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Within the Policy Dialogue between DG REGIO and NDRC
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EU–China Cooperative Research Program on Regional Policy

Research Report of the Chinese Expert Group

Chinese Expert Group, March 2010

Group Leader: Wang Yiming

Members: Wang Qingyun, Shen Bing, Sun Xuegong, Ouyang Hui,

Ding Ding, Yu Xiaoli, Gao Shiji, Liu Feng,

Liu Weidong, Huang Kun

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Foreword

—— Program Implementation

The EU–China Cooperative Research Program on Regional Policy is a part of the EU–China Dialogue Mechanism on Regional Policy. The Chinese expert group was established at the end of 2007 and the program was officially initiated in 2008. The expert group before the end of 2008 was made up of six experts led by Wang Yiming, Executive Vice President of the Academy of Macroeconomic Research of the National Development and Reform Committee (NDRC). It included Wang Qingyun and Shen Bing from the Academy of Macroeconomic Research of NDRC, Gao Shiji from the Development Research Centre of the State Council, Liu Weidong from the Institute of Geographic Sciences and Natural Resources Research of the Chinese Academy of Sciences, and Huang Kun from the Chinese Academy of Social Sciences. With more research topics involved since the end of 2008, the group has been refreshed with new members including Ding Ding and Yu Xiaoli, Sun Xuegong and Ouyang Hui from the Academy of Macroeconomic Research of NDRC, and Liu Feng from the Development Research Centre of the State Council.

Before the end of 2008 the expert group was mainly engaged in:

1. Organising the research into 15 topics

Under the guidance and direction of the group leader Wang Yiming, the expert group held several research group meetings following its establishment, discussing research focuses of the program under the EU – China Regional Development Exchange and Cooperation Mechanism. Different forms of exchange and communication were also carried out between the Chinese and the EU expert groups. By integrating the opinions of both parties the Chinese and EU experts finalised a cooperative research framework in which 15 topics were within the research remit of the Chinese expert group covering: economic growth and regional policy; a historical review of regional policy; the definition of region and regional demarcation; economic and regulative connotations of regional policy; promoting regional growth: development strategy and regional planning; regional governance with Chinese characteristics; the fiscal and tax system: budget and fund allocation, promoting regional development by industrial

transfer and capital flow; rural development and urban – rural integration; urbanisation and urban development; interregional labour flow; contributions of health to economic growth; environmental protection and sustainable development; climate change and responding strategies, as well as the international financial crisis and regional development. The Chinese experts also worked with relevant EU experts in pairs on different characteristics of and contrasts between the topics in the EU and China.

2. Organising the seminar of EU and Chinese experts

The EU–China Seminar on Regional Governance and Development was held at the Beijing Guohong Hotel on 19–20 July 2008 and attended by experts from both parties, as well as some experts from the Development Research Centre of the State Council, the Institute of Geographic Sciences and Natural Resources Research of the Chinese Academy of Sciences, the Research Institute for Fiscal Science of the Ministry of Finance and the Industry Research and Energy Research Institutes of NDRC. The experts discussed topics such as regional governance, regional planning, labour transfer, interregional industrial transfer, the relationship between the fiscal and tax system and regional development, regional ecological compensation mechanisms, etc. Requested by the EU experts, Wang Yiming reported on regional governance in China’s economic growth and the rebuilding of the areas hit by the Wenchuan Earthquake. Under the leadership of Wang Yiming the Chinese expert group took the responsibility for the organisation and coordination of the seminar.

3. Organising the visit of EU experts to China

With the support and coordination of the Department of Regional Economy of NDRC, and organised and accompanied by the Chinese expert group, the EU experts paid field visits to Chongqing, Guangzhou, Dongguan and Zhuhai during 21–25 July 2008, and held discussions with the local development and reform committees and high-tech zone management committees on issues such as integration of urban and rural development, differences between urban development of the eastern and western regions, China’s counterpart assistance mechanism, development of private enterprises, construction of new urban districts and development of hi-tech industrial zones. They also visited pilot villages for the construction of a new countryside, typical areas for the integration of urban and rural development, private enterprises

and hi-tech zones. The liaison and the coordination of the visit was organised by the Chinese expert group.

4. Attending the 2008 Annual Meeting of EU–China Dialogue on Regional Policy

The expert group attended the Annual Meeting of EU - China Dialogue on Regional Policy at the end of November 2008 in Chongqing, at which Wang Yiming gave a keynote speech entitled “Innovation Practices of China’s Urban–Rural Integration: Progress and Prospects”. At a work meeting, Wang reported on the work progress on behalf of the expert group. At this meeting it was suggested that the topics ‘strategies in response to climate change’ and ‘strategies in response to the global financial crisis’ be brought into the cooperative research. By giving speeches or participating in discussions in expert discussion meetings the Chinese experts exchanged their ideas with their EU counterparts on integration of urban and rural development, rural development in the context of rapid urbanisation, localisation of migrant workers, labour transfer in urbanisation and other issues.

5. Survey visit to Europe

The Chinese experts visited the UK and Belgium from 8–17 December 2008, and carried out a survey on the formulation and implementation of regional policies of the UK and the EU, discussing and exchanging their ideas on regional policy with British and EU scholars, officers from central and local governments as well as community representatives, and discussing with officers from relevant departments of the UK government on the specific issue of the financial crisis. Requested by the EU expert group, Wang Yiming gave a report at Cardiff University entitled “People Orientation and Scientific Rebuilding: on the Model of Post-Quake Rebuilding in China”. At the end of the survey the leader of the Chinese expert group submitted an English language version of the Outline of the Final Report on the EU–China Cooperative Program on Regional Policy drafted by the Chinese expert group to the leader of the EU expert group.

After the end of 2008 the expert group was mainly engaged in:

6. The expert group has completed the report

The Chinese expert group has completed the report according to the finalised framework under the leadership of Wang Yiming.

7. The expert group has modified the report and produced a final version

triggered the most destructive downturn in the world economy since World War II. Impacted by an abrupt shrinking of external demand, China's foreign trade exports also suffered a sharp drop, resulting in a rapid fall in industrial production, a large increase in unemployment, and a significant decline of China's economic growth (the growth rate declined from 13% at the 2007 level to 9.6% in 2008). Fortunately, the Economic Stimulus Package launched by China in November 2008 has expanded the investment demand effectively, stimulated the consumption demand, promoted the recovery of industrial production, relieved the employment pressure, and reversed the slowdown of economic growth. The growth rate bottomed out at 6.2% in the first quarter of 2009 and increased to 7.9% in the following quarter, putting an end to the consecutive slowdown of the previous seven quarters. With the growth rates in the third and the fourth quarters progressively increasing to 9.1% and then 10.7%, and an annual growth rate attaining 8.7%, China has been the first state in the world to move into economic recovery and towards an upturn trend.

An obvious change in China's role in the global economy

As the world's largest country in terms of population, China's high economic growth and the improved well-being of its people in the past 30 years represents one of the most momentous events in the history of world economic development since World War II. The sustained high growth of its economy has changed the role of China in the global economy remarkably. The GDP of China in 2008 was RMB 30,067 billion, approximately US\$4,329.2 billion at the average exchange rate in the same year. The economic aggregate ranked the third⁵ in the world, and the per capita GDP amounted to about US\$3,268, which, according to the World Bank's standards, suggested that China, previously a low-income country, had leaped into the category of middle-income countries. The influence of China on the world economy has also strengthened. According to data from the IMF, on a purchasing power parity basis, the contribution rates of China in 2006 and 2007 to global economic growth were 22.5% and 25.0% respectively, while those of U.S in the same periods were 12.5% and 9.5%. China has obviously become an important engine of global economic growth.

⁵ According to the new WB indicators in the World Development Indicators 2008, which takes into account the price level difference among nations, China is the world's second largest economy.

On 7 and 16 May 2010 the group leader organised the members to discuss the framework and content of the report. Since then some necessary deletions and modifications have been made as the data have been further updated. Regarding the data accessibility, the latest national, regional and municipal figures are principally from 2009, 2008 and 2007.

Despite all the time and effort, defects and mistakes in the report are unavoidable. We will cherish every opportunity for modification and improvement.

Chinese Expert Group

30 May 2010

Chapter 1 Economic Growth and Regional Policy

The sustained rapid growth of China's economy has been the most noticeable of the historic changes that have taken place in all aspects of China's economy since its reform and opening up policy began. During the past 30 years China has undoubtedly been one of the countries in the world with the most rapid economic growth as well as being the country with the longest period of sustained high growth. China's economic growth has, however, been quite unbalanced due to the differences among its regions¹ in terms of natural and geographic conditions and economic foundation. This clear imbalance exists not only between provinces but also between areas within provinces. Regional policies therefore play a significant role in reducing the regional development disparities and promoting a coordinated regional development. China's regional policy basically aims to contain the regional disparities within a reasonable range, to realise the equalisation of basic public services, to fully exert the comparative advantages of regions, to promote regional comprehensive competitiveness effectively, and to establish harmony between the economic society and the resource environment. Since the beginning of the 21st century China's effort to create regional development modes and to remodel the regional policy framework under the guidance of the Scientific Outlook on Development has sought to promote the coordinated development of the regions in China.

¹ 'Regions' in this book refers to the Chinese mainland, excluding Hong Kong, Macao and Taiwan.

1.1 China's Economy Across 30 Years of Reform and Opening Up

1.1.1 The growth track of China's economy since the reform and opening up policy

The 30-year rapid growth period of China's economy since the reform and opening up policy

China's average annual GDP growth rate during 1979–2009 was 9.9%, not only much higher than the average annual growth rate of the global economy, but also higher even than the most optimistic estimates of international institutions. The World Bank (WB) predicted (in 'China: 2020', a research report in 1997) that the average annual growth rate of China's economy would drop from 9.8%, the 1985–1995 level, to 6.9% during 2001–2010. It turned out, however, that the average annual growth rate of China during 2001–2009 hit 10.4%, up from 9.9%, the average annual growth rate in the preceding 30 years. China is also one of those economies in the world that have experienced extremely long periods of sustained high growth. In 'Wealth of Nations: Why China Grows So Fast', an article published in early 2007 by Professor Michael Spence, a senior fellow at the Hoover Institution, Stanford University, and a 2001 Nobel Laureate in Economics, eleven developing economies² showing sustained high growth rates³ after World War II were identified, among which China is the only one whose high economic growth still continues today whereas the other ten have seen it tail off, one after the other.

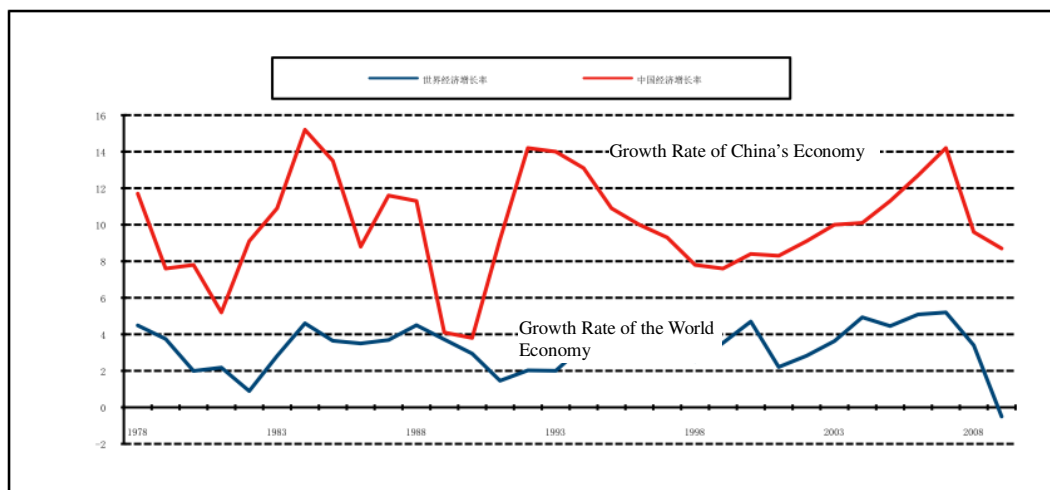
An economic boom period since the beginning of the 21st century

In the period 2001–2007 China experienced a rise for seven consecutive years (see figure 1-1), with the growth rate of China's economy increasing from a high starting point of 8.3% in 2001 to 14.2% in 2007, unprecedented in both the period length and the growth stability since the reform and opening up. This round of economic boom was, from the aspect of demand, mainly the result of a large-scale market effect and a shift in the consumption structure brought about by the increase in incomes. This

² The 11 developing economies are: Singapore, Hong Kong, Taiwan, South Korea, Thailand, Malta, Oman, Indonesia, Botswana, Malaysia and China.

boosted the development of heavy industries such as steel, non-ferrous metals, the chemical industry; the construction materials, automobile and machinery industries as well as in real estate, and remarkably enhanced the role of demand in driving the growth of China's economy. From the aspect of supply, the boom was mainly the result of a considerably higher supply brought about by the following factors: a rapid increase in the number of university graduates and a structural transformation of the labour force had improved productivity; equipment renewal following massive investment had increased the capital output ratio, and system vitality enhanced by the advancing of the reform had raised the total factor productivity. In addition to the stable and rapid growth of the domestic economy, China's entry into the WTO in 2001 opened up a new growth space for the overseas demand, an effective way to release its rapidly expanded productivity. This period also coincided with a 'golden age' of the global economy — the average annual growth and inflation rates of the global economy during 2003–2007 were respectively 4.9% and 3.6%.⁴ The growth rate of China's economy since 2003 exceeded 10% for five years in a row — China's average annual growth and inflation rates during 2003–2007 were 11.7% and 2.6% respectively – obvious indicators of 'high growth and low inflation'.

Figure 1-1 Economic Growth: the World and China 1978–2008 (%)



Source: China National Bureau of Statistics (CNBS), and the International Monetary Fund (IMF).

A leading upturn of China's economy after the international financial crisis

The outbreak of the international financial crisis in the fourth quarter of 2008 has

⁴ The average annual GDP growth rate and inflation rates of the global economy in the previous five years (1998–2003) were 3.4% and 4.4% respectively.

1.1.2 Major Factors in the Sustained Rapid Growth of China's Economy

While China shares some of the common features of the 'East Asia Model' such as a sufficient supply of low-cost labour, guaranteed by the world's largest population; high savings and investment rates brought by the 'demographic dividend', and a focus on basic education and macro-economic stability; a whole host of specific and characteristic preconditions and factors have also contributed to the rapid growth of China's economy. In a certain sense the sustained rapid growth of China's economy can be attributed to a development model with specific Chinese characteristics⁶ which has become established as world development has diversified. This 'Chinese development model' is characterised by the large size of the developing country, economic system transformation and growth model transition as the determining factors in the sustained rapid growth of the economy.

Gradual and incremental reform

China's economy wouldn't have developed without the reform and opening up. Different from the 'shock therapy' of the former Soviet Union and other socialist countries in Eastern Europe, China's reform has been gradual and incremental. Gradual meaning that reform is first experimented with on a small scale and then, if it succeeds, extended nationwide from rural areas to urban areas, from coastal areas to inland areas, as well as from the political field to the economic field. 'Incremental' means new 'increments' are developed under an unchanged 'stock' benefit pattern, so as to get marketised increments to promote the adjustment of the 'stock'. Market-oriented reforms, particularly the adjustments relating to property relations, have greatly improved the efficiency of resource allocation — the proportion of state-owned and collective economies has dropped to less than a third of the total from a 1978 level of 98%, whereas the private economy has grown into a major force in boosting national economic growth. Owing to the leading position of the market mechanism in resource allocation, the prices of over 99% of consumer goods and above 95% of means of production are determined by the market supply and demand, with the

⁶ The Beijing Consensus entered the political lexicon in May 2004 with the publication of a paper by Joshua Cooper Ramo, a senior advisor at Goldman Sachs and adjunct professor of Tsing university. Presented as an alternative to the Washington Consensus, it upholds liberalism and includes the following broad guidelines: plain living, innovation and constant experimentation; self-determination; progression and accumulation.

marketisation level of factors of production constantly improving. Meanwhile, the contribution rate of the total factor productivity to economic growth has been increased in steps⁷ while the labour and capital inputs still serve as the major reasons for economic growth.

Consumption structure upgrading and ‘consumption revolution’

China is not only one of the countries with the greatest market potential, but also one of those with the highest consumer market growth. The increase in people’s incomes, the expansion of the scale of the market, the mass-market effect and the upgrading of the consumption structure all contribute to the economic growth and the industrial structure upgrading. The rapid economic growth has been supported by a number of high growth industries in different periods, including light industry and textiles in the 1980s, household appliances in the 1990s, housing and automobiles in recent years and most prominently, steel, non-ferrous metals, building materials, machinery, electronics and real estate in this century, the most recent of which not only serve the demand for accommodation and transportation, but also have also sustained the economic boom. Compared with light industry and the household appliance industry, the supporting industries of this century have played an important role in sustaining the economic boom due to the large scale of investments, long construction cycles, and longer development periods spanning from initiation to saturation.

Industrialisation and the advantages of scale economy

The high growth of China’s economy in the recent 30 years has been synchronous with extensive industrialisation. From 2001 to 2008 most of all, the average annual increase of industrial added value was 11.5%, exceeding the 10.2% economic growth rate in the same period, and the contribution rate of industry to economic growth in 2008 was 46.1%, up from 42.1% in 2001. China has now grown into one of the world’s largest industrial producers, with the outputs of more than 100 industrial products ranking the top in the world. Despite a smaller per capita industrial product possession, China’s total scales of production and market are still listed among the top ranking in the world owing to the huge population base. In addition to the sheer size of the active labour force and its low cost, the advantages of a scale economy which are unique to large developing countries can also be utilised by industrialisation —

⁷ As reported by UNDP, the average annual increase of the labour productivity of Chinese manufacturing industry from the middle of 1990s to 2003 exceeded 20%, sustainable to a rapid growth (8%–10%) of the real wages, as well as a price drop to obtain the market share and a reasonable return of capital.

market competitiveness can be effectively improved since market monopolisation is beyond a single enterprise: products which have a saturated market in the eastern regions of China can be promoted in the central and western markets due to a larger wiggle room of the market, so as to prolong the life cycles of products and enterprises. Moreover, risks from the international market can be avoided and countervailed by the potential and the scale of the domestic market which offers a means to buffer China from the impact of fluctuations in the international market.

Urbanisation and massive infrastructure construction

Because it is the reason for the massive movement of a rural surplus labour force into cities, China's industrialisation has also facilitated its urbanisation. The urbanisation rate of China's population increased from 17.9% to 46.6% across the period 1978–2009, a total of 28.7% throughout these 31 years, representing on average 0.93% per year. It is even more notable that during 1996–2009, the urbanisation rate increased from 30.5% to 46.6%, 16.1% in total, and thus on average by 1.23% per year. Urbanisation has transformed the distributed industrial development model, increased the benefits of a scale economy, stimulated a massive investment demand for infrastructure and urban residential buildings, created a huge consumption demand from the rural migrant population due to the changes of lifestyle, and become a powerful force propelling the sustained rapid growth of China's economy. On a 1% annual increase basis for the following ten years, the urbanisation rate of China's population will reach about 55% by 2015, and about 60% by 2020.

Active participation in economic globalisation

The high-speed growth of China's economy since the beginning of this century has coincided with the peak of the third wave of globalisation, thereby leaving China endowed with the advantage of being able to leverage external resources which were beyond the deployment of other developing countries in their own high growth periods. Meanwhile, by adhering to an export-oriented development strategy, China has improved its ability to adapt to external changes under globalisation through a gradual opening up and learning process. Following China's entry into the WTO in 2001 the conditions of global resource allocation for China have further improved, and the stimulation of an overseas market demand on China's economic growth has increased remarkably. The average annual increase of import and export trade for the

period 2001–2008 was 28.5% which is 13.3% higher than that of 1979–2002, and the proportion of import and export trade in total world trade basically doubled. We can say that through effectively combining its domestic advantages, such as the low cost of labour and its home mass market, with the overseas advantages of capital, technology and management expertise, China has shared in the ‘dividends of globalisation’ to the highest extent.

Active and effective participation of the government in promoting economic growth

The rapid growth of China’s economy rests on some factors that are far beyond the explanations of standard growth models. One essential such factor is the establishment of the principle of focusing on economic construction. The delegation of economic authority to local governments has instigated an unprecedented enthusiasm in developing their local economies. By improving their local infrastructure conditions and investment environment and through the construction of industrial parks and urban areas, local governments have made a major contribution to the rapid economic growth.

In conclusion, during the past 30 years since the beginnings of the reform and opening up policy China, as a large developing country, has accomplished an ‘economic takeoff’ despite its huge population, small per capita resource possession and weakness of economic foundation; a pathway to industrialisation and urbanisation with Chinese characteristics has been developed. As a transitional country, China has succeeded in building up an initial, comparatively perfect, socialist market economy system by effectively integrating socialism and market economy through constant reform and innovation.

Yet we have to admit that the transformation of China’s economic growth model is far from fulfilled. The basic characteristic of the existing economic growth model is that the current economic growth relies on a high intensity input of low-cost resources and factors, as well as on investment expansion and external demand. Even though this high growth has been sustainable by depending on the high input of low-cost resources and factors at a time when the scale of economy and the total consumption of energy resources were not that intensive, changes in the scale of economy and the balance between supply and demand will continue to weaken the traditional advantage of low cost and, meanwhile, the constraints of energy resources and the

ecological environment will only deepen. Even though export expansion has been used successfully to balance the rapidly developed productivity in the past, the contribution of external demand to economic growth will undoubtedly decline further due to the deep adjustment of the world economy and the market contraction brought by the international financial crisis. In short, the space left to support the growth of China's economy within the traditional growth model will become even smaller.

1.2 Influences of Geographical and Policy Factors on Regional Development

As one of the world's largest countries in terms of area, China has distinct regional disparities and unbalanced regional development, which gives the regional policy a significant position in China's macro policy system.

1.2.1 Influence of Geographical Conditions

China is located in the east of the Eurasian Continent, on the west bank of the Pacific Ocean, enjoying a unique geographical position. This vast territorial area spans a complex topography and diverse climates, which significantly influences the economic growth and the regional development.

Three topographic tiers from west to east

China's topography is featured by a higher west and lower east, with the west widely covered by high mountains and dominated by mountainous lands and plateaus and the more undulating, low, gentle east mainly interspersed with hills and plains. There are three tiers from west to east with obviously different elevations: the Qinghai-Tibet Plateau, the 'roof of the world' which rises 4000-5000m on average above sea level, forms the highest tier. From the periphery of the Qinghai-Tibet Plateau to the Greater Hinggan Mountains, the Taihang Mountains, the Wushan Mountains and the Xuefengshan Mountains is the second tier formed by the Inner Mongolian Plateau, the Loess Plateau, the Sichuan Basin, the Yunan-Guizhou Highlands, the Tarim Basin and the Junggar Basin; and the third tier covering the vast plains and hills in the east includes the Northeast China Plain, the North China Plain, the Huaihe Plain and the Middle-lower Yangtze Plain extending from north to south. The topography deeply influences the regional disparities. The gradient of China's economic growth level from east to west is generally in reverse to that of the topography — the eastern plains

are the most highly developed, sequentially followed by the second tier and the highest tier which has turned out to be unsuitable for large-scale economic development.

Difference in precipitation and temperature from south-east to north-west

Influenced by the topography and the monsoon circulation, the spatial heterogeneity of China in rain and heat conditions varies greatly from the south-eastern coastal areas to the north-western inland areas. The Qinghai–Tibet Plateau has a cold, arctic climate, the areas east of the Plateau have a continental monsoon climate with a synchronous rainy season and hot weather, and areas to the north an arid climate with scarce rainfall. Imagine a line from Aihui, a county in Heilongjiang Province, to Tengchong, a county in Yunan Province. The area north-west of this line is arid, rainless and sparsely populated, with a population density of 11 people per sq km, merely 1/4 of the world average. Covering 1/4 of the total area of China, the Qing–Tibet Plateau is home to less than 1% of the total population, and the inhabitants in the north-western region, accounting for 4.5% of the total, are mainly distributed in the basins and oases. The area southeast of this line, however, with a rainfall of 400–800mm or more per year, is densely inhabited by 96% of the total Chinese population, and is also where most economic activity and large and mid-sized cities are located. In general, the population and economic densities gradually decline from southeast to northwest.

Complex and diverse geographical conditions

With its complex and diverse natural conditions compared to other countries, China is characterised by a clear-cut diversity in its regional development – there are well-developed coastal areas, as well as the less developed middle and western regions; former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas; there are industrial economic zones, as well as agricultural economic zones and ecological economic zones; there are urbanised areas such as metropolitan spheres, city agglomerations and metropolitan interlocking regions, as well as the vast rural areas; and there are emerging economic regions as well as old industrial bases and resource-exhausted areas. This diversity in natural and geographical conditions means the regions develop characteristic economies and have

a variety of comparative advantages to exploit.

A comparatively small proportion of area suitable for development

The total land area of China is shared by mountains, plateaus, basins, plains and hills in the proportions of 33%, 29%, 19%, 12% and 10% respectively. Of this there is an area of merely just over 1.8 million sq km suitable to be developed for industrialisation and urbanisation, which represents a very limited space for development (see figure 1-2). Despite a total water resource amounting to 2,800 billion cubic metres, the sixth greatest in the world, the per capita water resource possession is only 28% of the world's average. A large area of ecologically fragile regions restricts industrialisation and urbanisation from developing across a wider regional space.

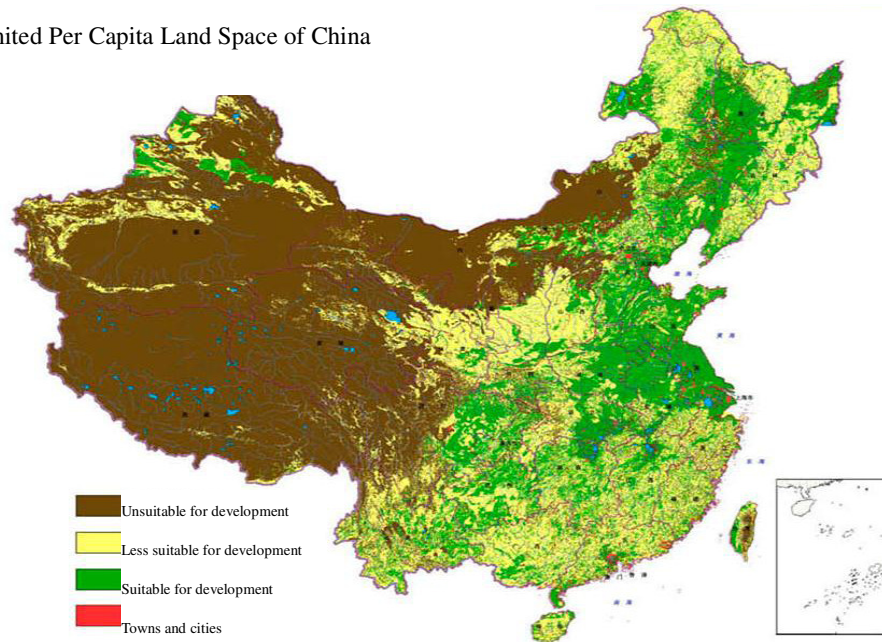
1.2.2 Evolution and Influence of China's Regional Policy

The evolution of China's regional policy has been closely related to changes in the institutional environment and the regional development strategy, with the regional policy being divided into three general stages in accordance with the latter. These stages are: the stage of planned economy, the stage after the reform and opening up policy, and the stage after the initial establishment of the socialist market economy system. As the economic society has developed and the reform and opening up has deepened, China's regional policy system has been constantly enriched and refined.

	Area		Population		Gross Regional Domestic Product (GRDP) in 2005 (unit: RMB 0.1 billion)	Average Annual Growth Rate during 1979–2005 (%)	GRDP/GDP (%)			
	Unit: 10000 sq km	Proportion (%)	Unit: 0.1 billion	Proportion (%)			1978	1995	2000	2005
Eastern Region	91	9.5	4.80	36.66	108999	12.5	43.7	51.2	52.5	55.5
Central Region	103	10.7	3.55	27.11	37046	10.2	21.7	20.4	20.4	18.8
Western Region	686	71.5	3.65	27.92	33390	10.2	20.6	18.1	17.1	17.0
North-eastern Region	80	8.3	1.09	8.31	17130	9.0	14.0	10.3	10.0	8.7

Figure 1-2 Territorial Development Suitability of China

Limited Per Capita Land Space of China



Priority to the inland areas in the stage of planned economy

The stage of planned economy started in the early 1950s and ended in the late 1970s, spanning approximately five 5-year plans. In the periods of the first and the second 5-year plans, influenced by the former Soviet Union which practiced the strategy of giving priority to the development of heavy industry and emphasised locating places of production near to places of primary materials, the state mobilised resources in a centralised manner through a planned economic system, focusing on the investment and development of the inland areas, and establishing a number of bases for energy, raw materials and the processing industry. In the middle of 1960s (the period of the third and the fourth 5-year plans), driven by a tense surrounding situation, China launched the extensive Third Front construction program. In the middle and late 1970s, the period of the fifth 5-year plan when the international environment was improved, the priority of investment started to be shifted to the coastal areas.

In the planned economy stage regional policy was to a large extent subordinate, there was a lack of independent policy orientations. The allocation of construction projects by the State relied mostly on resource advantages and potential, rarely taking into account the potential of regional markets and the mobilisation capacity of economic and scientific resources. A great number of industrial projects completed in the inland

areas throughout the 5-year plans had promoted the development of such areas, but the economic and technological superiorities of the coastal areas failed to be put into full play due to less input, which constrained national economic growth and any increase of resource allocation efficiency. Moreover, the international environment at that time meant that the connection between China and the international market was almost non-existent.

Acceleration in development of the coastal areas following the reform and opening up policy

The basic principle of the reform and opening up policy established in the early 1980s has brought profound changes to the institutional conditions and policy environment for the development of regional economies. In this stage the strategic focus of the State was shifted to the eastern coastal areas, thus optimising the spatial resource allocation and dramatically improving the resource allocation efficiency. Special economic zones, open cities and open economic zones established in the coastal areas have formed an open coastal belt covering an area of 0.3 million sq km and inhabited by 0.2 billion people. The 'economic development strategy for coastal areas' put forward at the end of 1987 clearly stated that the open coastal areas should focus on developing an export-oriented economy, take the lead in participating in international competition, and enjoy preferential policies in the aspects of finance, tax, credit loans and investment. A market reform advancing in steps throughout the country has enhanced the role of market in resource allocation, driving factors of production to flow to the areas with a high yield at greater speed, and enabling a more rapid development of the regions with these better conditions.

Preferential policies for opening up were practiced in this stage, giving play to the special location advantages of the eastern coastal areas. As a result those areas were linked up with the international market ahead of other areas in the development of the export-oriented economy, and rapidly obtained economic vitality. However, the market mechanism also resulted in obviously increasing regional disparities, which can be observed not only in the economic development levels, but also in people's incomes, public services, marketisation and degree of opening up. It appears that these increasing regional disparities are not a consequence of the stagnant growth of some areas, but rather of the differences in growth rate. Despite increasing overall wealth due to a rapid growth of the economic aggregate and people's incomes in the

eastern, central and western regions, the social focus has nevertheless shifted onto concern over the increasing regional disparities.

Establishment of a regional development strategic master plan

To address the growing regional disparities, the regional policy was refocused on coordinated regional development and the regional balance. The ninth 5-year plan formulated in the middle of 1990s specified the guideline that economic and social development should “adhere to the coordinated economic development among regions, and gradually reduce the regional development disparities”, and put forward a series of policies to accelerate the development of the central and western regions, including giving priority to these regions in scheduling resource development and infrastructure construction projects; rationalising the prices of resource products to enhance the ability of these regions to self develop; establishing a normalised central finance transfer payment system to progressively increase the financial support to these regions, etc. The implementation of these policies, though they actively sought to balance out regional development, was not remarkably successful at curbing the increase in the regional disparities. Greater adjustments to the regional development strategy started to be prepared in the late 1990s.

It is since 2000 that China has successively launched strategies such as the development of Western China, the rejuvenation of old industrial bases in Northeast China, and the rise of Central China, so as to form different development focuses according to the characteristics and comparative advantages of the western, north-eastern and central regions. With an even more overt direction of investment towards key fields of the three regions, the central government focused on improving the local infrastructures and investment environments and upgrading public services, which injected more momentum into the economic development of these regions and they did achieve a higher economic growth rate. From 2001–2005 the average annual GDP growth rates of the four regions, namely the ten provinces and cities in the east, the six provinces in central China, the twelve provinces in the west, and the three provinces in the northeast, were 12.35%, 10.86%, 11.12% and 10.87% respectively. In 2005, the proportions of the four regions in the national GDP were 55:19:17:9, with the eastern region achieving a new rise, the western region maintained the historical level, and the central and north-eastern regions slightly dropping off (see table 1-1). Thus, a master strategic plan for the regional development of China had been

basically established.

Table 1-1 Growth Rates and GDP Proportions of the Regions

	Area		Population		Gross Regional Domestic Product (GRDP) in 2005 (unit: RMB 0.1 billion)	Average Annual Growth Rate during 1979–2005 (%)	GRDP/GDP (%)			
	Unit: 10000 sq km	Proportion (%)	Unit: 0.1 billion	Proportion (%)			1978	1995	2000	2
Eastern Region	91	9.5	4.80	36.66	108999	12.5	43.7	51.2	52.5	
Central Region	103	10.7	3.55	27.11	37046	10.2	21.7	20.4	20.4	
Western Region	686	71.5	3.65	27.92	33390	10.2	20.6	18.1	17.1	
North-eastern Region	80	8.3	1.09	8.31	17130	9.0	14.0	10.3	10.0	

Source: *China Statistical Yearbook*

1.3 Regional Development in the Eleventh 5-Year Plan Period

The full-scale implementation of a regional development master strategy during the period of the eleventh 5-year Plan (2006-2010) put into practice a series of strategic measures to promote coordinated development among regions, further controlling the growing regional development disparities, and improving the coordination of regional development to a certain degree. Nevertheless, there were still some prominent problems such as a large disparity in basic public services among regions, a spatial imbalance in terms of human resources and economic resources, weak interaction between industries among the eastern, central and western regions, a lagging behind in the development of former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas, etc.

