technical progress. After starting reform and opening-up in 1978, China had a trade structure of exporting primary commodities and importing machinery. Subsequently, the transfer of labor-intensive industries from Hong Kong and Taiwan progressed, and with this, competitiveness in miscellaneous products expanded, centering on clothing. Furthermore, talks given by comrade Deng Xiaoping when he xisited the south in 1992, direct investment in China increased significantly, and exports of machinery and other capital and technology-intensive products expanded. In fact, the ratio of the total amount of exports accounted for by exports by foreign-affiliated companies increased year by year, and in 2005 reached 58.3%. Nevertheless, the share of exports of foreign-affiliated companies in 2006 decreased, although only slightly (Figure 1-3-21). Possible factors behind this include (a) the cycling back of direct investment from overseas (Figure 1-3-22), and (b) the apparent shift of focus from exports to domestic sales.





Source: CEIC Database





Source: CEIC Database



1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 (Year) Notes: Investments (in-flow) prior to 2004 do not include bank., security, and insurance values. Source: World Investment Report (UNCTAD), China Statistical Yearbooks (National Bureau of Statistics of China), China Monthly Statistics.

(Progress of import substitution of raw materials)

In regard to imports, while the total share of Japan, the United States, and the EU has been declining gradually, the share of imports from ASEAN, South Korea, and other countries has increased to over 60% (Figure 1-3-23). Looking at the figures by product, while the share accounted for by imports of manufactured products classified by raw material (nonferrous metals, metal products, iron and steel, textiles, etc.) has been declining, the share of primary commodities (crude oil, iron ore, etc.) has been expanding (Figure 1-3-24). It appears that import substitution of manufactured products classified by raw material has been progressing.



Figure 1-3-23 Changes in ratio of countries receiving imports from China

Source: CEIC Database.





Source: CEIC Database

(12) Breaking away from patterns of economic growth overly dependent on investment and exports

(Background to overheating of investment)

A factor pointed out as being behind the overheating of investment covered above is the fact that it is difficult to induce discipline based on the market, and controls of the central government are not functioning sufficiently due to (a) the high ratio of projects led by local governments, and (b) the relatively large ratio of investment accounted for by state-owned enterprises.

The ratio of investment led by local governments has been increasing since 1997, and of the amount of society-wide fixed asset investments in 2006, 90.2% was led by local governments (Figure 1-3-25). It has been pointed out that local governments have been overly involved in the investment decisions of companies and the credit decisions of financial institutions, and that moving forward with the insufficiently-planned approval of the diversion of agricultural land and development of economic development zones using the authority of approval regarding land-use rights has resulted in inefficient investment and overlapping construction. Furthermore, it can be seen that looking at the ratio of the amount

of fixed asset investment by investment entity, regional enterprises, centering on state-owned enterprises, continue to account for a significant ratio (Figure 1-3-26).

As such, the significant involvement of local governments and state-owned enterprises in investment activities is a factor that disrupts market functions and makes it difficult for the effects of controls of the central government to spread. Thus in order to control the overheating of investment, it is important to reduce the intervention of local governments in investment activities as much as possible and further utilize market functions.





(Efforts toward controlling the overheating of investment)

Based on the type of situation above, the Chinese government had adopted a number of investment control measures. In the second quarter of 2006, the real GDP growth rate was 11.4%, significantly above the government's target of 8%, and fixed asset investment saw accelerating growth of a total of 29.8% in January through June, 2006 (of which urban area investment was 31.3%). In response to these and other factors, the deposit reserve requirement ratio and interest rate on loans were increased, and in addition to adjustment guidance for the start of new construction projects, further strengthening of investment

control measures was carried out, including strengthening the supervision of local governments and discount window operation for banks. As a result, the rate of growth of the amount of fixed asset investment has gradually declined, and these control measures seems to have shown a certain degree of effectiveness (Figure 1-3-27). Nevertheless, there is a possibility that reduction of the growth of investment will only be gradual, due to factors such as (a) expected expansion of company revenues, (b) continued strong motivation of local governments to invest, and (c) vigorous motivation of financial institutions to lend.



(Efforts aimed at controlling exports and correcting the external imbalance)

The expansion of China's trade surplus is making it vulnerable to changes in the foreign economic situation and is triggering trade friction with the United States and other foreign countries. The Chinese government, as a measure for controlling the rapid growth of exports of low-value-added products, is carrying out a review of preferential treatment for exports, including refundment for exports and tax exemptions for trusted processing trade.

Refundment for exports is a system in which the value added tax at a tax rate of 17% collected at the production stage is partially or completely refunded at the export stage, and it has been implemented since 1994. In September 2006, an adjustment of the rate of refundment for exports took place, and in December, there was a shift to a completely new rate of reimbursement.²⁹ The reimbursement of value added tax was no longer applied to

²⁹ Ministry of Finance, National Development and Reform Commission, Ministry of Commerce, General Administration of Customs, State Administration of Taxation "Circular on Adjusting the Export Rebate Rate for Some Commodities and Supplementing the Prohibitive Catalogue for Processing Trade" (Cai Shui [2006] No. 139, promulgated September 14, 2006 and enacted the next day).

mineral products and so forth, the rate of reimbursement for steel products was lowered from 11% to 8%, and the rate of reimbursement for textile products, furniture, and so forth was lowered from 13% to 11%. Meanwhile, the rate of reimbursement for large-scale technological facilities, such as plants, a portion of IT-manufactured products and bio-manufactured products, and high-tech manufactured products was raised from 13% to 17%.

Moreover, in the case of carrying out exports (consignment manufacturing trade) of manufactured products processed using imported raw materials and parts, the bond system, in which there is exemption from import tax and value added tax, was applied. From September 2006 onward, however, an import tax and value added tax at the time of import came to be levied centering on items for which the reimbursement of value added tax on exports had been eliminated, and the benefits of the bond system could no longer be received.³⁰ Furthermore, the Ministry of Commerce, General Administration of Customs, and State Environmental Protection Administration of China made 1,140 items to which 137 items had been newly added from April 2007 onward items exempted from the bond system for consignment manufacturing trade.³¹

As a result of these measures, through promotion of the control of exports of low-value-added products and the procurement of raw materials to be used in production domestically, the control of exports and expansion of imports can be expected. Nevertheless, only a portion of products are targeted, and it has been pointed out that the effects on the problem of external imbalance and so forth will be limited. Thus, going forward it is necessary to closely watch movements in trade trends.

(Relationship between the overheating of investment and dependence of the economy on external demand and macroeconomic management)

Meanwhile, the expansion of China's trade surplus and the increase in the inflow of investment funds will put pressure of renminbi appreciation. Strong exports and the receipt of direct inward investment and so forth are important pillars supporting China's economic growth, but at the same time, pressure of renminbi appreciation resulting from this type of inflow of funds is further increasing the difficulty of China's macroeconomic management, beginning with responding to the overheating of investment.

In international finance, there is the well-known "trilemma of international finance" in which the three elements of "exchange stability," "free movement of international capital,"

³⁰ Based on a circular in September 2006 (Cai Shui [2006] No. 139), a commodity catalogue prohibited for processing trade was promulgated and enacted in November 2006 (Announcement No. 82, 2006, promulgated November 1, 2006 and enacted November 22, 2006).

³¹ Ministry of Commerce, General Administration of Customs, State Environmental Protection Administration "On Promulgating 2007 Commodity Catalogue Prohibited for Processing Trade" (Announcement No. 17, 2007, promulgated April 5, 2007 and enacted April 26, 2007). This announcement consolidated the commodity catalogues prohibited for processing trade promulgated and enacted in 2005 and 2006.

and "independent monetary policies" cannot be achieved at the same time. In, China, however, of these three elements, by controlling "free movement of international capital," exchange stability and the effectiveness of monetary policies have been secured. Nonetheless, in addition to expansion of the trade surplus, with direct inward investment, securities investment, and so on gradually opening up, the inflow of funds into China has continued, and there is pressure of renminbi appreciation.

In order to stabilize the exchange rate in response to this type of upward pressure, the Chinese government has repeatedly carried out foreign exchange intervention through buying US dollars and selling yuan. Since reform of the renminbi system in July 2005³², the rate of the renminbi against the US dollar has been in a rising trend, but this change has only been gradually (Figure 1-3-28). Meanwhile, China's foreign currency exchange reserves since 2002 have been increasing at a pace of approximately US\$200 billion per year on average, and at the end of 2006 amounted to US\$1.663 billion, the top level in the world (Figure 1-3-29).

When the renminbi that are sold go into circulation in the market as a result of this type of foreign exchange intervention, it causes increases in prices through excess liquidity and overheating of the domestic economy, so the Chinese government is forced to employ a sterilization³³ based on the issuance of debt bills and so forth. Nevertheless, in the case that the sterilization is not sufficient, there would be a potential for a vicious cycle in which the Chinese government increases the money supply, promotes the inflow of speculative funds into China, and there is further foreign exchange intervention and expansion of the scale of sterilization. Meanwhile, in order to reduce the inflow of speculative funds from overseas, the Chinese government has to keep interest rates at a low level. Based on this type of situation, the money supply and outstanding bank lending have been growing at an increasing pace since the beginning of 2007, and there is a possibility that this is promoting inefficient investment (Figure 1-3-30 through Figure 1-3-32).

As such, it appears that in China it is difficult to adopt effective monetary policies because of efforts to maintain a stable exchange rate.

³² There was a transition from a real dollar peg system to a managed float system referring to a basket of currencies, and at the same time the rate of the renminbi against the dollar was raised (US1 = 8.11 yuan, raised 2.1%).

³³ In intervention in the foreign exchange market, a policy of a country absorbing its own currency, which it has sold, through the issuance of government bonds and so forth in order to neutralize the effects of foreign exchange market intervention on the money supply.











(%)



(Correcting the pattern of economic growth which is dependent on investment and exports through increasing the flexibility of the renminbi)

Nevertheless, undervaluation of the renminbi has the effect of boosting the export competitiveness of domestic Chinese industries and leads to increases in Chinese exports. At the same time, it causes the overheating of investment and a housing bubble through the inflow of speculative funds, and is a factor that perpetuates inefficient companies. It is pointed out that a situation of a so-called "money glut" (excess liquidity) and a low-interest rate policy have caused a rapid rise in the recent Chinese stock market. With low deposit interest rates and real estate investments starting to be regulated, the fund operation destinations of Chinese investors are starting to concentrate on stock markets.³⁴ The

³⁴ In stock markets in China, transactions by foreign investors are limited. For example, the stock markets of the Chinese mainland are divided into the renminbi-denominated A Stock Market and the foreign

Shanghai Stock Exchange Composite Index, which is the representative stock price index of the Chinese mainland market, increased approximately 2.5-fold over the past year (as of May 2007), and there are concerns about a stock bubble (Figure 1-3-33).

In order to correct this type of situation and to boost the effect of measures currently being adopted by the Chinese government, such as investment control measures, there is a need to move steadily forward with the liberalization of capital movements and increasing the flexibility of the exchange rate system, and work to break away from an economic structure that is overly dependent on investment and exports.³⁵ In order to do this, it is extremely important to increase governance, including the introduction of the principle of market mechanisms in financial markets and strengthening functions for the supervision of financial institutions, and to work to strengthen financial systems.