1.3.1 Positive Changes in Regional Economic Development

Growing disparities in economic growth have been eased

Since 2008 the economic growth rates of the central, western and north-eastern

regions have surpassed that of the eastern region, altering the growth pattern in which the economic growth of the eastern region had been ahead of the others since the reform and opening up policy. The growth rates of the eastern, central, western and north-eastern regions in 2009 increased by 10.7%, 11.6%, 13.4% and 12.6% respectively on a year-on-year basis, with the western region ranking the highest of all. In terms of the proportion of GRDP in national GDP, in 2009 the eastern region dropped by 1.9% compared to the 2006 level, the western and central regions were increased by 1.4% and 0.7%, and the north-eastern region also slightly dropped (see table 1-2). From an overall point of view the relative disparities in regional economic growth were reduced, which suggests a noticeable effect has been made by the regional development strategy on controlling the growing regional disparities.

The absolute regional disparities, however, still grew. The disparity in per capita GDP between the eastern and the western regions increased from RMB 14,885 to RMB 22,129 during 2005–2009. Regarding specific provinces and cities, the absolute disparity in per capita GDP between Shanghai City, the highest, and Guizhou Province, the lowest, increased from RMB 46,422 to RMB 64,300 during 2005–2008. How to control the growing absolute regional development disparities is still an arduous and long-term major issue in the process of modernisation.

More spatial agglomeration of economic activities

The enhanced resource allocation function of the market has resulted in unprecedented massive flows of the factors of production such as labour force and capital. The labour force mainly flows from rural areas to cities, as well as from west to east. The numbers of labour force moving from rural areas to cities has reached 0.16 billion. Of the cross-province labour flow, 90% comes from the central and western regions, 82% of who move into the eastern region. About 2/3 of the rural migrant labourers enter large and middle cities above the prefecture level. Driven by profits, market-oriented capital mostly flows to the regions offering high returns on investment, especially the eastern region. Population and economic activities are centralised in city agglomerations and metropolitan spheres in a growing tendency, not only creating tremendous demand for urban infrastructure construction investment and consumer market, but also spurring the development of these city agglomerations and metropolitan spheres. The ten major city agglomerations accounted for 62% of the national GDP in 2007 (see figure 1-3), among which the three city agglomerations

of Beijing–Tianjin–Heibei, the Yangtze River Delta and the Pearl River Delta, with the most remarkable agglomeration effect, accounted for approximately 40% of the national GDP, 4.42% higher than the 2000 level. These three city agglomerations have become the growth poles with the greatest economic development vitality.

Table 1-2 Growth Changes in **Major Economic Indicators of Middle and Western Regions during 2006–2009 (%)**

	Gross Regional Domestic Product (GRDP) in 2009 (unit: RMB 0.1 billion)	Economic Growth Rate in 2009 (%)	RDP/GDP (%) GRDP/GDP (%)			
			2006	2007	2008	2009
Eastern Region	194670.9	10.7	55.6	55.2	54.3	53.7
Central Region	70137.3	11.6	18.7	19.0	19.3	19.4
Western Region	66867.7	13.4	17.1	17.3	17.8	18.5
North-Eastern Region	30556.8	12.6	8.6	8.5	8.6	8.4

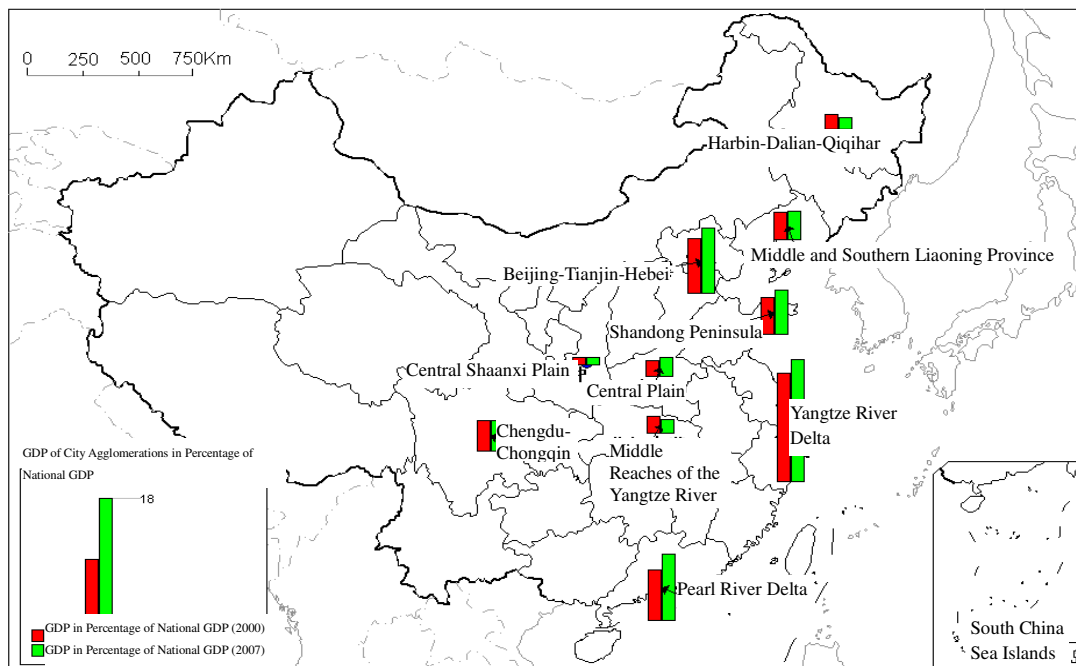
Source: *China Statistical Yearbook*

Interregional work division and cooperation noticeably strengthened

The deepening of interregional industrial division has given full play to the comparative advantages of the regions. Generally, in recent years, high-growth basic industries such as steel, building materials, non-ferrous metals, automobiles and electronics as well as the processing industry have been further centralised in the eastern coastal areas, in hope of development acceleration by leveraging the local infrastructures and supplies of manpower and capital whereas those industries more dependent on resources such as the energy and the mineral industries have clustered to a larger degree in the western region, characterised by the scale development of energy resources (especially hydroelectric power) in the south-western region, as well as that of oil and gas resources in the north-western region. In the central region grain production, energy, raw material industry and tourism have also achieved a rapid growth. Regional economic operation in developed regions has been carried out in all aspects. In the Yangtze River Delta, for example, the cooperation between cities in encouraging enterprises for trans-regional investments, the co-building of an

enterprise credit system, and sharing of resources have been gradually deepened, which not only reduces the interregional trade costs, but also benefits the development of these cities practically.

Figure 1-3 GDP Proportion Changes of City Agglomerations (2000–2007)



Source: A Study on How to Promote China’s Coordinated Regional Development in the Period of the Twelfth 5-Year Plan, by the Research Group of the Academy of Macroeconomic Research, 2009.

More support to poverty-stricken and backward areas

Four measures have been taken to support poverty-stricken and backward areas. Firstly, to increase the input into poverty-stricken areas the poverty alleviation fund from central finance was increased from RMB 10.6 billion to RMB 14.4 billion during 2002–2007, helping to shrink the national absolute poverty-stricken rural population from 28.2 million to 14.79 million, and the low-income population from 58.25 million to 28.41 million, an average drop of 8.6 million per year.

Secondly, to enhance the support to minority nationality border regions, the transfer

payment budget to the minority nationality regions amounted to RMB 28 billion in 2009, 1.8 times greater than the RMB 15.6 billion which was the 2006 level, and was mostly invested in compulsory education, public health, social security, social assistance, infrastructure, ecological protection, etc.

Thirdly, to enhance the support to resource-dependent cities and in line with the ‘Several Opinions of the State Council on Promoting the Sustainable Development of Resource-dependent Cities (No. 38 [2007] of the State Council)’ which was issued by the State Council in Dec 2007, a financial transfer payment fund amounting to RMB 4.3 billion was granted to 44 resource-dependent cities in two batches, supplemented by specific projects for resource-dependent cities to create enough jobs, comprehensively utilise resources and develop new and replacement industries.

Lastly, to intensify the construction of ecological functional zones by raising the environmental protection expenditure and the transfer payment coefficients, central finance increased the financial transfer payment to selected pilot sites for a central ecological compensation system, such as the three-river source area of Qinghai Province, the water source areas on the middle route of the South-North Water Diversion Project, and some natural forest reserves, which further promoted the ecological protection and the construction of basic public services in these areas.

A general sub-regional cooperation with neighbouring countries

Major projects, such as the natural gas pipeline connecting to the central Asian countries, the oil pipeline extending from Daqing City to East Siberia in Russia, and the Trans-Asian Railway connecting Singapore and Kunming City, are being successively constructed and symbolise a new stage of sub-regional cooperation between China and its neighbouring countries.

1.3.2 Major Problems facing Coordinated Regional Development

The key objective of the regional policy since the reform and opening up policy has been to balance regional economic growth, as well as to coordinate the interests among regions, and the guiding ideology has been to control the regional disparities in economic development. However, new conflicts and problems in public services, population and industry transfers, the ecological environment and other fields have

emerged.

Large regional disparity in basic public services

The regional policy focusing on the regional balance in economic growth has somewhat neglected the regional balance in the fields of public goods supply, such as education, health and culture, resulting in a large regional disparity in public services. Those Chinese counties that haven't yet universalised a compulsory nine-year education are unexceptionally distributed in the central and western regions, and there is still a big gap in the per capita educational level between the western region and the eastern region. The per capita educational expenditure budget of the western region was only 73.5% of that of the eastern region in 2008. The ratios between the numbers of healthcare institutions and employees in the central and western regions and the eastern region witnessed a drop during 2006–2008. At the end of 2008, the unemployment insurance coverage rate in the western region was 12.2% lower than that in the eastern region, and the coverage rate of social pension insurance in rural areas of the western region was only 10% of that of the eastern region, less than 20% of the national average.

Population transfer lagging behind economic spatial agglomeration

In 2007 the three city agglomerations of Beijing-Tianjin-Hebei, the Yangtze River Delta and the Pearl River Delta contributed 37.9% of the national GDP. With their populations accounting for only 14.2% of the total, the per capita GDP of the three agglomerations was 2.8 times the national average. Though coastal areas are the major destination for rural migrant workers, most of these rural migrant workers find it hard to be incorporated into the local population under the existing system. Except for their wages, the wealth they create ultimately flows into the local revenues, which undoubtedly serves to enlarge the regional income gap. Some regional governments attach little importance to the accommodation of migrant labour and the construction of public services, resulting on the one side in rapidly expanding cities and occupied land areas, and on the other side in a large number of migrant workers being excluded from the urbanisation process. During 2005–2008 the average annual area increase of urban built-up regions was 5.8%, while the average annual increase of the urban population was 2.6%, a difference at a ratio of 2.2:1 between the urban land use increase and the population increase.

Problems in interregional industry transfer

The transfer of processing and manufacturing industries from the eastern region to the central and western regions, hindered by problems such as expensive logistics and trade costs and lack of complementary products, is still on a small scale. Despite a respectable degree of dependence on foreign trade in 2008, the eastern region was always at the lower end of the global value chain in the international division of labour. With the international financial crisis, not only was the export-oriented economic growth of the eastern region heavily impacted, but also its production capacity excess became more obvious. In the meantime the comparative advantage of a low-cost labour force in the central and western regions was very much offset due to lower marketisation, less government effectiveness and legalisation. To narrow the development gap with the eastern region, the central and western regions followed in the footsteps of their counterpart by developing processing and manufacturing industries, thereby posing a homogeneous competition to the eastern region, hence resulting in a even more prominent issue of industrial structure convergence and industrial division.

Serious degradation of the ecological environment in some regions

The advancing of industrial construction and urban sprawl, accompanied by a large amount of resource consumption and land occupation, have intensified environmental damage and pollution, and led to a rapid decline in the bearing capacity of the environmental resources in some regions. For regions with a lower resource and environmental bearing capacity overdevelopment practices, such as developing high water consumption industries in water-deficient areas, high energy consumption industries in energy-deficient areas, and high-polluting industries in areas with an insufficient environmental carrying capacity, have exerted further pressure on the resource environment and ultimately resulted in the degradation of the ecological environment. Though China has considerably increased the input into environmental governance and ecological construction in recent years, the growing ecological degradation hasn't been effectively controlled owing to an increasing amount of pollutant emission. Long-distance resource allocation projects aimed at solving the energy and water shortages, such as the South-North Water Diversion Project in construction, the West-East Power Transmission Project, and the West-East Natural Gas Transmission Project, have increased the cost of industrial development.

However, these larger scale projects spanning great distances will have to be implemented to serve the rapid economic growth of some regions.

Difficulties in propelling poverty-stricken areas out of poverty

Despite the fact that in recent years the State has given more support to former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas, poverty-stricken areas and resource-exhausted cities, improving the people's wellbeing and alleviating poverty in these areas are still hard tasks due to the huge numbers of the poverty-stricken population and the high degree of poverty. It is harder and more costly again to solve the problems in border minority nationality areas, since poverty there is interwoven with harsh natural and geographic conditions as well as religious and border issues. A large majority of these areas which suffer from adverse natural conditions, fragile ecological environments, difficult access and a lack of infrastructure, haven't yet even resolved fundamental problems with education, healthcare, transportation and drinking water.

The solution to these problems requires not only an innovative regional development model, but also a remoulded regional policy framework in the context of the market economic system.

1.4 Regional Policy Objectives and Policy Framework

China's eleventh 5-year plan puts more emphasis than before on equalising basic public services among regions and controlling the gap in people's incomes; on coordinating a harmonious balance between economic and social development and population, resources and environment, as well as on promoting the concentration of population and factors of production in advantageous areas and on advancing urbanisation in terms of city agglomerations according to market rules. Adjustments of the regional policy will significantly influence the regional development in the near future.

1.4.1 Primary Objectives of China's Regional Policy

China's regional policy primarily aims to contain the regional development disparities

within a reasonable range, to equalise basic public services, to fully exert regional comparative advantages, to effectively promote comprehensive competitiveness, and to coordinate the regional economic society and resource environment.

Containing the regional development disparities within a reasonable range

A major task to promote the coordinated regional development at present is to contain the growing disparity in per capita GDP among regions within an acceptable and reasonable range. 'Reasonable' here means a range within which the rapid economic growth of a few regions should not be achieved at the expense of the economic interests of some others. The lower limit of this range is a general economic growth of all the regions, as well as the elimination of economic decline of any regions. The upper limit is that the disparity in per capita GDP stops growing or grows at a slower rate.

Equalising basic public services among regions

It is the moral obligation and responsibility of a government to provide basic public services for all of its citizens. Such services should not differ in a noticeable manner for different areas and population groups. People in less developed areas should not be deprived of the right to enjoy basic public services such as compulsory education, public healthcare, basic medical treatment, social security, etc. at a level equal to that in other, more developed areas due to development disparities.

Fully exerting the regional comparative advantages

Only when the comparative advantages of all the regions are fully exerted can the general interest of the nation be maximised. A major objective of the regional policy should be to reasonably and effectively harness the comparative advantages of all the regions, boost interregional labour division and cooperation, and improve the development capability and benefit level of all the regions in a comprehensive manner.

Effectively promoting comprehensive competitiveness

The trend towards localisation of the international market and internationalisation of domestic markets is growing as economic globalisation advances. To foster coordinated regional development in China it is necessary to promote the

comprehensive competitiveness of all the regions; to be specific, to promote the competitiveness of underdeveloped areas in the domestic market, as well as that of the developed areas in the international market.

Coordinating the regional economic society and the resource environment

Regional policy should take into consideration the bearing capacity of the regional resource environment. Activities to reduce the regional disparities should be appropriate, carefully planned and take account of the ecological environment, so as to realise a sustainable development.

1.4.2 Regional Policy Framework in Future Periods

A regional development strategy with four different focuses

- 1) The Development of Western China: the focus is to construct infrastructure and also the ecological environment. Aims are to improve the investment environment of the western region, to develop characteristic industries supported by the local resources (such as energy, minerals, tourism and cultural resources), and to increase the input into fostering human capital.
- 2) The Rejuvenation of Old Industrial Bases in Northeast China: the focus here is to carry out the structural adjustment and the reorganisation and reform of state-owned enterprises, open them up further to the outside world, enhance economic and technological cooperation with neighbouring countries, establish bases for those those industries which are in advantageous positions compared with the same industries in other areas, such as equipment manufacturing, raw material and intensive agricultural product processing, and to promote the economic transformation of resource-dependent cities.
- 3) The Rise of Central China: the aim is to elevate industrial competitiveness above the current level, to build a comprehensive transportation system, develop logistics and trade, and refine the market system.
- 4) Encouraging the Eastern Region to Take the Lead in Development: in the eastern region the focus is on improving independent innovation capacity, on accelerating the pace of establishing proprietary intellectual property rights, key technologies and well-known brands; on facilitating the updating of trade processing, raising the level

of the export-oriented economy, and enhancing international competitiveness.

Promoting a free flow of factors of production among regions

The flow of factors of production in the practical economic operation is hampered by various facts, including that the industries which use rural migrant labour are limited in some cities with heavy employment pressure, and also by the fact that some areas offer preferential terms to external investment while restricting the local capital output. It is necessary in the rebuilding of the regional policy framework to focus on giving full play to the fundamental role of the market in resource allocation, and on eliminating any institutional or personal factors that may hamper the free flow of factors of production in order to realise the maximum interests of all the regions.

Boosting the equalisation of public services among regions

To boost the equalisation of public services among regions requires the governments at all levels to put more emphasis on education, medical treatment, social security, environmental protection, etc. Given that the financial position of the central and western underdeveloped areas is so weak that extensive public expenditure is beyond the capacity of some local governments, transfer payments from central finance should be extended to increase the public service level of these areas, and to help gradually narrow down the public service gap between these areas and the eastern, developed areas.

Intensifying the support for poverty-stricken and backward areas

In order to intensify the support to former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas, locations of concentrated poverty need to be identified and linked as part of the bid to eliminate poverty and achieve prosperity. This will promote the economic transformation and reconstruction of the ecological environment of resource-exhausted cities and industrial and mining areas; help in the refinement of the public finance system and the targeting of the financial transfer payments of the central government to underdeveloped areas; and last but not least encourage a mutual beneficial cooperation between local governments, and the assistance of developed areas to undeveloped areas.

Box 1-1 Regional Plans and Policy Documents since 2009

Because the regional policy aims at four such large regions (the western, the central, the north-eastern and the eastern coastal regions), the Chinese government has formulated a number of more specific regional plans and policy documents on smaller spatial scales in recent years. Since 2009 thirteen regional plans and policy documents have been issued, which are:

- Several Opinions of the State Council on Supporting Fujian Province to Accelerate the Building of the Economic Zone on the West Coast of the Taiwan Straits, 14 May 2009
- Guanzhong–Tianshui Economic Zone Development Plan, 25 June 2009
- Hengqin Island Development Master Plan, 24 June 2009
- Liaoning Coastal Economic Zone Development Plan, 1 July 2009
- Approval of Jiangsu Coastal Area Development Plan, 14 July 2009
- Outline of the Regional Cooperation and Development Plan for Tumen River – Establishing the Changchun–Jilin–Tumen Development and Opening-Up Pilot Zone, 30 August 2009
- Plan to Promote the Rise of Central China, 23 Sept 2009
- Development Plan for an Efficient Ecological Economic Zone in the Yellow River Delta, 1 December 2009
- Plan for a Poyang Lake Ecological Economic Zone formally approved by the State Council on 12 December 2009
- Master Plan to Develop a Circular Economy in Gansu Province, 24 December 2009
- Several Opinions of the State Council on Promoting the Construction and Development of the International Tourist Island of Hainan, 31 December 2009
- Plan of Anhui City Belt Pilot Zone along the Yangtze River for Industrial Transfer, 12 January 2010
- Outline of the Yangtze River Delta Regional Planning, 24 May 2010

These plans and policy documents covering the western, central, north-eastern and the eastern coastal regions, are deepened and refined reflections of China's regional development master strategy, which not only help to develop more regional economic growth poles to boost a stable growth of the national economy, but which also promote a coordinated regional development to facilitate the construction of a harmonious society. Within the near future further regional plans and policy documents will be accordingly formulated during the implementation of the master regional development strategy, so as to develop more regional economic growth poles.

Optimising territorial development on the basis of development priority areas

According to the outline of the eleventh 5-year plan, the national space of China is divided into development priority areas in four categories: optimised development areas, key development areas, restricted development areas and prohibited development areas. Based on the bearing capacity, current development density and development potential of their resource environments, these areas have been given different development priorities. Optimised development areas will strive to improve the technical competency of industries, break through the bottleneck restrictions of the resource environment, and participate in higher levels of global competition. Key development areas will aim to reinforce infrastructure, absorb capital, technologies, industries and population for agglomeration, speed up the pace of industrialisation and urbanisation, and enhance interregional relations. Restricted development areas: to carry out the principle of ‘giving priority to protection of the environment, and development in an appropriate manner’, enhance the treatment and control of the ecological environment, to properly develop characteristic economies, and to facilitate an outward flow of migration. Prohibited development areas: to implement compulsory protection in line with laws and regulations as well as the relevant plans, to prohibit exploitation and constructions which run counter to the development priority.

The regional policy and its performance evaluation will be further adjusted and refined according to the development priorities.

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Chapter 2 Historical Review of Regional Policy

China's regional development strategy has passed through three stages since the 1950s. The balanced development strategy of the 1950s to the late 1970s focused on the inland region, the unbalanced development strategy from the late 1970s to the late 1990s focused on the coastal region, and the coordinated regional development strategy since the late 1990s has focused on a coordinated regional development. The completely different regional development strategies of the three stages have led to obviously different orientations and effects of policy implementation. An understanding of the historical background and evolution of China's regional policy is key to any analysis of its present mechanisms of action and the effects of their implementation.

2.1 Regional Policy during the 1950s–1970s with the Focus on Balanced Regional Development

China's regional development strategy and regional policy were born in the 1950s. Impacted by a host of factors such as the domestic and international development environments and theories of balanced development, the central government practiced a balanced regional development strategy from the 1950s to the late 1970s, directing government investment and construction projects towards the inland regions to promote regional development and narrow down the gap between the inland and the coastal regions.

2.1.1 Balanced Regional Development in the 1950s under the Influence of the Former Soviet Union Model

The ideology of balanced regional development is rooted in the

production factor allocation theory of the former Soviet Union.

In 1949, when the new People's Republic of China was founded, the distribution layout of its economic regions was rather unbalanced, with more than 70% of industries located in the coastal regions.⁸ As a solution to such an unequal distribution of productivity, in its policy the central government emphasised the uniform distribution of industrial productivity throughout the country, and also the location of industrial production near to raw material and fuel production areas as well as consumption areas. A balanced regional development strategy with the basic characteristics of balanced regional development and with priority given to the inland region was hence instigated.

The production factor allocation theory of the former Soviet Union laid the primary theoretical basis for a so-called balanced development strategy, which regarded a 'national balanced production allocation' as the main principle and governing rule of a socialist productivity distribution, and a nationwide balanced development of industries as an important precondition to eliminate disparities between urban and rural areas as well as between regions. Influenced by the Soviets, the Chinese theory circle agreed that a planned productivity allocation would be the primary principle of China's productivity distribution in order to eliminate economic inequality and disparity between regions, urban and rural areas, as well as between people of all nationalities. This constituted the theoretical basis of the balanced regional development strategy and its policies.

The strategic intent of balanced regional development was basically realised through the distribution of government-funded projects and national key construction projects.

Supported by a mechanism that featured a high degree of planned economy, the State intensified investment in the inland region⁹ by taking advantage of the high resource

⁸ Wang Haibo, *The History of Industrial Economy of China (1949.10-1957)*, Economy & Management Publishing House, 1994.

⁹ The coastal (eastern) region refers to the ten cities and provinces including Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Shandong, Guangdong and Guangxi. The central region refers to the nine provinces of Inner Mongolia, Heilongjiang, Jilin, Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan. The western region refers to the nine provinces of Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. The inland or the inland region is a general name for the central and western provinces.

mobilisation capability of the mechanism. The first large-scale productivity distribution towards the inland region in the history of P.R.C. happened in the 1950s. Of the 694 industrial construction projects categorised as government investment and construction projects in the period of the first 5-year Plan, 222 were in the coastal region, accounting for 32%, while 472, the remaining 68%¹⁰, were in the inland region. Government investment in the inland region was mainly distributed to large and middle-sized inland cities with better development foundations and resource conditions as well as convenient transportation, such as Wuhan, Baotou, Lanzhou, Xi'an, Taiyuan, Zhengzhou, Luoyang, Chengdu, etc., aiming to develop these cities into key national industrial bases. Moreover, of the 156 key construction projects aided by the former Soviet Union¹¹ that were launched in the same period, a majority were distributed in the north-eastern region and the inland region (see figure 2-1).

¹⁰Chen Dongsheng (Ed.), *Regional Economics*, Henan People's Publishing House, 1993.

¹¹The 156 key projects aided by the former Soviet Union since 1953, mostly heavy industrial projects, formed a major part of the construction projects of China in the period of the first 5-year plan, propelling Chinese key heavy industries such as energy, machinery and raw materials toward a respectable modernisation. As a matter of fact, there were a total of 174 projects settled through five rounds of negotiations after 1952, which were finally reduced to 154 projects after repeated scrutinisation and adjustments which led to cancellation, combination, division, delay and exclusion of the projects exceeding the investment quota. The title 'The 156 Soviet-aid projects' was reserved, as 156 was the number previously publicised in to the plan.

Figure 2-1 Distribution of the 156 Projects



Source: exhibition to celebrate the 60th anniversary of the founding of P.R.C.

2.1.2 Direction of National Production Distribution towards the Inland Unchanged during the ‘Third Front’ Construction Period (1960s–1970s)

In the middle of the 1960s, the mainland of China (but not Taiwan) was divided into three regional fronts according to different strategic locations for national defence and security considerations (see Box 2-1). With the focus of the State falling on the construction of the Third Front region, the periods of the third (1966–1970) and the fourth 5-year plans (1971–1975) were another notable period since the 1950s when the State refocused its investment on the inland. Focusing on the south-western region, the government investment in the third 5-year plan period mainly included the

construction of key infrastructure such as traffic channels, as well as that of industrial enterprises. During this period the State invested in completing an important transportation trunk connecting the south-eastern regions that included the Sichuan-Guizhou Railway, the Chengdu-Kunming Railway, the Guiyang-Kunming Railway, the Xiangfan-Chongqing Railway and the Hunan-Guizhou Railway. Five steel bases were built in Panzhihua, Jiuquan, Wuhan, Baotou and Taiyuan, and a large number of industrial projects were established or expanded in the fields of power, petroleum, machinery, chemicals and national defence. At the same time a host of enterprises were moved from the coastal region to the Third Front region in a planned order. In the fourth 5-year plan period, in addition to a rise in investment to the inland region, a regional economic system was established under the principle of 'wide dispersion and low concentration', dividing the whole country into ten economic cooperation regions, and requiring each region to establish independent industrial and economic systems with local characteristics, and each province and city to have a complete local industrial system. The infrastructure investment in the inland region accounted for 66.8% of the total national investment in the period of the third 5-year Plan (see table 2-1), hitting its highest level since the founding of P.R.C.

Government investment was refocused on the coastal region in the middle and late 1970s as the international environment improved. Of the twenty-two large, imported, complete equipment projects in 1978, ten were situated in the coastal region, including large industrial construction projects such as Shanghai Baosteel, Nanjing Petrochemical Engineering, Qilu Petrochemical Engineering, etc.

2.1.3 Effects of the Regional Policy

The inland industrialisation was accelerated.

The balanced regional development strategy to accelerate the development of the inland region, backed up by the balanced production factor allocation theory of the former Soviet Union, was carried out after the founding of P.R.C. as a method to transform the national economic pattern which was over-focused on the coastal region, as well as to strengthen the national defence and preparedness for conflict. The channelling of heavy investment by the State (see table 2-1), the construction of a large number of infrastructure projects (railways, for example), and the completion and relocation of large and medium-sized key enterprises and scientific research

institutions laid a concrete foundation for the industrialisation of the inland region, greatly promoting its economic development. The gross industrial output of the inland region was increased from 30.6% to 39.1%¹² during 1952–1978, fundamentally altering the conditions left over by from old China in which industries and transportation facilities had been densely concentrated in the coastal region.

Table 2-1 Proportions of Infrastructure Investment in Different Regions from the First 5-Year Plan Period to the Fourth 5-Year Plan Period (%)

	Coastal Region	Total	Inland Region	Inland/Coastal
			Third Front Region	
First 5-Year Plan Period (1953–1957)	41.8	47.8	30.6	1.14
Second 5-Year Plan Period (1958–1962)	42.3	52.0	36.9	1.23
Adjustment Period (1963–1965)	39.4	58	38.2	1.47
Third 5-Year Plan Period (1966–1970)	30.9	66.8	52.7	2.16
Fourth 5-Year Plan Period (1971–1975)	39.4	53.5	41.1	1.36
1952 – 1975	40.0	55.0	40.0	1.38

Note: The total proportion of the coastal and inland regions was less than 100%, excluding rolling stock, ships and aeroplanes which were under a national unified purchase rather than regional investments.

Source: Lu Dadao et al., *China's Regional Development Report 1997*, Commercial Press, 1998.

The investment returns were not satisfactory.

However, the investment diversification in this period, especially in the Third Front construction period, also resulted in a sharp drop in investment returns. The infrastructure investment effectiveness across the nation (national income achieved by per unit of infrastructure investment) dropped from 6.12 during the first 5-year plan period to 4.4 during the fourth 5-year plan period, and that in the western region from 6.09 to 3.96.¹³ In a major indication of low investment returns, industrial production in the inland region was not developed as rapidly as expected – the gross industrial output of the region accounted for 36.9% of the national total in 1970, equal to the 1965 level, only increased by 2.1%¹⁴ in 1975, and achieved a rise of 0.1% in 1978. Another indication was that the growing disparities in the development of the eastern,

¹² Lu Dadao et al., *Theory and Practice of China's Regional Development*, Science Press, 2003.

¹³ Huang Sujian et al. (Ed.), *The Development of Western China and the Growth of Eastern and Central China*, Economy & Management Publishing House, 2001.

¹⁴ Ma Quanshan, *The History of Industrial Economy of China (1966–1978)*, Economy & Management Publishing House, 1998.

central and western regions hadn't been controlled. The per capita national incomes of the eastern, central and western regions in 1952 had been 116%, 99% and 72% of the national average, while in 1978 the numbers were 148%, 86% and 70%, which may indicate that capital input at the expense of economic benefit is not a way to fulfil the objective of bridging the regional gap.

2.2 Regional Policy Adjustments since the Late 1970s

China stepped into the era of reform and opening up in the late 1970s, when the economic system began to be gradually transformed from the highly concentrated planned economy to a socialist market economy, and the closed or semi-closed national economy was opened up in a comprehensive manner. In this period, with great adjustments in the relation between the central and local governments, local autonomy in economic development was remarkably improved, and local development capability was greatly enhanced. In the context of the reform and opening up, China's regional development strategy and regional policy have experienced fundamental changes.

Box 2-1 Definition of the Three Regional Fronts

First Front region: the 12 provinces, autonomous regions and municipalities directly under the central government in the northeastern and coastal regions, comprising Guangdong, Guangxi, Shanghai, Jiangsu, Zhejiang, Anhui, Fujian, Shandong, Beijing, Tianjin, Hebei and Liaoning.

Third Front region: a vast inland area of China to the west of the Beijing–Guangzhou Railway, the east of Wushaoling Mountain in Gansu Province, the south of the Great Wall and to the north of Shaoguan City in Guangdong Province, completely or partly covering the 11 central provinces and autonomous regions. To be specific, the Third Front region includes the entire areas of Sichuan, Guizhou, Yunnan, Shaanxi, Qinghai, Gansu and Ningxia, and the western parts of Hubei, Hunan, Shanxi and Henan.

Second Front region: the provinces between the First Front region and the Third Front region.

Small Third Front areas: regional Third Front areas are also located within the First and Second Front regions.

Source: Ma Quanshan, *The History of Industrial Economy of China (1966–1978)*, Economy & Management Publishing House, 1998.

2.2.1 The Economic Development Strategy of Coastal Areas

since the Late 1980s

The regional development strategy was reoriented from balanced development to unbalanced development or gradient promotion.

In 1978 Deng Xiaoping, then leader of China, pointed out that economic policies should allow some regions and some people to get rich first, so as to achieve a common prosperity of all the regions and people through the demonstration effect. The ideology of ‘early and later prosperity for a common prosperity’ significantly influenced the formulation of China’s regional development strategy and regional policy. Since the sixth 5-year plan (1980–1985), the State has accordingly adjusted the regional development strategy and the regional policy in terms of an overall development of the national economy, establishing the guiding ideology to focus on improving the macro economic benefits, clearly stating the principle of ‘giving priority to efficiency with due consideration to equality’ and thereby reorienting the regional development strategy from balanced development to unbalanced development or gradient promotion.

The coastal region was developed at a noticeably higher pace.

Through a series of opening up policies such as establishing special economic zones and opening coastal cities (see box 2-2), the directing of government investment towards the coastal region, as well as through preferential policies granted to the coastal region on retention of foreign exchange earnings, retention of financial revenues, tax exemption, bank credits, etc., the central government promoted the development of the coastal region ahead of others, building up a development pattern in which the coastal region took the lead in development and further propelled the development of the inland region. In 1988, considering the new situation in international economic development, the State put forward and implemented the economic development strategy for coastal areas in hope of encouraging these areas to vigorously develop an export-oriented economy, step forward into the international market and participate further in international exchange and competition. As a result the ratio between the infrastructure investment in the eastern region and the national total experienced a rise from 40.1% to 54.1% during 1978–1995, with direct foreign

investment accounting for 85% of the national total. Supports for the development of poverty-stricken and minority nationality areas was also increased at the same time.

2.2.2 The Coordinated Regional Development Strategy since the 1990s

In the 1990s, with the regional development disparities growing alongside the deepening of the reform and opening up policy and the enhancement of overall national strength, the Chinese government raised the promotion of coordinated regional development to a significant strategic level. In the outline of the eighth 5-year plan (1990–1995), it was clearly stated that the country would establish a balance between allowing the full play of regional advantages and national overall planning, between the coastal region and the inland region, as well as between developed areas and underdeveloped areas, and would promote regional economies towards the formation of reasonable division, unique competitiveness, complementary advantages and coordinated development. In the ninth 5-year plan (1995-2000), to ‘adhere to the coordinated regional development, and gradually reduce the regional development disparities’ was listed as one of the primary principles which must be followed in the economic and social development within a certain period in the future.

The national regional policy was adjusted in the following aspects to promote coordinated regional economic development:

- In addition to consolidating the opening up achievements of the coastal region, the State accelerated the opening up of the central and western regions, including establishing open economic zones in inland provinces such as Hubei and Sichuan, setting up port cities and border economic cooperation zones, opening up riverside and inland capital cities, and encouraging foreign investment in the central and western regions;
- The development of township and village enterprises in the central and western regions was given more support;
- To increase the support to poverty stricken areas, the State carried out the Seven-Year Priority Poverty Alleviation Program, and organised cooperation and counterpart assistance for poverty relief between poverty affected areas and developed areas.

2.2.3 Effects of the Regional Policy of the 1980s and the 1990s

The reform and opening up policy of the 1980s onwards gradually strengthened the function of the market mechanism in developing the regional economies, greatly increased the liquidity of production factors such as raw materials, capital, labour force, etc., and ended the situation in which most of the momentum for regional economic development was being injected by government investment. The local governments, who used to be simple receivers of national planning, were changed into economic entities with autonomous decision making powers, thus remarkably increasing their enthusiasm and initiative in developing local economies, and greatly enhancing their self-development capacity, which not only contributed to an unprecedented development of regional economies, but also developed regional economies into the most vital component of the national economy. Moreover, the strategy of promoting coordinated regional economic development and relevant policies in the 1990s also contributed to remarkable advance in rural poverty alleviation – the rural poor figures for China dropped sharply from 250 million to 26 million during 1978–2000.

The vigorous development of regional economies nevertheless did create new problems. First of all, the obviously unbalanced regional economic growth resulted in growing development disparities among the regions, especially between the eastern coastal region and the central and western inland regions (see table 2-2). Secondly, with the authority of local administrations in economy extended and local economic strength enhanced, the coordination of interests by the State among the regions was getting more difficult.

Box 2-2 Opening up Policies for Coastal Areas

Special and flexible policies were enacted in Guangdong and Fujian in 1979, granting the two provinces more autonomy in managing foreign exchange and financial revenues:

In 1980, the proposal to establish special economic zones in Shenzhen, Zhuhai, Shantou and Xiamen was approved at the Fifteenth Conference of the Standing Committee of the Fifth National People's Congress. The First Conference of the Seventh National People's Congress held in 1988 approved the establishment of Hainan Province and demarcated Hainan Island as the Hainan Special Economic Zone.

Fourteen coastal port cities comprising Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang and Beihai were opened up in 1984 to benefit from being a part of the policies for the special economic zones.

Fourteen economic and technical development zones were established one after another in the coastal region during 1984–1988, enjoying policies similar to those for the special economic zones (a number of new economic and technical development zones have been established in the coastal and inland regions since 1992, and so far there are 78 national economic and technical development zones across the nation).

Fifty-nine cities and counties (13 cities, 46 counties and 2 towns) in the Yangtze River Delta, the Pearl River Delta and the Xiamen–Zhangzhou–Quanzhou delta region in the south of Fujian Province were listed as coastal open economic zones in 1985. In 1988, in addition to enlarging the ranges of the open economic regions in the Yangtze River Delta, the Pearl River Delta and the delta region in the south of Fujian Province, the State Council further listed some counties and cities in the Liaodong Peninsula, the Shandong Peninsula and the Bohai rim region as well as the counties under the administration of the coastal open cities as coastal open economic zones, increasing the total number to 260.

The development and opening of the Shanghai Pudong area was approved by the State in 1990, and the Pudong New Area established benefits from the policies for the economic and technical development zones and some of those for the special economic zones. Shanghai Waigaoqiao Bonded Zone was established under the approval of the State Council in the same year, the first approved and established bonded zone since the founding of P.R.C. Thirteen more bonded zones including Tianjin Bonded Zone were successively set up by the State Council in the coastal region during 1991–1993.

Sources:

- 1) Wang Yiming (Ed.), *A Study on China's Regional Economic Policy*, China's Planning Press, 1998.
- 2) <http://www.cadz.org.cn/>

Regions in the 1980s and the 1990s

Indicator	Year	1980	1990	1995	2000
GDP	Central/Eastern	59%	54%	47%	45%
	Western/Eastern	40%	39%	47%	45%
Per Capita GDP	Central/Eastern	65%	60%	51%	53%
	Western/Eastern	53%	52%	42%	41%

Note: See regional divisions in footnote 2.

Source: China Statistical Yearbooks for the corresponding years.

2.3 Implementation of the Master Strategy for Coordinated Regional Development since the Beginning of the 21st Century

In the 21st century, the strategies of the Development of Western China, the Rejuvenation of Old Industrial Bases in North-eastern China, the Rise of Central China, and the Leading Development of Eastern China have been gradually developed into major components of the national master strategy for coordinated regional development (see figure 2-2 for detailed regional divisions of eastern China, central China, western China and north-eastern China).

2.3.1 The Strategy for the Development of Western China

In the latter half of 1999 the central government formally put forward the strategy of the Development of Western China.¹⁵ There was an important background to the strategy: as previously mentioned, despite considerably rapid national economic growth since the initiation of the reform and opening up policy, the growing development disparities between the coastal and inland regions, especially between the eastern and western regions, was a major concern in Chinese society. Following on from the rapid growth of production, China had stepped from being a shortage economy into becoming a 'buyer's market' which, coupled with the demand to extend the domestic market, also put the pressure on for a faster development of the vast

¹⁵ In addition to the nine western provinces mentioned in footnote 2, Chongqing, Guangxi and Inner Mongolia are further included in the Development of Western China.

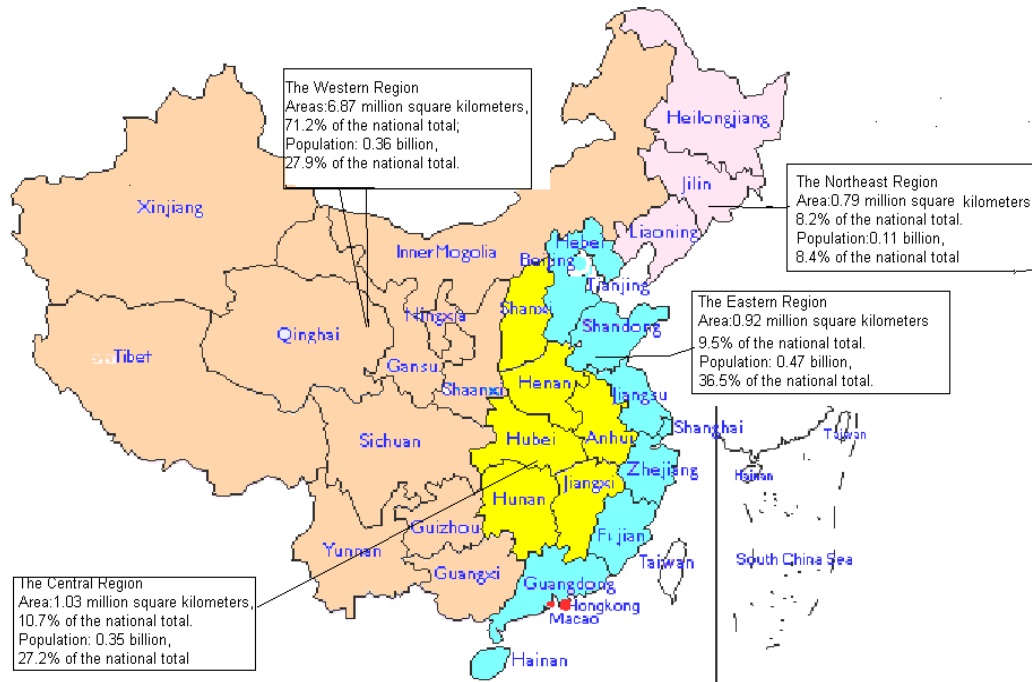
inland region. Meanwhile, the western region as a source area of the nation's major rivers still has a very fragile ecological environment, and therefore it is of great significance for the nationwide implementation of the sustainable development strategy to intensify the ecological protection and restoration of the region.

Since 2000, a host of preferential policies for the western region have been formulated across a wide range of aspects such as an increase of capital input, the deepening of external and internal opening up, the attraction of talent, the development of social undertakings in areas such as science, education and healthcare, the reform of state-owned enterprises, the growth of industries, the promotion of cooperation between the eastern and western regions, the strengthening of ecological environmental construction, etc. (see more details in Chapter 3). Though regarded as the third attempt by the State to accelerate the development of the western region since the 1950s and the Third Front construction period, the strategy of the Development of Western China is substantially different in both the development concept and objectives:

- The key fields for development are infrastructure construction and the protection and construction of an ecological environment, rather than the simple development of economic activities;
- Rather than subjectively 'embedding' a large quantity of industrial projects and pursuing an independent industrial system without taking account of the local development conditions, the strategy focuses on developing industries which are characteristic of and advantageous to the western region with its particular resource advantages and development foundations and includes tourism, hi-tech industries such as farming and animal husbandry product processing, traditional Chinese medicine, energy and mineral resource development and processing, equipment manufacturing, aerospace, etc.;
- Rather than simply pursuing economic growth, the strategy also puts emphasis on developing social undertakings such as education, healthcare, culture and social security, and highlights the cultivation of human capital;
- Instead of simply pursuing a higher economic growth rate of the western region and a smaller gap between the western and eastern regions in economic output, the strategy focuses on gradually reducing the disparity in per capita basic public services between urban and rural residents in the western region and those in the eastern and central regions. This is to be

carried out through an increase of the transfer payment from central finance and it is also one of the major objectives of the strategy.

Figure 2-2 The Eastern, Central, Western and North-Eastern Regions of China (population data from 2007)



2.3.2 The Strategy for the Rejuvenation of Old Industrial Bases in North-Eastern China

Old industrial bases in north-eastern China (the provinces of Liaoning, Jilin and Heilongjiang) used to be the cradles of China's industry. Despite a rapid economic growth of these bases after the reform and opening up policy, they were obviously not as important to the national economy as they had been. The proportions of the gross industrial output values of Liaoning and Heilongjiang were almost equal to those of Jiangsu and Guangdong at the beginning of the reform and opening up policy, while by 2003 they had dropped to only 34% and 14% of the latter, accounting for 4.3% and

2.0% of the national total, with Jiangsu and Guangdong seeing a rise to 12.7% and 15.1% in the national total (see table 2-3).

The industrial and economic development of these bases had lagged behind due to following reasons:

- Unreasonable economic structure characterised by a larger proportion of the economy being state-owned and less vitality in economic development;
- Economic recession triggered by resource exhaustion in cities with resource development as the leading industry such as Fushun and Fuxin in Liaoning Province;
- Obsolete technology due to a long-term absence of systematic transformation of production equipment;
- Enterprises overloaded with social burdens. It was a common phenomenon that current assets were tied up by a variety of tremendous, unproductive expenditures (such as the housing and medical treatment of employees) due to large numbers of retirees in most of the old state-owned enterprises;
- Serious unemployment. Under the pressure of market competition and structural adjustment the issue of recessive unemployment was magnified in this region, leading to a considerable increase in numbers of laid-off and unemployed workers.

Table 2-3 Gross Industrial Output Values of the North-Eastern Region and the Changes in its Proportion to National Total

	Gross Output Value (unit: RMB 0.1 billion)			Proportion to national total (%)		
	1980	1991	2003	1980	1991	2003
National Total	5177.8	28248	142271.2	100.0	100.0	100.0
Liaoning	451.4	1860.6	6112.9	8.7	6.6	4.3
Jilin	133.9	614.4	2662.3	2.6	2.2	1.9
Heilongjiang	250.6	983.7	2909.9	4.8	3.5	2.0
Total of the North-Eastern Region (Liaoning, Jilin and Heilongjiang)	835.9	3458.7	11685.1	16.1	12.2	8.2
Jiangsu	465.7	3160.3	18036.7	9.0	11.2	12.7
Zhejiang	213.6	1861.4	12864.2	4.1	6.6	9.0
Guangdong	250.4	2524.1	21513.4	4.8	8.9	15.1
Total of the Three South- Eastern Coastal Provinces (Jiangsu, Zhejiang and Guangdong)	929.7	7545.8	52414.3	18.0	26.7	36.8

Source: China Statistical Yearbooks, 1981, 1992 and 2004.

In order to promote the rejuvenation of the old industrial bases in the north-eastern region through institutional reform, structural updating and development environment enhancement, in 2003 the State enacted a strategy for the Rejuvenation of Old Industrial Bases in North-eastern China (see details in Chapter 3). The key elements of this strategy include accelerating institutional and system innovation focused on the reform of state-owned enterprises, boosting the optimisation of the industrial structure by developing modern equipment manufacturing, shipbuilding, automobile

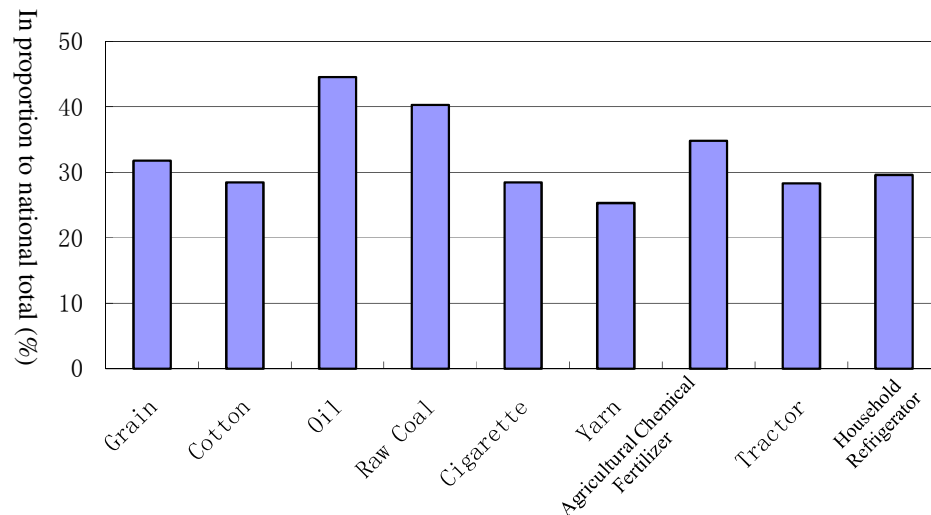
manufacturing, high-tech, modern service and other industries; opening up more widely to the outside by encouraging foreign and private capital to participate in the reform of state-owned enterprises and the disposal of non-performing assets. This aims at supporting the economic transformation of resource-dependent cities in terms of capital and policy, and supporting the construction of transportation, water conservation and other infrastructure projects. Relevant policies include a preferential policy on income tax for enterprises in the north-eastern old industrial bases, the exemption from outstanding historical taxes of enterprises in the north-eastern region, a value-added tax reform in the region, the release of central enterprises from social functions, the promotion of further opening up, etc.

2.3.3 The Strategy for the Rise of Central China

Central China is made up of the provinces of Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan and is located in the centre of inland China, a densely populated region which enjoys the advantage of being located at the junction connecting the east and the west, as well as the north and the south. An important major production region for grain, cotton and oil, as well as a key base for energy and raw material production and supply, the region also has a range of old industrial bases forming a large proportion of the traditional industry and covering an extensive range of fields, known for a number of famous brands and enterprise groups (see figure 2-3). However, troubles had coexisted alongside the rapid economic growth of the region since the reform and opening up policy:

- A long-acting mechanism to stabilise the grain production was not established yet, and the problems of agricultural development, rural construction and the increase of farmers' incomes became extremely serious;
- The industrial restructuring was arduous, and the third industry grew slowly;
- An enormous population, specifically the rural population, exerted increasing pressure on urbanisation, employment and the ecological environment;
- The disaster-resistant capability was not strong enough to cope with a high frequency of natural disasters.

Figure 2-3 A Large Proportion of National Agricultural and Industrial Product Outputs are From the Central Region (2008)



Source: China Statistical Yearbook 2009.

The strategy for the Rise of Central China was initiated in 2006, focusing on the following:

- Accelerating the building of national key grain production bases and the construction of a new socialist countryside;
- Strengthening the construction of energy and raw material bases, and encouraging the rejuvenation of old industrial bases and the transformation of resource-dependent cities;
- Developing industries capable of independent innovation such as modern equipment manufacturing and high-tech industries;
- Intensifying the construction of a comprehensive transportation system and enhancing the importance of this region as a traffic hub;
- Propelling trade circulation and the development of tourism;
- Reinforcing the development of human capital and upgrading public services to a higher level;
- Strengthening the construction of water conservation facilities, the treatment of water pollution and ecological construction, and enhancing the disaster-resistant and damage-reducing capabilities.

Many policies regarding the strategy are still being researched and formulated due to its rapid implementation. At present the 243 underdeveloped counties and the 26 resource-exhausted cities in the central region respectively follow the relevant policies for the Development of Western China and the Rejuvenation of Old Industrial Bases in North-eastern China.

2.3.4 The Strategy for the Leading Development of Eastern China

As the region with the most powerful comprehensive strength in China, the eastern coastal region enjoys a significant strategic position and plays an exemplary role in the nation's overall modernisation. The region takes the lead in enhancing the independent innovation capability, optimising and updating the economic structure, transforming the economic growth model, and perfecting the socialist market economy mechanism. To be specific, the strategy for leading development of eastern China is focused on:

- Enhancing the independent innovation capability, which means accelerating the formation of a number of proprietary intellectual property rights, core technologies and famous brands, and improving the industrial quality and competitiveness;
- Updating the industrial structure, which means giving priority to advanced manufacturing industries and high-tech industries, and focusing on developing intensively processed and high-end products. Accelerating the growth pace of the modern service industry, and building Shanghai into an international finance and shipping centre. Promoting the updating of trade processing, upgrading the level of the export-oriented economy, and enhancing international competitiveness;
- Regarding the growth model transformation and sustainable development, increasing the utilisation rate of resources, especially land and energy, strengthening the protection of the ecological environment, and improving the outlook for sustainable development;
- Regarding the spatial distribution, increasing further the role of special economic zones and Shanghai Pudong New Area, promoting the

development and opening of Tianjian Binhai New Area, and supporting the economic development of the western coastal area of the Taiwan Strait as well as other areas with a higher investment concentration, so as to lead the development of regional economies.

Box 2-3 Development Objectives of the Yangtze River Delta by 2020

By 2012: to further optimise the industrial structure and sharply increase the proportion made up of the service industry; to noticeably enhance innovation capacity and considerably raise the contribution of scientific and technological advances to the economic growth; rationalise the regional labour division and industrial distribution, and significantly improve the quality and degree of opening up; to bring the energy consumption per unit of GRDP (gross regional domestic product) below the national average, and contain the degradation of the ecological environment in key areas; to expand the social security system across the urban and rural areas, to further enhance the capability of providing public services, and to basically achieve the goal of building a moderately prosperous society in all aspects.

By 2020: to establish an industrial structure focused on the service industry and realise a coordinated development of tertiary industries; to promote scientific and technical innovations in key fields close or equal to the world-class level; to greatly strengthen the leading and supporting role of the region in economic development; to achieve a coordinated internal development and build up a spatial framework with reasonable division and various characteristics; to effectively control the total emissions of major pollutants; to reduce the energy consumption per unit of GRDP to close or equal to the world-class level and build an ecological environment where humans and nature can co-exist in harmony; to further upgrade the social security level and realise the equalisation of basic public services. Basically, to realise modernisation ahead of other areas in a more distant future.

Source: Guiding Opinions of the State Council on the Further Promotion of the Reform and Opening up as well as on Economic and Social Development in the Yangtze River Delta.

2.3.5 Establishment of the Interactive Regional Coordination

Mechanism

Since the beginning of the 21st century (in particular since 2003) the Scientific Outlook on Development has been an important guideline for China's economic and social development. Its key principle is to realise a people-oriented, comprehensive, coordinated and sustainable economic and social development. Regarding regional

development, it lays more stress on promoting coordinated development among regions and establishing an interactive mechanism for mutual promotion and an advantageous and complementary relation between regions. To build such an interactive regional development mechanism requires the completion of the market mechanism, as well as that of the cooperation mechanism, the mutual assistance mechanism and the support mechanism.

To complete the market mechanism requires further adjustment of the governmental functions to reduce the government's ability to directly interfere in resource allocation. It means giving full play to the functioning of the market mechanism, to reasonably guide foreign and domestic investment, industrial distribution and an orderly distribution of industries among regions whilst eliminating by steps the institutional obstacles hindering labour force and population flows between urban and rural areas as well as between regions, and enabling a rational agglomeration of labour force and population directed by the flow of capital, technology and industries. To put the cooperation mechanism into action means to encourage and support regional economic, technical and skill cooperation in various forms while maintaining effective regional competition. The present regional cooperation in China is carried out not only between adjacent regions for common interests and to enhance public administration, but also between the eastern, central and western regions for advantage complementation and a cooperative division of the labour force. More support will be provided by the central government to facilitate the regions in exploring more ways and methods of regional cooperation, and the planning coordination and policy guidance will be further enhanced.

To complete the mutual assistance mechanism means to continue with the counterpart assistance from developed areas to underdeveloped areas. So far there are counterpart assistance projects to the Three Gorges reservoir area, to poverty-stricken areas and to Tibet, Xinjiang and other minority nationality areas, as well as to the extensive earthquake-stricken area of Wenchuan. This takes the form of capital support for infrastructure construction to the aided party, cadre exchange, receipt and resettlement of migrant population from the aided party, guidance in the investment process for enterprises of both sides, organising labour training for the aided party, etc. The State will continue to adopt methods that enhance counterpart assistance planning to encourage and strengthen the counterpart assistance, create new means of assistance and to improve the performance of the assistance.

To complete the support mechanism entails the increase of support to underdeveloped areas in line with the principle of equalisation of public service provision. The State will give more support to the central and western regions in the aspects of economic policy, capital input and industrial development.

2.3.6 Formation of Development Priority Zones

The outline of the eleventh 5-year plan for National Economic and Social Development in P.R.C. (2006–2010) put forward a plan to divide the territorial space of China into development priority zones in four categories, namely optimised development zones, key development zones, restricted development zones and prohibited development zones, with an overall consideration of the future national population distribution, economic layout, land utilisation and urbanisation pattern on the basis of the bearing capacity of the resource environment, the present development density and the development potential. A plan for development priority areas and relevant policies is now under formulation.

Optimised development zones are those with a higher development density and a reduced bearing capacity of the resource environment such as the Beijing–Tianjing–Hubei region, the Yangtze River Delta, the Pearl River Delta, etc. By feasibly upgrading the industrial structure and transforming the development model, these areas are to be developed towards a higher level of participation in global labour division and competition, as well as towards a better quality of economic growth and more economic benefits, in the hope of fully playing the leading role in the national economic and social development.

Key development zones are those with a higher bearing capacity of the resource environment, as well as better conditions for economic and population agglomeration, such as the Liaodong Peninsula, the Shandong Peninsula, the south-eastern part of Fujian Province, the Central Shaanxi Plain, the Chengdu–Chongqing region, etc. These areas serve not only as bearing areas for industrial transfer from optimised development areas, but also as bearing areas for a population transfer from restricted development areas and prohibited development areas, and thus constitute major spatial carriers supporting the national economic development and population agglomeration.

Restricted development zones are those with a low bearing capacity of the resource

environment and poor conditions for economic and population agglomeration. These areas influence the ecological safety of the whole or large parts of the nation (see figure 2-3 for major restricted development zones). Viewed as a whole, most of these areas are national forest protection zones, areas for restoring farmland to forest or grassland, key water source protection areas, and areas suffering a severe shortage of water resources which influences the ecological safety of the whole or a large part of the nation. With the focus on ecological and environmental protection, these areas should appropriately develop characteristic industries which are in accordance with the bearing capacity of the resource environment and appropriately located, direct a gradual and orderly transfer of excess population, and gradually grow into national or regional key ecological function areas.

Prohibited development zones refer to a variety of legally established natural protection areas. These areas should be compulsorily protected by laws and regulations as well as relevant plans, so as to control the interference of human factors on the natural ecology and gradually develop these areas into key ecological function areas that guarantee the national ecological balance and improve the regional ecological environment quality.

Box 2-4 Counterpart Assistance between the Eastern and Western Regions for Poverty Alleviation

Eastern Developed Cities and Provinces (the Aiding Party)	Western Underdevelopment Cities and Provinces (the Aided Party)
Beijing City	Inner Mongolia Autonomous Region
Tianjin City	Gansu Province
Shanghai City	Yunan Province
Liaoning Province	Qinghai Province
Shandong Province	Xinjiang Uyghur Autonomous Region
Jiangsu Province	Shaanxi Province
Zhejiang Province	Sichuan Province
Fujian Province	Ningxia Hui Autonomous Region
Guangdong Province	Guangxi Zhuang Autonomous Region
Dalian City, Qingdao City, Shenzhen City and Ningbo City	Guizhou Province
Xiamen City and Zhuhai City	Chongqing City

Source: Cao Hongmin, The Strategy and Its Impact of Cooperation between Eastern and Western Regions in Alleviating Poverty, www.iprcc.org.cn/ppt/, Dec. 2007.

2.3.7 Effects of the Regional Development Strategy

In the 21st century, the establishment of the master regional development strategy and the implementation of policies such the increase of support to the western and central regions have actively contained the growing regional development disparities and bridged the regional gap in public services. For example, the average annual GDP growth rate of the western region during the period of the ninth 5-year plan (1996–2000) was 2.7% lower than the national average but in the period of the tenth 5-year plan (2000–2005) was sharply reduced to 1.7%, which indicates that the growing trend of economic growth disparity since the 1990s has been initially reversed. Moreover, there has also been a rise in the ratio of per capita GDP between the central and western regions and the eastern region in recent years (see table 2-4).

An increase of the governmental input into compulsory education, public health, social security, social aid, poverty alleviation and ecological protection of the central and western regions has resulted in remarkable achievements in advancing the equalisation of basic public services. Since the latter half of 2008, as an important measure to expand the domestic demand, the Government has further increased the input to the field of public services and the support to the development of rural areas, which will undoubtedly help bridge the gap in public service provision between the eastern and western regions.

Table 2-4 Comparison of Per Capita GDP among the Four Regions since 2001

		2001	2003	2005	2007	2008
Per Capita GDP (RMB Yuan)	Eastern	13395.8	17330	23696.8	32089.1	37022.9
	Central	5763.4	7125.0	10576.2	14745.4	17816.7
	Western	5183.0	6438.0	9163.0	13186.4	15950.9
	North-Eastern	9857.5	11857.9	15934.5	21538.1	25929.2
Taking Eastern Region as 100%	Eastern	100.0	100.0	100.0	100.0	100.0
	Central	43.0	41.1	44.6	46	48.1
	Western	38.7	37.1	38.7	41.1	43.1
	North-Eastern	73.6	68.4	67.2	67.1	70.0

Source: China Statistical Yearbooks for the corresponding years.

To establish an interactive mechanism for mutual promotion and advantage

complementation among regions is not only an institutional arrangement in the internal mechanism for coordinated regional development, but is also a significant part of the regional development master strategy, effectively guaranteeing its implementation. The establishment of such a mechanism constitutes an institutional foundation for promoting the optimised allocation of various resources and production factors, realising a free flow of population, and eventually equalising the per capita income and public services among regions. This strong focus on the establishment of development priority areas is a new method adopted by China to promote coordinated regional development. The present work will cover all the adjustments and completion of the existing policies in finance, investment, industry, land, population management and performance evaluation and assessment that are required by the establishment of development priority areas.

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Chapter 3 Definition of Regions and Regional Demarcation

3.1 Definition of Regions

A region is a spatial area that can be distinguished from others. It consists of land encircled with a specific boundary, the related resources within the area, its population, the economic activities and so on. Dividing the world into regions is not only a means by which human beings can know the world in terms of its spatial aspects and execute spatial management; the region is also the basic unit which constitutes the world or a particular spatial area in practice. Each method of demarcating regions represents a certain way of observing the world and thus unavoidably carries a certain background or purpose with it. Which means that regions and their demarcation are not objective facts, but highly subjective and purposeful imposed categories.

The regions most people are familiar with are administrative units demarcated for administrative management. Regions can also be defined otherwise, such as natural zones (regions) for people to understand nature, policy regions to solve specific development issues, economic regions mainly for the organisation of economic activities, and so on. Although infinite types of regions are possible to name, in practice there are only three basic types in terms of the method of demarcation, namely homogeneous regions, functional regions and administrative regions.

- Homogeneous regions are those defined according to common characteristics, such as natural conditions (climate, soil, vegetation, etc.), economic characteristics, political culture, etc. 'Homogeneous' here is not a term for absolute identity within a region, but rather a description of the degree of similarity. Climatic zones, agricultural regions, economic regions, 'problem regions', etc. are all typical types of homogeneous region.

●Functional regions are defined by mutual dependency or complementarity, wherein all elements collaborate to complete or realise a specific function. Typical functional regions include commuting districts and market districts in cities. Some regional concepts frequently quoted in academic circles and government departments, such as ‘city-region’, EMR (extended metropolitan region), metropolitan sphere etc. are also typical functional regions.

●Administrative regions are political regions whose demarcation is based on the power structure, historical inheritance and natural conditions (in terms of convenience in administrative management), and are characterised by a high degree of stability. For example, some county boundaries in China have barely changed for a thousand years. In addition, administrative regions usually have clearly defined boundaries; any changes can trigger enormous political or economic restructuring.

From the above definitions of region and demarcation of region we can conclude that region is a concept that exists on a variable spatial scale. Internationally, transnational spatial units such as the North American Free Trade Area (NAFTA) and the Association of Southeast Asian Nations (ASEAN) are sometimes called regions, while those domestic units composed by several provinces, or one province, or several cities can also be described as regions. Uniformity in regional scale should be specially noted in both state management (such as implementation of regional policies) and also when making international comparisons. Regions are by no means comparable if there is too much disparity in scale.

In addition to being useful, the demarcation of regions is bound up with political and economic mechanisms and cultural traditions. For example, regional divisions China made in the planned economy period, such as the six regions in the early period of P.R.C. and the ‘three fronts’ in the 1960s, are products of specific historical backgrounds – the market mechanism was not the rationale for such divisions. Influenced by the administrative system and the division of decision-making authority, regional demarcations in China at the state level are intended to maintain the integrity of provincial administrative units as much as possible. All the above should also be noted when making international comparisons.

3.2 Regional Demarcations in China

3.2.1 Introduction to the Administrative Divisions of China

Regional demarcations for the purpose of government administration in both China and the EU have to consider the integrity of administrative units. Therefore, a brief introduction to the administrative divisions of China is necessary for a better understanding of China's regional demarcations. At present mainland China (excluding Hong Kong, Macao and Taiwan) has 31 province-level administrative units (4 municipalities directly under the central government, 22 provinces and 5 autonomous regions. See figure 3-1), 333 prefecture-level administrative units (283 prefecture-level cities, 17 prefectures, 30 autonomous prefectures and 3 leagues), and 2,859 county-level administrative units (856 municipal districts, 356 county-level cities, 1,463 counties and 172 autonomous counties/banners).

The so-called 'province-level' is regarded as a rank in the administrative system, therefore independent of the scale of a region. That explains why, among the four Chinese municipalities directly under the central government, three (except Chongqing) are much smaller than the other province-level units. The areas of Beijing, Shanghai and Tianjin are 16,000 sq km, 6,300 sq km and 12,000 sq km respectively, while Ningxia, the smallest among the province-level units, occupies an area of 66,000 sq km. There is also a big gap between the province-level administrative units in population size. Contrary to Ningxia and Hainan, the two provinces with the smallest populations (6.01 million and 8.33 million), those ranking top all have populations of around 100 million, including Henan (101.79 million), Shandong (92.82 million) and Sichuan (87.23 million). If the population of migrant work force were included Guangdong's population would hit about 100 million. Therefore, it should be noted that compared to the standards of the EU's NUTS (Nomenclature of Territorial Units for Statistics), the scale gap between China's province-level administrative units is so big that it would adversely impact the formulation of an ideal regional policy, and attention will have to be paid by our EU partners when they try to understand the regional division mechanism of China.

Figure 3-1 Administrative Map of China



黑龙江 Heilongjiang
 吉林 Jilin
 辽宁 Liaoning
 内蒙古 Inner Mongolia
 北京 Beijing
 天津 Tianjin
 河北 Hebei
 山西 Shanxi
 山东 Shandong
 江苏 Jiangsu
 甘肃 Gansu
 宁夏 Ningxia
 陕西 Shaanxi
 河南 Henan
 安徽 Anhui

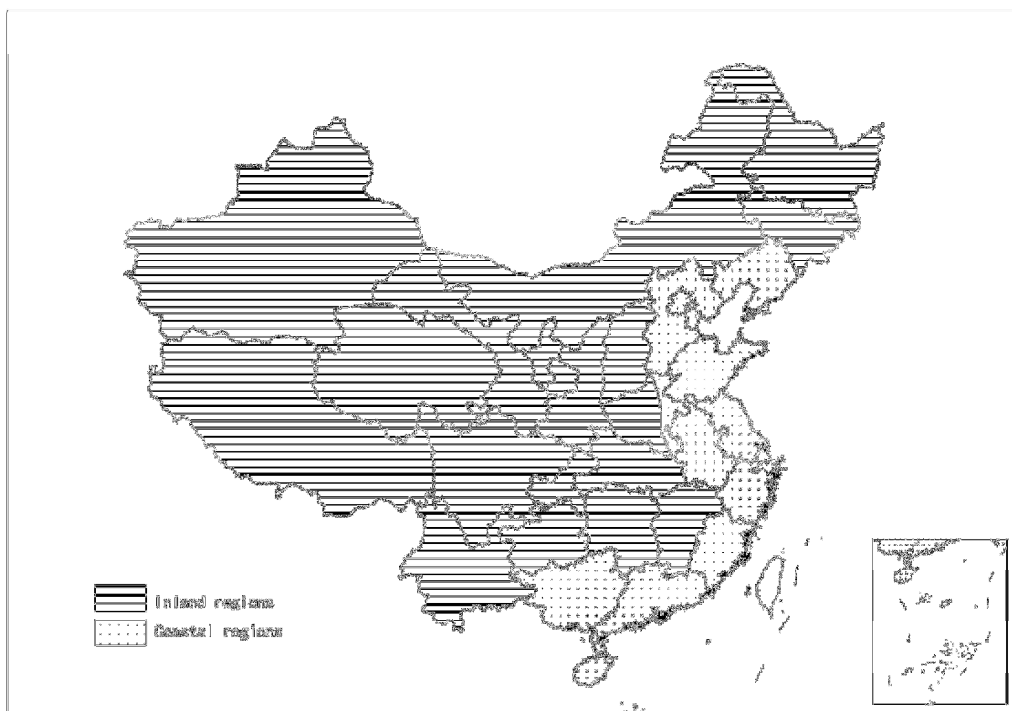
浙江 Zhejiang
 青海 Qinghai
 新疆 Xinjiang
 西藏 Tibet
 四川 Sichuan
 重庆 Chongqing
 湖北 Hubei
 江西 Jiangxi
 福建 Fujian
 湖南 Hunan
 贵州 Guizhou
 广西 Guangxi
 广东 Guangdong
 云南 Yunnan
 海南 Hainan

3.2.2 A Brief Review of China's Regional Demarcations Before the Reform and Opening up Policy

'Coastal–Inland' demarcation in the early period of P.R.C

It was in the period of the first 5-year plan that the concepts of 'coastal region' and 'inland region' formally appeared in the central planning documents of China to describe a spatial framework of the country for economic planning purposes. The major factors considered in the coastal–inland demarcation back then were the existing industrial foundations at that time, the need for a balanced regional development, and national defence. Most of the modern industries of China before liberation were distributed along the coastal areas, in the north-eastern areas and in a handful of riverside cities. During the three year period of economic restoration (1949–1952) the new government was determined to “change the unbalanced productivity distribution left over by the old China” by relocating a part of the factories into inland areas. It was stated in the first 5-year plan that “new industrial bases should be established in order to change the previous unbalanced regional layout”. The coast–inland demarcation of this period, however, is different from that of after the reform and opening up policy. The coastal region at the time included the 13 cities and provinces of Liaoning, Hebei, Beijing, Tianjin, eastern Henan, Shandong, Anhui, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong and Guangxi. The inland region referred to the 17 provinces of Heilongjiang, Jilin, Inner Mongolia, Gansu, Shaanxi, Shanxi, Qinghai, Xinjiang, Ningxia, Western Henan, Hubei, Hunan, Sichuan, Tibet, Guizhou, Yunnan and Jiangxi. See figure 3-2.