(Efforts aimed at the disposal of nonperforming loans of state-owned commercial banks)

In order to strengthen financial systems, the disposal of the nonperforming loans of

currency-denominated B Stock Market, but ordinarily foreign investors are only able to participate in the B Stock Market. In 2002, it became possible for cross-border institutional investors who are certified as Qualified Foreign Institutional Investors (QFII) to participate in transactions in the A Stock Market, but the investment cap amount for these investors is 10 billion yuan. Based on the fact that the aggregate market price of the stock market in the Shanghai Stock Exchange is approximately 12 trillion yuan (as of April 2007), the aggregate market price of the Shanghai B Stock Exchange and the investment cap amount for QFII together have a scale of less than 1% of the Shanghai stock markets.

³⁵ Increasing the flexibility of the renminbi system is important from the perspective of the sustainable and balanced growth of the world economy, and at meetings of the finance ministers and central bank governors of G7, United States-China economic strategy dialogues, and so forth, there have been calls for increasing the flexibility of the currency exchange system of China, which has a large trade surplus. As such, the People's Bank of China has expanded the range of fluctuation of the renminbi against the dollar per day from 0.3% to 0.5% above or below the standard value. (Implemented since May 21, 2007) state-owned commercial banks is important. While the ratio of nonperforming loans of state-owned commercial banks fell to 9.2% in the end of 2006, the pace of decline has recently been gradual (Figure 1-3-34).

The decline in the ratio of nonperforming loans is mainly due to transfers of nonperforming loans to asset management companies (AMC), but there are problems pointed out regarding the disposal of nonperforming loans by AMC, including (a) the risk that it will contribute to moral hazards for state-owned commercial banks and state-owned enterprises, in the case that the responsibilities of the management are not sufficiently pursued, and (b) the presence of some AMC with cash recovery rates in the disposal of nonperforming loans (Table 1-3-35).

Approximately 80% of the loans of state-owned commercial banks in China are to companies, and they are supporting the fixed asset investment of companies. This type of loan structure has also provided a backdrop for China's investment and external demand-driven economic growth, but in the case that a tight monetary policy is carried out to a considerable degree in order to cope with excess liquidity in the future, operation of the inefficient companies and facilities that had been preserved will be difficult, and there is a risk that this will lead to the creation of new nonperforming loans. Based on this, domestic commercial banks need to move forward with financial reforms, such as the swift disposal of remaining nonperforming loans, the strengthening of risk management systems, and the development new products, and it is necessary for the administrative side as well swiftly to carry out the strengthening of functions for the management and supervision of financial institutions, including corporate governance and thorough prudential regulation.



Fores. Lething outstanding estimated intoin non-performing roads obsaming and projocition of non-performing toals. Source: Website of China Banking Regulatory Commission, CEIC Database. Quoted by: "2005 NEN NO CHUGOKU KEIZAI" by Hosokawa (2005), KOKUSAI KINYUU NO. 1140 (The Institute of Foreign Exchange and Trade Research) Original source: Financial and Economics Magazine.

	China Huarong AMC	China Great Wall AMC	China Orient AMC	Cinda AMC	Total of 4 AMCs
Cumulative disposal (100 million Yuan)	2468	2707.8	1419.9	2067.7	12103
Amount of recovered cash (100 million Yuan	546.6	278.3	328.1	652.6	2110
Cumulative disposal rates (%)	70.11	80.11	56.13	64.69	68.61
Asset recovery rates (%)	26.5	12.7	27.16	34.46	24.2
Cash recovery rates (%)	22.15	10.28	23.11	31.56	20.84

Figure 1-3-35 Situation about disposable of nonperforming loans a	t AMCs in China
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Notes: The cumulative disposal of bad loans for the 4 AMCs, cash recovery rates are those at the end of March 2007. The others are from the end of March 2006. Therefore, the total of 4 AMCs does not match with others. Source: Website of China Banking Regulatory Commission.

2. Problem of expanding disparities: toward strengthening the constitution of the foundation for growth through the expansion of consumption

The Chinese economy is facing factors of instability, including risk of the overheating of investment and the problem of external imbalances, but in terms of a way of solving this, shifting from an investment and external demand-driven to a consumption-driven pattern of economic growth is a major issue. An important key in this regard will be responding the problem of disparities. The following outlines the current status of consumption and disparities in China and touches upon efforts aimed at correcting disparities.

(1) Current status of consumption trends and disparities in China (Current status of consumption in China)

The Chinese economy continues to grow at a high rate, but compared to investment and exports, the growth of consumption lacks momentum. The growth rate (nominal) of the total retail sales of consumer goods has been increasing gradually and in 2006 was 13.7% compared to the previous year, but it continues to below the increase in investment (Figure 1-3-36). While income has been growing accompanying economic growth, the propensity to consume has been flat or on a declining trend, and it is not leading to an expansion in consumption (Figure 1-3-37 and Figure 1-3-38).

As mentioned above, the economic growth of China, which is driven by investment and exports, is facing factors of instability, including risk of the overheating of investment and the problem of external imbalances. In order to secure an autonomous and stable foundation for growth, spurring domestic demand is an important issue, and this point has been pointed out in the government's 11th five-year plan (2006 through 2010).³⁶

³⁶ As has been pointed out in Chapter 1 Section 2, the problem of China's external imbalance is a manifestation the surplus of China's savings-investment balance (excess savings), and from the perspective of equilibrating this balance as well, efforts are needed for the expansion of internal demand.







Figure 1-3-38 Consumption tendencies by income in urban areas of China

Notes: Consumer tendencies = Consumer expenditure / disposable income. Source: *China Statistical Abstract 2007* (National Bureau of Statistics of China); CEIC database.

^{1.05} 1.00 0.95 0.90 0.90 0.85 0.81 0.80 0.77 0.75 Bottom 20% • 0.73 Lower-to-bottom 20% 0.70 Median 20% • 0.67 - Median-to-upper 20% 0.65 Upper 20% 0.60 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006(Year)

(Three disparities behind sluggish consumption: disparities between regions, disparities between cities and rural communities, and disparities within urban areas)

One factor behind the weakness of China's domestic consumption relative to its economic growth is the presence of expanding disparities. The disparities in China can be divided into the three main categories of (a) regional disparities (disparities between coastal areas and inland areas), (b) disparities between cities and rural communities, and (c) disparities within urban areas. The fruits of growth are concentrated in a portion of the layers of society, however, so they are not leading to an expansion in consumption overall. An expansion in consumption can be expected through raising the level of the low-income class.

The current status of disparities in China is covered in detail below.

(Regional disparities)

Regional disparities, which can be seen between coastal areas and inland areas and between province-level areas, are related to economic development centering on coastal areas. Under the reform and opening-up policy from 1978 onward, based on the theory of allowing individuals to grow rich first,³⁷ China set up special economic zones centering on coastal areas, moved forward with opening up to the outside and industrialization, and achieved growth. Furthermore, since the talks given by comrade Deng Xiaoping when he visited the south in 1992, China has moved forward with reforms aimed at transition to a market economy, and economic development has accelerated further. As a result, the economic development of regions inland has continued to lag behind, and the disparities between coastal areas and inland areas have thus expanded.

Efforts are being made to correct these disparities based on regional development, starting with China Western Development that began in 2000, but looking at the recent data on per capita GDP by province-level area, Shanghai (a coastal area) is at a level 10 times (2006) that of Guizhou (an inland area). Comparing this to the postwar peak of Japan's disparity by prefecture (income gaps of residents in the per capita) of 2.9 times (1961, Tokyo versus Kagoshima), it can be seen that this figure is quite large (Figure 1-3-39 and Figure 1-3-40).³⁸

With regard to income gaps, estimating³⁹ movements in regional disparities, extracting regions corresponding to the top 20% (cumulative population) and regions corresponding to

³⁷ One of the basic principles of the reform policy of opening up to the outside world promulgated by Deng Xiaoping, this is the idea that some people in some regions should develop first and by having the regions that have developed first help the regions developing later, ultimately both will become prosperous. This did away with the detriments of the egalitarianism that accompanied the planned economy era at that time, and called for giving priority to efficiency over equality.

³⁸ The per capita GDP of China and the per capita income of residents of prefectures in Japan, in addition to personal income, include corporate income and so forth.

³⁹ A total of 62 regions are obtained by dividing the 31 province-level areas throughout the country into urban areas and rural areas. The regions are stratified based on per capita income for each year (disposable income for urban areas and net income for rural areas). The disparity in income levels (multiplying factor) is calculated using the weighted average of the per capita income of the top 20% regions (total population) and bottom 20% regions in per capita income for each year.

the bottom 20% in per capita disposable income in 62 regions (urban areas and rural areas in 31 province-level areas), from 1997 onward the disparities were on an expanding trend, and recently they amounted to 5.7 times (2006) (Figure 1-3-41). Income gaps were also reflected in terms of the gaps in consumption expenditure, and the consumption expenditure of inland areas (central areas and western areas) was less than 60% that of coastal areas (eastern areas) (Figure 1-3-42).



Notes: ♦ indicates Eastern regions, ● indicates central regions, ♦ indicates western regions and ■ indicates north-eastern regions. Source: China Statistical Abstract 2007, (National Bureau of Statistics of China).





Notes: 1. The 62 regions were gained by splitting up the 31 provinces and cities of China into urban and rural areas, and these were stratified in terms of per capita income for each year (using disposable income values for urban areas, and net income values for rural areas). 2. Income differential was calculated using the weighted average of per capita income for the top 20% per capita income (cumulative population total) and the bottom 20% per capita income (cumulative population total) for each year. Source: China Statistical Yearbook (each year), China Statistical Abstract 2007 (National Bureau of Statistics of China); Shen, J., (Department of Geography and Resource Management, Chinese University Hong Kong) (2003).



Notes: 1. Eastern part: Beijing,, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Hainan Central part: Shanxi, Anhui, Jiangxi, Henan, Hubei, Hunan Western part: Inner Mongolia, Guangxi autonomous region, Chongqing, Sichuan, Guizhou, Yunnan, Tibet autonomous region, Shaanxi Gansu, Qinhai, Ningxia autonomous region, Xinjiang autonomous region Northeastern part: Liaoning, Jilin, Heilongjiang

 The population for disposable income and consumer expenditure per capita of urban areas, and net income and consumer expenditure of rural areas was calculated from the population of each region in urban and rural areas in proportion with the data from 2005.
 Source: *China Statistical Abstract 2007*, *China Statistical Stearbook 2006* (National Bureau of Statistics of Schina).

(Disparities between cities and rural communities)

The income disparity between urban areas and rural areas has been in a trend of gradual expansion, and comparing per capita disposable income, there was 3.3-fold disparity in 2006 (Figure 1-3-43). This disparity is having effects in terms of consumption as well, and this is being manifested in the distribution rate of consumer durable goods (Figure 1-3-44).

The consumption of China has a structure in which the ratio of consumption of rural areas, which account for approximately 60% of the population, is small, and cities, which account for only around 40% of the population, sustain three quarters of domestic consumption overall (Figure 1-3-45). Normally, the disparity between cities, where industrialization progresses, and rural areas tends to level out through the movement of labor from rural communities to cities. China, however, based on the family registration system, is a two-tiered society of people residing in cities and people residing in rural communities. While there is a limit to employment which fragile agriculture can substantively retain, the infrastructure improvement of urban areas, which have developed rapidly, is not progressing at such as pace that it possible to receive populations from rural areas. As will be covered below, the Chinese government has adopted various measures aimed at correcting the disparity between cities and rural communities and has laid out a policy of making efforts in the development of institutions, starting with a family registration system, but raising the level of income of persons residing in rural areas, which account for the majority of the population, also appears to be extremely important in order to realize strong economic growth that is driven by domestic demand.



Figure 1-3-44 Disparity in the number of durable consumer goods owned between (Units/100 hc urban and rural areas (2006) 200 Urban areas 150 Disparity of ownership 100 50 (lectric fan Bicycle Color TV Washing RefrigeratorTelephone Cellular Air Camera Computer Motor bik Phone conditioner machir

-50 Notes: Electric fan, bicycle, and camera are data from 2005. Source: China Statistical Yearbook 2006, China Statistical Abstract 2007 (National Bureau of Statistics of China).





Source: China Statistical Yearbook 2006, China Statistical Abstract 2007 (National Bureau of Statistics of China).

(Disparities within urban areas)

Furthermore, income disparities within urban areas are also expanding. Comparing the disposable income of the top 20% income group and the bottom 20% income group with 10 years ago, the disposable income of the top 20% income group has expanded 4.1-times, while the income of the bottom 20% income group has only grown 1.6-times. As a result, the income disparity, which was 2.2-times in 1996, expanded significantly to 5.6-times in 2006

(Figure 1-3-46). Factors behind this seem to include the impact of the reform of state-run enterprises, which moved into full swing in the latter half of the 1990s, and the increase in the number of peasants migrating to cities referred to as "peasant workers," but this rapid expansion in income disparities has become a factor contributing to social anxiety. In considering the disparity problem faced by China, what is notable is not only the size of the disparity, but also the fact that the disparity is expanding rapidly.



(Social anxiety faced by China: high medical expenses and the problems with employment and unemployment)

According to a survey carried out by a research institute of the Chinese government, social problems that Chinese people consider to be serious include, in addition to the expanding income disparities, the high medical expenses and problems with employment and unemployment (Table 1-3-47). This type of social anxiety regarding income, is said to be connected with the savings behavior of households.⁴⁰ In fact, looking at the weight of household expenditure accounted for by medical and health care-related expenses, while in Japan it has remained more or less flat since the period of high growth, in recent years in China it has been gradually increasing (Figure 1-3-48). The ratio of household expenditure accounted for by medical expenses is also high compared to that of foreign countries (Figure 1-3-49). As such, in urban areas, which are driving consumption in China, as well, the household savings rate is on a trend of increasing year-by-year (Figure 1-3-50). In China's aiming for economic growth that is driven by domestic demand, it also seems to be important that these types of social anxieties are eliminated.

⁴⁰ State Administration of Foreign Exchange Balance of Payments Analysis Group, (2006) "China's Balance of Payments Report for 2005" (2007) "China's Balance of Payments Report for 2006."

Table 1-3-47 Ranking of social issues that are thought to be serious by Chinese citizens in urban and rural areas (2006)

- 1. Expensive medical fees
- 2. Employment, unemployment problems
- 3. Gaps in income, expanding gaps between the rich and the poor
- 4. Problems concerning corruption and bribery
- 5. Insurance problems in

(%)

post-retirement years

- 6. Education cost problems
- 7. Skyrocketing of house prices
- 8. Societal security problems
- 9. Problems in social trends
- 10. Environmental pollution problems

unit[.] %

Notes: The survey target was households in the 28 provinces in urban and rural areas. The survey took place March-July of 2006. There were 7,061 households with useful answers Quoted by: Website of People's daily online (December 25, 2006).

Original source: Analysis and Forecast on China's Social Development 2007 (Chinese Academy of Social Science) (2006).

Figure 1-3-48 Rates of medical and insurance expenditure within household consumption in Japan



Notes: Japan uses data of households more than 2 people excluding Agriculture, Forestry and Fisheries industries. Source: China Statistical Yearbook 2006 (National Bureau of Statistics of China), Household expenditure survey (Ministry of Internal Affairs and Communication).

		Year	Food	Tobacco,	Clothing	Housing, utility costs	Household goods and services	and	Transportation and Communication	Education, cultural and leisure services	Other goods and services
China	orea	2005	34.7	2.0	10.1	10.2	5.6	7.6	12.6	13.8	3.5
Ciina	Rural area	2005	40.8	4.7	5.8	14.5	4.4	6.6	9.6	11.6	2.1
Ja	apan	2003	14.4	3.1	4.8	26.9	4.1	4.0	13.2	11.9	17.8
Sout	h Korea	2004	15.7	2.4	4.3	17.2	4.0	4.7	16.6	13.4	21.7
	US	2003	7.0	2.2	4.5	17.8	4.8	18.7	13.3	11.6	20.2
Fi	rance	2004	14.2	3.3	5.0	24.2	5.8	3.3	17.4	10.0	16.8
1	UK	2004	9.2	3.9	6.0	18.7	5.8	1.8	16.5	13.9	24.3
Ca	anada	2003	9.9	4.2	5.1	23.7	6.7	4.8	16.9	12.1	16.6
R	ussia	2003	24.2	2.6	3.2	13.4	8.0	4.8	18.5	6.6	18.7
Au	stralia	2003	10.5	4.1	3.8	19.7	5.7	5.6	14.3	14.5	21.9

Table 1-3-49 Internationally comparing household consumption distribution

Original Source: 2006 Comparative study on China's international position (National Bureau of Statistics of China).



(2) Increasing domestic demand through resolution of the disparity issue: towards realizing a harmonized society

(A shift from prioritization of economic growth to balanced development)

As mentioned above, social anxiety in China over disparity and income issues has seemed to have a huge impact on the country's domestic consumption. From the perspective of ensuring social stability, resolving issues of disparity poses a grave task for the country, given the level of disparity and the speed at which it is expanding.

Thus the Chinese government is currently working to improve and strengthen its policies for income redistribution in a broad sense, including financial support for local governments. Measures being taken include, firstly, financial transfers from the central government to local governments and regional development projects such as the large-scale development of the western regions. These are identified mainly as measures to resolve regional disparities. Secondly, there have been efforts to cope with the "three agricultural problems" (low agricultural productivity, deterioration of rural villages, and impoverishment of farmers). These are identified mainly as measures to resolve disparities between urban and rural areas. The third category encompasses the revision of the Individual Income Tax Law and the development of the social security system. These are identified mainly as measures to resolve disparities within urban areas.

The principles and specifics of this policy path were clarified at the Sixth Plenum of the 16th Communist Party of China Central Committee in 2006, and it was emphasized that the disparity would be corrected through the realization of a "harmonious society" that is aimed at harmonious development.⁴¹ Specifically, a plan was clarified for policy shifts from a priority on efficiency to a balance between fairness and efficiency, from development with a priority on coastal areas to development coordinated among regions, and from development

⁴¹ Communist Party of China "Resolution on Some Major Issues regarding the Building of a Harmonious Socialist Society" (October 2006). The policy path toward a "harmonious society" was included in the 11th five-year plan of the government and so forth prior to this resolution, but it seems that the principles and specifics were not clearly stipulated.

with a priority on urban areas to development coordinated among cities and rural communities.⁴²

At the same time, in the decision of the Sixth Plenum, a plan was laid out for the proactive development of employment policies, including securing various employment routes, focusing on development of service industries and small- and medium-sized enterprises, and working to reform family registration and labor systems. It seems that this will contribute to correcting disparities and expanding internal demand through increasing the income of the low-income group, and will be an important effort in terms of the further development of the Chinese economy in the future. It appears that while income redistribution policies can correct social equity which cannot be secured by relying on the market economy, employment policies are policies for correcting disparities and expanding internal demand that mainly utilize the power of the market economy.

(3) Enhancing and strengthening policies that lead to income redistribution

(a) Correcting disparities between regions

(Enhancement of financial transfers from the central government to local governments)

In China, a system for financial transfers from the central government to local governments was introduced following reforms to the tax-sharing system in 1994.⁴³ The expenditure for financial transfers from the central government can be divided into mainly (i) financial strength transfer expenditure, (ii) special item transfer expenditure, (iii) tax reimbursement, and (iv) structural subsidies. Initially after the introduction of the system, the effect on correcting disparities was not significant because of the high ratio of tax reimbursement⁴⁴ with a structure of a greater distribution in wealthy regions (Table 1-3-51).⁴⁵However, the amount of financial transfers has been on a trend of gradually increasing in recent years, and the weight of this accounted for by the amount of transfers other than tax reimbursement has been increasing (the ratio of expenditure for financial

⁴² Working for harmony between people and nature through the effective utilization of resources and environmental conservation is also mentioned (for details, refer to "3." of this section).

⁴³ By making value added tax, which was a local tax item, a shared tax of 75% central and 25% local, the financial revenues of the central government were strengthened and financial transfers to local governments began. Prior to this, a local finance contract system had been adopted, and once the local governments paid a certain amount to the central government, they were able to use the rest independently.

⁴⁴ At the time of the introduction of as financial transfer system, a "tax reimbursement system" was also introduced as a compromise plan for wealthy regions which would be losing independent revenue sources as a result of reforms to the tax-sharing system. Prior to the reforms, this system was to ensure the amount of local tax revenues and increase the growth rate of the tax revenues of the relevant regions each year by a certain ratio, and it thus serves as a mechanism under which large amounts of money are allocated to wealthy areas where there are significant increases in tax revenue. Later, at the time of reforms to the sharing of corporate tax and income tax in 2002, the addition of reimbursement amounts was carried out to prevent falling below the amount of local tax revenue in 2001. As such, tax reimbursement money is returned to the financial resources of the original regions, and it has been pointed out that in reality financial transfers are not taking place.

⁴⁵ Three-fourths of the amount of financial transfers in 1994 was tax reimbursement money (amount of financial transfers: 238.9 billion yuan; tax reimbursement money: 179.9 billion yuan).

transfers accounted for in 2005 was more than 60%) (Figure 1-3-52). In fact, in the central and western regions, the ratio of relying on financial resources in financial transfers from the central government is high. (Figure 1-3-53).