Figure 3-2 'Coastal–Inland' Demarcation in the Early Period of P.R.C.



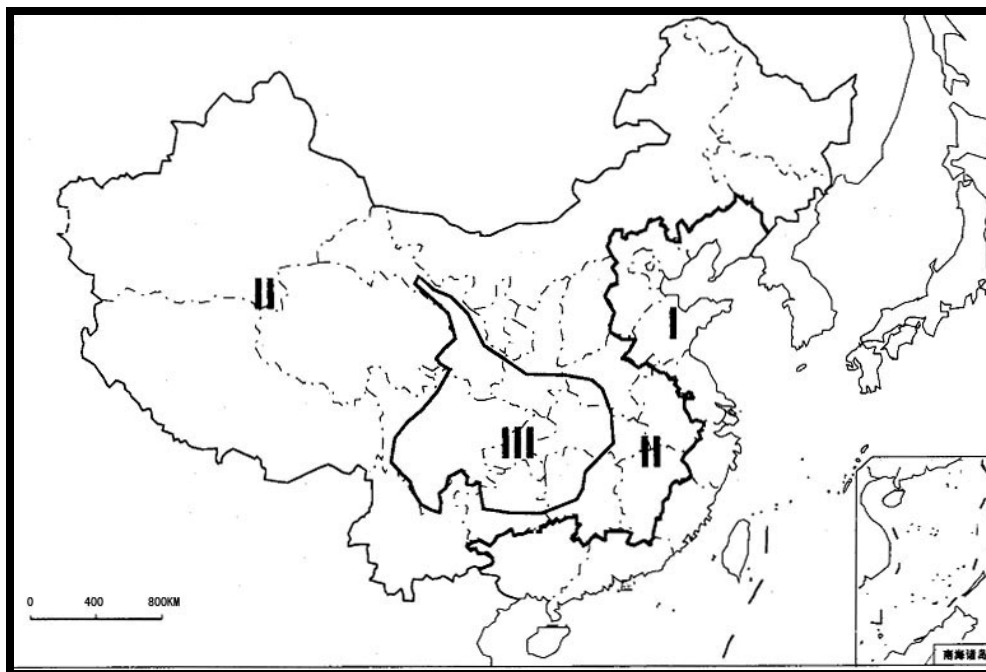
The coastal–inland demarcation was made to secure the industrial development of the coastal region while at the same time implement a planned focus on the inland region, that is to reduce the development disparity between the coastal and inland regions for a balanced regional economic development. This demarcation did, in fact, help the economic development of the inland region, and effectively balanced the national production distribution. On the basis of the demarcation the Chinese government adhered to a policy of taking the coastal industries as a springboard while vigorously developing the inland industries, and located industries close to raw materials and fuel production areas as well as consumption areas, which gradually changed the unjustifiable distribution inherited from the old China where industry had been highly concentrated in the coastal areas.

The Three Fronts in the 1960s

In the early 1960s, as the ties with the former Soviet Union weakened and the international political and military situations grew volatile, the Chinese government shifted the strategic focus from the construction of a national economy to national defence and related construction activities. To satisfy the demand for national defence

construction and national security, the coastal and inland regions were reshuffled into three new regions: the 'First Front', the 'Second Front' and the 'Third Front' regions. The First Front region consisted of the national strategic frontier areas including the eastern coastal areas and the north-eastern areas. The Third Front region was made up of the strategic hinterlands covering the three south-western provinces of Sichuan, Guizhou and Yunnan, the four north-western provinces of Shaanxi, Gansu, Ningxia and Qinghai, central south China (the western parts of Henan, Hunan and Hubei), south China (the northern parts of Guangdong and Guangxi), and north China (the western parts of Shanxi and Hebei). The Second Front region was those areas between the First Front region and the Third Front region, including Inner Mongolia, Xinjiang, Tibet and other border provinces. The demarcation of the three regions was not clearly defined, and to date no maps with distinct boundaries of the regions are available. See figure 3-3 for a sketch map.

Figure 3-3 Sketch Map of Three Fronts Regions



The Three Fronts strategy greatly promoted the economic growth of the inland region, especially the south-western and north-western minority nationality areas, further diluting the high concentration of industries in the coastal region. On the other hand, the Third Front construction was based on the rather weak national economy at that

time so it also sharply reduced economic efficiency. Many factories built in this period had to relocate to other places after the reform and opening up policy, as factors of national defence had been put above those of economic location when the factories were originally built.

3.2.3 'Coastal–Inland' and Three Zone Demarcations in the Early Period of the Reform and Opening Up Policy

A series of reform and opening up policies have been launched since 1978, with their implementation following a step-by-step pattern, beginning in coastal areas, then moving on to inland areas. Four special economic zones were established in 1980, followed by 14 coastal open cities in 1984. Meanwhile government investment was refocused away from the Third Front region and back towards the coastal region. The sixth 5-year plan requested that positive use be made of the relative strength of the coastal regions, “giving full play to their advantages and allowing them to lead the economic development of the inland region”. This depiction of the coastal regions as the foundation for development symbolised the initiation of a strategy tilted towards the coastal region. As a result, the coastal–inland demarcation once again became the most important regional demarcation of China in the period of the sixth 5-year plan (1981–1985).

Figure 3-4 Three Zone Demarcation of China



Different from the demarcation in the first 5-year plan, the coastal region in this period only included 12 cities and provinces with coastlines (see the eastern coastal areas in figure 3-4), namely Liaoning, Hebei, Beijing, Tianjin, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong, Guangxi and Hainan, of which Hainan is a province (special economic zone) newly established in 1988 under the approval of the central government. All other provinces than these 12 cities and provinces were defined as the inland region. The coastal region, the centre of China's economy, is where economy has grown fastest in China since the 1980s, as well as one of the regions with the most rapid economic growth in the world. The area covered by the 12 coastal cities and provinces is only 13.87% of the total area of China, while its GDP increased from 53.38% to 60.57% of the national GDP during 1980 - 2008, with the population rising from 42.21% to 43.64% of the national total (see Table 3-1).

The combination of a strategic tilt towards the coastal region and the reform and opening up policies did greatly increase the overall economic growth efficiency of China. However, as a result of the high economic growth rate of the coastal region, the imbalance in regional development was magnified and this placed a political pressure on the central government. From the mid-late period of the sixth 5-year plan,

government departments and academic circles were engaged in intense debates concerning the issue of regional development strategies. Several proposals were put forward, such as gradient promotion, a ‘leapfrog’ approach, spot-axle development, etc. To achieve a balance among these various voices as well as to lay the foundation for addressing the unbalanced regional development, the State put forward the ‘three zone’ demarcation, namely the eastern zone, the central zone and the western zone. According to the seventh 5-year plan, disparities in economic development level exist among the three zones – “in terms of the development of regional economies, it is necessary to balance the relationship well between the three economic zones. From the period of the seventh 5-year plan to the 1990s, the development of the eastern coastal zone should be accelerated, the construction of energy and raw materials industries should be focused on the central zone, and the development of the western zone should be very well prepared”. From the start of this plan till the end of the 1990s, the three zones were the primary regional demarcation of China.

Among the three zones (see figure 3-4), the eastern coastal zone corresponded with the coastal region in the coastal–inland demarcation, namely the 12 cities and provinces of Beijing, Tianjin, Shanghai, Liaoning, Hebei, Shandong, Jiangsu, Zhejiang, Guangdong, Guangxi, Hainan and Fujian. The central zone referred to the nine provinces of Heilongjiang, Jilin, Inner Mongolia, Shanxi, Henan, Hubei, Hunan, Anhui and Jiangxi, with an area accounting for 29.62% of the national total. The western zone included ten cities and provinces: Shaanxi, Gansu, Ningxia, Xinjiang, Sichuan, Guizhou, Yunnan, Tibet, Qinghai and Chongqing (a municipality directly under the central government which was established in 1997 under the approval of the central government), covering 56.51% of the total area of China. From 1980 to 2008 the GDPs of the central and western zones in proportion to the national GDP (see Table 3-1) declined, with that of the central zone declining from 31.78% to 26.19%, and that of the western zone from 14.84% to 13.24%. The population of the western zone, by contrast, saw a rise of 1.4% (from 21% to 22.4%) in proportion to the total.

Table 3-1 Land Area, Population and GDP of Different Types of Regions in Proportion to National Total

	Proportion of Land Area (%)	1980		1990		2000		2008	
		Population in % of total	GDP in % of total	Population in % of total	GDP in % of total	Population in % of total	GDP in % of total	Population in % of total	GDP in % of total
Coastal and Inland Regions									
Coastal Region	13.87	42.21	53.38	41.34	54.01	42.48	59.40	43.64	60.57
Inland Region	86.13	57.79	46.62	58.66	45.99	57.52	40.60	56.36	39.43
Three Zones									
Eastern Zone	13.87	42.21	53.38	41.34	54.01	42.48	59.40	43.64	60.57
Central Zone	29.62	36.80	31.78	35.76	29.89	34.81	27.02	33.97	26.19
Western Zone	56.51	21.00	14.84	22.90	16.10	22.71	13.58	22.39	13.24
Four Blocks									
Eastern Coastal Region	9.82	34.86	44.60	34.12	45.76	35.57	52.49	36.66	54.27
North-Eastern Region	8.33	9.31	13.94	8.72	12.02	8.44	10.02	8.31	8.62
Central Region	10.80	29.17	22.77	28.61	21.93	27.84	20.36	27.11	19.31
Western Region	71.05	26.66	18.69	28.56	20.29	28.15	17.13	27.92	17.80

Source: China Statistical Yearbooks for corresponding years.

3.2.4 Seven Economic Regions in the Mid 1990s

In the 1980s the growing imbalance in regional development, which was a result of the high-speed economic growth of the coastal region, aroused frequent criticisms against the strategic focus on the coastal region. Moreover, as contradictions and conflicts of interests among regions grew more serious, local protectionism once again began to prevail. To address these problems the central government began to prepare a coordinated regional development strategy in 1992. This was carried out in the thought that, over a dozen years of reform and opening up, a certain number of economic regions with tight connections had been formed, around which a reasonable economic layout should be built to promote a coordinated regional development. In 1996 it was stated in the outline of the ninth 5-year plan approved by the Fourth Session of the Eighth National People's Congress that "seven economic regions, regardless of boundaries of provinces, prefectures and cities, should be gradually established according to the laws of market economy, the internal economic relations and the geographical and natural characteristics and on the basis of the existing economic distribution, breaking through the limit of administrative divisions, and supported by central cities and vital communication lines". The seven economic regions were (see figure 3-5):

- Yangtze River Delta and areas along the Yangtze River: eight cities and provinces from Shanghai in the east to Sichuan and Chongqing in the west, as well as fourteen cities within the Yangtze River Delta and fourteen cities and eight prefectures along the Yangtze River.
- Bohai rim region: Liaoning, Hebei, Shandong, Shanxi, Beijing, Tianjin and seven leagues (cities) in central Inner Mongolia.
- South-eastern coastal region: Fujian and Guangdong.
- South-western China and part of south China: Sichuan, Guizhou, Yunnan, Guangxi, Hainan and Tibet, as well as Zhanjiang and Maoming in western Guangdong.
- North-eastern region: Liaoning, Jilin, Heilongjiang and four leagues (cities) in eastern Inner Mongolia.
- Five provinces in central China: Henan, Hubei, Hunan, Anhui and Jiangxi.
- North-western region: Shaanxi, Gansu, Ningxia, Qinghai, Xinjiang and three

leagues (cities) in western Inner Mongolia.

The population and GDP figures of the seven economic regions are listed in table 3-2. From the viewpoints of either the principle or the results of demarcation, the seven economic regions share characteristics of both the coastal-inland ‘type’ regions and the three zone ‘comprehensive economic’ regions, thus unavoidably leading to overlapping territories and unclear boundaries. For example, the territory of the Yangtze River Delta and areas along the Yangtze River partly overlaps with that of the central five provinces, as do the Bohai rim region and the North-eastern region (see figure 3-5).

At the time when the definition of the seven economic zones was about to be finished, the former State Development Planning Commission started the regional planning for each economic zone. Highlighting regional cooperation focused on infrastructure construction, the planning took into full consideration the reasonable development of resources, the stable development of the economy, social progress and the ecological environment and aimed at positively promoting the regional economies towards a coordinated and balanced development. Admittedly, the demarcation and planning of the seven economic regions still had strong planned economy features and they quickly stepped out of this stage as the process of reform and opening up gained momentum.

Figure 3-5 Seven Economic Regions



Table 3-2 Population and GDP of Seven Economic Regions in Proportion to National Total

Year	1995				2000			
	Population		GDP		Population		GDP	
	Unit: 10000	% National Total	Unit: RMB 0.1 billion (current price)	% National Total	Unit: 10000	% National Total	Unit: RMB 0.1 billion (current price)	% National Total
Bohai Rim Region	25973.9	21.44	14553.3	24.89	27272.0	21.54	24948.6	27.91
Yangtze River Delta and Areas along the Yangtze River	23575.5	19.46	15228.5	26.04	24837.2	19.62	25891.7	28.96
North-eastern Region	11529.1	9.52	6240.0	10.67	11850.7	9.36	10271.3	11.49
Five Provinces in Central China	31340.0	25.87	10798.6	18.47	31850.0	25.16	18147	20.30
South-western China and Part of South China	28890.6	23.85	9231.6	15.79	26238.4	20.73	12516.7	14.00
North-western Region	8948.6	7.39	2863.3	4.90	9546.4	7.54	4859.1	5.44
South-eastern Coastal Region	10802.9	8.92	7945.8	13.59	12849.3	10.15	14410.4	16.12

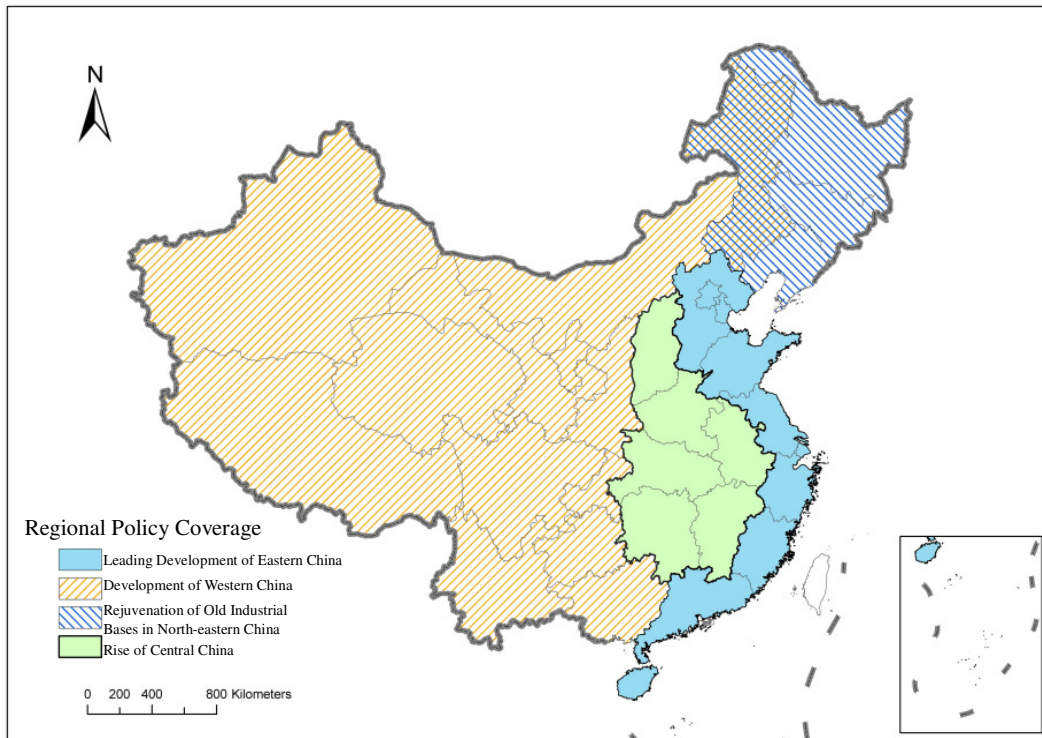
Remarks: overlapping exists, such as the areas alongside the Yangtze River and the five provinces in Central China (Anhui, Hunan and Hubei), the Bohai rim region and the north-eastern region (Liaoning), the Bohai rim region and the Yangtze River Delta (Zhejiang), the areas alongside the Yangtze River and the south-western region (Chongqing), etc., therefore the total sum of '% national total' is greater than 100.

3.2.5 Regional Demarcation in the New Century – the Four Blocks

Though the Chinese government had already come up with a strategic idea to promote coordinated regional development as early as the beginning of 1990s, no strategic

measures except for special measures such as the Poverty Relief Program had really systematically taken place since then, due to the preliminary development stage and the restraints on governmental finance. By 1999 the Chinese government was determined to start the Development of Western China: in 2003 the Rejuvenation of Old Industrial Bases in North-eastern China was launched followed, in 2006, by the Rise of Central China. Accordingly, a master strategy to promote coordinated regional development was clearly set out in the outline of the eleventh 5-year plan, specifying the development focuses of the various regions, namely to “further promote the development of the western region, rejuvenate the old industrial bases in the north-eastern region, facilitate the rise of central China, and encourage the eastern region to take the lead in development, so as to form a coordinated regional development mechanism with mutual complementation and healthy interaction among the eastern, central and western regions, as well as a development pattern in which the eastern region leads the western region into a faster development, and a common development is achieved between the eastern, central and western regions”. New regional divisions of China hence came into being, namely the coastal region (block), the north-eastern region (block), the central region (block) and the western region (block). As policy regions, these four regions (blocks) share overlapped areas with each other in scope, which means some areas can be entitled to two or more policies at the same time.

Figure 3-6 Four Policy Regions



Implementation and geographic scope of the Development of Western China

In 1999 the strategy for the Development of Western China was put forward, aiming to accelerate the development of the western region, promote national unity, social stability and border defence, and realise the coordinated development and common prosperity of the eastern and western regions. The major tasks specified in the outline of the tenth 5-year plan were “acceleration of infrastructure construction, carrying out the protection and construction of the ecological environment, development of local industries where conditions are favourable, and vigorous promotion of science and technology as well as education.” The Master Plan for the Development of Western China in the eleventh 5-year plan period further emphasised the promotion of equalisation of basic public services, in addition to the construction of infrastructure and the ecological environment, the development of industries with local features where conditions are favourable and the development of science and technology as well as education.

According to the Opinions on Implementing Some Policies and Measures for the Development of Western China which was issued by the Western Development Office of the State Council on 28 August 2001, the scope of western China encompasses ten cities and provinces in the western part of China, namely Shaanxi, Gansu, Ningxia, Qinghai, Xinjiang, Sichuan, Guizhou, Yunnan, Tibet and Chongqing, as well as Guangxi Zhuang Autonomous Region and Inner Mongolia Autonomous Region (see figure 3-6). The two autonomous minority regions, respectively located in the coastal region and the central region, can enjoy the policies of the Development of Western China to promote their development. Most of these 12 cities and provinces in western China number among those with the lowest per capita GDP in the nation, and are pressing for support from the central government. Western China occupies 71.05% of the nation's total area, while its population and GDP in proportion to the national totals were 28.15% and 17.13% respectively in 2000, and 27.92% and 17.80% in 2008 (see table 3-1).

To accelerate the development of autonomous minority regions, the Opinions further included Xiangxi Tujia and Miao Autonomous Prefecture in Hunan Province, Enshi Tujia and Miao Autonomous Prefecture in Hubei Province, and Yanbian Chaoxian Autonomous Prefecture in Jilin Province among the autonomous minority regions which were entitled to benefit from the policies of the Development of Western China, and requested the related departments of the State Council to give more consideration to these areas in their work, in line with relevant policies and measures. Furthermore, when carrying out the strategy for the Rise of Central China, the State Council approved that policies equivalent to those of the Development of Western China can be implemented for the 243 counties in the central region (see box 3-1).

Implementation and geographic scope of the Rejuvenation of Old Industrial Bases in North-Eastern China

North-eastern China is regarded as the cradle of Chinese industry. Among the 156 key projects in the first 5-year plan, 58 were located in the north-eastern region. It was the focus of government investment in the 5-year plans before the reform and opening up policy, occupying a large part of the state-owned economy. Precisely because of this heavy proportion of state investment made during the planned economy period, the region's economic growth lagged behind in the transitional process from planned economy to market economy driven by the reform and opening up policy. A growing

disparity with the coastal advanced areas has led to the shrinking of its significance in the national economy, hence the 'northeast China phenomenon'. Most of all, the long-term practice of a planned economic mechanism left the industrial enterprises in this region with backward technologies, obsolete equipment, the burden of an historical overload and an industrial structure difficult to transform. Meanwhile, resource-dependent cities had to face the prominent problem of resource exhaustion, and an unbearable pressure on social security.

To tackle the whole host of problems in the development of the north-eastern region, in March 2003 the State Council put forward the idea of accelerating the adjustment and transformation of old industrial bases in the north-eastern region. The Opinions on Implementing the Strategy of the Rejuvenation of Old Industrial Bases in North-eastern China was discussed in a State Council executive meeting on 10 September 2003 and approved in principle. In October 2003 the Opinions was formally issued by the State Council. At the initial stage only the three north-eastern provinces (Liaoning, Jilin and Heilongjiang) were involved in the strategy, but considering the historical relation between these three provinces and eastern Inner Mongolia, which is also an important energy supply base of the former, the Opinions unveiled by the State Council further included Hulun Buir City, Hinggan League, Tongliao City, Chifeng City and Xilin Gol League of Inner Mongolia in the coverage of policies of the strategy. Therefore the geographic scope of the Rejuvenation of Old Industrial Bases in North-eastern China is actually overlapping with that of the Development of Western China in the eastern five leagues and cities of Inner Mongolia (see figure 3-6).

The eastern five leagues and cities of Inner Mongolia, though covered by the strategy for the Rejuvenation of Old Industrial Bases in North-eastern China, are generally perceived as involved in the Development of Western China - at least within the National Development and Reform Commission (NDRC). In this way the region (the three north-eastern provinces) covered by the Rejuvenation of Old Industrial Bases in North-eastern China occupies 8.33% of the total national area, while its population and GDP in the percentage of national totals were 8.44% and 10.02% in 2000, and 8.31% and 8.62% in 2008.

Moreover, 26 cities in the central region have obtained the approval of the State Council that policies equivalent to the relevant policies for the Rejuvenation of Old

Industrial Bases in North-eastern China can be implemented. These cities are: Taiyuan, Datong, Yangquan and Changzhi in Shanxi Province, Hefei, Ma'anshan, Bengbu, Wuhu and Huainan in Anhui Province, Nanchang, Pingxiang, Jingdezhen and Jiujiang in Jiangxi Province, Zhengzhou, Luoyang, Jiaozuo, Pingdingshan and Kaifeng in Henan Province, Wuhan, Huangshi, Xiangfan and Shiyan in Hubei Province, and Changsha, Zhuzhou, Xiangtan and Hengyang in Hunan Province.

Implementation and geographic scope of the Rise of Central China

With the implementations of the Development of Western China and the Rejuvenation of Old Industrial Bases in North-eastern China, only six provinces in central China were left without support from special regional policies, which provoked a rising voice calling for a solution for the 'saddle'. Regarding the fact that the central region was inferior to the western region in terms of growth rate and the eastern region in terms of development level, in March 2004 Premier Wen Jiabao initially put forward in a government work report the task of promoting the rise of the central region. In March 2005 he once again urged in a government work report that plans and policies to promote the rise of the central region should be studied and formulated in a timely manner. The following points were highlighted: focusing on enhancing the construction of modern agriculture (especially key grain production areas) via giving full play to the favourable conditions in its location and the comprehensive economic advantages of the central region; intensifying the construction of a comprehensive transportation system and energy and primary raw material bases; accelerating the development of manufacturing industries and competitive high-tech industries; exploring the huge market in the central region and developing a large scale circulation network. The Opinions of the State Council on Promoting the Rise of Central China issued in April 2006 formally initiated the implementation of the strategy of the Rise of Central China, symbolising the preliminary formation of a strategic framework for coordinated regional economic development based on the four regions, namely the western region, the north-eastern region, the central region and the eastern coastal region.

Different from the central region as defined in the three zone framework, the strategy for the Rise of Central China covers only the six provinces of Shanxi, Henan, Hubei, Hunan, Anhui and Jiangxi, which occupy 10.8% of the total area of China. The population and GDP of the six provinces in 2000 accounted for 27.84% and 20.36%

of the national total, and dropped to 27.11% and 19.31% in 2008 (see table 3-1). Though not overlapping geographically with the other zones, under the approval of the State Council the central region has 26 cities and 243 counties, which enjoy the benefits of the policies of the Rejuvenation of Old Industrial Bases in North-eastern China or those of the Development of Western China.

The strategy for the Leading Development of Eastern China and its geographic scope

Following the initiation of the above three strategies, the eastern region was assigned with the strategic task of taking the lead in development. The strategy for the Leading Development of Eastern China was initially put forward as a part of the master strategy for promoting coordinated regional development set out in the eleventh 5-year plan, on the basis of a host of facts about the eastern coastal region in the recent 30 years since the reform and opening up policy, such as a rapid economic growth, a greatly enhanced economic strength, more prominent conflicts over the resource environment and a higher pace of economic globalisation. The central government didn't provide a clear demarcation of the region, but with reference to the definition of the eastern coastal region, Liaoning should not be excluded. However, in the practice of the policy execution bodies (NDRC, for example) the eastern region involved in the strategy only includes the ten cities and provinces with the highest populations and economic densities in China, namely Beijing, Tianjin, Shanghai, Hebei, Shandong, Jiangsu, Zhejiang, Fujian, Guangdong and Hainan. With the area accounting for merely 9.82% of the total area of China, the population and GDP of the ten cities and provinces in 2008 amounted to 36.66% and 54.27% of the national totals (see table 3-1).

3.2.6 Development Priority Zones under Formulation

In the outline of the eleventh national 5-year plan, which was approved in 2006, the State put forward the task of promoting the formation of development priority zones. A development priority zone is a spatial unit where a specific area is defined with a specific development priority on the basis of the bearing capacity of its resource environment, present development density and development potential. Development priority zones fall into four categories, namely optimised development zones, key

development zones, restricted development zones and prohibited development zones. These four zones are to be clearly demarcated at the national level and on the basis of our country's reality, taking into full consideration the nation's population and economic distribution, land utilisation and urbanisation patterns; and regional policies and evaluation systems should be adjusted and refined accordingly, so as to gradually form a regional development pattern with diversified characteristics. The demarcation of development priority zones is a new vision and strategic measure of our country in its quest to promote coordinated regional development.

Optimised development zones are those with a higher land development density and a reduced bearing capacity of the resource environment, such as northern parts of Beijing - Tianjin - Hebei, the Yangtze River Delta, the Pearl River Delta, etc. Key development zones are those with a rich per capita possession of available water and land resources, a higher bearing capacity of their resource environments, as well as good conditions for economic and population agglomerations, such as the Central Plain, the Central Shaanxi Plain, the Jiangnan Plain, the Chengdu - Chongqing region, etc. Restricted development zones refer to those ecological areas or agricultural areas, including natural forest protection zones, areas for restoring farmland to forest or grassland, and key water source protection areas and grain bases, which have a low bearing capacity of their resource environments and present unfavourable conditions for large-scale economic and population agglomerations, and which could impact the ecological security of the whole or a considerably large area of the nation. Prohibited development zones include various kinds of legally-established natural protection areas, such as state-level natural reserves, world cultural and natural heritage sites, key national parks, national forest parks and national geoparks.

Demarcation of development priority areas will be carried out at both the national level and the provincial level. The demarcation at the national level will not necessarily cover the whole area of the country while the demarcation at provincial level has to cover their full territories. A unified national standard consisting of ten criteria has been adopted for the demarcation, nine of which are computable indexes such as available land resources, available water resources, environmental carrying capacity, vulnerability of the ecosystem, ecological importance, risk of natural hazards, degree of population agglomeration, economic development level and

transportation dominance, and the only controlling index is the strategic consideration. The demarcation of development priority areas is still under formulation and hasn't come into a final plan yet.

To promote the formation of development priority zones needs the support of a series of policies.

1. **Financial and tax policies.** Central finance should be directed to restricted development zones and prohibited development zones, so as to provide financial support for the local governments to meet their public service responsibilities and to maintain the operation of government at the grassroots level, to compensate accordingly for the protection of the ecological environment, and gradually equalise the level of basic public services between the residents of these zones and those of the other two types of zones.

2. **Investment policy.** Government investment should be focused on intensifying the construction of public service facilities and managing the ecological environment in restricted development and prohibited development zones, as well as on supporting infrastructure construction in key development zones.

3. **Industrial policy.** The transfer and development of regional industries should be reasonably guided in line with the regionalisation of industrial policies.

4. **Land policy.** The planned, equal distribution method of land allocation in administrative regions should be terminated, and land policies in accordance with the development priorities should be carried out for an effective control and guidance mechanism.

5. **Population policy.** The settlement of immigrant populations into stable jobs and accommodation in optimised and key development zones, and the voluntary, steady and orderly emigration from restricted and prohibited development zones should be encouraged.

6. **Performance assessment policy.** For optimised development zones, more attention should be paid in performance assessment to economic structure optimisation, resource consumption and independent innovation while less attention should be paid to economic growth. For key development areas, the comprehensive performance of economic growth, quality efficiency and levels of industrialisation and urbanisation should be assessed. For restricted development zones, more consideration should be given to ecological protection and evaluation while less should be given to economic growth and levels of industrialisation and urbanisation. For prohibited development

zones the protection of ecological environment is paramount.

Despite the above measures and statements of intent, there are still some problems and difficulties in optimising the territorial development pattern by the means of development priority areas. For example,

- Whether such a way of demarcation is efficient depends on how the local governments weigh the balance between resource gaining and opportunity losing, rather than simply on administrative power. Regarding the planning content, the implementation of rigid plans requires not only relevant guarantee systems, but also coordination with existing plans, but this coordination work has yet to get legal support.

- Though important from either a scientific or a practical perspective, development priority areas are merely one, albeit key, part of spatial planning. A further requirement of good spatial planning is a reasonable layout of 'point', 'line' and 'plane', as well as an optimal grouping of the relations between these three. Although a clear embodiment of 'plane', development priority areas barely involve 'line' sets such as axes and corridors, or 'point' sets, and thus can hardly satisfy the basic requirement for a reasoned organisation of spatial structure.

- Because they cannot be completely overlapped with areas focused on by other regional policies, development priority areas have an unbalanced relationship with other regional policies. On the one hand development priority areas are far from equivalent to policy areas. For instance, poverty relief policies with income level as a measurement can hardly be embodied in the demarcation of development priority areas. On the other hand, some major special divisions, such as resource-exhausted city agglomerations, former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas, though regarded as the focus of other regional policies, are blind spots in the demarcation of development priority areas.

3.2.7 Special Divisions

Special economic zones and coastal and border open cities

The opening up policy of China has been gradually advanced from the coastal areas to

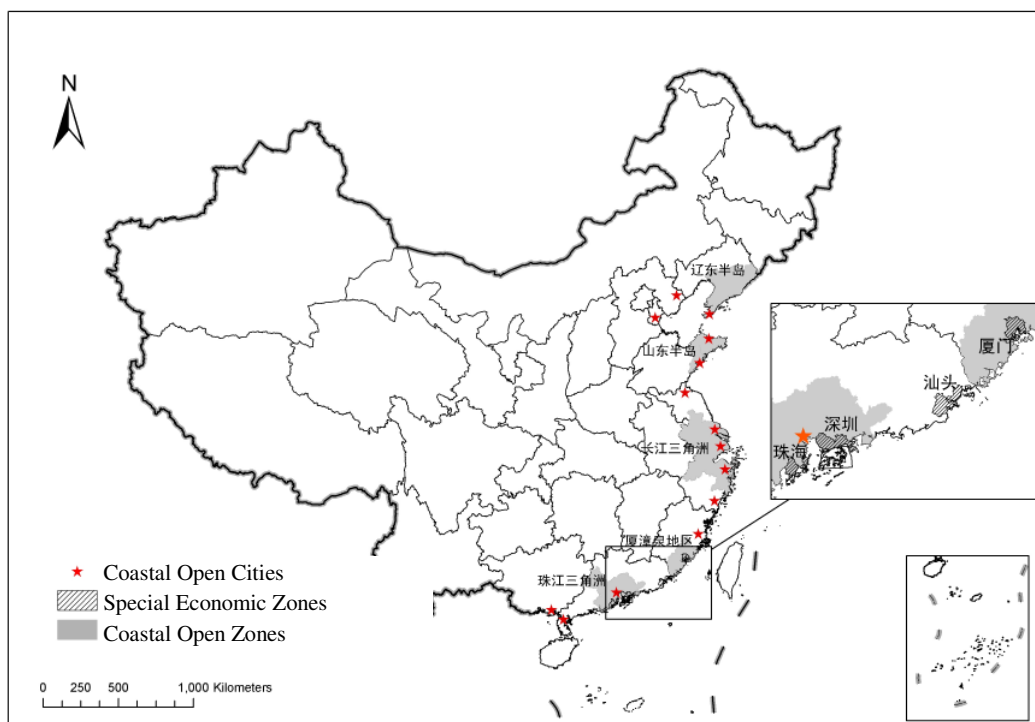
the inland areas since its launch in 1978. As a result, a general and multilevel opening up pattern has been established, accompanied by the foundation of a series of special economic zones, open cities and economic open zones.