Item	Content	Fiscal transfer expenditure (2005)	Rate divided by region (2002)
 Financial transfer expenditures 	Goal is to reduce disparity.	381,200 million Yuan	-
General transfer expenditures	Distributed as a general budget to local governments. Calculated by each regions' population, administrative demand, and income disparity. Equivalent of local tax allocation of Japan.	112,000 million Yuan	East: 2.9% Central: 46.1% West: 50.9%
Ethnic region transfer expenditures	Created after huge Western development in 2000. It was distributed in Midwest region ("mote), freedom of use. (mote) 5 autonomous regions (Tibet, Xinjiang, Ningxia, Inner Mongolia, Guangxi), 3 ethnic provinces (Yunnan, Oinghai, Guizbou), 8 autonomous prefetures (Oceated on Sichuan, etc).	15,900 million Yuan	-
Salary adjustment transfer expenditures	Salary adjustment transfer expenditures In response to the rise of civil servants' salaries, the central government aids part of the Midwest regions' burden. Agricultural tax reform transfer expenditures Aid is given to the annual revenues of local governments decreasing as a result of agricultural tax reform. Extended distribution to Midwest from transfer		-
Agricultural tax reform transfer expenditures			-
(2) Specific transfer expenditures	Distributed to all projects by the governing agency. Capital construction, social security, farming, education areas are covered.	351,700 million Yuan	-
(3) Federal tax refunds	Before the e reform it assured local governments' annual revenue. It was introduced after 1994 tax reform, 2002 corporate tax, and income tax communization reform.	414,300 million Yuan (includes structural aid)	(refunds after (refunds after 2002 1994 reform) reform) East: 52.6% East: 70.8% Central: 25.9% Central: 17.4% West: 21.5% West: 11.8%
(4) Structural financial aid to Tibet, Xinjiang. Began before 1993.		12,500 million Yuan (2001)	_

Table 1-3-51 Overview of government financial transfer expenditures from central governments to local governments in China

ce: Onishi (2004) "CHUGOKU ZAIHO/ZEISEI NO GENIO TO TENBO". Ni (2005) CHUGOKU NI OKERU SEIFUKAN ZAISEI ITEN SHISHUTU SEIDO NO GENIO, MONDAITEN TO SO NO SEIBI, Report on the Central and Local Budget Execution in fiscal 2005 and Draft Central and Local Budget for fiscal 2006, Fiscal 2005 Central Accounting Report (Finance Department of China).



Figure 1-3-52 Structure of local government revenues in China

Notes: 1. Tax repayment of fiscal 2004, 2005 includes structural aid. The breakdown of the financial transfer expenditure of fiscal 2006 is not disclosed.

2. The main financial resource of local direct revenues is local taxes.

Source: Onishi (2004) "CHUGOKU ZAIHOU/ZEISEI NO GENJYOU TO TENNBOU", China Statistical Yearbook 2006 (National Bureau of Statistics of China), Financial Results of China (each fiscal year), Report on the Central and Local Budget Execution and Draft Central and Local Budget(each fiscal vear) (Financial Department of China).



Figure 1-3-53 Government revenue transfer dependence in China by region (2004)

2. The government revenue transfer dependence from the central government (%) = revenue transfer / (regional independent revenue source + revenue transfer)

Of the items of expenditure for financial transfers, "general transfer expenditures" are a system which is expected to be a mechanism for correcting financial disparities between regions and ensuring the fairness of public services, such as education and health care. This system, which corresponds to the tax revenues distributed to local governments in Japan, is being positioned in the draft budget and so forth as a mechanism to boost the basic public service capability of local governments, and from 2000 onward, there have been a series of significant increases each year (Figure 1-3-54). Nonetheless, the ratio of local revenue (amount adding the amount of expenditure for financial transfers from the central government to local independent financial resources) accounted for by general transfer expenditures is approximately 5% (2005). Comparing this to the ratio of local revenue accounted for by tax revenues distributed to local governments in Japan, which has remained around 20% from the high-growth period up to now, it can be seen that this is extremely small (Figure 1-3-55). Sufficient financial transfers through to the administrative units that are responsible for public services are not being carried out due to the ambiguity of the

Source: Chinese Statistical Yearbooks (National Bureau of Statistics of China), CEIC Database.

division of roles between governments.⁴⁶ As such, plans have been developed to carry out efforts in conjunction with the development of financial management systems and so forth at local governments.⁴⁷

A system that corresponds to national treasury disbursement in Japan is "special item transfer expenditures." The ratio of local revenue accounted for by this item, which is allocated once the use is stipulated, is 13.2% (2005), which is lower than the level in Japan during the high-growth period (20.6% in 1970) (Figure 1-3-55, shown above). In regard to the items in question, inefficiencies have been pointed out, such as carrying out the same project multiple times since compartmentalization between the ministries and agencies has not been clarified.



Notes: 1. Figures for China are on a calendar year basis, and those for Japan on a financial year basis. 2006 figures (FY) are estimated.
 2. China's general transfer expenditure is equivalent to Japan's local allocation taxes.
 Source: Website of Ministry of Finance of China; *China Statistical Yearbook 2006* (National Bureau of Statistics of China); *Local Government Financial Statistics, Local Government Budget Plans* (Ministry of Finance of Japan).

⁴⁶ OECD, (2006a) "Challenges for China's Public Spending: Toward Greater Effectiveness and Equity."

⁴⁷ For example, the "Report on the Implementation of the Central and Local Budgets for fiscal 2006 and on the Draft Central and Local Budgets for fiscal 2007" adopted at the National People's Congress in March 2007 calls for working to complete financial management systems in counties and townships below the province class.



Figure 1-3-55 The rate of finance transfer expenditure from the central government of the gross local revenue in China and Japan

Source: China Statistical Yearbook 2006 (National Bureau of Statistics of China), 2005FY financial statement (Financial Department of China), Website of Statistics Bureau, The condition of local finances (Ministry of internal affairs and communication).

(Regional development projects: China Western Development, Revitalize Northeast China, and Rise of Central China)

Projects for the economic development of inland areas are also progressing. China Western Development since 2000 has brought investment in western regions, and the economic growth regard, which was 8.5% in 2000, has risen for five consecutive years to reach 12.7% in 2005. Following China Western Development, the Revitalize Northeast China and Rise of Central China plans were launched in 2003 and 2005, respectively, also spurring investment (Figure 1-3-56).

In Japan has the experience of aiming to correct regional disparities and carry out the balanced development of national land through public investment based on the Comprehensive National Development Plan, and has achieved high growth. Public investment is important from the perspective of promoting the accumulation of social capital, which serves as the source of growth, and it seems that in terms of pursuing investment efficiency as well, investment in local areas had logical aspects. At the same time, however, it is also true that it has produced public investment that it seems would not have been realized if it were not for the purpose of regional development. In light of Japan's experience, it seems that when carrying out regional development, not only regional development projects led by the central government, but also overall efforts, including the independent regional development projects of local governments, need to be directed toward public investment in industrial infrastructure that truly contributes to economic development, and it seems to be important to build a mechanism in which vested interests are not created (Figure 1-3-57 and Figure 1-3-58).



Figure 1-3-57 The relation of corporate investment and prefectural resident income per capita in Japan



Notes: The gap in income is the largest gap for prefectural resident income per capita. Source: *SNA* (Government of Japan).



Source: Chinese Statistical Yearbooks (National Bureau of Statistics of

(b) Correcting disparities between cities and rural communities (Responding to the three agricultural problems)

One factor behind the disparities between cities and rural communities is the "three agricultural problems" (low agricultural productivity,⁴⁸ deterioration of rural villages,⁴⁹ and impoverishment of farmers⁵⁰). Responding to these problems has been a focal policy issue of the government since 2004,⁵¹ and based on tax revenues, which have been increasing at a greater pace than economic growth, measures are being taken, including the elimination of

⁴⁸ Issues for agriculture in China include the low labor productivity of agriculture compared to Asian countries (see Table 1-4-27) resulting from a cultivated acreage per agriculture worker of 0.17 ha, which is significantly smaller than the 1.01 ha in Japan, and the instability of the food production system resulting from the failure to fully break away from the cycle of excess production and decreasing production capacity.

⁴⁹ This includes insufficient infrastructure for living, including roads and drinking water, and an insufficient supply of public services, such as health care and education.

⁵⁰ This refers to relative impoverishment in comparison with city residents. The population of rural poor (group with an annual net income of 693 yuan or lower) amounted to 21.48 million people at the end of 2006 (down 2.17 million people from the previous year; approximately 2% to 3% of the rural population) and is on a trend of decreasing year-by-year. Based on the poverty standard of the United Nations (an income per capita of one dollar or less a day), however, it has been pointed out that approximately 70% of the rural population is living below the poverty line (Yan, (2006) KOSEKI SEIDO TEPPAI DE NOUMIN NO TOSHI HE NO IDOU SOKUSHIN WO).

⁵¹ The handling of the three agricultural problems in the four consecutive years starting in 2004, as positioned in the "Central No. 1 Document," is based on the themes of increasing the earnings of farmers in 2004, increasing the overall production capacity of agriculture in 2005, promoting the building of a new socialist countryside in 2006, and promoting modern agriculture and building a new countryside in 2007. The Central No. 1 Document is a policy paper that draws attention to covering the most important issues in a given year.

agricultural taxes, various cost burdens, and so forth which had been imposed on only farmers,⁵² and the enhancement of budgetary steps with regard to agricultural subsidies, education and health care for rural communities, and so on (Figure 1-3-59 through Figure 1-3-62).⁵³ Through these measures, the Chinese government is aiming for development balancing urban areas and rural areas based on the slogan of building a "new socialist countryside.

Table 1-3-59 Main approaches to the three agricultural problems in China

(1) Agricul	itural tax reform
Agricult	ural tax reform]
(Rather th	an abolishing each cost collection, the local government raised the
agricultu	ral tax)
2000 II 2002 E	ntroduced first to Anhui province, etc.
2002 E 2003 Ir	troduced nationwide
Removal	of agricultural tax (Three exemptions)
2003	Rural specialty tax (other than tobacco) abolished
2001	In some regions meadow tax abolished
	Cutting agricultural tax begins (1% point decrease in one year)
2005	In 492 poor states, abolition of agricultural tax accelerated.
	All meadow tax abolished
2006	All agricultural tax abolished (3 years accelerated)
(2) Financi	al support
Rural ar	ea support】(Three aids)
2004	3 aids were introduced
- I	Direct aid payment to food producing farms, (2006: 14.2 billion Yuan
-T	ay aid to Good quality seed nurchase (2006: 4-15 hillion Vuan evnenditure)
-T	ax aid to farm equipment purchase (2006: 600 million Yuan expenditure)
Rural ar	ea education]
 In poor h 	ouseholds, support for students
2005	In 59 poor states, exemption of textbooks, and other expenses, boarding
expense aided	1 (17 million people)
2006	In Midwest regions, textbook costs exempted (37.3 million people), boarding
expense aideo	1 (/.8 million people)
education)	indatory education costs insured mechanism reform (Free mandatory
2006	In Midwest region, tuition, and other expenses exempted
2007	Nationwide, tuition and other expenses exempted (planned)
2010	In all rural areas free mandatory education (planned)
Rural ar	ea medicine]
•New rura	al joint medicine system
2003	Tests begin
2006	Tests implemented in 50.7% of states nationwide 410 million farmers joined.
	Aid per capita raised
	(Central financial administration: 10 Yuan → 20Yuan, Local financial
2007	administration level raised) Tests implemented in more than 80% of states nationwide (planned)
2010	Implemented nationwide (planned)
(3) Other (I	nfrastructure, Development of institutions)
• Develop	ment of minimal standard of living insurance institution (2006: 25 provinces,
- /	2007: nationwide expansion)
•Rural are	a drinking water safety project (2006: 12.9 billion Yuan expenditure)
 Rural are 	a methane gas development business (The purpose is to improve satellite
• Infrastrue	situation and promote energy conservation)
•Rural are	a financial institution reform, etc.