- Special economic zones. In 1980, the central government decided to establish special economic zones in Shenzhen, Zhuhai, Shantou and Xiamen, practicing special economic policies and administrative systems in these zones in order to attract capital from overseas Chinese, Hong Kong, Macao and Taiwan, as well as from foreign investors, and giving permission to direct investment and joint ventures. In 1988, Hainan Province was included in the list of special economic zones, enjoying additional preferential policies to those from which it was already benefitting.
- Coastal open cities. In 1984, once the experience in special economic zones had been concluded, the central government decided to further open the 14 coastal port cities of Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang and Beihai (see figure 3-7), practicing in these cities some of the same policies as for special economic zones, such as empowering local authorities with more administrative rights and more competence for engagement in economic activities with foreign institutions; implementing more flexible policies and permitting preferential conditions for foreign investment, as well as establishing economic and technical development zones and introducing urgently-needed advanced technologies.
- Coastal open zones. Fifty-nine counties and cities in the Yangtze River Delta, the Pearl River Delta and the Xiamen - Zhangzhou - Quanzhou delta region were listed as coastal open economic zones in 1985. In the course of the three following years, the State frequently regulated the extent of the three open regions, successively opening more counties and cities. In line with the Economic Development Strategy for Coastal Areas, the Liaodong Peninsula, the Shandong Peninsula, the Bohai rim region in Hebei Province, and 140 counties and cities in Guangxi Province adjacent to the Beibu Gulf were accredited as coastal open economic zones (see figure 3-7).
- Border open cities. To develop economic cooperation with neighbouring countries, boost the economy of minority nationality regions and accelerate

the opening up of inland areas, some border cities (Yining City, Tacheng City and Bole City in Xinjiang Province, Pingxiang City and Dongxing Town in Guangxi Province, Wanding City, Ruili City and Hekou County in Yunnan Province, and Erenhot City in Inner Mongolia) have been opened one after another since 1992, enjoying policies which are intended to encourage investment and trade, as well as the privilege of being permitted to establish border economic cooperation zones.

- Opening of riverside and inland provincial capital cities. Following coastal and border open cities, three inland border cities (Urumqi, Xining and Kunming), five cities along the Yangtze River (Chongqing, Yueyang, Wuhan, Jiujiang and Wuhu), and fifteen provincial capital cities (Harbin, Changchun, Hohhot, Shijiazhuang, Taiyuan, Hefei, Nanchang, Zhengzhou, Changsha, Chengdu, Guiyang, Xi'an, Lanzhou, Xining and Yinchuan) have been opened since 1992. More cities along the Yangtze River, such as Huangshi, Yichang, Wanxian and Fuling, were opened in 1993/4. These riverside and inland capital cities enjoy the same policies as for coastal open cities, and each is allowed to establish an economic and technical development zone when ready.

Figure 3-7 Distribution of Special Economic Zones, Coastal Open Cities and Coastal Open Zones in China



- 辽东半岛 Liaodong Peninsula
- 山东半岛 Shandong Peninsula
- 长江三角洲 Yangtze River Delta
- 厦漳泉地区 Xiamen-Zhangzhou-Quanzhou Region
- 珠江三角洲 Pearl River Delta
- 厦门 Xiamen
- 汕头 Shantou
- 深圳 Shenzhen
- 珠海 Zhuhai

Poverty-affected regions

At the end of 1970s eighteen major, closely linked, poverty-affected regions¹⁶ were first identified. Since the establishment of the Impoverished Area Economic Development Leading Group of the State Council in 1986, the criteria for and the number of poverty-affected counties has been adjusted three times in order to specify

¹⁶ Qinling-Bashan mountainous region, Wuling Mountain region, Wumeng Mountain region, Dabie Mountain region, south-eastern Yunnan mountainous region, Hengduan Mountain region, Taihang Mountain region, Lyliang Mountain region, north-western Guangxi mountainous region, Jiwandashan region, Nulu'erhu Mountain region, Xihai region, Dingxi region, revolutionary base areas in south-western and north-eastern Fujian, northern Shaanxi revolutionary base area, revolutionary base areas in Jinggang Mountain and southern Jiangxi, and Yimeng Mountain revolutionary base area.

the application range and object of the national special poverty alleviation funds (see table 3-3).

It was in 1986, the early period of the seventh 5-year plan, that the criteria for and the number of poverty-affected counties were first broadcast. Three hundred and thirty-one poverty-affected counties were identified, according to the following standards:

- 1) Counties with a per capita net income in 1985 lower than RMB 150.
- 2) Autonomous minority counties (banners) with a per capita net income in 1985 lower than RMB 200.
- 3) Counties in old revolutionary base areas with a per capita net income in 1985 lower than RMB 300.
- 4) Counties (banners) in pastoral areas with an average per capita net income during 1984–1986 lower than RMB 300, and those in semi-pastoral areas of lower than RMB 200.

Table 3-3 Changes in Number of State-Level Key Poverty-Affected Counties

	Poverty-affected counties specified in the seventh 5-year plan	Poverty-affected counties specified in the eighth 5-year plan	Poverty-affected counties specified in the Seven-Year Priority Poverty Alleviation Program	Change in number
China	331	567	592	+25
Eastern China	47	74	72	-2
Central China	79	147	154	+7
Western China	205	346	366	+20

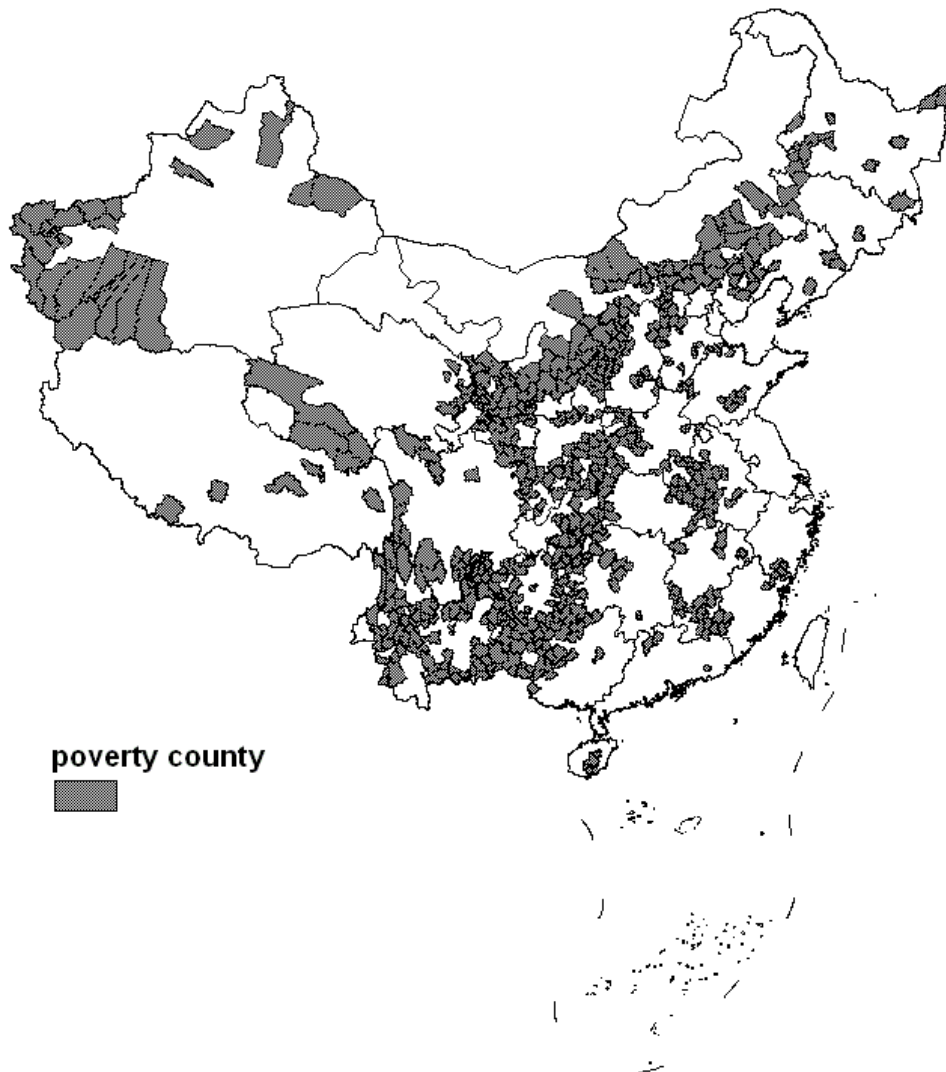
New criteria for and numbers of poverty-affected counties were issued in 1991. In addition to those existing poverty-affected counties, 236 counties with a per capita net income in 1990 lower than RMB 300 were accredited to enjoy a RMB 500 million special loan. In total there were 567 poverty-affected counties across the country enjoying key national support.

The criteria and numbers were once again adjusted and issued in 1993. Considering

the changes of the price index and cost of living index, the State adjusted the criteria for national poverty-affected counties according to the principle of 'four in and seven out when formulating the Seven-Year Priority Poverty Alleviation Program in 1993, namely to include counties with a rural per capita net income in 1992 of lower than RMB 400 in the list of poverty-affected counties, and to exclude from the list counties among the 331 national key poverty-affected counties defined in the seventh 5-year plan but with a rural per capital net income in 1992 of higher than RMB 700. This process increased the number of poverty-affected counties according to the national criteria from 331 in 1986 to 592 in 1992.

The 592 poverty-affected counties are distributed across 27 cities and provinces (see figure 3-8) and encompass over 72% of the national, rural, poverty-affected population. Provinces with a larger number of national, key, supported, poverty-affected counties are unexceptionally in the western region and include Yunnan (73), Shaanxi (50), Guizhou (48), Sichuan (43) and Gansu (41). The 592 poverty-affected counties account for 28% of the national total number of county-level units, while those in the eastern, central and western regions respectively account for 12.9%, 24.1% and 40.1% of the regional totals.

Figure 3-8 Distribution of Poverty-Affected Counties in China



To address the problems in the development of poverty-affected areas a financial poverty alleviation policy framework has taken form in China, combining comprehensive financial poverty alleviation and special poverty alleviation, and aiming to support the development of poverty-affected areas and groups. **Comprehensive financial poverty alleviation** refers to the promotion of the self development of poverty-stricken areas and populations through financial policies and measures which equalise basic public services, including various forms of regional

financial transfer payment systems, regional development and ecological protection policies, rural social undertaking guarantee policies, etc. **Special financial poverty alleviation** refers to special financial support measures in relation to national development-oriented poverty alleviation policies, including a development fund, a government job fund, an ethnic minorities development fund, a poverty alleviation fund for state-owned poverty-affected forest farms, a poverty alleviation fund for state-owned poverty-affected farms, an interest subsidy fund for poverty alleviation loans, etc.

The implementations of the Seven-Year Priority Poverty Alleviation Program (1994 – 2000) and the China Rural Poverty Reduction and Development Program (2001 – 2010) have achieved rapid economic growth in poverty-affected areas. However, the growing disparity between poverty-affected areas and other areas in economic and social development is not fundamentally controlled, reflected by huge gaps in per capita GDP, per capita income of farmers, financial revenue, etc. The per capita GDP, per capita net income of farmers and per capita revenue of the 592 poverty-affected counties in 2005 were less than 50% and equal to 52.9% and 1/6 of the national averages respectively, which indicates that the economic development of poverty-affected counties lags behind the national average by 15 to 20 years.

Resource-dependant cities

North-Eastern China is one of the regions with a high concentration of resource-dependent cities. When launching the strategy of the Rejuvenation of Old Industrial Bases in North-eastern China in 2003, the Chinese government was confronted with a prominent issue – the transformation of a resource-based economy. In the Several Opinions on Implementing the Strategy of the Rejuvenation of Old Industrial Bases in North-eastern China, which was issued by the State Council in October 2003, Fuxin, a city in Liaoning Province, was selected as a pilot city for such a transformation. Since then, the transformation of resource-exhausted cities has been made a priority of the strategy, the implementation of which is in the charge of the Leading Group Office of Rejuvenating the Old Industrial Bases in North-eastern China under the State Council. Obviously, the strategy for the Rejuvenation of Old Industrial Bases in North-eastern China has been the driving force behind the transformation of resource-exhausted cities, and has played an important role in setting up a policy platform for transformation.

Resource-dependent cities (areas)¹⁷ are the kinds of cities where the exploitation and processing of local minerals, forests and other natural resources are the leading industries. As suppliers of basic energy and major raw materials, resource-dependant cities have made outstanding contributions to the nation's economic and social development. Meanwhile, due to the absence of a long-term overall plan and the crisis caused by the exhaustion of non-renewable resources, many conflicts and problems have accumulated in the development of these cities, such as an unbalanced economic structure, a high number of unemployed and poverty-stricken people, a dominant presence of resource industries coupled with a weak growth of alternative industries, severe damage to the ecological environment, a higher pressure to maintain the social stability, etc.

To promote the sustainable development of resource-dependant cities and a coordinated development of regional economies, as well as to effectively tackle the international financial crisis, the State Council has selected and approved 44 resource-exhausted cities (see box 3-1), to which financial transfer payment funds are pledged by the central finance.

The sustainable development of resource-dependant cities is a world issue. Despite the successes of some countries¹⁸ in transforming resource-dependant cities, such transformation is even more complicated and difficult in China as the national macro political and economic systems are also in the midst of transformation. Advocated solutions to the issue include the economical and sustainable utilisation of natural resources, the reduction of adverse effects of resource exploitation decline on the regional development, updating and optimisation of the industrial structure to reduce the over-dependence on natural resources, addressing unemployment and poverty, completing the social security system and enhancing the ecological environment.

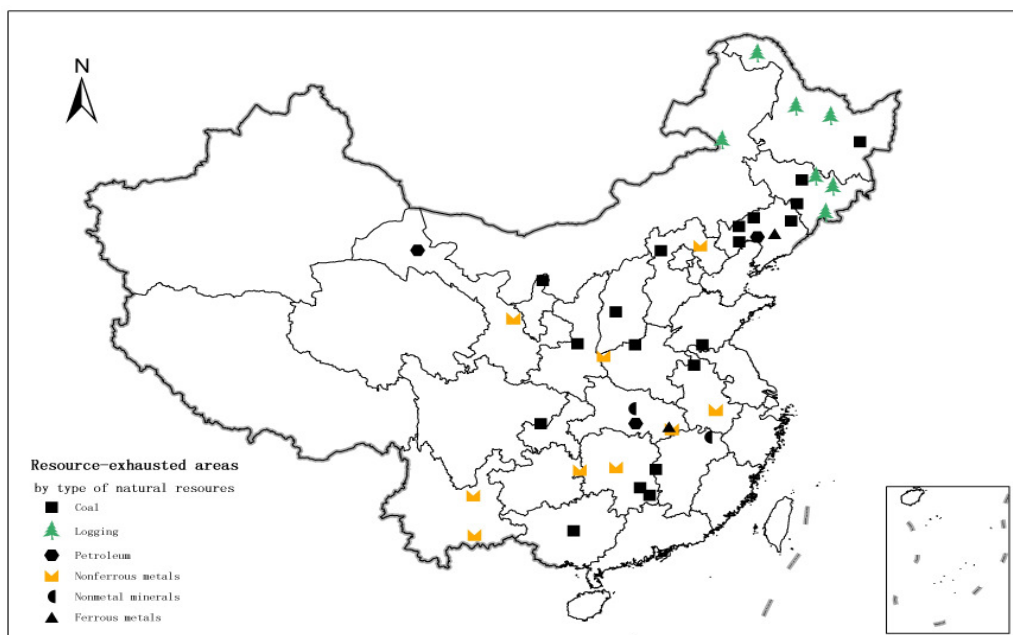
As one of the major pillars of implementing the Scientific Outlook on Development, the sustainable development of resource-exhausted cities has attracted profound attention and great efforts from the Chinese government. According to the State Council, the provincial governments should take an overall responsibility for the sustainable development of resource-dependant cities, so as to enhance the guidance and support on offer. The local governments of resource-exhausted cities should

¹⁷ Among the present 118 resource-dependant cities in coal, logging, petroleum and other types, there are 63 coal cities, 12 non-ferrous metal cities, 8 ferrous metallurgy cities and 9 petroleum cities.

¹⁸ Such as the Lorraine region of France, the Ruhr region of Germany, and the Kitakyushu region of Japan.

formulate and complete transformation plans, put forward specific programs for transformation and sustainable development, and clarify the thinking behind transformation programs and the selection of development foci and thereby explore a new path for economic transformation and sustainable development of resource-dependant cities across the country. The general and special transfer payments to resource-exhausted cities from the central and provincial finances have been intensified since they were finalised. To strengthen the support capability of resource-dependant cities in basic public service provision, financial transfer payments oriented to these cities have been established, focusing on accomplishing social security, education, health, environmental protection, infrastructure construction, interest subsidies for special loans, etc. Meanwhile, the effort towards compensating for resource exploitation, aiding declining industries, developing successive and alternative industries, and improving people's well-being is supported by the central and local governments in terms of preferential policies and capital.

Figure 3-9 Distribution of Resource-Exhausted Cities in China



Box 3-1 Determining the 44 Resource-Exhausted Cities

The first batch of resource-exhausted cities was finalised by NDRC and approved by the State Council on 17 March 2008, including the following 12 cities (area):

- ✧ three typical resource-exhausted cities in central China: Jiaozuo, Pingxiang and Dazhi.
- ✧ five pilot cities for the transformation of resource-dependant cities: Fuxin, Yichun, Liaoyuan, Baishan and Panjin.
- ✧ three typical resource-exhausted cities in western China: Shizuishan, Baiyin and Gejiu.
- ✧ one typical resource-exhausted area: the Greater Higgan Mountain area.

In March 2009 the State Council identified the second batch of 32 resource-exhausted cities (districts), including:

- ✧ nine prefecture-level cities: Zaozhuang in Shandong Province, Huangshi in Hubei Province, Huaipei and Tongling in Anhui Province, Qitaihe in Heilongjiang Province, Wansheng District in Chongqing (regarded as a prefecture-level city), Fushun in Liaoning Province, Tongchuan in Shaanxi Province, and Jingdezhen in Jiangxi Province.
- ✧ seventeen county-level cities: Wanshan Special District in Tongren Prefecture (Guizhou), Yumen in Gansu Province, Qianjiang in Hubei Province, Lingbao in Henan Province, Heshan in Guangxi Zhuang Autonomous Region, Leiyang in Hunan Province, Lengshuijiang in Hunan Province, Beipiao in Liaoning Province, Shulan in Jilin Province, Huaying in Sichuan Province, Jiutai in Jilin Province, Zixing in Hunan Province, Zhongxiang in Hubei Province, Xiaoyi in Shanxi Province, Wudalianchi (logging) in Heilongjiang Province, and Arxan (logging) in Inner Mongolia Autonomous Region.
- ✧ six municipal districts: Yangjiazhangzi Development Zone (Huludao, Liaoning), Yingshouyingzi Mining District (Chengde, Hebei), Nanpiao District (Huludao, Liaoning), Dongchuan District (Kunming, Yunnan), Gongchangling District (Liaoyang, Liaoning), Xiahuayuan District (Zhangjiakou, Hebei).

3.3 Inspiration and Suggestions Obtained from the Comparison of Regional Demarcations in China and the EU – Some Preliminary Ideas

- Regional demarcation is based on a nation's institutional background in politics, economy and administration. Without consideration of such background it is impossible to understand and learn from others in terms of their experience in regional demarcation.
- Regional demarcation is an important step in formulating a regional development strategy, and they are dependant on each other – without a long-

term regional development strategy (or strategic ideology), regional demarcation would be less stable and without practical importance, while without a reasonable regional demarcation, a specific strategy (measure) is impossible to implement. In other words, a regional development strategy and the regional management decide and are served by regional demarcation.

- The core purpose of the EU's NUTS is to acquire comparable statistical units (data) among the member countries. Without comparable figures among regions, the formulation of reasonable regional strategies and measures is out of the question. Statistical units at the present three statistical levels of China, namely the provincial level, the municipal level and the county level, are generally comparable, which eliminates the need for a new regional demarcation to achieve comparability among the units. However, the county-level statistics in China are far from perfect, lacking in comprehensive statistical indicators. To strengthen the county-level statistics is a major groundwork of our regional policy.
- The regional demarcation in China has changed frequently. In addition to a rapid social and economic growth and changes in the macro environment, one of the major reasons for the frequently changing regional demarcations in China lies in the absence of a definite, long-term regional development strategy – frequent adjustments to the regional development strategy have led to frequent changes in regional demarcations.
- The Chinese government should think about which basic level should be selected and used for considering and formulating regional strategies and policy measures. At present, provincial units are generally regarded as the basis for regional policy formulation. But is there a need to shift the basic level of regional policy formulation down to municipal or even county-level units, so as to reduce administrative layers in policy execution and more effectively protect the interest of subsidised groups?
- The demarcation of development priority areas which is presently carried out in China is mainly aimed at strengthening the implementation of the Scientific Outlook on Development, and on providing a favourable institutional and policy foundation for the local governments to change their current views of achievements (a unilateral pursuit of economic growth).

Virtually only one specific type of region, development priority areas, emphasises

coordination between a region's economy, politics and ecological environment. Whether such a demarcation can serve as a major framework to realise a coordinated regional development depends on specific measures and policies to be launched. Nevertheless, it is certain that the role of development priority areas in helping accelerate the economic growth of underdeveloped areas is not promising.

The optimisation of territorial development patterns by the means of development priority areas can gradually realise equal basic public service provision in many underdeveloped areas, but the need to help these areas achieve economic growth cannot be satisfied by this means. This does not, therefore, equate to being a regional development strategy that focuses on building a moderately prosperous society in all aspects, as well as promoting reasonable economic growth and employment in underdevelopment areas. Such a regional development strategy requires a second thought to the existing regional demarcations.

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Chapter 4 Economic and Regulative Orientations of Regional Policy

China's regional policy has been continuously enriched and improved since the founding of the P.R.C. in 1949, alongside the evolution of its economic development strategy. China's regional policy so far is the sum of the many policies promoting the coordinated regional development of China. In terms of the time sequence, as China's market-oriented reform has deepened and advanced the role and function of China's regional policy in regulating and controlling the nation's economic and social development has been continually reinforced.

4.1 The Role and Function of China's Regional Policy in the Government's Regulation and Control of Economic and Social Development

China's regional policy has passed through two stages with distinct characteristics since the founding of P.R.C in terms of the acting mechanism and the degree of effectiveness: that of the planned economy period during 1949–1978, and then that of the market-oriented system transformation period since 1979.

4.1.1 China's Regional Policy in the Planned Economy Period

The planned economy stage of 1949–1978 had three obvious features regarding resource allocation. Firstly, as the central government owned almost the entire power of resource allocation (from an overall point of view, centralisation is the basic characteristic of this period despite some short-term power delegation to the local governments), the autonomy of the local governments in resource allocation was limited. Secondly, from the aspect of the fiscal administration mechanism, to achieve a universal revenue and expenditure system the management and distribution of financial funds were under the complete control of the central government, and the

expenditure quota of each local government didn't bear any relation to its revenue: that is, each local government was not an economically independent entity. Thirdly, the power of the central government in resource allocation was scattered across economic administrative departments, which were responsible for the distribution layout of the enterprises under their jurisdiction across the country. For example, the textile ministry was responsible for the location of textile enterprises in different areas nationwide as were steel, chemical engineering and other sectors.

To summarise, China's regional policy in the planned economy period had the following characteristics:

- Interest relationship coordination among different regions was not necessary as they were not independent interest entities, which played down the role and function of regional policy;
- The economic administrative departments under the central government, particularly the industrial departments, determined the nationwide distribution of enterprises according to the development of individual industries and the requirements and features of distribution. Enterprises from different sectors were placed in a region according to their specific layout plans, and the collection of these enterprises thereby formed the region's economic characteristics.

4.1.2 China's Regional Policy in the Market-Oriented Transformation Period

China has been practicing the reform and opening up policy since the end of the 1970s, aiming to establish a socialist market economy system. There are several factors that have profoundly influenced China's regional policy framework during this period:

- More power in resource allocation has been delegated to the local governments who have, in turn, gone through a process of improving their resource allocation capabilities;
- A clearer financial relationship between the central and local governments has been built, in which the local governments are independent interest entities, and the economic interest relationships between the central and

local governments, as well as between the local governments, call for frequent negotiations.

- Regarding administration, the central economic departments, particularly the industrial administration departments, have been reorganised over time. The number of direct investments from the central departments has dropped sharply, while the number of projects invested in by enterprises directly has increased considerably. Factors influencing regional development have been greatly changed.

In this period regional policy has taken on an increasing importance, with a more and more significant function in coordinating the economic interests between the central and local governments as well as between the local governments. Moreover, the measures and methods for negotiating such interest relationships are varied, involving direct investment and projects, policies in finance and taxation, foreign investment and trade, credit and land, as well as legislative approaches.

4.2 Preferential Policies in the Four Regions of China

At present, different development strategies are practiced in the four regions of China, i.e. the eastern region, the central region, the western region and the north-eastern region, supported by relevant policies. The provinces covered by the four regions are shown in table 4-1.

Table 4-1 Provinces in the Four Regions of China

Region	Scope
China	31 cities, autonomous regions and provinces
Eastern region	10 cities and provinces: Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan.
Central region	6 provinces: Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan.
Western region	12 cities, autonomous regions and provinces: Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang, Inner Mongolia and Guangxi.
North-eastern region	3 provinces: Liaoning, Jilin and Heilongjiang.

4.2.1 Preferential Policies in Eastern China

Policies for special economic zones (Shenzhen, Zhuhai, Shantou and Xiamen): foreign-invested enterprises in such zones (including Sino-foreign joint ventures, Sino-foreign cooperative enterprises and wholly foreign-owned enterprises) should pay the business income tax at a rate of 15%. Manufacturing industries with more than ten years of operation period, once approved by the tax department, may be exempted from the business income tax for the first two profitable years, and entitled to half of the rate for the following three years (for enterprises with advanced technologies this period can be extended for another three years). Business income tax for enterprises with exported products accounting for over 70% of the output value in the same year may be collected at a rate of 10%. Their manufactured products, when exported, may be exempted from the export tariff and industrial and commercial consolidated tax. Imported raw materials, equipment and own-use office supplies necessary for manufacturing may be exempted from import tariff and industrial and commercial consolidated tax. Enterprises in special economic zones enjoy a lower land-use fee, and so on.

Preferential policies for coastal open cities mainly include:

— Foreign-invested manufacturing enterprises which qualify for consideration under the relevant regulations, once approved by the Ministry of Finance, may pay the business income tax at a rate of 15%

— For foreign merchants without offices in China, their dividends, interests, rents, disclosure fees and other incomes from the old urban areas (those areas of the 14 coastal cities that lie outside the economic and technological development zones), unless exempted from income tax according to relevant laws, should be taxed at a rate of 10%

— Own-use manufacturing equipment, building materials, vehicles and office supplies imported by foreign-invested enterprises for investment and any other additional investment should be exempted from tariffs and industrial and commercial consolidated tax

— Products manufactured by foreign-invested producers for export, unless restricted from export by the State, should be exempted from the industrial and commercial consolidated tax for production procedures

—Home appliances and vehicles imported by foreign businessmen working in foreign-invested enterprises for own-use, in reasonable quantities, should be exempted from tariffs and industrial and commercial consolidated tax. Moreover, projects listed in the Provisions of the State Council on the Encouragement of Foreign Investment may enjoy special preferential treatments.

Preferential policies for Shanghai Pudong New Area mainly include:

— Fiscal revenue of the area newly gained in the eighth 5-year plan period may be retained by the local government

— Business income tax of foreign-invested manufacturing enterprises in the area should be deducted and collected at a rate of 15%. Those with over ten years of business operation should be exempted from income tax for the first two profitable years and then for the following three years this should be collected at half of the rate

—Machines, equipment, vehicles and building materials which are imported into the Pudong area and are necessary for construction there may be exempted from tariffs and industrial and commercial consolidated tax, but should be strictly restricted for use in the area only. Equipment, raw and auxiliary materials, transport vehicles and own-use office supplies imported by foreign-invested enterprises in this area for production, as well as home appliances and vehicles for foreign businessmen, should be exempted from tariffs and industrial and commercial consolidated tax

— Foreign-invested energy and transportation projects, such as airports, harbours, railways, highways and telephones, should be exempted from business income tax for the first five profitable years, and taxed at half of the rate in the following five years.

4.2.2 Preferential Policies in Western China

Business income tax

— Domestically funded and foreign-invested enterprises in the western region that are engaged in the state-encouraged industries are taxed for business income at a deducted rate of 15%

— Business income tax and local income tax in autonomous regions are deducted or remitted respectively from domestically funded enterprises (regularly) and foreign-invested enterprises

— The policy of “tax exemption in the first two years and half deduction in the following three years” is enjoyed by domestically funded enterprises that invest in transportation, power, water conservation, the postal service and broadcast and television projects in the western region from start-up. The same reductions are offered to foreign-invested enterprises with a period of more than ten years of operation since the first profit-making year.

Credit loan

Bank loans as a part of national policy as well as concessional loans from international financial organisations and foreign governments, with no contradictions to the loan principle, should increase the proportion of loans granted to projects in the western region. More than 70% of concessional foreign loans in recent years have been directed towards the western region.

4.2.3 Preferential Policies in North-Eastern China

Pilot projects for the lifting of social functions from central enterprises

According to government policy documents of 2003, some old industrial base cities in north-eastern China should be selected as pilot cities for the lifting of social functions from enterprises, with the aim of gradually relieving key large enterprises of their social role. The social costs should be compensated by the central finance at an appropriate amount; and the issue of collectively owned factories operated by state-

owned enterprises should be properly resolved.

Social security

Funds are pledged by the central finance for social security undertakings in the three north-eastern provinces (Liaoning, Jilin and Heilongjiang), undertakings such as basic pension and medical insurance. For instance, the funds granted from the central finance to the three provinces regarding the above examples amounted to RMB 66.16 billion during 2003–2005, with RMB 36.93 billion as basic pension insurance allowances for employees, RMB 11.94 billion as living allowances and employment subsidies for laid-off workers of state-owned enterprises, RMB 6.71 billion as subsistence allowances for city residents, and RMB 10.58 billion as the funds for social security reform pilot projects.

Central investment

Investments from the central government are mainly focused on projects for industrial structure adjustment and the transformation of old state-owned enterprises, as well as high-tech industrialised projects.

4.2.4 Preferential Policies in Central China

In the central region 26 cities classified as old industrial base cities, including 16 in Shanxi, Hubei, Hunan and Jiangxi (4 in each) and 12 in Henan and Anhui (6 in each), are also entitled to the implementation of national preferential policies for the north-eastern region.

In the central region 243 counties have been selected for the implementation of the same national preferential policies as for the western region in investment allowance, development-oriented poverty alleviation, etc.

4.3 Supportive Policies for Poverty-Affected Areas

To help poverty-affected areas shake off poverty and achieve prosperity as rapidly as possible, 592 counties were selected by the central government in 1994 as the national poverty-affected counties that would benefit from priority for support from the State. The list was adjusted in 2001 (see table 4-2 for the numbers of poverty-affected counties in the provinces after the adjustment). All the counties in Tibet Autonomous

Region are also included as key poverty-affected counties to be supported by the nation, enjoying the same poverty-relief policies as for the counties in table 4-2.

Table 4-2 List of Key Counties Included in the National Plan for Poverty Alleviation through Development (592 in total)

Province	Number	Province	Number
Hebei	39	Hainan	5
Shanxi	35	Chongqing	14
Inner Mongolia	31	Sichuan	36
Jilin	8	Guizhou	50
Heilongjiang	14	Yunnan	73
Anhui	19	Shaanxi	50
Jiangxi	21	Gansu	43
Henan	31	Qinghai	15
Hubei	25	Ningxia	8
Hunan	20	Xinjiang	27
Guangxi	28		

Supportive policies of the central government mainly include:

4.3.1 Arranging Financial Poverty Alleviation Funds

Both the central finance and the provincial finance are required to include development-oriented poverty alleviation in the annual financial budget, as well as to increase this input with the years. The scale of projects where government offers jobs as a means of relief should be enlarged. Financial transfer payments should be intensified according to the actual financial difficulties of poverty-affected areas.

4.3.2 Reinforcing the Management of Financial Poverty

Alleviation Funds and Improving the Efficiency of Usage

Poverty Alleviation funds from the central finance should be applied mainly in key counties via the national plan for poverty alleviation through development, as well as in other poverty-affected areas in appropriate amounts. Financial poverty alleviation funds (including funds used to offer government jobs as relief) should be managed under special accounts. Fund allocation plans should be released to provinces,

autonomous regions and municipalities directly under the central government every year, and arranged by the local governments in an overall perspective in line with the plan for poverty alleviation through development. Financial poverty alleviation funds from the central and local governments at different levels must be transmitted to poverty-affected townships and villages according to the plan for poverty alleviation through development, and must be focused on improving basic production and living conditions and on building infrastructure.

4.3.3 Arranging Poverty Alleviation Loans

The Agricultural Bank of China should increase the total number of poverty alleviation loans year on year, focusing the loans on key poverty-affected areas to support industries which can propel an income increase of the poverty-affected population, such as farming and livestock breeding, labour-intensive industries, agricultural product processing and market circulation, as well as on infrastructure construction projects. Investment by various enterprises in projects in poverty-affected areas aimed at helping increase the incomes of poverty-stricken households should be actively supported, to a degree corresponding with project profits. With the security of capital safety guaranteed, the conditions for poverty alleviation loan programs in poverty-affected areas should be relaxed, and the loan periods should be appropriately prolonged in a manner corresponding to the industrial characteristics and the situation of each project. Micro-credit to individual households for poverty alleviation should be actively yet prudently promoted to support production in poverty-stricken households. Poverty alleviation loans should enjoy an across-the-board preferential interest rate, and the difference between the preferential interest rate and the benchmark interest rate should be subsidised by the central finance according to the actual figures.