Source: Ministry of economy, trade and industry

⁵² It is said that the burden on the 800 million farmers was reduced by 125 billion yuan.

⁵³ In addition, in rural areas, there is the problem of the unregulated expropriation of the land of farmers and the unauthorized diversion of agricultural land for use as building sites by local governments, and it is said that the number of farmers who have lost their land has reached 40 to 50 million. In 2005, 87,000 protests were reported, and an important issue for the government is the measures to respond to this.







Source: China Statistical Yearbook (each year) (National Bureau of Statistics of China), Website of finance department of China, Report of Budget use situation in fiscal 2006 and the fiscal 2007 budget proposal (Finance department of China).

(c) Correcting disparities within cities

(Individual income tax and imposing tax on assets)

One means of income distribution is the tax system. Looking at individual income tax in China, as in foreign countries, a system of progressive taxation has been adopted, and employment income is subject to taxes with a nine-tier progressive tax rate from 5% to 45% (Table 1-3-63). Nevertheless, it has been pointed out that there are very few people to whom a tax rate of 20% or more is being applied.⁵⁴ For reference, comparing the level of the tax rate in China with that in Japan, with the benchmark as the amount of annual income (including tax) of the top 10% income group in 2005, subtracting the basic deduction amount,⁵⁵ the annual income of the top 10% income group in Japan fell under the category of a 43%⁵⁶ tax rate level, while the level did not exceed 10% in China. It thus appears that

⁵⁴ OECD, (2005) "OECD Economic Surveys China Vol. 2005."

⁵⁵ For this comparison, it is necessary to keep in mind that the tax rates applied in reality do not necessarily correspond due to the following points.

⁽a) Annual income includes income other than employment income.

⁽b) For China, an income deduction (800 yuan) is taken into consideration, and for Japan, an employment income deduction and basic deduction (380,000 yen), a spouse deduction (380,000 yen), and a dependent deduction (380,000 yen \times two people) with the model of a four-person household (husband, full-time homemaker wife, two children) are taken into consideration, but in actuality, deduction amounts other than these also exist.

⁵⁶ Tax rate adding the income tax rate and the individual inhabitant tax rate. In tax system reforms in 2006, the tax rate structure of income tax and individual inhabitant tax was changed, and highest tax rate for 2007 is 50% (income tax rate of 40% and individual inhabitant tax of 10%).

progressive taxation is not functioning sufficiently in terms of effectiveness in correcting disparities⁵⁷ (Table 1-3-64). In China, revenues from the taxation on personal income both relative to GDP and relative to annual government revenue are only at a low level compared with that in foreign countries (Figure 1-3-65).

As for individual income tax in China, the amount of deduction from income in regard to employment income was raised in January 2006 (800 yuan \rightarrow 1,600 yuan, tax reduction on the scale of 28 billion yuan). There was a significant decrease in the burden for the low-income group in urban areas composed of mainly employment income earners,⁵⁸ but revision of the degree of progression has been postponed.⁵⁹ Furthermore, in China, there is no inheritance tax. It is thus pointed out that there is a need to revise the tax system from the perspective of strengthening the income redistribution function.⁶⁰

Table 1-3-63 Personal income tax rate in foreign countries and regions

China	Japan	US	UK	France	Germany	South Korea
5-45%	10-50%	10-45.5%	10-40%	5.5-40%	15-45%	8-35%
India	Thailand	Malaysia	Indonesia	The Philippines	Taiwan	Hong Kong
10-30%	10-37%	1-28%	5-35%	5-32%	6-40%	2-19%

Notes: 1. In Japan and the US, the highest tax rate is those including local taxes. In addition, in the US, New York includes eity tax and state tax.

2. For India, when an income exceeded a million rupees, additional tax (10% of income tax) was added.

3. For France, general public tax(fixed rate, 8%), in Germany, solidarity tax (5.5% of income tax), South Korea, residential tax (10% of income tax), India, educational tax (2% of income tax and additional) were added.

Source: Website of Ministry of Finance of Japan, JETRO, Asia Pacific Taxation & Investment (IBFD), Website of government of

Source: Website of Ministry of Finance of Japan, JE1RO, Asia Pacific Taxation & Investment (IBFD), Website of government of France, Ministry of Finance of India, Inland revenue department of Hong Kong.

⁵⁷ In OECD (2005), it is pointed out that the degree of progression of tax brackets for employment income is low, and an example is given to the effect that the income level, for which the marginal tax rate is 20%, corresponds to five times the average wage in urban areas.

⁵⁸ In the "Report on the Work of the Government" adopted at the National People's Congress in March 2006, it is stated that a revised personal income tax law will be steadily implemented and that the tax burden on the low and medium income groups will be reduced. The State Administration of Taxation of China has commented that as a result of this revision, the number of taxpayers has been reduced by 20 million people and the burden on the low and medium income groups has been reduced.

⁵⁹ Accompanying the revision of the personal income tax law, earners of high incomes of 120,000 yuan or greater of annual taxable income were required to carry out self assessment, and efforts were made to strengthen the management of collection, but a revision of the tax rates and brackets has not been carried out.

⁶⁰ Fan, (2002) *CHUUGOKU HOUKAIRON NI IGI ARI*, Japan Center for Economic Research and National Center for Economic Research at Tsinghua University edition, (2006) *CHUUGOKU NO KEIZAI KOUZOU KAIKAKU*, etc.

Stage	Taxable income	Tax rate			
1	500RMB or less	5%			Annual earnings of top 10% incon
2	> 500 – 2000 RMB	10%		1,830 Yuan	31,238 Y uan (2,630 Y uan per mon
3	> 2000 – 5000 RMB	15%		per month	Deduction from income 800 Y uai
4	> 5000 - 20,000 RMB	20%			permonu
5	> 20,000 - 40,000 RMB	25%			
6	> 40,000 - 60,000 RMB	30%			
7	> 60,000 - 80,000 RMB	35%			
8	> 80,000 - 100,000 RMB	40%]	_	
9	> 100,000 RMB	45%	54.6tim	ies	

Figure 1-3-64 Personal income tax rate in China and Japan (estimation)

Personal income tax rate in Japan chart

Stage	Taxable income (annual basis)	Total Tax	Income tax	Inhabitants tax		\square	Annual earnings of top 10%
1	Up to 3.3 million yen	5-20%	10%	5-10%			income 13.35 million yen
2	3.3 million to under 9 million yen	30-33%	20%	10-13%	9,462,500		Employment income deduction 2,367,500 yer
3	9 million to 18 million yen	43%	30%	13%	yen per year	Ч	Spouse deduction 380,000 yen
4	Over 18 million yen	50%	37%	13%	1.9times		Deduction for dependents 760,000 yen

Notes: 1. Data are those as of 2005.

2. For China and Japan calculations are made from annual earnings of top 10% income, but it must be noted that for extracting the top 10% income, the disposable income per capita for China, and annual earnings per household for Japan were used.

For China and Japan, the annual earnings are calculated as employment income, but for calculations, annual earnings income other than
employment earnings are included.

Reductions other than the ones above are not considered.

Source: China Statistical Yearbook 2006 (National Bureau of Statistics of China), Household expenditure survey (Statistics Bureau), Website of JETRO, Website of National Tax Agency.

Figure 1-3-65 International comparisons of tax revenue from income taxes (2004)



Source: Revenue Statistics 2006, Tax Administration in OECD and Selected Non-OECD Countries: Comparative Information Series (2006) (OECD).

(d) Correcting disparities through development of a social security system

Development of a system in regard to social security has been gradually been moving forward since the latter half of the 1990s when the restructuring of state-owned enterprises moved into full swing (Table 1-3-66). Nevertheless, it is not yet to the point where all people participate in social security (Figure 1-3-67). Furthermore, due to fund shortages and so forth accompanying the increase in persons due to receive benefits, financial support for the social security funds which was started in 1998 has been increasing each year (Figure 1-3-68). Statistically, the balance of the fund is a surplus, but the existence of a huge shortage in reserves has been pointed out (Figure 1-3-69). In regard to the pensions of urban areas, there is a pressing need to address the "empty account" problem that has arisen as a result of the reserves of individual accounts having been diverted in order to cover the deficit of the social

pool portion.⁶¹

The systems regarding pensions differ between cities and rural communities, and 150 million migrant peasants are exempt from the systems. Furthermore, the individual design of institutional arrangements by region is accepted, so gaps in participation rate have arisen depending on the region, and there is a situation in which the rate of participation in coastal regions is high and the rate of participation in inland regions is low.⁶² There are also issues such as the lack of portability between regions and between systems.⁶³

As for health care, since the problem of SARS in 2003, efforts have been moving forward for the establishment of a basic health care system to cover residents of cities and rural communities, but compared to foreign countries, the ratio covered by the people is high, and it has been pointed out that the amount of financial support should be enhanced⁶⁴ (Figure 1-3-70).

System	Urb Insurance rate	Rural area			
Annuity insurance	(1)Basic pension (for social pool) <pay-as-you-go system=""> 20% of salary (at the expense of corporations)</pay-as-you-go>	[{(Average wage of each region + average wage during person's enrollment period/2} × (number of years enrolled/100)] is issued.	Enrollment is voluntary Insurance rate can be selected on a 10 level scale between 2- 20 Yuan. Total personal account fund amount is the principal. Small		
	(2)Personal account <funded system=""> 8% of salary (at the expense of workers)</funded>	businesses cover this. •Benefit (monthly) is 1/120 of personal balance account (10 years).			
Health insurance	*8% of salary (corporations 6%, workers 2%)	Based on medical costs, portions other than medical costs to be paid individually, are issued.	 [New Rural joint medical treatment] Central and local governments yearly contribute 20 Yuan each, and farmers contribute 5 Yuan. (As of 2006, 50.7% of regions are covered) 		
Unemploy ment insurance	•3% of salary (corporations 2%,workers1%)	Based on employed period, for 1-2 year, salaries below minimum wage, but more than minimum life security are issued.			
Maternity insurance	 less than 1% of previous year salary (at the expense of corporations) 	Maternity coverage, and basic salary for child-care leave are insured.			
Workers' compensati on insurance	•All insurances (at the expense of corporations)	100% of medical costs, based on salary, salary for 1-24 months during medical leave is issued.			

Table 1-3-66 Overview of Social security system of China

Irce: Miura (2007) "CHUGOKU NO NENKIN SEIDO – BUNGITEN WO MUKAETA KAIKAKU NO YUKUE" (RIM No.25), and so on, compiled by METI.