4.3.4 Promoting the Development of Poverty-Affected Areas along with the Development of Western China

The implementation of the Development of Western China should be combined with the plan for poverty alleviation through development, to drive the economic development of poverty-affected areas. Projects of the Development of Western China

in the areas of water conservation, restoring farmland to forest and resource development should, all else being equal, give priority to poverty-affected. Road construction projects should be properly extended into poverty-affected areas, connecting poor counties with national and provincial trunk roads. As long as conditions permit, infrastructure construction projects in the western region should employ labour drawn from poverty-affected areas, so as to increase the cash income of the poverty-affected population.

4.3.5 Carrying out Targeted Poverty Alleviation among Party and Government Organs

The targeted contact and assistance between party and government organs and poverty-affected areas, as an approach to support the development and construction of poor areas and solve the poverty issue of China, should be given long-term importance. Such contact and assistance to poverty-affected or rural areas should be carried out throughout central and local party and government organs at all levels as well as by enterprises and institutions. Those bodies and enterprises with better conditions and higher capabilities should, as a practice of cadre fostering and training, continue to send cadres to selected areas for poverty alleviation, so as to carry out direct assistance in poverty-affected townships and villages in order to better and more practically offer help.

4.3.6 Organising the Counterpart Assistance for Poverty Alleviation between the Coastal Developed Areas and the Western Poverty-Affected Areas Successfully

Counterpart assistance between the coastal, developed areas and the western, poverty-affected areas should be enlarged, improved and intensified, on the basis of a comprehensive review of previous experience and in line with the plan for poverty alleviation through development. Governments of both parties should actively advocate and organise such counterpart assistance between schools, encourage and guide various forms of personnel exchange and communication at different levels and, most of all, promote mutual communication between and common development of

enterprises on the basis of mutual benefit and reciprocity.

4.3.7 Carrying forward the Fine Tradition of the Chinese Nation to Aid the Poor and Mobilise Society at all Levels to Help in Development and Construction in Poverty-Affected Areas

The role of Chinese society at all levels in development-oriented poverty alleviation should be exercised to include bodies such as democratic parties, industrial and commercial associations, mass organisations, colleges and universities, scientific and research institutions, the People's Liberation Army and the People's Armed Police. The conditions should be actively created to allow for the participation of non-governmental organisations in governmental poverty alleviation development projects. Through capital endowments enterprises can cooperate with non-governmental organisations to jointly participate in development-oriented poverty alleviation. Such capital endowments can be disbursed before tax and charged at cost according to relevant regulations of the State. Development-oriented poverty alleviation activities by non-governmental organisations should be normalised step by step. The efforts of overseas Chinese, associations and organisations in various forms to support development and construction in poverty-affected areas should be encouraged.

4.3.8 Organising International Exchanges and Cooperation Over Development-Oriented Poverty Alleviation

Efforts to win aid projects for poverty alleviation from international organisations and developed countries should be continued. To ensure a smooth implementation of such efforts the State should increase the proportion of supporting funds, and grant the supporting funds in full to local governments with real financial problems. Pertinent measures in accordance with the characteristics of poverty-afflicted areas should be taken to enhance the management of foreign aid projects. The economic benefits of foreign aid loan projects should be maximally increased, and the loan repayment capacity should be improved. Various channels and strategies should be adopted to

attract assistance and support from international non-governmental organisations towards development-oriented poverty alleviation in China. Exchanges with international organisations in relevant fields should be intensified, so as to learn from successful and innovative experiences and effective approaches adopted in the wider, international, society in development-oriented poverty alleviation, and to improve the relevant work efficiency and overall effects for China.

4.4 Differential Policies for Development Priority Areas in Different Categories

To accelerate industrialisation and urbanisation in suitable areas, and enhance the protection of ecologically vulnerable regions, in the Outline of the eleventh 5-year plan for National Economic and Social Development in P.R.C the Chinese government put forward the concept of dividing the whole country into four categories of development priority areas, i.e. optimised development areas, key development areas, restricted development areas and prohibited development areas. A specific division plan is now under formulation, and will initiate different policies for areas in different categories when unveiled. Such policies, as researched by relevant experts, will include the following:

4.4.1 Policy Orientations for Optimised Development Areas

Encouraging industry upgrading

High-tech industries, export-oriented industries and the modern service industry will be given priority in development. The development of industries with low resource consumption, presenting a low threat to the environment, high added value and a strong leading force will be guided, whereas industries with high resource consumption, serious environmental pollution, backward techniques and low added value and technical content will be strictly restricted. Standards for industrial efficiency in these areas will be higher and stricter than those in other areas.

Encouraging intensive use of land

Specific standards for land use indicators of industrial and commercial projects, such as investment intensity, plot ratio, building coefficient, land output benefits, land use

structure, etc., will be clearly stipulated and, if these standards are not met by land use applications of enterprises they will by no means be approved. A system in which an increase of land used for urban construction is linked with a decrease of land for rural construction will be rolled out.

4.4.2 Policy Orientations for Key Development Areas

Encouraging and supporting a faster industrialisation

Methods such as using financial budget funds, earmarked funds and lump-sum infrastructure subsidies will be strengthened to support infrastructure construction in key development areas, as well as to enlarge loan interest subsidies for infrastructure projects. The supply of land for construction will be appropriately and properly expanded, giving priority to projects which are concerned with the internal distribution of industrial parks, closely related to the local industrial development, capable of providing a larger amount of employment, and supportive to key industries. Land consolidation will be vigorously carried out to improve the supply potential of land for construction as well as farmland. Interregional farmland replacement, interregional farmland index transfer and other methods will be used to realise the relative stability of land in quantity and quality.

Encouraging and supporting a faster urbanisation

The settlement of the migrant population with stable jobs and accommodation in key development areas will be encouraged. With a stronger comprehensive management of the migrant population, public service provision will be equalised between the migrant population and the local residents. Input to the mobile population will be increased concerning medical treatment and public health, education and training, living facilities, etc. Government-invested prefabricated houses and other affordable housing will be built in greater efforts, the construction of low-rent social housing and the development of relevant service industries will be accelerated, and enterprises will be encouraged to provide housing welfare and seek to improve the housing of their employees.

4.4.3 Policy Orientations for Restricted Development Areas

Accelerating the establishment of an ecological compensation system

A special compensation fund for ecological benefits will be established, appropriated directly by the central finance and used for the ecological restoration and maintenance of restricted development areas. Beneficiary compensating efforts, specifically through interregional cooperation and counterpart assistance, will be refined. Approaches will be explored to charge directly benefited subjects at an appropriate rate, using the finance thus raised to enrich relevant ecological compensation funds. A beneficiary-compensating fund will be collected through channels such as water resource rates, water and electricity charges and income from tourism.

Selectively supporting the development of special and advantageous industries

Ecologically endowed areas that are suitable for industrial and population agglomeration will reserve specific space for use as industrial land for development of restricted development areas. Financial interest subsidies, investment allowances, treasury bonds, stocks, debentures and other means may be used to support the development of appropriate and advantageous industries.

4.4.4 Policy Orientations for Prohibited Development Areas

Specifying responsibilities of the central and local governments in managing natural reserves

The salaries of employees in national natural reserves and the day-to-day expenditure on the management of such reserves will be included into the central finance budget as soon as possible, so as not only to soften the economic pressure on the local governments, but also to suppress their interference. Vertical management of provincial governments with respect to natural reserves at the provincial level or below will be strengthened, and employee salaries and operational expenses will be included into the provincial finance budget, regarding which the central and western regions will be subsidised by the central finance.

Properly subsidising the local residents who serve the development priority

Residents who do not need to move out of the reserves will receive more support to basic public services such as social security, cultural education, medical treatment and health, information, technology, etc., and will be compensated for any loss in agricultural production and reduction in income due to their protection of key wild animal and plant resources as well as the natural and cultural heritage.

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Chapter 5 Promoting Regional Growth: Development Strategy and Regional Planning

5.1 China's Development Strategy and Regional Economic Growth

The reform and opening up of China put an end to the Forging Ahead Strategy of the planned economy period. Guided by the strategic concept of reform and opening up, China's development strategy has been adjusted according to the economic and social development conditions and problems emerging at different periods, and thus has propelled a rapid growth of China's regional economies.

5.1.1 Adjustments to the Strategy to Promote Regional Growth

In the 30-year 'rapid growth period' since the reform and opening up, China's strategy to promote regional growth has experienced a shift from an unbalanced development to a coordinated development.

Reform and opening up (the mid 1990s): the strategy of unbalanced development

In the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China which was held in 1978, it was clearly stated that the focus of work would be shifted towards socialist modernisation centred on economic construction. Since the regional development policies would give priority to accelerating development through further opening up, the strategy of gradient promotion or unbalanced development was therefore adopted. In line with the two strategic ideologies of Deng Xiaoping, i.e. "allowing some regions and people to get rich first to gradually realise a common prosperity" and the "two overall situations" (one was to accelerate the opening up of the eastern, coastal region for an earlier prosperity, and the other to accelerate the development of the central and western regions when the

eastern region was developed up to a certain level), through a string of opening up measures such as establishing special economic zones and opening coastal cities, a pattern in which coastal areas took the lead in development and further pushed forward the growth of inland areas was formed in this period. During 1978–1995, foreign capital absorbed by coastal areas accounted for 84.7% of the national total, with a remarkable increase of infrastructure investment in proportion to the national total. The average annual GDP growth of coastal areas during this period was 11.6%, 2.1% higher than that of inland areas. The leading development of coastal areas on one hand accelerated the reform and opening up of China and contributed to a sharp rise of the national economic strength; yet on the other hand, due to different development biases and conditions as well as other reasons, a growing disparity in growth rates between the eastern region and the central and western regions became more and more obvious.

Since the middle of the 1990s: the strategy of coordinated development

The transformation from the unbalanced development strategy to the coordinated development strategy has been spurred on since the middle of 1990s. To solve the major conflicts brought by the regional disparities, the strategy to promote regional growth has been adjusted according to Deng Xiaoping's conception of the "two overall situations", and pressing forward with the important decision to advance the regional development strategy and make it a major long-term principle to reduce the regional disparities. Since the mid 1990s more importance has been attached to the economic development of the central and western regions, and greater efforts have been made to control the growing regional disparities. With the Seven-Year Priority Poverty Alleviation Program issued and launched in 1994, and major policies such as the Development of Western China, the Rejuvenation of Old Industrial Bases in North-eastern China and the Rise of Central China unveiled in 1999, 2003 and 2005, a master strategy for a coordinated regional development has been initially established. Positive changes in China's regional development pattern took place during 1996–2009 as demonstrated by a smaller disparity in economic growth rate between the regions. The average annual GDP growth of the eastern region was 11.4%, while that of the central and western regions was 10.5%. Compared to the period of 1978–1995, the growth rate of the central and western regions was obviously accelerated, with the

disparity with the eastern region having dropped by 0.9%.

5.1.2 Characteristics of China's Regional Development Mode

More than 30 years of reform and opening up have not only achieved a flourishing growth of China's regional economies, but have also shaped a special regional development mode with the following characteristics:

Government-market mechanism

China is now in the midst of transformation from a socialist planned economy to a socialist market economy, during which shortcomings and missing parts of the market functions are most likely to be made up for by the government. Therefore the Chinese government is very important in regional economic development. China's regional economy has the following features: it is supported by certain administrative regions, based on certain territorial divisions of labour, and it is basically concerned with a reasonable spatial allocation of limited resources. The nature of these features determines that the development of China's regional economies calls for government regulation and control through formulation of relevant policies on the basis of the market economic system and in line with the objective requirements of production factor flow and interest relations. After several rounds of reforms led by the central government and aimed at sharing power with local governments, the autonomy of the local governments has been extended and the economic administrative authority of the local governments in regional economic development has been continuously strengthened, which helps the governments play an important role in local infrastructure construction and industrial development, and directly push forward the growth of regional economies.

Regional competition mechanism

In the context of China's current administrative system it is a common practice that higher levels of government conduct performance evaluations of next level government in terms of GDP, financial revenue, foreign capital absorption and other indicators. A certain degree of pressure for economic growth, created by such

evaluations of local government leaders, has effectively stimulated the initiative and enthusiasm of the local governments to speed up local economic growth. Evaluations and ratings of the economic and social development work of the lower-levels of government are also regularly organised by the higher-level government. As a result, to succeed in these evaluations and to develop their local economies, the local governments vie with each other to intensify their efforts in attracting investments, etc., thus forming a unique regional competition mechanism in China's regional economic development.

Box 5-1 Performance Evaluations in Guangdong Province

The 21 prefecture-level cities of Guangdong Province are divided into four categories, namely metropolitan development zones, optimised development zones, key development zones and ecological development zones, and are evaluated according to the development priorities. Metropolitan development zones, such as Guangzhou and Shenzhen, which lead the economic and social development of the whole province, are required to follow the example of international advanced cities and highlight the dominance of independent innovation in economic development. Evaluations of these cities are focused on their demonstrating and leading effects with respect to the provincial economy. Evaluations of optimised development zones such as Zhuhai, Foshan, Dongguan and Zhongshan, which are characterised by a developed economy, a dense population, a high intensity of development and high resource requirements, are focused on their optimisation of the economic structure and transformation of the development mode. The 12 key development zones such as Shantou, Huizhou, Shanwei, Qingyuan, Jieyang and Yunfu, with a well-formed economic foundation, a strong resource bearing capacity and considerable development potentials, are evaluated mainly on advances made in industrialisation and urbanisation. Ecological development zones, mostly including Shaoguan, Heyuan and Meizhou, are evaluated largely on their performance in protection of the ecological environment, soil erosion and water loss control, forest coverage, etc. Through such zoning, different categories are given different development requirements with different weights, which can effectively lead these development zones in a scientific development.

Flexible regional innovation mechanism

Another special feature of China's regional economic development mode lies in its flexible regional innovation mechanism. Under the prevailing administrative system sufficient administrative authority in the local social and economic development has

been granted to the local administrative leaders during the reform and opening up to lead to an adequate flexibility in the local economic development thereby enabling the local governments to make constant reforms, innovations and self adjustments. Such a mechanism, though seen as overly pragmatic by some, is undeniably effective.

5.1.3 Transformation and Challenges of China's Regional Development

Transformation of China's regional development

China's regional development has accelerated its transformation as a consequence of the Scientific Outlook on Development, breaking through the boundary of economic growth and extending into some other fields, such as improvement of people's well-being, ecological protection, etc. In recent years, to catch up with the transformation of the orientation of regional development, central finance has been actively converted into public finance – to balance the local financial strengths and promote the equalisation of basic public services among regions. The general transfer payment and special transfer payment from central finance to the central and western regions as well as the north-eastern region have been enlarged on a year-on-year basis, presently accounting for more than 50% of the total expenditure. Through inputting more capital to strongly support the extension of compulsory education, health, cultural and social security undertakings from the urban areas to the rural areas of underdeveloped regions, the equalisation of basic public service provision has seen remarkable achievements. Alongside accelerating economic growth, the local governments are putting more emphasis on ecological construction and environmental protection. Ideas such as 'clean GDP' and 'economic growth yes, but not at the expense of green mountains and clear water' have gradually become social consensuses. Restrictive benchmarks for energy conservation and emission reduction, as important indicators for evaluations, have been assigned to governments at all levels and to key enterprises, driving the local governments to further intensify their efforts in preventing and controlling air pollution, solid waste pollution and key river

basin and region pollution; to steadily advance key ecological projects such as natural forest resource conservation, the Beijing–Tianjin Sand Source Control Engineering, restoring farmland to forest, grazing land to grassland, and constantly seek to complete the local ecological protection systems.

Challenges facing China's regional development

The transformation of China's regional development has vigorously promoted a coordinated regional development and strongly backed up the construction of a harmonious, socialist, moderately prosperous society in all aspects in China. Nevertheless, the task of promoting a coordinated regional development still has a long way to go when some major problems in China's regional development are taken into consideration as well as existing institutional and structural conflicts which restrict coordinated regional development.

Large disparities in regional development

The large disparities in regional development are a major and long-standing problem in China's economic and social development, as well as a key issue to be solved by the regional development strategy and regional policies. Despite a smaller disparity in growth rate between the regions in recent years, the absolute disparities are still big and the unbalanced development is still pronounced. Regarding the disparity in per capita GDP, in years 1978, 2000 and 2009 the per capita GDP of the eastern region was respectively 1.8, 2.4 and 2.4 times higher than that of the western region, while the absolute disparity in per capita GDP between the two regions in the corresponding periods, RMB 203, RMB 7,120 and RMB 17,523 respectively, was obviously growing (see table 5-1). The per capita GDP of Chinese cities, prefectures and provinces in 2009 shows that the distance between the highest figure (RMB 77,556 from Shanghai) and the lowest figure (RMB 10,251 from Guizhou) is approximately seven times. Moreover, growing disparities between the eastern region and the vast central and western regions can also be seen in the level of public services, income of urban and rural residents, consumption standards, degree of marketisation, etc.

Table 5-1 Relative Disparity and Absolute Disparity in per capita GDP between the Eastern Region and the Western Region

	1978	2000	2009
Relative Disparity (times)	1.8	2.4	2.4
Absolute Disparity (RMB)	203	7120	17523

Source: *China Statistical Yearbooks* (2001 and 2007)

Difficulties still existing in the development of backward areas

Backward areas in China refers to underdeveloped areas in the central and western regions, resource-exhausted cities, as well as former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas. The difficulties of underdeveloped areas in the central and western regions lie in their weak economic development, sole reliance on investment for local economic growth, their still unformed industrial characteristics and their deviation from the virtuous track of independent economic growth. In recent years, with 2/3 of mines in China entering their aging period, 1/4 of the resource-dependant cities are confronted with resource exhaustion that, due to an economic overdependence of these cities on resource exploitation and processing and a backward development of new and substitute industries, has led to serious problems of unemployment and low living standards. In former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas, a weak economic foundation and insufficient financial resources have resulted in a shortfall of basic public services – some areas still have difficulties in education, medical treatment, transportation and clean drinking water, and are denied access to television and broadcast networks. Worse still, these backward areas mostly have fragile ecological environments, which means that their development is highly constrained by the resource environment.

Seriousness of disorderly regional development and repeated

construction of low-level, polluting, resource-dependent projects

At present problems such as disorderly and isolated regional development in China are serious, and the distribution of national productivity is not reasonable in general.

- Heavy administrative blockades and barriers hinder the free flow of production factors. Trade barriers in China have been taking more concealed forms in recent years, often taking technical standards as an excuse. This poses a serious threat to the regional development of China as it directly leads to economic decentralisation and separation, and greatly sets back the development of an interregional division of labour and exchange.
- In the pursuit of GDP growth without regard to the local resource environment conditions and comparative advantages, many local governments compete with each other to launch resource processing projects with high consumption and high pollution, which has ultimately led to severe resource damage and environment pollution.

The disorderly development and the repeated construction of low-level, polluting, resource-dependent projects among regions has not only increased the burden on the resource environment, but has also directly hindered the expansion of economic regions and the coordinated development among regions.

5.2 Positive Effects of China's Regional Planning on Regional Economic Growth

5.2.1 Role of China's Regional Planning

So far a planning system mainly consisting of master planning, special planning and regional planning has been basically established in China. Master planning refers to those plans compiled by the central and local governments every five years to guide the national economic and social development, namely national plans for economic and social development. Regional planning is a comprehensive policy framework formed under the coordination of all the governmental departments, reflecting the intention and policy direction of the government for spatial development, and serving as a major method of the government to implement the regional development strategy and promote regional economic growth. Regional planning not only lays the

foundation for formulating long-term national plans for economic and social development, but also provides special plans (urban and rural plans, master plans for land use, etc.) with a basis for macro regional economic development. For over 60 years, since the founding of P.R.C., regional planning has played a decisive role in regional economic growth.

5.2.2 Transformation of Regional Planning and Effects in

Promoting Regional Growth

China's regional planning prior to the reform and opening-up policy

Regional planning in the P.R.C. before the reform and opening up policy was to support economic construction or, to be more specific, to support the construction of industrial projects. As the major task of national economic construction back then was to realise industrialisation and large-scale resource development. The construction of industrial bases called for comprehensive distribution and regional planning was given the core content and objective of “shaping the internal structure of industry-based regional productive complexes and arranging regional organisations” or, in other words, of taking a reasonable industrial and urban distribution as the major task, of implementing infrastructure constructions for particular regions in specific areas, and of carrying out technical and economic appraisals of the overall productivity distribution. As a result, ‘comprehensive planning for industry-based regional construction’ became the main tenet of China’s regional planning in the centralised planned economy period. In the three years before the second 5-year plan, a period when large-scale infrastructure construction hotted up across the country, regional planning was extended into more regions to meet the needs of the situation, and thus played an active role in the socialist construction.

Transformation of China's regional planning

With great changes in the internal and external environments of China’s regional development since the reform and opening up policy, especially since the 1990s, China’s regional planning has speeded up its transformation in the following aspects to realise spatial management as well as to respond to changes of the external environment:

With a greater influence of the market mechanism, a large part of

regional planning is transformed to guided and spatially prescriptive regional planning.

With the evolution of the market economy system since the reform and opening up, the influence of the market on resource allocation has become more fundamental, and has also grown with respect to regional planning. As the market economy develops the operational autonomy of enterprises has been increased, the capital source has been diversified, the planned allocation of production factors has been gradually transformed into a market-oriented allocation, and the most part of regional planning has been changed into guided regional planning. With their authority in examining and approving investment and construction projects thus weakened, the competent development planning departments, who used to be ignorant of spatial planning, have had to refocus and to enrich regional plans with spatial considerations.

The field of regional planning is expanded from traditional urban physical spaces to city economic zones, urban systems, city agglomerations and city and countryside integration.

The strategy to balance urban and rural development has given a new meaning to regional planning. City and countryside integration has become not only the basic target of regional planning research, but also a key objective of the government in regulating and controlling regional development.

The objective of regional planning is transformed from simply one of promoting economic growth to achieving a coordinated development of the economy, society and the environment.

The overall reform to complete the socialist market economy system was launched with the Scientific Outlook on Development. Critical reflection on the years of the road of reform and opening up pointed out that more coordination and guidance on regional development was required. Under the guidance of the Scientific Outlook on Development China's regional planning is accelerating its transformation from holding the single objective of promoting economic growth to that of having multiple targets and of achieving a coordination between development of the economy, society and the environment. This has led to some priorities being dropped while other, newer, ones accordingly and gradually have come to enrich planning with content such as the protection of ecological environments, population mobility, employment,

social progress, local culture and the quality of life of residents (see table 5-2).

Table 5-2 Transformation of China's Regional Planning and Major Changes in Content

Transformation Period	Major Content	Feature	New	Abolished
Planned Economy Period	1. Development of mineral resources; 2. Construction of industrial bases; 3. Agricultural regionalisation; 4. Transport infrastructure construction; 5. Urban scale and distribution; 6. Power supply and telecommunication systems; 7. Water supply and drainage facilities; 8. Comprehensive use of water resources; 9. Greening measures such as building shelter belts; 10. Supply of building materials and distribution of construction sites; 11. Development of agriculture in city suburbs and distribution of state farms and equipment and tractor stations.	Focused on development of productivity		
Planned Commodity Economy Period	1. Comprehensive development and utilisation of resources; 2. Structure and comprehensive distribution of industries; 3. Construction and distribution of transport infrastructure; 4. Population distribution and urbanisation; 5. Comprehensive development and utilisation of water resources; 6. Key development areas; 7. Land utilisation and reclamation; 8. Environmental protection; 9. Policy measures.	Regional development objectives are often bound up with regional economic growth.	Planned commodity economy 6, 7, 8 and 9	Items 7, 9 and 10 in the planned economy period
Transition to Market Economy Period	1. Development, utilisation and protection of water, land and mineral resources; 2. Leading industries and new economic growth sources; 3. Construction of transport infrastructure; 4. Population movement and urbanisation; 5. Protection of ecological environment; 6. Market system; 7. Regional cooperation; 8. Positioning of planning areas; 9. Policy measures.	More focus on regional positioning, functional division and a sustainable development	Transition to market economy 6, 7 and 8	
Gradual Refinement of Market Economy Period	1. Development, utilisation and protection of water, land and mineral resources; 2. Industrial division, cooperation and transfer; 3. Distribution and location of infrastructure such as harbours and airports; 4. Urban system and human habitat environment; 5. Protection of ecological environment; 6. Regional market system; 7. Positioning and functional divisions of planning areas; 8. Policy system.	More focus on policy design and fostering of markets.	Gradual Perfection of Market economy 4 and 7	

China's regional planning since the beginning of the 21st century

In the 21st century overall planning has grown into a major approach adopted by China to promote reasonable regional economic distribution and to enhance international competitiveness. To spur on some developed areas to advance further, the Chinese government has organised specific regional planning in these areas. Especially since 2009, the central government of China has successively approved 13 regional plans, namely: Outline of the Plan for the Reform and Development of the Pearl River Delta, Several Opinions of the State Council on Supporting Fujian Province to Accelerate the Building of the Economic Zone on the West Coast of the Taiwan Straits, Guanzhong–Tianshui Economic Zone Development Plan, Jiangsu Coastal Area Development Plan, Hengqin Master Development Plan, Liaoning Coastal Economic Zone Development Plan, Plan to Promote the Rise of Central China, Outline of the Regional Cooperation and Development Plan of Tumen River, Development Plan for an Efficient Eco-Economic Zone at the Yellow River Delta, Plan for Poyang Lake Ecological Economic Zone, Master Plan for Developing a Circular Economy in Gansu Province, Several Opinions of the State Council on Promoting the Construction and Development of the International Tourist Island of Hainan, and Plan of Anhui City Belt Pilot Zone along the Yangtze River for Industrial Transfer. These plans are mainly to specify the targets of the master strategy, the functional status and overall distribution pattern of regional development, to reasonably allocate territorial resources, to deepen the cooperation towards a due division of labour, speed up the industrial restructuring, improve the overall economic strength and competitiveness, and to promote a sustainable development of regional economies.

**Box 5-2 Outline of the Plan for the Reform and Development of the Pearl River Delta
(Table of Contents)**

I. Great Significance of Accelerating Reform and Development in the Pearl River Delta

1. Achievements of the Reform and Development in the Past 30 Years
2. Challenges and Opportunities
3. Great Significance

II. General Requirements and Developmental Goals

1. Guiding Ideas
2. Strategic Positioning

3. Developmental Goals

III. Building of a Modern Industrial System

1. Prioritise Development of Modern Service Industries
2. Accelerate Development of Advanced Manufacturing Industry
3. Vigorously Develop Hi-Tech Industries
4. Renovate and Upgrade Traditional Industries with Advantages
5. Actively Develop Modern Agriculture
6. Promote Overall Competitiveness of Enterprises

IV. Strengthening of Capabilities of Independent Innovation

1. Facilitate Innovation and Translation of Core Technologies
2. Consolidate the Role of Enterprises as Main Players in Independent Innovation
3. Build an Open Regional Innovation System
4. Deepen National – Local Collaborative Mechanism for Innovation
5. Reinforce Environmental Construction for Independent Innovation

V. Promotion of Infrastructure Modernisation

1. Construct an Open, Modern and Integrated Transportation System
2. Build a Clean, Safe and Reliable Energy Security System
3. Construct Harmonious Water Conservation Projects
4. Build a Convenient and Efficient Information Networks System

VI. Coordination of Urban and Rural Development

1. Enhance Administration of Urban and Rural Planning and Construction
2. Enhance Construction of Rural Infrastructure
3. Facilitate Urban and Rural Equality of Basic Public Services
4. Establish a New Mechanism Providing Urban Assistance to Rural Areas and Industrial Subsidies to Agriculture

VII. Promotion of Coordinated Regional Development

1. Implement Demonstration Role of Major Cities
2. Optimise Functional Layout of Eastern Bank of Pearl River Mouth
3. Elevate Development Levels of Western Bank of Pearl River Mouth
4. Advance Regional Economic Integration of Pearl River Delta
5. Inspire Accelerated Development of Areas Surrounding Pearl River Delta

VIII. Enhancement of Resource Conservation and Environmental Protection

1. Utilise Land Efficiently and Intensively
2. Energetically Develop Circular Economy
3. Intensify Pollution Prevention and Control
4. Strengthen Ecological and Environmental Protection

IX. Expedition of Development of Social Undertakings

1. Prioritise Development of Education

2. Perfect Medical and Health Services
3. Complete Housing Welfare System
4. Improve Employment and Social Insurance Systems
5. Construct Harmonious Culture

X. Creation of New System and Advantage Mechanisms

1. Innovate Administrative System
2. Deepen Reform of Economic System
3. Advance Reform of Social Management
4. Advance Construction of Democratic and Legal Systems
5. Fully Exert Pioneering Role of Special Economic Zones in Reform and Opening up

XI. Creation of New Situation for Opening up and Cooperation

1. Elevate Level of Economic Openness
2. Engage in Closer Cooperation with Hong Kong and Macao
3. Elevate Levels of Cooperation with Taiwan
4. Deepen Cooperation of Pan Pearl River Delta Region
5. Enhance Cooperation with ASEAN and Other International Economic Regions

XII. Mechanism for Securing Plan Implementation

1. Strengthen Organisation and Leadership
2. Enhance Integration and Cooperation
3. Strengthen Supervision and Inspection

5.2.3 Positive Effects of China's Regional Planning on Regional Economies

Enhancing the international competitiveness of regions

Within the overall context of world development and with the growth of economic globalisation, the capital control capability and commodity chains are growing global or super-national, while production capacity and industrial competitiveness, by contrast, are becoming local or regional. Thus, the development of China increasingly counts on a higher regional competitiveness, towards which regional planning works as a positive and significant measure. With the deepening of globalisation, the effect of the world market on China's development is more obvious than ever. Different from the traditional regional planning which focused on regional productivity

distribution and resource balancing according to the local conditions, the present regional planning, as a tool for regional management and independent decision-making, highlights the building of overall regional competitiveness and plays an important role in enhancing China's international competitiveness.

Strengthening the macro-control on regional economic development

It has been proved by historical experience that as a multi-ethnic country with large regional disparities, China cannot realise a long-term peace and order without centralisation and effective, centralised, space management. At present and within a considerably long-term future, to realise the Great Leap Forward development and coordinated regional development, China should continue to attach sufficient importance to the State's function of macro-control by centralising an appropriate number of financial and material resources to support the development of key areas, by scheduling key projects for long-term development and, most of all, by using the method of regional planning to make overall arrangements for key areas and projects and to coordinate the regional development. Through a variety of 'spatial permissions' China's regional planning has performed an effective allocation of land and space resources, guided the planning of land utilisation and spatial development, and worked with other measures such as finance and taxation, planned regulation and control as well as land use regulations to establish a public intervention system in which the government regulates and controls the market and directs the economy.

Promoting the formation of a normalised regional development order

The guiding ideology of Scientific Outlook on Development was put forward at the beginning of the 21st century. A thorough application of this ideology in China's regional planning is being reflected in the guided formulation by local governments of regional plans to realise an overall coordinated development of the regional economy, society and environment and initially form a normalised territory and space development order. In the period of the eleventh 5-year plan, China's regional planning has further advanced in the focus on the construction of human habitat

environments, which has moved the Scientific Outlook on Development into the practice of spatial development and thus enriched the ideology with new requirements of the era. Such a focus also corresponds with the internationally popular ‘new regionalism, which is in favour of a balance between economic development and environmental and social objectives, as well as placing more emphasis on urban design, physical planning, space creation and equitable regional planning than on economic growth.

Promoting a coordinated regional economic development

Large regional disparities in natural conditions, historical foundations and economic growth levels, as consequences of the vast territory of China, require the master guidance of regional planning for the economic development of regions. The regional planning made by the central government of China is aimed at both a faster opening up and development of well-endowed areas and an accelerated growth of less-endowed and poverty-stricken areas. Feasible and practicable plans formulated in accordance with regional characteristics have effectively controlled the long-standing growing disparities between the eastern region and the central and western regions. The economic growth of the central and western regions in recent years has tended to surpass that of the eastern region. The economic growth of some underdeveloped and less developed areas has exceeded that of developed areas in economic inflection points which break historical records, indicating both that the regional development disparities have been narrowed, and that coordinated regional economic development has been promoted.

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Chapter 6 Regional Governance with Chinese Characteristics

The rise of regional governance has had its unique catalysts. In an era when economic globalisation is growing astonishingly rapidly, no single area can dissociate itself from the region to which it belongs and participate in global competition on its own. Meanwhile, as regional integration continues apace, a large number of 'regional public problems' have emerged and multiplied. To strengthen regional governance is considered an effective approach to solve regional public problems and avoid a tacit 'tragedy of the commons' and the sidelining of regional subjects occurring.

China's regional governance has appeared since the reform and opening up. With the central government delegating power to the local governments, increasing the autonomy of enterprises and encouraging an orderly development of social organisations, the model of regional governance has experienced a series of positive adjustments and changes, among which the most significant are promotion of interregional and inter-city cooperation, effective regulation of regional markets, and more weight given to the role of social organisations in regional governance. By integrating the 'top-down' and 'bottom-up' mechanisms, regional governance has become a major approach to promote coordinated regional development. However, in addition to the problems brought by the decentralisation reform, such as disorderly regional competition and overdevelopment, the present model of regional governance is also confronted with many challenges in coping with global competition and enhancing the prospect for sustainable development.

6.1 The Rise and Development of Regional Governance in China

6.1.1 Regional Administration in the Planned Economy Period

Regional governance is new to the Chinese, who are more familiar with regional

administration, which is a special form of the former. In the planned economy period before the reform and opening up, a majority of economic and social resources were under the control of the government, while enterprises and institutions were extensions and subsidiaries of the government in social and economic fields and they didn't own the right to independent decision-making. In some sense, regional administration in the planned economy period was a special model of government-dominated regional governance, which mainly involved the central and local governments. It was the governments who formulated the rule system of regional governance, and the decision-making process concerning regional development was also conducted by government departments in a top-down pattern. The relationship between the central and local governments was the most important institutional factor affecting regional development.