⁶¹ As for issues facing the pension systems of urban areas, in 2006, reform testing on personal accounts, which had first been implemented in three provinces in the northeast (Liaoning, Jilin, and Heilongjiang), was newly carried out in eight regions, including Tianjin and Shanghai, and efforts have been moving forward, such as changes to funding methods and benefit levels based on a resolution of the State Council. ⁶² In 2003, while pension participation rates in urban areas included 98.7% in Guangdong Province, 88.5% in Zhejiang Province, and 88.4% in Shanghai, the rates were below 50% elsewhere, including 16.4% in the Tibet Autonomous Region, 35.6% in the Xinjiang Uyghur Autonomous Region, and 49.3% Guizhou Province (Shen, (2006) ZENKOKU TOUITSU NO SHAKAI HOSHOU SEIDO NO SEIBI WO SAKKYUU NI).

⁶³ According to the "*Report on the Work of the Government*" adopted in March 2003, portability procedures between regions regarding social insurance are to be swiftly examined and formulated.

⁶⁴ OECD, (2006a) "Challenges for China's Public Spending: Toward Greater Effectiveness and Equity".





(100 million yuan) Figure 1-3-69 Changes in social security fund balance in China



 1995
 1996
 1997
 1998
 1999
 2000
 2001
 2002
 2003
 2004
 2005
 2006

 Notes:
 Fund expenditure's symbol is the minus sign.
 Surver:
 China Spritterol Revended 2006
 Notes:
 CEIC Database
 Year)

Figure 1-3-70 Proportion of private and public sector expenditure on health and medical-related expenses as a proportion of GDP (2003) (%) 16 Private 14 Public 12 10 1.4 8 1.8 1.5 6 4 6.6 2 0 , ,2.0 0 France Korea $S\Omega$ Germany Sweden K China India Malaysia New Zealand Japan Philippines Australia Vietn am Thailand Indonesia

(4) Correction of disparities and expansion of internal demand by boosting income through the promotion of employment

(Measures against the mismatching of employment, and promotion of small- and medium-sized enterprises and service industries)

In order to correct disparities and expand consumption, in addition to the enhancement and strengthening of income redistribution functions as mentioned above, it is important to

Source: WDI (World Bank).

work to expand the income of the low-income group through efforts to address the problem of employment and unemployment.

In China, while it has been pointed out that there are latent unemployed in both urban areas and rural areas and that it is difficult for university graduates to find employment, in some regions, labor shortages are becoming increasingly serious (Figure 1-3-71 and Figure 1-3-72). In order to improve the situation regarding this type of mismatching of employment, the Chinese government is working to enhance vocational training and is making an effort to develop service industries with high employment absorption capability and small- and medium-sized enterprises (Table 1-3-73).

The enhancement of measures for small- and medium-sized enterprises is also important from the perspective of building a foundation for enabling the autonomous starting of businesses. Furthermore, the promotion of service industries is expected to help the advancement of manufacturing industries and contribute to the stimulation of consumption. The weight of the Chinese economy accounted for by service industries and tertiary industries is small compared with that of Japan during its high-growth period (Figure 1-3-74). In recent years, partially because China has moved forward with opening up, there has been a shift from direct investment and export processing to an internal demand orientation. With this, it is expected that there will be an increase in service demand, starting with distribution⁶⁵. Accordingly, it seems that going forward there will be great deal of room for expanding service industries and working to promote employment.

In regard to employment problems, it is also necessary to work to develop and enhance safety nets, such as unemployment benefits. Nevertheless, developing an environment in which it is easy to find employment through not only financial support measures, but efforts such as employment create and strengthening the matching of employment, in addition to the effects of the expansion of income of the low-income group as a result of this, also appears to be important in terms of leading to sustainable development through the enhancement of human capital.

⁶⁵ Refer to Chapter 2 Section 2 regarding the production and sales trends of companies in China and service demand, starting with distribution.





Notes: 1. The number of registered jobless people are those within the working population looking for a job other than those registered in farming. Therefore those who are registered at local employment services are the targets. 2. In reality, hidden unemployment can be pointed out (in urban areas 20-30 million, employed 10%) (rural areas 50 million–100 million, employed 10-4% are estimated). Source: Website of Bureau of Statistics of China, CEIC Database.



	Job openings (persons)						Employment offer ratio (%)				
Industry type	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005	
Primary industry	46,033	108756	145686	274324	141573	1.0%	1.6%	1.6%	1.9%	1.7%	
Agriculture, forestry, livestock, fishery	46,033	108,756	145,686	274,324	141,573	1.0%	1.6%	1.6%	1.9%	1.7%	
Secondary Industry	1,107,064	2,038,659	3,153,313	5,132,358	2,957,824	23.4%	29.8%	35.5%	35.8%	35.4%	
Mining	28,134	64,358	131,524	193,017	104,010	0.6%	0.9%	1.5%	1.3%	1.2%	
Manufacturing	827,958	1,588,708	2,532,556	4,096,457	2,385,203	17.5%	23.2%	28.5%	28.6%	28.5%	
Power, gas, water supply	52,111	115,013	190,128	286,638	156,416	1.1%	1.7%	2.1%	2.0%	1.9%	
Constructing	198,861	270,580	299,105	556,246	312,195	4.2%	4.0%	3.4%	3.9%	3.7%	
Tertiary Industry	3,075,520	4,420,295	5,195,684	8,173,243	4,746,416	64.9%	64.6%	58.5%	57.0%	56.8%	
geological investigation, water supply administration	8,395	128,928	290,575	356,013	184,821	0.2%	1.9%	3.3%	2.5%	2.2%	
Transportation, warehouse, postal mail, communication	153,243	216,373	246,126	516,354	276,265	3.2%	3.2%	2.8%	3.6%	3.3%	
Wholesale and retail, restaurant	1,477,578	1,990,121	2,233,498	3,741,501	2,155,427	31.2%	29.1%	25.2%	26.1%	25.8%	
Finance and insurance	180,565	200,514	253,023	387,621	202,066	3.8%	2.9%	2.8%	2.7%	2.4%	
Real estate	116,218	139,730	174,060	366,709	201,368	2.5%	2.0%	2.0%	2.6%	2.4%	
Social service	824,958	1,248,715	1,362,841	2,028,288	1,271,819	17.4%	18.3%	15.3%	14.1%	15.2%	
Health care, physical exercise, social welfare	69,134	88,371	98,910	165,139	78,330	1.5%	1.3%	1.1%	1.2%	0.9%	
Education, culture, arts, broadcast	91,811	106,236	101,490	133,200	78,664	1.9%	1.6%	1.1%	0.9%	0.9%	
Scientific research, technical service	124,744	233,161	357,469	400,621	252,174	2.6%	3.4%	4.0%	2.8%	3.0%	
National agencies, party, society organization	28,874	68,146	77,692	77,797	45,482	0.6%	1.0%	0.9%	0.5%	0.5%	
Other	507,758	273,098	384,863	756,350	513,539	10.7%	4.0%	4.3%	5.3%	6.1%	
Total	4,736,375	6,840,808	8,879,546	14,336,275	8,359,352	100.0%	100.0%	100.0%	100.0%	100.0%	

Source: Website of Ministry of Labour and Social Security of China.



Figure 1-3-74 Weighting comparison of the service industry in China and Japan (during Japan's high growth era)

3. Energy and environmental constraints: transition to energy conservation and environmental protection oriented economic growth

Energy and environmental problems are one of the distortions that China, which continues to grow a high rate, is facing. China has expanded industrial production through the heavy consumption of energy, and has come to the forefront as the "factory of the world." Nevertheless, the efficiency of China's energy consumption is remarkably low, and its environmental regulations and their enforcement are not strict. China is thus facing a risk of demand pull for resources and energy and serious environmental problems, such as water contamination and air pollution, and there are concerns that these could become factors restricting the sustainable growth of the Chinese economy. In these circumstances, the Chinese government has set forth energy conservation and environmental protection as new pillars of its economic policy, and it is aiming for a transition from a resource-wasting economy to an energy conservation- and environmental problems in China and efforts of the Chinese government, and covers the framework for cooperation with Japan.

(1) Responding to energy constraints: promoting energy conservation (Energy consumption expands rapidly accompany high growth)

Energy consumption in China, against a backdrop of factors such as economic growth that has remained at a high level, is expanding rapidly, and has reached the second highest level in the world (2005), with primary energy consumption accounting for 14.7% of the world share (Figure 1-3-75 and Figure 1-3-76). Looking at per capita consumption, in 2004, while the United States was at 7.9 TOE (ton of oil equivalent) and Japan at 4.2 TOE, China was at the low level of 1.2 TOE,⁶⁶ and China's energy consumption can be expected to continue to grow in the future.



Notes: SCE (Standard Coal Equivalent) is the standardized conversion volume for coal. Source: China Statistical Yearbook 2006, National Economic and Social Development Statistics 2006 (National Bureau of Statistics of China), CEIC Database.



Figure 1-3-76 Share of global consumption of primary energy resources by country (2005)

Source: BP Statistical Review (2006), (BP).

⁶⁶ IEA, "Energy Balances of OECD Countries", "Energy Balances of Non-OECD Countries", Institute of Energy Economic, Japan "Handbook of Energy & Economic Statistics in Japan."

(Progression of industrialization, a factor behind the expansion of energy consumption)

As for factors behind the rapid expansion of energy in China, there is first of all the progress of industrialization. Economic growth in China is recent years has been driven by secondary industries, and energy consumption has also been significantly increasing in manufacturing industries (Figure 1-3-77 and Figure 1-3-78). Looking at a breakdown of this, the heavy and chemical industries such as metal and chemical industries which are energy-intensive industries, account for a high ratio, and the growth rates of their energy consumption are high (Figure 1-3-79 and Figure 1-3-80).



Source: China Statistical Yearbook 2006, 2006 Gazette of National Economic and Social Development Statistics (National Bureau of Statistics of China)



Figure 1-3-78 Changes in consumption of primary energy resources by sector in China

¹²⁰



Figure 1-3-79 Chinese energy consumption breakdown by sector (manufacturing industry: 2005)

Notes: The division of industries is from Wada (2004) "CHUGOKU KEIZAI KANETSU SURU KOTEISHISAN TOUSHI NO ZOUKA YOUNI BUNSEKI" (Development Bank of Japan Mini report) Source: CEIC Database.

_	(based on comparison with the previous							
		2000	2001	2002	2003	2004	2005	
All industries		3.5	3.4	6.0	15.3	16.1	9.9	
A	griculture, forestry, fishery	3.7	3.1	6.1	1.6	14.4	3.8	
Mining		3.1	4.2	1.0	14.7	-1.7	8.5	
A	ll manufacturing	2.7	2.6	6.0	18.2	21.4	12.2	
	Food	-5.6	1.6	4.5	-2.5	11.6	10.0	
	Manufacturing	2.1	5.3	8.3	15.6	25.7	10.1	
	Chemical	5.2	3.8	7.0	15.5	19.7	7.3	
	Metal	2.3	1.0	4.9	23.6	24.5	16.7	
	Machine	-2.2	5.9	7.7	10.4	17.9	7.0	
	Electric machine	3.1	5.5	16.7	25.6	19.0	11.7	
	Other	4.4	3.5	4.3	12.7	12.9	7.4	
Po	ower, gas, water	3.2	4.5	8.9	11.9	9.4	8.6	
C	onstruction	8.2	4.3	13.9	12.4	14.0	4.6	
Transportation		7.8	2.9	7.8	14.8	17.8	10.4	
W	holesale and retail	4.7	7.4	7.8	18.7	15.3	4.3	
0	ther industries	5.2	4.2	3.9	7.7	15.0	12.1	
Hc	usehold consumption	4.9	3.8	5.8	13.1	7.3	9.9	

Table 1-3-80 Changes in Chinese consumption growth rate by sector

Source: CEIC Database.