Box 6-1 'Governance' and 'Good Governance'

Defined by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 'governance' means 'the process of decision-making and the process by which decisions are implemented (or not implemented)', and can be 'used in several contexts such as corporate governance, international governance, national governance and local governance'. Such a definition stresses the multiple actors of governance, including government, non-governmental organisations, enterprises, residents, etc. According to UNESCAP, 'good governance' has the following eight characteristics:

- participation
- rule of law
- transparency
- responsiveness
- consensus orientation
- equity and inclusiveness
- effectiveness and efficiency
- accountability

Box 6-2 Regional Governance and Regional Administration

As for China, regional governance refers to the authority and responsibilities of government, social organisations, enterprises and the public in regional economic development, reflected in the determination of regional development targets, the definition of the authority of these actors, and the formulation, implementation, supervision and accountability of policies.

Both focusing on coordinated regional development and on regional public problems, regional administration and regional governance are intrinsically consistent with each other. The following shows their major differences (see also the table below):

- The actor in regional administration is government, whereas regional governance involves others more widely, such as social organisations, enterprises and the public, who make decisions on regional issues together with government;
- The fields involved in regional governance include not only those administrated by government, but also those covered by regional governance and probably under the important influence of social organisations;
- Regarding the coordinating mechanism, regional administration is under a top-down system, whereas regional governance focuses on negotiation and cooperation mechanisms and functions via the network among major actors who are equal to each other in governance.

Comparison between Regional Governance and Traditional Regional Administration

Category	Regional governance	Traditional regional administration
Interest relationship	Interwoven, three-dimensional network	Top-down, one-way linear structure
Controlling authority	Government and society	Government
Method of governance	Multiple and flexible	Central and simple
Means of governance	Coordination and cooperation	Control and command
Resource allocation	Based on the market mechanism	Based on the planned mechanism

'Regional governments' in the planned economy period

In a country with a vast territory like China, the area of a province is often equal to that of a European country. To reinforce the coordination among the local governments, regional administration systems were established between the central and provincial governments after the founding of P.R.C, respectively including six administrative regions (north China, northeast China, northwest China, east China, central south China and southwest China) and seven cooperation regions (north China, northeast China, northwest China, east China, south China, central south China and southwest China). According to the Organic Act of the People's Government Committee of Grand Administrative Region approved by the Government Administration Council (predecessor of the State Council) at the end of 1949, the People's Government Committee of every grand administrative region was the highest local organ of state power over the cities and provinces under the jurisdiction, as well as being the representative organ, of the Government Administration Council of the Central People's Government for leading local work. Seven cooperation regions were established in 1958 to support the implementation of the national economic plan. The Stipulations of the Central Committee of the Communist Party of China and the State Council on Improving the Planned Management System specified the major tasks of the cooperation regions in planning, which were: organising the cities and provinces to take active measures to ensure the fulfilment or exceeding of national plans, making comprehensive balancing and necessary adjustments to draft plans of the cities and provinces, and organising cooperation between the cities and provinces in production, construction and cadre training and adjusting materials, commodities, labour and investment on the premise of completing national redeployments.

Characteristics of regional administration in the planned economy period

The high concentration of power in the planned economy period was also reflected in the characteristics of regional administration, which were:

1. The administration was a top-down highly concentrated vertical system
2. Resources were allocated via government departments instead of regions
3. Regions were hardly connected economically due to such a vertical system
4. The actors of regional administration were lone ones – the governments played an absolute leading role in regional administration, in which social

organisations and the public were barely involved.

6.1.2 The Rise of Regional Governance since the Reform and Opening up

The market-oriented reform of China since the reform and opening up has re-adjusted the regional administration model fundamentally towards power delegation to the local governments. With a large number of regional public issues among administrative regions emerging from the regional economic development, regional governance has been rapidly developed to integrate the dispersed decision-making function of the market mechanism and the advantage of this style of government in solving regional public issues, all of which has actively promoted the economic transformation and a coordinated regional development.

Decentralisation reform and extension of local authority

In accordance with the market-oriented reform, the central government delegated fiscal and tax power, investment administrative power and enterprise jurisdiction to the local governments at the beginning of the reform. Regarding fiscal and tax power, the local finance contract system was carried out in the early 1980s, in which the local governments were given the authority to control a majority of tax revenue by turning over an agreed amount to the government at a higher level, and retaining the increment by a certain proportion. The responsibility for public services was partly transferred to the local governments at the same time. As for investment administrative power, in addition to greater power to the local governments in reviewing and approving investment projects, those of special economic zones and open cities were given more autonomy in import and export rights, foreign exchange retention and taxation. For enterprise jurisdiction, enterprises under the administration of the central government were transferred to the local governments, most of which were afterwards transformed into enterprises with mixed ownership through shareholding reforms. So far there are presently only just over 100 large state-owned and state-held enterprises directly under the central government.

Regions with special functions have been established in different periods to meet the needs of the decentralisation reform and the expansion of opening up. In 1980 the Standing Committee of the National People's Congress issued the Regulations on

Special Economic Zones in Guangdong Province, formally approving the establishment of special economic zones. The four special economic zones of Shenzhen, Zhuhai, Shantou and Xiamen were established in the same year, followed by Hainan in 1988. Fourteen coastal port cities were opened in 1984, supplemented by three coastal open economic zones. Economic and technical development zones were initiated in the open cities, enjoying preferential policies similar to those for the special economic zones. Another eighteen economic and technical development zones were successively approved during 1986–1994. To grant some large cities provincial-level economic administrative authority, in the 1980s the State started to establish sixteen cities with independent planning status in batches. In 1993 ten provincial capital cities with independent planning status were re-positioned by the State Council as sub-provincial cities. With more administrative authority in economy and special preferential policies, these functional regions have played a leading and demonstrative role in the reform of regional administration systems.

Re-demarcation and differential governance of economic regions

Due to the vast territory, regional governance in China should be essentially based on a reasonable demarcation and differential governance of economic regions. Economic regions have been re-demarcated since the beginning of the 1980s, following principles of geographic conformity, economic connections and enhancement of the market functions. The functional positions and strategic developmental orientations of key economic regions have also been reasonably defined. In the sixth 5-year plan the whole country was divided into the coastal region and the inland region. The seventh 5-year plan put forward the demarcation of three zones (the eastern zone, the central zone and the western zone). The strategic development orientations of seven trans-provincial economic regions were planned in the eighth 5-year plan. The ninth 5-year plan strengthened the support to the central and western regions in terms of finance, investment and policies. The tenth 5-year plan raised a master strategy for regional development which can be summarised into the development of western China, the rejuvenation of old industrial bases in north-eastern China, the rise of central China, and the leading development of coastal areas.

The demarcation of economic regions is mainly aimed at leveraging the comparative advantages of regions, as well as at promoting interregional cooperation with a due division of labour. However, focusing on economic development, the earlier

demarcations of economic regions neglected to consider the bearing capacity of the resource environment in different regions, and have thus led to an increasingly serious situation of the ecological environment in some regions. With an overall consideration of the future population distribution, economic layout, land use and urbanisation pattern, the eleventh 5-year plan divides China into four categories of areas, in which areas with a fragile ecological environment are included into the categories of prohibited development areas and restricted development areas, while those suitable for development yet differing in development intensity and potential are accordingly classified as optimised development areas and key development areas. The future trend will be the one optimised and key development areas that are oriented towards development will serve as the major carriers of the economy and the population of China, while restricted and prohibited development areas, which are oriented towards protection, will provide resources and ensure a favourable environment.

Trans-provincial economic cooperation and creation of cooperative mechanisms

With the market-oriented reform promoting the development of markets for commodities and production factors, the lateral economic ties between administrative regions have become a major method of facilitating market growth. Following the principles of full leverage of advantages and mutual benefit and risk sharing, the provinces have organised various forms of lateral alliance and cooperation in different fields and at different levels. They have established inter-provincial (city) regional economic cooperation networks on different scales and with different characteristics and manifold forms such as economic cooperation zones among the provinces (regions) and in adjoining areas of the provinces, completed inter-provincial (city) transport and communication infrastructure, and carried out economic cooperation in terms of joint investment, cooperative development, technical transfer, personnel training, etc., to promote the flows of production factors such as labour, capital and technology as well as specialised regional divisions of labour.

With the expansion of regional economic cooperation, it is inevitable that new cooperative mechanisms are built including: establishing non-permanent organs involving relevant local governments, organising the compilation of regional cooperation frames and strategic plans, carrying out pre-evaluations for important economic and social activities, coordinating interest disputes among interregional

investors, etc. Contract mechanisms need to be accordingly established, in order that interest relationships can be coordinated by means of contracts in the event of disputes. Meanwhile, various forms of cooperative mechanisms for enterprises, industrial associations and social organisations among regions have emerged at the same time.

Economic integration of metropolitan spheres and governance of city agglomerations

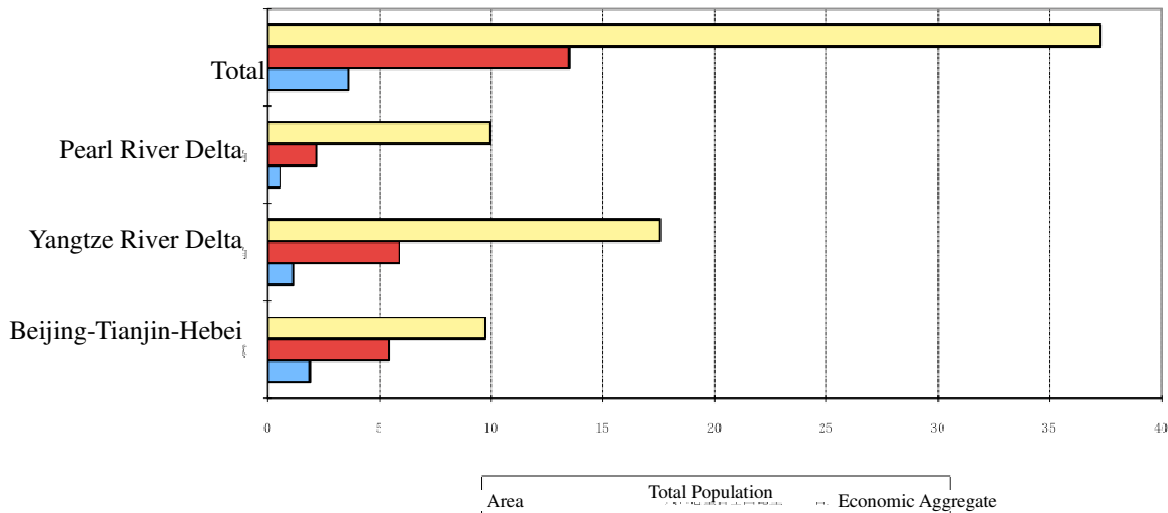
Metropolitan spheres and city agglomerations have been the most vigorous in economic development due to several reasons. First, massive flows of labour, capital and other production factors have realised an ample supply of production factors for the development of metropolitan spheres and city agglomerations. Second, a large number of employment opportunities created by the faster industrialisation of these areas attract population and economic activities in a spatial agglomeration. Third, large-scale agglomeration of foreign direct investment (FDI) links these areas with global production and supply systems. The GDP of the three coastal city agglomerations of the Yangtze River Delta, the Pearl River Delta and the Beijing–Tianjin–Hebei region approach 40% of the national total (see table 6-1), showing a release of development potential at an unprecedented rate. To facilitate an orderly development of city agglomerations, the central government has organised the formulation of plans for the Yangtze River Delta, the Beijing–Tianjin–Hebei region and other economic regions, in hopes of developing them into key regions for elevating the national competitiveness.

Table 6-1 Major Indicators of the Three Coastal City Agglomerations of China (2007)

City Agglomeration	Area		Population		GRDP	
	Area (sq km)	In Proportion to National Total (%)	Total (unit: 10000)	In Proportion to National Total (%)	Amount (unit: 0.1 billion yuan)	In Proportion to National Total (%)
Beijing-Tianjin-Hebei	182660.24	1.90	7181	5.43	25071.8	9.74
Yangtze River Delta	110230.5	1.15	7791	5.90	45138.5	17.54
Pearl River Delta	54743.0	0.57	2864	2.17	25606.0	9.95
Total	347633.74	3.62	17836	13.50	95816.3	37.24

Source: *China City Statistical Yearbook*

Figure 6-1 Area, Total Population and Economic Aggregate of the Three Coastal City Agglomerations in Proportion (%) to the National Total of China (2007)



With the most vibrant trading activities, the cities have shown a variety of characteristics in regional governance. Taking the Yangtze River Delta as an example, its 16 cities have reinforced not only their cooperation in the construction of inter-city infrastructure such as transport and communication facilities and environmental and ecological moves, but also in the coordination of labour flow and employment to constantly strengthen the inter-city division of labour. In addition, the cities have practiced policies such as relaxing market access and encouraging enterprises towards inter-city investments to gradually develop enterprises and industrial associations into full cooperations, and jointly built up enterprise credit supervising systems and inter-city platforms for bill settlement and equity exchange in order to lower the manufacturing, operation and transaction costs of enterprises. All these efforts have improved the integration capability for advantageous regional resources, thus bringing enormous multiplier effects of regional development.

Maintenance of regional market order and strengthening of market regulation

The administrative decentralisation reform, while stimulating the enthusiasm of the

local governments for economic development, has also increased their motivation in the pursuit of local interests. Due to institutional problems such as the integration of government administration and enterprise management as well as capital investment, driven by the pursuit of political achievements, it has been quite common that the local governments take administrative measures to protect their local markets and shield the local enterprises from the impact of competition, so as to guarantee the local financial revenues and also their political achievements. To break administrative blockades and preserve an order of fair market competition, reforms in recent years have been refocused on the government administration system in moves such as streamlining government departments, devolving further the economic functions of the government and strengthening the government's role in market supervision, social management and public services, in hope of orienting the local governments away from directly interfering in the activities of enterprises and towards creating a favourable investment environment and improving their own administrative skills and efficiency. Scientific and normalised standards for performance evaluation were stipulated at the same time.

Vertical leadership systems below the provincial level have been applied in market supervisory departments such as industrial and commercial administrative departments and quality supervision departments, in order to strengthen market regulation and improve the supervision capability. The role of local people's congresses is being given full play to intensify the supervision by the local governments. The Law of the People's Republic of China against Competition by Inappropriate Means, the Law of the People's Republic of China on the Protection of Consumer Rights and Interests and the Anti-Monopoly Law have been unveiled to legally preserve a fair competition order and create a favourable legal environment for eliminating disorderly interregional competition.

Support and counterpart assistance to underdeveloped areas

Most of the underdeveloped areas in China are located in the inland remote regions, suffering from severe natural conditions, inconvenient transportation and interwoven problems of economy, society and resource environment, all of which render the market mechanism alone insufficient to serve to balance the development between these areas and others. The input from the central government in infrastructure construction, ecological environment protection and human resource development of

underdeveloped areas has been increased in recent years, and has reduced the rural absolute poverty population from 0.22 billion in the middle of 1980s to 14.79 million in 2007. A counterpart assistance mechanism between developed cities and provinces and underdeveloped areas has been established, in which eleven coastal developed provinces offer counterpart assistance to eleven inland provinces. Xinjiang and Tibet are assisted by the whole country. Such a horizontal assistance mechanism, though different from the horizontal transfer payments of the EU and based on political mobilisation, has effectively restrained the growing disparities between underdeveloped areas and developed areas.

The eleventh 5-year plan has further specified the task to enlarge the State's supports to underdeveloped areas by the principle of equalisation of public services, and requested developed areas to assist underdeveloped areas through counterpart assistance, social donation and other means. Meanwhile, the forms of support and counterpart assistance to underdeveloped areas have also been constantly innovated in practice. Capital and material assistance have been replaced by human resource training, cadre exchange, knowledge diffusion, etc., and the aid for construction projects has been substituted with the supply and improvement of public services, guidance in population emigration from areas with a rugged natural environment, and employment training and basic social security for the emigrant population.

Extension of channels of participation for social organisations and the public

An administration information and publicity system has been established, and channels for public participation have been extended. Attaching great importance to protecting citizens' right to information, participation, expression and supervision over government administration, the government departments have actively deepened the openness and transparency of decision-making by making decision-making results public through news media, internet, etc., and by regularly publicising major decisions, deployments and tasks as well as normative documents and social hot topics. This has increased the channels and opportunities for the public to get to know policies, and has improved the opportunity for public initiative and broad public interest to participate in decision-making. Public expression of opinions through modern information dissemination methods such as E-mail, messages and forums has been facilitated and promptly responded to, so that interests across the board can be

more inclusively reflected in decision-making.

The social hearing system has been set up in order to open up decision-making. The formulators of the eleventh 5-year plan and other plans have solicited opinions from the public through news media, the internet and other methods, and hearings have been held for opinions and suggestions on the decision-making regarding those major issues that are closely related to public interests, such as price adjustment of public products and the unveiling of charged items. These hearings have effectively realised the articulation of the public's interests and claims, and transformed the decision-making process into a process where interests of different subjects are balanced and coordinated.

6.2 Regional Mutual Assistance Mechanism with Chinese Characteristics

The eleventh 5-year plan clearly set out the four mechanisms for regional development, namely the market mechanism, the mutual assistance mechanism, the cooperation mechanism and the support mechanism. Regarding regional governance, the mutual assistance mechanism, which encourages developed areas to assist underdeveloped areas through counterpart assistance, social donations and other forms, is the most notable.

6.2.1 Running of Regional Mutual Assistance Mechanism

Counterpart assistance partnership

To specify the partnerships in counterpart assistance is an important measure to ensure an effective implementation of such assistance. In October 1996 the Central Committee of the Communist Party of China and the State Council issued the Decision on Quickly Solving the Problem of Food and Clothing of Rural Poverty-Stricken Population, adjusting the counterpart assistance receivers on the original basis, and specifying partnerships between Beijing and Inner Mongolia, Tianjin and Gansu, Shanghai and Yunnan, Guangdong and Guangxi, Jiangsu and Shaanxi, Zhejiang and Sichuan, Shandong and Xinjiang, Liaoning and Qinghai, Fujian and Ningxia, Xiamen–Zhuhai and Chongqing, Dalian–Qingdao–Shenzhen–Ningbo and

Guizhou, as well as between the whole country and Tibet.

On June 11 2008, upon the occurrence of the devastating earthquake in Wenchuan, Sichuan Province, the General Office of the State Council issued the Counterpart Assistance Plan for Recovery and Reconstruction Following Wenchuan Earthquake, specifying 19 pairs of cities and provinces for a three-year period of counterpart assistance in post-earthquake recovery and reconstruction. As shown in table 6-2, the counterpart assistance is organised between cities and provinces of the central and eastern regions and the earthquake-hit areas according to the local economic development levels and the regional development strategy, and is under the overall coordination of the central government.

Table 6-2 Counterpart Assistance Partnership following Wenchuan Earthquake

No.	Aided Party	Major Aiding Party	No.	Aided Party	Major Aiding Party	No.	Aided Party	Major Aiding Party
1	Beichuan County	Shandong Province	2	Wenchuan County	Guangdong Province	3	Qingchuan County	Zhejiang Province
4	Mianzhu City	Jiangsu Province	5	Shifang City	Beijing City	6	Dujiangyan City	Shanghai City
7	Pingwu County	Hebei Province	8	Anxian County	Liaoning Province	9	Jiangyuan City	Henan Province
10	Pengzhou City	Fujian Province	11	Maoxian County	Shanxi Province	12	Lixian County	Hunan Province
13	Heishui County	Jilin Province	14	Songpan County	Anhui Province	15	Xiaojin County	Jiangxi Province
16	Hanyuan County	Hubei Province	17	Chongzhou City	Chongqing City	18	Jian'ge County	Heilongjiang Province
19	Seriously Damaged Areas of Shaanxi Province	Tianjin City	20	Seriously Damaged Areas of Gansu Province	Guangdong Province (Shenzhen)			

Source: www.gov.cn

Relevant institutions and operating mechanisms

Relevant institutions have been set up in the involved areas to ensure a smooth implementation of counterpart assistance. A special office for economic cooperation, for example, has been established in Shanghai, taking charge of the cooperation and counterpart assistance between Shanghai and other areas, and accordingly arranging operational expenses and employees to form a counterpart assistance operating

mechanism. After the Wenchuan Earthquake the aiding cities and provinces have unexceptionally sent personnel to the aided areas to instruct the aid projects. In addition to government-sponsored aid projects, the aiding areas also encourage enterprises for cooperation with those in the counterpart areas on the basis of mutual benefit, and guide social organisations to participate in various kinds of assisting and supporting activities.

Special funds for counterpart assistance

Special funds for counterpart assistance have been widely established in the aiding areas. For instance, Shanghai has not only set up special funds for counterpart assistance, but also formulated measures for a comprehensive management of counterpart assistance funds of the municipal and district-level finances, in order to ensure a year-on-year increase of the funds, as well as a centralised application in the aided areas. In Guangdong a provincial cooperation fund has been established for counterpart assistance in the economic development of the Three Gorges reservoir area. The Counterpart Assistance Plan for Recovery and Reconstruction following the Wenchuan Earthquake clearly stipulates that the yearly object workload of the aiding cities and provinces for counterpart assistance should not be lower than 1% of their annual local revenue of the previous year, and the specific assistance items and methods should be settled upon full negotiation between both parties.

6.2.2 Transformation of Regional Mutual Assistance Mechanism

From government domination to extensive social participation

Counterpart assistance in the early period was dominated by the government, and thus was deeply marked with administrative features. With the development of quasi-social organisations and an extensive public participation, a great number of non-governmental organisations, social groups, private sector and international and bilateral development institutions have been involved in different levels of assistance to poverty affected areas, such as the Hope Project organised by the Central Committee of the Communist Young League, the Guangcai Program sponsored by the All-China Federation of Industry and Commerce, the Poverty-Reduction Action for Women and the China Poverty Alleviation Program under the organisation of the All-China Women's Federation, the Angel Project initiated by China Foundation for

Poverty Alleviation, etc.

From simple assistance to development capability enhancement

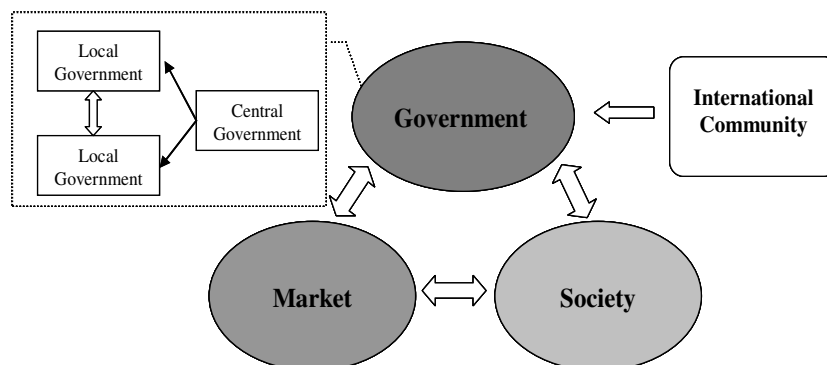
Capital, materials and aid projects for infrastructure and industrial construction used to be the major forms of counterpart assistance. To enhance the self-development capability and self-sustaining function of the aided areas, counterpart assistance at present lays more emphasis on building a higher self-development capability of the aided areas through measures such as strengthening technical support, talent fostering and local labour force training, etc.

From economic assistance to focusing on better public services

Contrary to the counterpart assistance of the past which laid a heavier emphasis on the economy than on social undertakings and public services, counterpart assistance in recent years has attached more importance to improving the living standards and public services in the aided areas, including intensifying the construction of public service facilities such as schools, hospitals and health equipment, cultural and sports facilities and nursing homes in order to raise the level of public service provision in the aided areas.

Box 6-3 PPP for Recovery and Reconstruction after Wenchuan Earthquake

PPP (Public – Private Partnership): a partnership between government and the private sector for constructing and operating projects or providing services.



PPP with Chinese characteristics:

- Government, market and society work out compatible incentives and harness their respective advantages so as to achieve mutual complementation and work together towards the common purpose of the greatest post-earthquake reconstruction and recovery project worldwide to date.

- Such a model is innovative in that it helps improve the efficiency of providing public products and reduces the costs by making use of the market mechanism.

Characteristics:

- Self-reliance. Rebuild homes by self-aid, self-help and self-reliance.
- Focus on the local efforts. Rely mostly on the organisation and coordination of the local governments, so as to reduce information asymmetry.
- Support from the central government. Help the local governments make post-earthquake reconstruction plans, and offer fiscal, tax, financial and manpower support.
- Social participation. When disaster struck, help came from all sides. Monetary and material donations from all walks of life amounted to US\$8 billion within two months.
- Counterpart assistance. Establish partnerships between 21 eastern and central provinces and 19 severely hit areas and counties in Sichuan, Gansu and Shaanxi.
- Driving function of the market. All enterprises, including foreign-invested enterprises, are encouraged by the State to actively participate in the post-earthquake reconstruction through preferential policies.
- International aid. Actively enlist aid in the form of technical and knowledge expertise as well as capital from the international community.

6.3 Problems and Challenges of Regional Governance

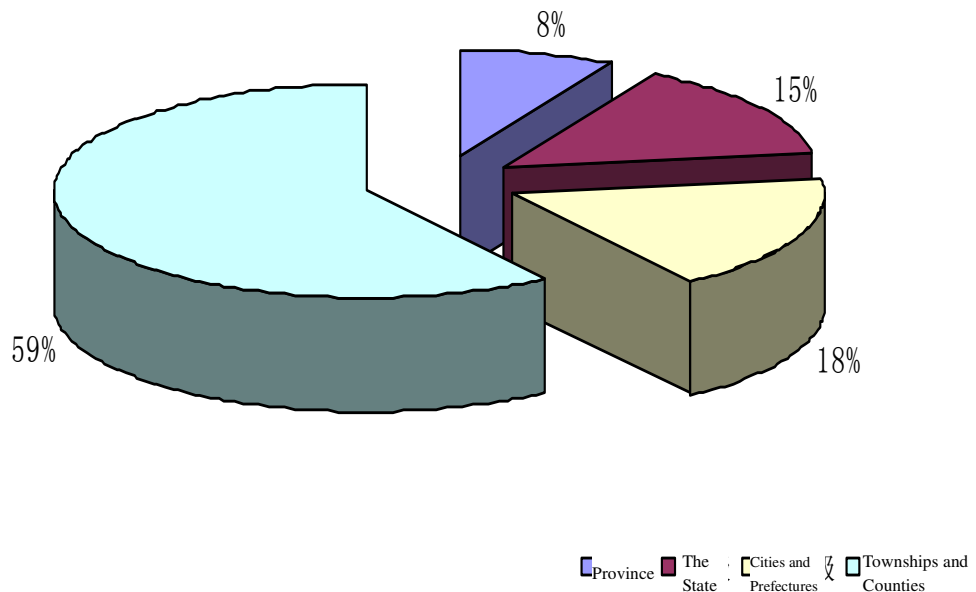
Despite positive changes in the model since the reform and opening up, regional governance is still restricted by traditional systems in its transformation to adapt to economic and social development. It is also confronted with new challenges as it tries to keep up with the marketisation-oriented reform and cope with globalisation.

6.3.1 Institutional Constraints

Unreasonable distribution of responsibilities and authority among the central and local governments

The division of responsibilities and authority among governments at all levels are only outlined in principle, and there is a lack of normative and operable specific regulations and clear definitions, which has led to overlaps in practice. Excessive responsibility for public services is shouldered by governments at the grassroots level, to a degree that is inappropriate in comparison with their earning capacities and thus leads to the undersupply of basic public services. According to rough estimations, in China the governments at the county level are responsible for 60% of educational expenditure (see figure 6-2) and 55–60% of public health expenditure; figures that are apparently higher than those of other transitional countries and developing countries at a similar development level. Regarding this, some scholars suggest reducing the levels of government, for example, decreasing the total number of levels from five to three. In practice, county-level governments in some provinces are directly under provincial governments in financial authority, and governments at the township level are deemed to be organs of the county-level governments.

Figure 6-2 Educational Expenditure of Governments at the State, Provincial, Municipal (Prefectural) and County Level (2003)



Incomplete correspondence between local financial and administrative powers

The tax-sharing system reform in China started in 1994, following the overall principle of centralising financial power while delegating or maintaining administrative power. As a result, the proportion of the central financial revenue in the national total was remarkably increased from 22% in 1993 to 52.4% in 2009 (see figure 6-3), while the expenditure of local governments in the same period was increased from 71.7% to 75.3% of the national financial expenditure (see figure 6-4). The re-centralisation of financial revenue wasn't tied in with corresponding adjustments to the expenditure responsibilities, and the gaps between local revenue and expenditure can only be filled with transfer payments. Owing to unbalanced

financial strengths among regions, those stronger in economy obtain more financial power, while less developed areas, with difficulties in funding elementary education, basic medical care, social security and other public services, are facing growing disparities between revenue and expenditure.

Figure 6-3 Changes in Central and Local Financial Revenues in Proportion to Total (Since 1990)

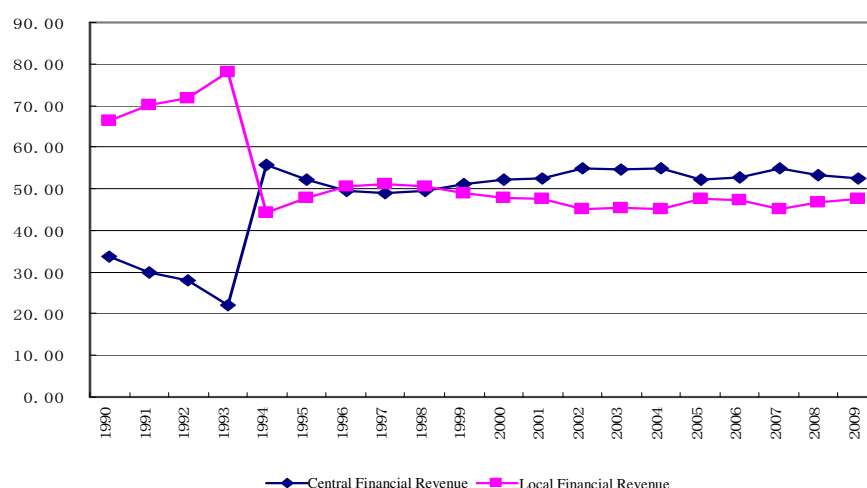
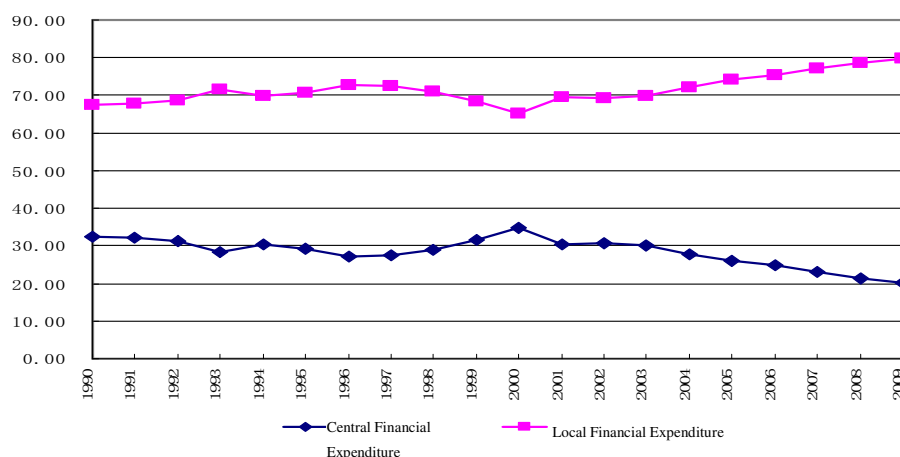


Figure 6-4 Changes in Central and Local Financial Expenditure in Proportion to Total (Since 1990)



Imperfect coordination and cooperation mechanisms among departments

The central government's allocation of resources to local governments is taking the

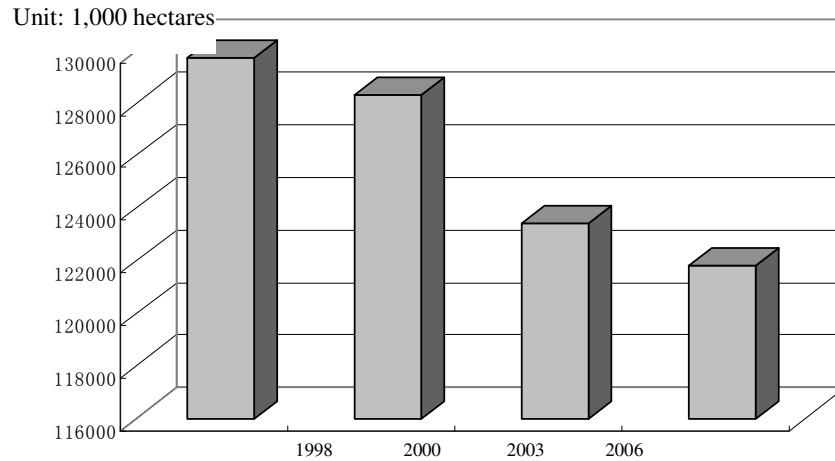
form of a vertical flow between government departments of different levels, with earmarked transfer payments making up 70% of the total transfer payments. Since investment subsidies and project support are mostly distributed to local governments through government departments, lateral integration and coordination among different funds and resource allocation are missing, leading to some construction projects being funded by multiple sources, or overlapping investments, or unnecessary waste of resources. Function overlap among government departments is still serious. Coordination and cooperation mechanisms are not completed, and unveiled policies are occasionally conflicting. Regarding the formulation of regional development plans, it is often the local development and reform departments, land management departments and urban planning departments who respectively formulate strategic plans, land use plans and urban master plans. Yet these plans are not that binding due to the absence of a coordination mechanism. Consequently, urban systems, industrial parks, infrastructure networks, green belts and protection zones, though settled by these plans, are hardly being put into practice.

6.3.2 Challenges

Disorderly competition among regions has not been eliminated

The decentralisation reform has stimulated the initiative of the local governments to develop their economies, while the unbalanced regional financial strengths (the per capita expenditure of the richest province is nine times of that of the poorest province) have led to the hectic pursuit by some local governments of a high growth of GRDP to increase their financial strength. The construction funds of some cities are mostly from extra-budgetary revenues such as land rents and toll roads, which have caused extensive farmland occupancy and an increase of transportation costs. There has been a clear decrease of the national farmland area available for arable farming in recent years (see figure 6-5). Furthermore, some local governments vie with each other to attract inward investment by offering preferential policies, tax cuts as well as low-priced land, which has not only spawned disorderly competition among cities and regions, but has also set back resource integration and an orderly regional development.