(Low level of energy efficiency)

A second factor behind the expansion of energy in China is the low level of energy consumption efficiency. The volume of energy consumption in China as a percentage of GDP (specific energy consumption) is at a high level, being four times that of the United States and nine times that of Japan (Figure 1-3-81). It is also pointed out that compared with major developed countries, specific energy consumption is high at 25% to 60% in manufacturing industries and 40% in energy-intensive industries such as electricity, iron, nonferrous metals, chemicals, and textiles in China.⁶⁷ It seems that this low level of energy efficiency is spurring the growth of energy consumption.

⁶⁷ Qu, (2007) "2007 NEN ZENJINDAIGO NO CHUUGOKU ENERGY JYOUSEI – MOKUHYOU TASSEI NO SHONENDO KARA DEHA WO KUJIKARETA CHUUGOKU SEIFU NO KONGO NO APPROACH."



Figure 1-3-81 Consumption efficiency of primary energy for major countries and regions (2004)

Notes: Calculated as primary energy supply volume / real GDP (2000 values) for each country, with Japan set at 1.0. Source: *Key World Energy Statistics 2006* (IEA).

(Issue of energy conservation incentives such as energy prices)

Furthermore, in China, energy prices are being kept down by guided pricing by the government,⁶⁸ and it is pointed out that even with high international oil prices, there has been a failure to put the brakes on the energy demand of companies. It appears that in addition to the inadequacy of this pricing mechanism, the policy of accepting energy-wasting industries while putting a priority on economic growth has also contributed to the expansion of energy demand in China.

(Risk of demand pull for resources and energy)

Meanwhile, this increase in energy demand is increasing the risk of a shortage of resources and energy. While demand has recently been moving toward easing as a result of the progress of capital investment, in 2002 through 2005, the problem of summer energy shortages has been evident.⁶⁹

In recent years, China has swiftly increased the import of oil, and there are concerns that in the mid to long term, that the supply will not be able to keep up with the expanding demand (Figure 1-3-82). While oil consumption in China accounts for no more that 20% of

⁶⁸ For the pricing of oil products, the State Development and Planning Commission sets base prices referring to product prices in international oil markets (Singapore, Rotterdam, New York) in the previous month, and wholesale and retail prices are set with a price range of 8% above and below.

⁶⁹ It is pointed out that factors that contributed to the power shortages from 2002 onward include the compulsory closure of small power plants that took place in 1998 when there was an excess supply of power, and investment control measures such as the temporary halting (three years) of approvals for the construction of new thermal power plants. From 2002 onward, when the power shortage became evident, power plant construction resumed and there has been movement toward the easing of supply and demand, but at the same time there appear to be concerns about another excess supply of power. See Chapter 2 Section 4 about China's power supply shortage.

domestic primary energy consumption, it is expected that the further expansion of demand will continue in the future due to the progress of motorization, and there is pressure to take measures for energy conservation and the steady supply of energy.



(Efforts aimed at the promotion of energy conservation: setting initial goals for energy conservation)

With energy consumption that is expected to continue to grow and constraints on the supply of resources and energy, in order for the Chinese economy to realize sustainable growth, it is important to move energy conservation efforts into full swing.

In order to do this, the Chinese government has been aiming to switch from economic growth based on resource loading, to growth that is based on boosting the efficiency of resource usage. In the eleventh five-year plan adopted in March 2006, the Chinese government set reducing energy consumption by 20% per unit of GDP in 2005 by 2010 as a mandatory objective. In September 2006, target figures for energy conservation were also set at the province level (Table 1-3-83). Furthermore, a system of bulletins on energy consumption per unit of GDP, the rate of reduction, and so forth at the national and province level was introduced, responsibility documents on the objectives for energy conservation are exchanged between the central government and provinces, municipalities, and autonomous regions, and energy conservation objectives are integrated into the system for assessment and appraisal of each region. Thus, going forward, energy conservation efforts can be expected to accelerate.

Region	2005 (Ton SCE/10,000 Yuan)	2010 Target (Ton SCE/10,000 Yuan)	Reduction rate (%)	Region	2005 (Ton SCE/10,000 Yuan)	2010 Target (Ton SCE/10,000 Yuan)	Reduction rate (%)	Region	2005 (Ton SCE/10,000 Yuan)	2010 Target (Ton SCE/10,000 Yuan)	Reduction rate (%)
Nationwide	1.22	0.98	20	Zhejiang	0.90	0.72	20	Chongqing	1.42	1.14	20
Beijing	0.80	0.64	20	Anhui	1.21	0.97	20	Sichuan	1.53	1.22	20
Tianjin	1.11	0.89	20	Fujian	0.94	0.79	16	Guizhou	3.25	2.60	20
Hebei	1.96	1.57	20	Jiangxi	1.06	0.85	20	Yunnan	1.73	1.44	17
Shanxi	2.95	2.21	25	Shandong	1.28	1.00	22	Tibet	1.45	1.28	12
Inner Mongoli	2.48	1.86	25	Henan	1.38	1.10	20	Shaanxi	1.48	1.18	20
Liaoning	1.83	1.46	20	Hubei	1.51	1.21	20	Gansu	2.26	1.81	20
Jilin	1.65	1.16	30	Hunan	1.40	1.12	20	Qinghai	3.07	2.55	17
Heilongjiang	1.46	1.17	20	Guangdong	0.79	0.66	16	Ningxia	4.14	3.31	20
Shanghai	0.88	0.70	20	Guangxi	1.22	1.04	15	Xinjiang	2.11	1.69	20
T .	0.00	0.54		** :	0.00	0.04	10				

Table 1-3-83 Reduction target of China's 11th Five-Year Plan's energy consumption per GDP unit in regions

Notes: SCE stands for Standard Coal Equivalent.

Original source: Letter No. 94 [2006] of the State Council (Gazette of the state council of the people's republic of China).

In 2006, the first year, the objective was to reduce energy consumption per unit of GDP by around 4% (annual average for 20% reduction over five years), but it was reduced by only 1.2%. In regard to this point, the "Report on the Work of the Government" of the National People's Congress, which was held in March 2007, once again indicates determination to achieve the objective for 2010, and as for factors behind the poor results, it mentions: (a) the continued expansion of energy-intensive industries without very much progress in adjustments to the industry structure, (b) the lack of progress in weeding out excess production capacity, (c) the failure of some local governments and companies to enforce regulations and standards for energy conservation and environmental protection, and (d) the need for a certain amount of time before the results of related measures are clear. As for priority measures for 2007, the report states: (a) requiring energy consumption efficiency examinations and environmental assets for new projects, (b) reducing the production capacity of industries lagging behind, such as iron manufacture, cement, and electrolytic aluminum, (c) strengthening businesses for energy conservation and the reduction of waste generation in priority industries, such as iron and steel, nonferrous metals, and chemical engineering, and energy-intensive companies, and (d) the promotion of energy conservation through the enhancement of pricing systems, taxes and finance, and financing systems.



Source: China Statistical Yearbook 2006 (National Bureau of Statistics of China), etc.

The "Eleventh Five-Year Plan for Energy Development" was announced in April 2007, and in addition to incrementally developing an oil reserve system and strengthening the framework for energy security, the plans sets forth new specific numerical targets, such as reducing primary energy consumption to below 2.7 billion tons of SCE (standard coal equivalent) in around 2010 and keeping the annual average rate of increase at 4%.⁷⁰

As mentioned above, efforts aimed at energy conservation are gradually progressing, and further efforts are expected in the future.

(2) Responding to environmental problems: toward balancing economic growth and environmental conservation

(Increasingly serious environmental problems)

In addition to the expansion of energy consumption, environmental problems are also becoming increasingly serious. Industrialization, which has progressed rapidly based on high growth, is bringing about destruction of the environment, including water contamination and air pollution, and 1,406 incidents (including 693 cases of water contamination and 538 cases of air pollution)⁷¹ were reported in 2005. According to the "China Green National Accounting Study Report 2004," which was first announced in China in September 2006, in 2004, the loss brought about by destruction of the environment due to economic activities corresponded to at least 3% of GDP (511.8 billion yuan (approximately 7.7 trillion yen)), and the scale of this loss cannot be ignored.⁷²

The problem of the environment is one which crosses national borders. It is said that pollution in the Songhua River resulting from chemical explosions produced in Jilin Province at the end of 2005 affected neighboring countries downstream. China's handling of the problem of global warming and acid rain will also have a greater impact on the world as a whole, as the weight accounted for by Chinese economy in the world increases.

(Efforts aimed at environmental protection: transition from a path of prioritizing economic growth)

In response to this situation, the Chinese government is strengthening efforts aimed at environmental protection, and in the 11th five-year plan in March 2006 mentioned above, an objective is set forth to balance economic growth and environmental protection through changing the path of prioritizing economic growth, moving forward with energy conservation,

⁷⁰ Other objectives include lowering energy consumption per unit of GDP to 0.98 tons from 1.22 tons in 2005 and in conjunction with this, reducing emissions of sulfur dioxide by 8.4 million tons and emissions of carbon dioxide by 360 million tons.

⁷¹ National Bureau of Statistics of China, "China Statistical Yearbook 2006".

⁷² Green GDP is net domestic product (NDP: gross domestic product (GDP) minus depreciation on natural resources) minus the expense calculated from a monetary valuation of external diseconomies regarding the environment (imputed environmental costs). In Japan, the cost of external diseconomies (as a percentage of nominal GDP) resulting from environmental pollution and so forth is estimated to have been 3.1% in 1970, 1.5% in 1980, 1.0% in 1990, and 1.0% in 1995 (Tamaru, (2005) *CHIKYUU ONDANKA TO NIHON KEIZAI*).

and boosting the efficiency of the usage of resources. Like the objective for energy conservation, a "mandatory" objective was set forth for the emission reduction amount for major pollutants. There is set to be a 10% reduction over the five years to 2010, and based on this, objectives were assigned to reach region, and a structure for assigning responsibility for the objectives has been put in place (Figure 1-3-85). Recently, actions can be seen such as taking measures for administrative punishment for the first time in regard to projects that have violated environmental regulations.⁷³

However, the environment problems that China is facing are serious and varied, and are large in scale. Making improvements to places where the environment has already been damaged is expected to require a great deal of time and expense, and this remains an extremely difficult issue.

Region	2005 (Ton SCE/10,000 yuan)	2010 Target (Ton SCE/10,000 yuan)	Reduction rate (%)	Region	2005 (Ton SCE/10,000 yuan)	2010 Target (Ton SCE/10,000 yuan)	Reduction rate (%)	Region	2005 (Ton SCE/10,000 yuan)	2010 Target (Ton SCE/10,000 yuan)	Reduction rate (%)
Nationwide	2549.0	2294.0	10.0	Zhejiang	86.0	73.1	15.0	Chongqing	83.7	73.7	11.9
Beijing	19.1	15.2	20.4	Anhui	57.1	54.8	4.0	Sichuan	129.9	114.4	11.9
Tianjin	26.5	24.0	9.4	Fujian	46.1	42.4	8.0	Guizhou	135.8	115.4	15.0
Hebei	149.6	127.1	15.0	Jiangxi	61.3	57.0	7.0	Yunnan	52.2	50.1	4.0
Shanxi	151.6	130.4	14.0	Shandong	200.3	160.2	20.0	Tibet	0.2	0.2	0.0
Inner Mongoli	145.6	140.0	3.8	Henan	162.5	139.7	14.0	Shaanxi	92.2	81.1	12.0
Liaoning	119.7	105.3	12.0	Hubei	71.7	66.1	7.8	Gansu	56.3	56.3	0.0
Jilin	38.2	36.4	4.7	Hunan	91.9	83.6	9.0	Qinghai	12.4	12.4	0.0
Heilongjiang	50.8	49.8	2.0	Guangdong	129.4	110.0	15.0	Ningxia	34.3	31.1	9.3
Shanghai	51.3	38.0	25.9	Guangxi	102.3	92.2	9.9	Xinjiang	51.9	51.9	0.0
Jiangsu	137.3	112.6	18.0	Hainan	2.2	2.2	0.0				

Table 1-3-85 Quota situation of sulfur dioxide (SOx) emissions in respective regions during China's 11th Five-Year Plan period

Notes: 1. Nationwide distribution amount was calculated using 2005 emission amounts and 11th Five-Year-Plan target (reduction rate). 2. Respective regions' distribution amounts are reduction targets as well as the base for emission trading. Source: Environment management act No. 182, 2006 (State environment protection agency data).

(Water pollution and water shortages)

First, looking at water pollution, according to the results of an inspection of the quality of water in the seven main river systems, while differing in degree, pollution is observed in all of the rivers, and altogether 54% are a state of heavy pollution such that they cannot be touched by people. (Figure 1-3-86) Furthermore, chemical oxygen demand (COD), which is one of the major pollutants, in 2006 increased 1.2% compared to the previous year. While the margin of increase was lower than that in the previous year, the situation is moving in the direction of worsening relative to the objective of a 10% reduction by 2010 (Figure 1-3-87).

As for the problem of water shortages, while the water resources are concentrated in the west, there is a tendency toward water shortages in northern China and eastern China, where the industries and cities are concentrated. Per capita water resources in China are only around one-fourth of the world average, and this is a constraining factor not only in terms of factory

⁷³ In January 2007, the State Environmental Protection Administration adopted the measure of halting examination procedures for all projects of administrative districts, industries, and large-scale companies which have violated the "environmental impact assessment" system or "three simultaneousness" system (system in which it is necessary to simultaneously (i) design, (ii) execute, and (iii) operate environmental protection measures when starting construction of a factory, etc.) until they adjust or improve their projects which are in violation. (State Environmental Protection Administration website)

locations, but also in terms of agricultural production (Table 1-3-88). It is said that approximately 400 cities are facing water shortages, including droughts.⁷⁴ As such, the "South-to-North Water Transfer" project got underway in December 2002 to divert the water of the Yangtze River to northern areas, but it has been pointed out that in addition to technical issues, there are also issues of water quality, the negative impact on ecology, and the problem of relocating residents.



Figure 1-3-86 Pollution situations in major rivers of China



Notes: Chemical oxygen demand (COD) is an index for the amount of water pollution, and it stands for the concentration of oxygen when pollution is scientifically decomposed.

Source: China Statistical Yearbook (each year), Gazette of National Economic and Social Development Statistics 2006, (National Bureau of Statistics of China).

⁷⁴ It has been pointed at that there are water shortages in 400 of China's 600 major cities. (OECD, (2006b) *"Environmental Performance Review of China"*, etc.).

				1	1
	Amount of	Per capita		Amount of	Per capita
Country	water resources	water resources	Country	water resources	water resources
country	(km3/year)	(m3/person-	country	(km3/year)	(m3/person-
		year)			year)
Canada	2,740	87,970	Japan	424	3,337
New Zealand	327	84,671	France	180	3,047
Sweden	178	19,978	Spain	112	2,821
Australia	352	18,638	Italy	161	2,804
Indonesia	2,838	13,380	UK	145	2,465
US	2,460	8,838	China	2,812	2,201
World	42,650	7,044	Romania	37	1,657
Austria	55	6,698	Iran	129	1,898
The Philippines	479	6,305	India	1,261	1,244
Switzerland	40	5,416	Saudi Arabia	2	111
Thailand	210	3,420	Egypt	2	34

 Table 1-3-88
 World water resources per capita

Notes: 1. The population of Japan is from the 2000 census. The world population is from 2000 according to the United Nations World Population Prospects, The 1998 Revision.

2. RFWR (4235 million m3/year) was used for the amount of water resources in Japan.

3. For the world and respective countries, the amount of water resources (Annual Internal Renewable Water Resources) from the World Resources 2000-2001(World Resources Institute) was used. Original source: Website of Ministry of Land, Infrastructure and Transport.

(unit: m3												
4 maj	or parts	Top 5	Regions	Lowest 5 Regions								
N ationw ide	2151.8	Qinghai	16176.9	T ia njin	102.2							
Eastern part	1176.8	Xinjiang	4808.9	Shanghai	138.0							
Central part	1531.4	Yunnan	4161.7	Ningxia	143.6							
Western Part	4199.6	Fujian	3975.5	B e ijin g	151.2							
N ortheastern P art	1538.3	Hainan	3722.4	Hebei	197.0							

Table 1-3-89 Distribution of water resources per capita in China (2005)

N otes: Eastern part: Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Hainan

Central part: Shanxi, Anhui, Jiangxi, Henan, Hubei, Hunan

W estern part: Inner Mongolia, Guangxi autonomous region, Chongqing, Sichuan, Guizhou, Yunnan, Tibet autonomous region, Shaanxi, Gansu, Qinghai, Ningxia autonomous region, Xinjiang autonomous region Northeastern part: Liaoning, Jilin, Heilongjiang

Source: China Statistical Yearbooks (National Bureau of Statistics of China).

(Air pollution and the problem of global warming)

The situation is also worsening in regard to air pollution. Emissions of sulfur dioxide, which is one of the major pollutants, have increased for four consecutive years starting in 2003, and in 2006, they increased by 1.8% compared to the previous year, meaning that the objective of an approximately 2% reduction of the annual average was not achieved (Figure 1-3-90). The ratio of cities suffering from acid rain was 2% in 2000, but expanded to 10% in 2004⁷⁵.

In China, which is rapidly industrializing, emissions of greenhouse gases are already second in the world in scale, and they are expected to surpass to those in the United States in the near future to become the top in the world (Figure 1-3-91). As such, the "National Assessment Report on Climate Change"⁷⁶ recently announced by the Chinese government

⁷⁵ OECD, (2006b) "Environmental Performance Review of China."

⁷⁶ China's first national report on climate change, which was created over four years by related

points to the possibility of a widespread negative impact from global warming, including the destabilization of agricultural production and an increase in droughts and flood damage, but at the same time regarding the obligation to reduce emissions, it expresses a view that level of economic development should be thoroughly taken into consideration.⁷⁷



Figure 1-3-90 Changes in sulfur dioxide (Sox) emissions in China

Source: China Statistical Yearbook (each year), Gazette of National Economic and Social Development Statistics 2006 (National Bureau of Statistics of China).





(Soil contamination and soil runoff)

The actual situation regarding the problem of soil contamination is not necessarily clear, and a system of law has not been developed. In July 2006, however, the Chinese government announced an estimated result that more than 10% of agricultural land nationwide is polluted by heavy metals such as copper, mercury, and chrome, and agricultural chemicals, and that

departments and agencies of the government, including the Ministry of Science and Technology, China Meteorological Administration, Chinese Academy of Sciences, National Development and Reform Commission, Ministry of Foreign Affairs, and State Environmental Protection Administration. It was announced in December 2006.

⁷⁷ A national plan on climate control was formulated in June 2007.

the economic losses caused by this amount to over 20 billion yuan⁷⁸. Thus, in order to ascertain the actual situation of soil contamination, the State Environmental Protection Administration and Ministry of Land and Resources plan jointly to carry out a nationwide study over a period of approximately three years. There is a need for a swift response so that grain containing toxic substances does not end up on the market. In regard to soil, it is also pointed out that there is the problem of desertification and the problem of soil runoff in northeastern areas.

(3) Cooperation between Japan and China in the area of energy and environment

It is essential that the efforts of the Chinese government in the area of energy and environment, as mentioned above, are addressed not just by China alone, but internationally. It seems to be important for Japan to utilize its technological capabilities, its experience in dealing with energy and environmental problems, and so forth to contribute to resolving the issues that China is facing.

Accordingly, in May 2006, the first "China-Japan Forum on Energy Saving and Environmental Protection" was held, and the Japanese and Chinese governments agreed to carry out policy dialogues regarding energy conservation policies and implement assistance in human resource development. In the business world, in order to promote business in the area of energy and the environment among private-sector companies, the "Japan-China Business Alliance for Energy Saving and Environmental Protection" has been established.

In April 2007, the "Joint Statement on the Further Enhancement of Cooperation for Environmental Protection" was signed by Japan and China, and it was confirmed that cooperation would be strengthened in the areas of a system for corporate environmental protection supervisors, the building of a recycling economy, and so forth. Furthermore, in the same month, the first "Japan-China Energy Ministerial Policy Dialogue" was held, and agreements were made on concrete efforts aimed at the promotion of energy conservation, including the implementation of the "Japan-China Energy Conservation and Environmental Business Promotion Model Project" and the provision of training for groups of 300 persons from related departments in the Chinese government and so forth. The second China-Japan Forum on Energy Saving and Environmental Protection is scheduled to be held in September 2007 in Beijing, and the cooperative relationship between Japan and China is expected to be further deepened.

The sustainable development of the Chinese economy, which is increasing its presence in the world economy, is important not only for China, but for the stability and development of the world economy. In China, which is becoming incorporated into the global economy, there is a need for the further strengthening of macroeconomic policies, beginning with monetary policies. A shift from an investment and export-led economy to a domestic demand-led

⁷⁸ Comment by director of the State Environmental Protection Administration in a video conference on a national survey on the status of soil contamination (July 2006).

economy can be expected to ensure a stable foundation for autonomic growth, and it seems that in order to do this it is important to work to resolve the problem of disparities, which is one of the distortions brought about by a high level of growth. Furthermore, it is expected that proactive efforts will be made regarding the problem of energy and the environment, which is another of the distortions brought about by a high level of growth, and it is important for Japan to deepen its cooperative relationship with China and move forward with concrete efforts.