Figure 6-5 Changes in National Farmland Area (1998–2006)



Overdevelopment in some regions is still serious

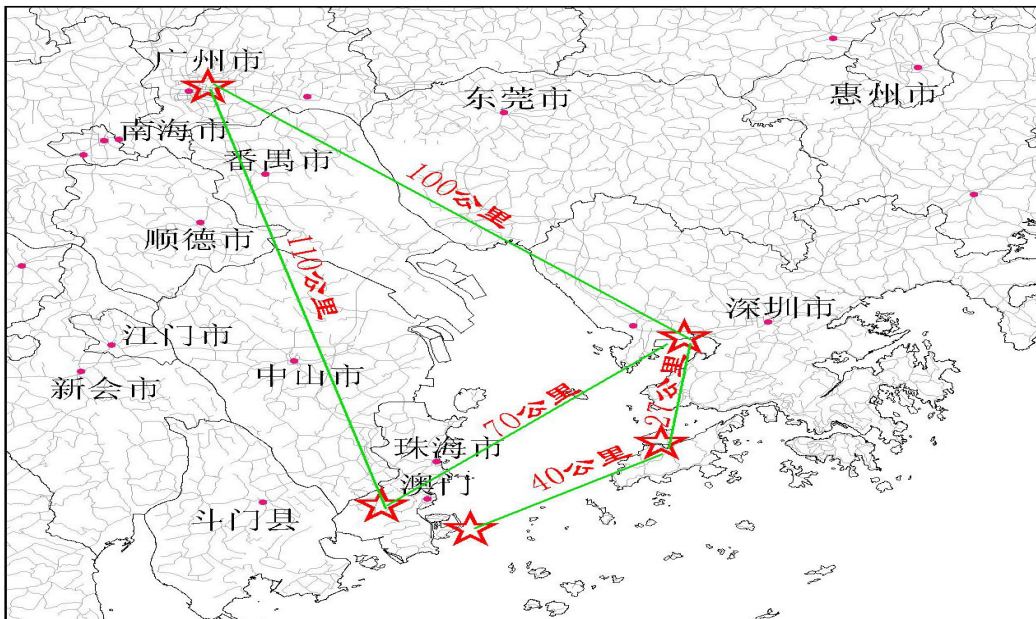
The existing local fiscal and tax system makes value-added tax the only option for local governments to increase their revenues, thus stimulating the local governments to increase investment to develop manufacturing industries with high income-increasing effects regardless of the local resource environment conditions thereby intensifying the burden on the ecological environment. With the central government greatly increasing the input into ecological construction and environmental protection in recent years, the eleventh 5-year plan further put forward the binding targets to reduce the energy consumption per unit of GDP by 20% and pollutant emission by 10% by 2010. The achievement these goals will, however, require more to be done, given the development of the last four years.

Cooperative mechanisms among cities and regions need to be improved

The spatial agglomeration of economic activities and the development of city agglomerations have highlighted the absence of relevant coordinating organs and ‘flat’ management mechanisms among administrative regions. For example, the construction of fast mass transit channels as well as harbours, airports and other passenger and logistics facilities needs to be sped up as city agglomerations develop, but overlapping construction projects can also be seen to be taking place due to the

lack of uniform planning and mutual coordination. The Pearl River Delta, for example is served by as many as five airports, two of which are only 27km apart (see figure 6-6). Redundant harbour constructions and excessive competition also exist in the Yangtze River Delta and the Beijing–Tianjin–Hebei region. These all adversely influence the development and completion of the spatial structures of city agglomerations.

Figure 6-6 Locations of the Five Airports in the Pearl River Delta



广州市: Guangzhou
 南海市: Nanhai
 番禺市: Panyu
 顺德市: Shunde
 江门市: Jiangmen
 新会市: Xinhui
 中山市: Zhongshan
 珠海市: Zhuhai
 澳门: Macao
 斗门县: Doumen
 东莞市: Dongguan
 惠州市: Huizhou
 深圳市: Shenzhen

100公里: 100km
 110公里: 110km
 70公里: 70km
 40公里: 40km
 27公里: 27km

Local administrative protectionism is weakened but not eliminated

Local protectionism, with new content and forms in recent years, is growing more and more concealed. From the markets for products and services to those for capital, equity and other factors (for example, restricting the merger of external enterprises with local enterprises), local protectionism has been transformed from taking the form of customs barriers to that of technical barriers (such as standards for technology, quality, environmental protection and safety), and these are deployed to restrict external products from entering the local market in order to protect the local enterprises and products. In addition, the free flow of production factors, such as trans-regional employment, loans, bill settlement and equity exchange, are still somewhat obstructed due to the limitations of systems and trade platforms.

Interregional benefit compensation mechanisms are not refined

The free flow of production factors, while promoting regional economic development, has intensified the development imbalance among regions. However, under the present system, there are no mechanisms that can coordinate the interests among regions. For example, due to the absence of a national unified labour market and social security system, labour export areas have to shoulder more responsibilities for social security and public services for the elderly and the children of outgoing labour households. In large river basins the benefited downstream areas rarely compensate the upstream areas for their input towards the protection of the ecological environment.

Participation of social organisations and the public is far from sufficient

To collect the suggestions of the public and social organisations when making strategic plans for regional development, urban plans and relevant policies has become an essential procedure and step in the government's formulation of plans and policies in recent years. Nevertheless, the participation of social organisations and the public is far from sufficient – some procedures have been over formalised, and the role of social organisations such as industrial associations and professional institutes in regional governance and planning, as well as in formulating coordinating mechanisms has not been fully played. The government's forwardness in decision-making still prevails over public opinion.

Decision-making responsibility restraint mechanism is not complete

Problems such as 'power without accountability' and 'great power with little

accountability', as results of the centralised position of the decision-making power, are still serious under the present system. For instance, without operable laws and regulations which can distinguish the responsibilities of decision-making bodies in the event of wrong decisions or huge losses in government-reviewed (and approved) investment projects, responsibilities are hard to identify, and a decision-making accountability system is not complete. In project identification and implementation, preliminary research is always outweighed by implementation supervision and post-evaluation, not least the latter. The lack of a working decision-making assessment system also affects and limits the institutional implementation of decision-making accountability, noticeable in the absence of specific assessment standards for the effects of decision-making and of reliable statistics on policy contents, implementation and effects.

6.4 Building of a Regional Governance Model with Chinese Characteristics

China's regional governance, while facing various conflicts and problems arising from existing institutional factors such as fiscal and tax systems and administrative systems, will also be confronted with further challenges in the near future, such as population and industrial agglomerations caused by rapid industrialisation and urbanisation, a higher sensitivity to the global economy and abrupt social and economic changes due to the development of metropolitan spheres and city agglomerations, etc.

6.4.1 How to Refine the Regional Governance Model

The regional governance model should not only serve the demands of the economic and social transformation, but should also correspond with the targets of regional policies. In general, such a model should facilitate the free flow of production factors among regions, the harnessing of comparative regional advantages, control over growing regional disparities, the equalisation of basic public services among regions, and the coordination of economic and social development with the resource environment. Major tasks in refining the regional governance model for the near

future include:

Clearly defining a reasonable remit for the local authorities

The administrative responsibilities and authority of the central and local governments in economic regulation, market supervision, social management and public services should be clarified in line with the principle of the unified leadership of the central government and the full exertion of local initiative and enthusiasm. The authority and responsibilities of the central and local governments should be reasonably defined on the basis of their administrative power, to establish a decision-making mechanism integrating both the centralised and decentralised decision-making processes. Considering the huge differences among Chinese regions in terms of nature, economy, society, culture and systems, it would be unrealistic to design a universal regional governance model for all the provinces. Therefore, provincial governments should be given certain autonomy to form an applicable local governance model. A reasonable remit for local authorities should be clearly defined and related to their obtainable revenues and financial strengths for a relative uniformity. The present regional administrative agencies of the central government should be merged, integrated and defined with specific functions to achieve higher performance efficiency.

Reforming the fiscal and tax system to balance local financial and administrative authorities

To reduce dependence of the local governments on extra-budgetary revenues, the expenditure responsibility and transfer payment of the central government should be enlarged on the basis of a reasonable division of central–local authorities and responsibilities. Earmarked transfer payment projects should be properly integrated, while the proportion of general transfer payment should be increased, so as to build up a transfer payment system dominated by the general transfer payment. Property tax should be collected and gradually lead the local tax systems.

Eliminating market barriers in regional economy integration

The free flow of production factors should be facilitated, and the elimination of various market barriers should be accelerated to establish open and orderly regional markets. The government should facilitate the free flow of labourers from underdeveloped areas and, considering the low quality of this labour force, should enlarge the input into vocational training in necessary skills. Interregional investments should be encouraged, interregional financing businesses should be developed, and

trade settlement and clearing platforms should be established. Market regulation and supervision should be strengthened to maintain the market order.

Strengthening regional planning and supervising the implementation

Regional planning should be focused on the layout of infrastructure, the ecological environment and public services among administrative regions, and should be strengthened to facilitate the optimisation of resource allocation in a larger space, as well as to effectively promote an orderly regional development. Not least, the binding force of regional plans should be reinforced, and the supervision and accountability of plan implementation should be strengthened.

Building interregional benefit compensation mechanisms

Ecological construction in upstream areas not only requires a tremendous capital input, but also possibly influences the local economic development and the increase of people's incomes, which would further affect the enthusiasm of these areas for improving the ecological environment. A benefit compensation mechanism for ecological construction should be definitely set up between upstream areas and downstream areas to ensure the sustainability of ecological construction by levying certain (or even most) ecological construction costs on downstream benefitted areas.

Establishing horizontal organising and coordinating institutions among regions

Relevant operation rules and coordinating mechanisms as well as horizontal organising and coordinating institutions are imperative for regional economic cooperation. Besides horizontal institutions between related cooperative parties and cities, various non-governmental horizontal cooperative organisations should also be encouraged with the aim of avoiding conflicts in cooperation and reducing the transaction costs of enterprises.

Establishing common development funds among eligible regions

To promote regional economic cooperation, common development funds can be established by qualifying cities, prefectures and provinces on the basis of a common aspiration, raised either following and economic scale or according to economic development levels (the EU style), and mainly applicable for the construction of infrastructure, treatment of ecological environments and building of social service facilities among administrative regions.

Encouraging extensive participation by social organisations and the public

Regional governance in the socialist market economy means not only interest coordination among social subjects, but also the solicitation and consideration of social opinions. Social organisations and the public should be informed of key issues in regional development through publications of regional plans and construction projects, exhibitions of plan achievements, etc. Hearings, expert evaluation meetings, questionnaires and on-line opinion solicitations should be adopted to gradually enlarge the participation of social organisations and the public.

Strengthening relevant legislation of regional governance

Relevant legislation should be initiated as soon as possible, to offer a legal ground and guarantee for the establishment of stable regional governance models and coordinating mechanisms. Relevant laws and regulations for solving trade disputes among enterprises of different regions should be formulated to legally support the arbitration of interregional trade disputes. Institutions such as interregional trade arbitration committees should be established to coordinate and handle trade disputes among regions.

6.4.2 Formulation of a Regional Governance Model with Chinese Characteristics

To select a model for China's regional governance relies on learning from the mature experience of the EU and other developed countries in regional governance. This includes areas such as promoting decentralisation, specifying the responsibilities of different bodies, establishing the accountability system, etc. It also relies, more largely, on a consideration of the national conditions of China and its reform target to build a socialist market economy mechanism. As a unified country, China is greatly different from federal countries seen through the lens of models of regional governance. The decentralisation reform which has been carrying on for 30 years in China will be continued in the future but at a gradual pace, consistent with that of China's reform. China's reform aims to build and complete a socialist market economy mechanism, requiring not only the improvement of market functions to exert the active role of the market mechanism, but also with great importance attached to

social equity and harmony, as the market mechanism cannot completely realise balanced development and the equalisation of public services among regions. For the foreseeable future the government will continue to play a significant role in regional governance, while the participation of enterprises, social organisations and the public will also see a remarkable rise.

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4. Hao Shouyi, *Principles of Regional Economics*, Shanghai People's Publishing House, 2007.
5. Research Group of the Academy of Macroeconomic Research, *A Study on Administration Systems and Mechanisms Promoting Coordinated Regional Development*, 2008.

Chapter 7 Fiscal and Tax System: Budget and Fund Allocation

7.1 China's Fiscal and Tax System

7.1.1 Evolution and Future Reform Orientation of China's Fiscal and Tax System

China's fiscal system has passed through four stages since the founding of P.R.C. These are namely: state-monopolised revenue and expenditure, unified leadership and decentralised administration, division of revenues and expenditures in the form of contracts, and the tax-sharing system.

The fiscal system of state-monopolised revenue and expenditure (1949–1952) is mainly characterised by 'separation between revenue and expenditure' – all of the revenue collected by the local governments was handed over to the central treasury and all their expenditure was appropriated by the central government at various government levels in a unified management of cash flow. With the power highly centralised by the central government, all the fiscal systems were under the unified formulation of the Ministry of Finance, while the local governments were deprived of due power in administration and finance.

The fiscal system of unified leadership and decentralised administration (1953–1978) mainly included:

- Administrative decentralisation was realised under the unified planning and decision-making of the central government. The authority delegated to the local governments was too little for them to constitute different levels of independent budgeting bodies;
- The responsibilities of the central and local governments were defined, the range of budget expenditure of governments at different levels was specified, but the expenditure targets were subject to the central government;
- With the revenue targets settled by the central government, all the local revenue was categorised into fixed revenue and ratio shared revenue, collected by the

- local governments and separately handed over to the central treasury;
- The financial strength of regions was uniformly adjusted by the central government – regions with revenue exceeding expenditure turned over the revenue, while those with expenditure over revenue were subsidised by the central government.

Rather than being a long-term and relatively stable system, this system had cycles, lasting from one to several years. Specifically, these included 1) yearly alternation, 2) a system in which expenditure was determined by revenue for three years, 3) an annual total amount sharing system between the central and local governments, 4) a system in which revenue and expenditure were fixed and contracted annually and the local governments reserved the balance after turning over the revenue or receiving the expenditure-revenue balance subsidy, 5) a system of linking revenue with expenditure and sharing the increase in revenue over the annual quota with the central government, etc.

The system of division of revenues and expenditures between central and local governments and with contracts at different levels was exercised between 1979 and 1993 after China's reform and opening up, in which the central government decentralised power and transferred profits for fiscal decentralisation. Three major reforms and adjustments were made in 1980, 1985 and 1988 respectively, aiming at contracting with different levels of government and calling for self-equilibration on the basis of dividing revenue and expenditure between the central and local governments, the so-called system of 'serving different diners from different pots'. In Feb. 1980 the State Council decided to exercise the system of serving different diners from different pots, that is, of dividing revenue and expenditure between the central and local governments in various forms in the regions, with the exception of the three municipalities directly under the central government – Beijing, Tianjin and Shanghai. In 1985, in response to the need for the substitution of tax payment by profit delivery, the method to 'separate tax categories, designate revenue and expenditure, and responsibly contract for different levels' was initiated in 1985, aiming to improve the system of dividing revenue and expenditure between the central and local governments. Since 1988 different forms of financial contract systems were fully practiced to support the contract management responsibility system of state-owned enterprises, including contract for revenue increase, total revenue sharing, total revenue sharing plus revenue increase sharing, contract for increase of turned-over

revenue, an imprest system for turning-over revenue and subsidies, etc. Although such a system greatly stimulated the enthusiasm of local governments in collecting financial revenue, it also resulted in a drop in the proportion of financial revenue in GDP, as well as that of the central financial revenue in the national total, and enlarged the imbalance of financial strengths among regions.

The tax-sharing system reform was launched in 1994 to increase the ‘two proportions’ (proportion of financial revenue in GDP, and the proportion of the central financial revenue in the national total), as well as to enhance the capability of the central government in macro control. Clearly specifying the scope of authority of the central and local governments in administration and finance, and normalising the financial relations between the central and local governments, the reform is regarded as a watershed in China’s fiscal system reform.

A deeper fiscal system reform is forthcoming in response to the growth demand, including:

- Establishing and completing a government budget system with seamless connection. The revenue and expenditure scopes of public finance budget, government fund budget, state-owned capital managing budget and social security fund budget will be further defined, and relevant methods for operation will be constantly refined;
- Deepening the reform of budget management system. Reforms to the county level budgeting will be advanced at full throttle;
- Completing systems that can balance the administrative and financial power of the central and local governments. The financial transfer payment system will be refined, with input in general transfer payment further enlarged. Financial systems below the provincial level will be completed, the distribution relations among governments below the provincial level will be further standardised, and a guarantee mechanism for the basic financial strength of governments at the county level will be actively established.
- Reforming and honing the tax system, including unveiling taxes that facilitate resource conservation and environmental protection, carrying forward the income tax reform oriented by fair taxation, and refining the systems of consumption tax and property taxes.
- Vigorously supporting income distribution reform and other reforms. The distribution pattern of the national income will be further adjusted, focusing on

increasing the income of low-income earners, making full use of the market in fundamentally regulating the primary distribution of the national income, and laying more emphasis on the function of government in regulating the redistribution of the national income.

7.1.2 Present Fiscal and Tax System of China

The present fiscal and tax system has been gradually established on the basis of the tax-sharing system reform in 1995, in the year in which the authorities of the central and local governments in finance and administration were re-defined and major taxes were re-classified, so as to further standardise the distribution relations between the central and local governments, build up a reasonable distribution mechanism and control the growing financial gap among regions. Consequently, five levels of fiscal system have been correspondingly set up for the governments at the five levels (state level, provincial level, municipal level, county level and township level). The reform is mainly concerned with the layout of fiscal and tax relations between the central and provincial governments, while those among governments below the provincial level are up to the provincial governments, in line with the principles of the tax-sharing system.

The present fiscal and tax system mainly includes:

Defining the scope of authority of the central and local governments in administration and finance

In administration, the central finance is mainly responsible for expenses on national safety, foreign affairs and the operation of central state organs, expenditure necessary for regulating the national economic structure, coordinating regional development and carrying out macro-control, as well as development expenditure for undertakings that are directly under the control of the central government. The local finance mainly shoulders expenditures necessary for the operation of local organs of state power and the development of the local economy and local undertakings. In finance, in line with the principle of balance between financial power and administrative power, the central and local revenues are defined according to different taxes, that is taxes that are essential for safeguarding national interests and carrying out macro-control are classified as central taxes, major taxes that are directly related to economic

development as shared taxes, and those more suitable for the local governments to collect and manage as local taxes.

The central finance sets the amount of tax revenue return from the local finance

To preserve the pattern of local vested interests and smoothly carry out the tax-sharing system reform, the amount of tax revenue return from the local finance is authorised by the central finance on the 1993 basis. The actual local tax revenue that was handed over to the central finance in 1993, as the base number, is totally returned to the local finance, while an increase in rate of return after the base year is 30% of the growth rates of the local VAT and consumption tax.

Original central subsidies, the handing in of local revenue contributions and other related settlements remain unchanged

The original distribution pattern remains unchanged for a certain period of time after the tax-sharing system reform to ensure a smooth reform implementation.

Establishing the system of transfer payment in the transitional period

The amount of transfer payment in the transitional period is the sum of amounts of general transfer payment and transfer payment for preferential policies for minority nationalities, in which the former is mainly determined by the balance between local standard revenue and expenditure as well as the general transfer payment coefficient, while the latter is calculated by the balance between the local standard revenue and expenditure of minority nationality regions as well as the coefficient of transfer payment for preferential policies for minority nationalities.

Table 7-1 Present Fiscal and Tax System of China

Government	Administrative Power	Financial Power
Central Government	Expenditure on national defence, the armed police and foreign affairs and aid; central administrative expenses; expenditure on public security organs and cultural, educational and health undertakings that are within the area of responsibility of the central finance; infrastructure investment under the unified control of the central government; agricultural aid expenditure arranged by the central finance; expenses on technical transformation and trial production of new products of state-owned enterprises directly under the central government; allocations for geological prospecting; expenditure for repaying the principal and interest on domestic and foreign loans taken out by the central government	Central taxes: tariffs, consumption tax, VAT and consumption tax withheld by customs, tonnage dues, income tax of central enterprises, income tax of local banks, foreign banks and non-bank financial enterprises, centralised taxes of railway departments and head offices of banks and insurance companies (including business tax, income tax and urban maintenance and construction tax) Shared taxes: 75% of VAT, 60% of income tax, 97% of securities exchange tax ¹⁹ , and resources tax turned over by offshore oil companies ²⁰ .
Local Government	Infrastructure investment planned by the local governments, expenses on technical transformation and trial production of new products of state-owned enterprises directly under the local governments, agriculture-aid expenditure, urban maintenance and construction expenses, expenses on local cultural, educational and health undertakings, administrative expenses, price subsidies, etc.	Local taxes: business tax (excluding centralised business tax from railway departments and head offices of banks and insurance companies), income tax of local enterprises (excluding local banks, foreign banks and non-bank financial enterprises), individual income tax ²¹ , feast tax ²² , car and vessel license tax ²³ , land appreciation tax, city and town land use tax, fixed asset investment redirection tax ²⁴ , urban maintenance and construction tax, property taxes, vehicle and vessel use tax, stamp tax, animal slaughter tax ²⁵ , farmland conversion tax, agricultural tax ²⁶ , contract tax and tobacco tax on agricultural speciality income ²⁷ Shared taxes: 25% of VAT, 40% of income tax, 3% of securities exchange tax, and resource tax turned over by other enterprises except for offshore oil companies.

Source:

1. Zhong Xiaomin, *Local Public Finance*, China Renmin University Press, 2001.
2. Liu Zuo, *China Taxation* (2007 edition), Economic Science Press, April 2007.

¹⁹The ratio was changed from 1:1 to 4:1 on 1 January 1997, and to 88:12 later. On 1 October 2000, it was regulated into 91:3 and fixed as 97:3 from 2003.

²⁰Resource tax from offshore oil companies goes to the central government (in planning), and that from other enterprises goes to the local governments.

²¹Except for income tax from railway transport, national postal services, the four commercial banks (The Bank of China, Industrial and Commercial Bank of China, China Construction Bank, and Agricultural Bank of China), the three policy banks (China Development Bank, Export-Import Bank of China, and Agricultural Development Bank of China) and offshore oil and natural gas enterprises, income tax from other enterprises and individual income tax were classified as shared taxes on 1 January 2002 at the ratio of 1:1 between the central and local governments. The ratio was afterwards changed into 3:2.

²²Ceased.

²³Car and vessel license tax and vehicle and vessel use tax were combined as vehicle and vessel tax in 2006.

²⁴Ceased from 2000.

²⁵Cancelled on 17 February 2006.

²⁶Cancelled from 2006.

²⁷Collected since 28 April 2006.

7.1.3 Characteristics of China's Taxation System

From the structure of tax revenue a pattern focused on turnover taxes, supplemented by income tax and characterised by diversified forms of taxes and multiple collection steps has been established in China. The three major turnover taxes (VAT, consumption tax and business tax) cover 71.47% of the total tax revenue, of which 51.01% is from VAT. Income tax contributes 28.05% of the total tax revenue, and the sum of the three major turnover taxes and income tax constitutes 99.52% of the total tax revenue.²⁸ From the distribution layout, tax revenue of the central government accounts for 56.24% of the total, slightly higher than that of the local governments, for the reason that turnover taxes and income tax, which are easy to collect, contribute a majority of the tax revenue of the central government (118% of the total central tax revenue²⁹), while minor taxes are collected by the local governments.

7.2 China's Fiscal and Tax Policies to Promote Coordinated Regional Development

7.2.1 Transfer Payment System (General Transfer Payment, Earmarked Transfer Payment and Allowances)

Financial transfer payment in China is diversified and takes the following forms:

Tax revenue return

The total net income handed in to the central government (consumption tax plus 75% VAT minus allotted income from the central government) that is authorised on the 1993 basis is returned to the local governments, and has served as the base figure for returns since 1994. As mentioned earlier, the allotted income from the central government includes an annual increase rate of 30% of the growth rates of the local VAT and consumption tax. Tax revenue returns should also be deducted proportionately in the case that the net income handed in to the central government in

²⁸Considering statistical errors, the figure is overestimated and should be around 90%.

²⁹Considering statistical errors, the figure is overestimated and should be around 95%.

1994 and thereafter is below the base number of 1993.

Institutional allowance or handing in

Following the tax-sharing reform in 1994 the quota allowance from the central government to local governments, increases in revenue handed in and quota handing in remained subject to the original regulations, and the handing in of areas that practice the sharing-in-total system and pilot areas for the tax-sharing system is annually increased at a rate fixed on the 1993 basis.

Earmarks

Earmarks are a kind of allowance from the central government that is fixed by projects and in accordance with real local conditions and used for specific purposes, such as expenditure for supporting agriculture, investing in infrastructure, assisting underdeveloped areas and relieving areas hit by major natural disasters. The use of earmarks should be exclusively for the specific purposes.

Transfer payment in transitional period

Transfer payment in the transitional period since 1995 is a kind of transfer payment which is basically oriented towards equalisation and calculated by uniform formulae, including transfer payment governed by subjective factors and transfer payment governed by policy factors, and aims to alleviate major problems in local financial operation and solve the financial difficulties of financially strained areas, especially ethnic minority areas.

Transfer payment for distribution policy adjustments

To facilitate a smooth implementation of the nationwide wage increase policy and social security policy, transfer payment allowances of appropriate amounts are granted by the central finance to fill the financial gap in former industrial bases and the central and western regions which have financial trouble in carrying out the above policies.

Settlement allowance (or handing in of revenue)

Settlement allowance is a two-way financial transfer between the central and local governments, such as the handing in of revenue or the allotment of settlements between the central government and local enterprises or institutions, collection of deduction settlements in respect of delinquent loans from the World Bank, and other special arrangements for central level revenues in local treasuries.

Other allowances

There are some other small transfer payment items, low in their proportion of the total transfer payment amount yet of great significance, such as those for the National Forest Protection Project, for restoring farmland to forest and restoring grazing land to grassland, which have been successively unveiled since 1995 to support the Development of Western China and protect and improve the ecological environment of the western region.

Following on from the above description of the major forms of financial transfer payment in China, the structure of and variation within China's financial transfer payment system will be examined below. As indicated in table 7-2, the structure of China's financial transfer payment system has been changed since 1994 in the following aspects:

- Though gradually declining in its proportion of the total transfer payment amount from the central government to local governments in the current year, the tax revenue return still accounts for the largest part of financial transfer payment and is extensive in scale;
- Despite a hardly changed total amount, institutional allowance has experienced a year-on-year drop as a proportion of the total transfer payment;
- The scale and proportion of earmarks have been decreased in order to enlarge the transfer payment in the transitional period in recent years, which has seen a rapid increase in both scale and proportion, with those in 2001 nearly doubled as compared to 2000.

Table 7-2 Amount and Structure of Financial Transfer Payment from the Central Government to Local Governments in Major Years since Implementation of the Tax-

Item	1994		1995		1996		1997		2000		2001	
	Absolute Amount	Proportion	Absolute Amount	Proportion	Absolute Amount	Proportion	Absolute Amount	Proportion	Absolute Amount	Proportion	Absolute Amount	F
Tax revenue return	1799	75.5	1867	73.8	1949	73.0	2012	72.0	2268	48.6	2335	
Institutional allowance	114	4.8	115	4.5	111	4.2	112	4.0	125	2.7	120	
Earmarks	361	15.1	375	14.8	489	18.3	516	18.5	1440	30.9	1365	
Transfer payment in transitional period			21	0.8	35	1.3	50	1.8	86	1.8	161	
Transfer payment for income distribution adjustment policies									746	16.0	1,195	
Settlement allowance	56	2.2	103	4.1	43	1.6	49	1.8				
Others	56	2.4	50	2.0	44	1.6	56	2.0				
Total	2386	100	2530	100	2670	100	2795	100	4665	100	5176	

sharing System

unit: RMB 0.1 billion

Source: *Opinions of Chinese and Foreign Experts on Financial Transfer Payment*, p.19, p.p. 26 - 28.

Box 7-1 Regional Disparity in Financial Transfer Payment

- The proportion of the State transfer payment in the local financial revenues at the stipulated level has fallen year-on-year, on average from 124.91% to 76.61% during 2003 - 2005 across the country, and from 344.16% to 32.61% in Guangdong during the same period, the sharpest drop among all provinces. The major reason for this is that the tax-sharing reform has greatly enhanced the local capabilities in organising financial revenue, while the total amount of the State transfer payment has stayed almost the same.
- Compared to a lower dependence of the eastern coastal region on transfer payment, that of the north-eastern, central and western regions is heavy, especially the western region, to which the transfer payment from the central government in recent years has unexceptionally exceeded 150% of the regional financial revenues at the same level. It is worth noting that such figures for the twelve provinces involved in the Development of Western China are all above 100%, in which Tibet, ranking top with upwards of 1300% in the most recent years, shows a considerably high dependence on transfer payment. On the contrary, in 2005 only Hainan Province exceeded 100% among the ten cities and provinces in the eastern coastal region. The disparity in dependence on transfer payment among regions is quite obvious.
- Overall, on this scale of national averages, the three provinces of the Rejuvenation of Old Industrial Bases in Northeast China hit the top, followed in sequence by the six provinces of the Rise of Central China, the eastern region, and the cities and provinces in the Development of Western China. The reasons for this may lie in the following facts: the three provinces in north-eastern China have received a great amount of policy transfer payment due to the implementation of the Rejuvenation of Old Industrial Bases in Northeast China; the six provinces in the central region feature largely in transfer payments in the transitional period due to their large populations and a lower level of per capita financial expenditure and revenue; the eastern coastal region which is inferior in the amount of transfer payment is still superior to the less developed western region in average scale because of its developed economy, and the western region, with a large amount of policy transfer payment yet a general lower level of economy, is less capable of increasing the base amount of tax revenue return, the major form of transfer payment, and ends up with the smallest average scale.

It can be concluded from the above research that the more developed eastern coastal region and the less developed areas in the Development of Western China represent the two extremes of transfer payment dependence, while the areas in the Rejuvenation of Old Industrial Bases in Northeast China and the Rise of Central China are medium dependent, which conforms with their level of financial strength. Such an inverse ratio between the financial strength of regions and their dependence on transfer payment shows that for a better performance of transfer payments as means of balancing regional financial strength, transfer payment to the areas in the Development of Western China should be gradually intensified, tax revenue return, as an unreasonable transfer payment, should be abolished, and transfer payment in the transitional period should make up a larger part in the total transfer payment.

Figure 7-1 Regional Distribution of Transfer Payment (2000)

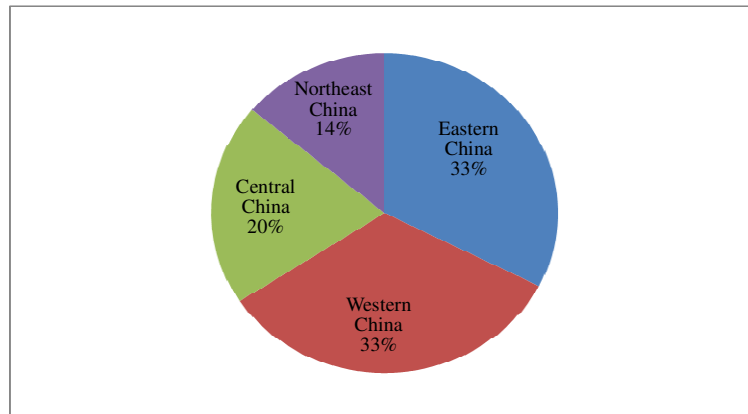
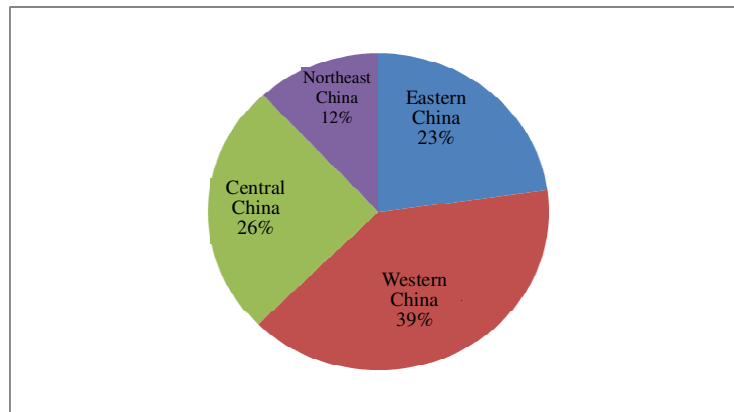


Figure 7-2 Regional Distribution of Transfer Payment (2008)



7.2.2 Preferential Tax Policies and Financial Aid

A great number and wide variety of preferential tax policies have been successively unveiled to promote coordinated regional development, and can be classified into specific categories for the eastern coastal region, as well as areas respectively involved in the strategies of the Development of Western China, the Rejuvenation of Old Industrial Bases in Northeast China, and the Rise of Central China. As many of the former preferential tax policies for the eastern coastal region are impossible to reproduce and in a process of step-by-step normalisation and elimination, and as the current national regional development strategy is focused on promoting the development of the central and western regions, the following is an introduction to major prevailing preferential tax policies for the central and western regions, as well as their influence on regional economic development.

Major preferential tax policies for areas in the Development of Western China

include:

- Domestically-funded and foreign-invested enterprises in the western region who are engaged in state-encouraged industries are taxed for business income at a deducted rate of 15% during 2001 - 2010;
- Business income tax on enterprises in minority autonomous regions, once they have been approved by the provincial governments, may be deducted on a regular basis or remitted;
- The policy of 'tax exemption in the first two years and half deduction in the following three years' is enjoyed by enterprises who invest in transportation, power, water conservation, postal services and broadcast and television projects in the western region (for foreign-invested enterprises, the operation period should exceed ten years);
- For income from special agricultural products that are produced by protecting the ecological environment and restoring farmland to forest (ecological forests should not be lower than 80%) and grassland, tax on special agricultural products is remitted for ten years following the first income-earning year;
- Land for construction of provincial and national roads in the western region should be exempted from farmland occupancy tax in reference to land for railways and civil aviation usage, and whether such exemption is applicable to land for construction of roads at other levels should be subject to the governments of municipalities directly under the central government, autonomous regions and provinces;
- Advanced technical equipment imported within the aggregate investment for self-use of projects of state-encouraged domestically-funded and foreign-invested industries as well as advantageous industries in the western region, unless otherwise restricted by the State from tax exemption, should be exempted from tariffs and VAT on import.

Major preferential tax policies for areas in the Rejuvenation of Old Industrial Bases in Northeast China include:

- Until 6 December 2006 eligible enterprises in old industrial bases in north-eastern China have been exempted from all outstanding industrial and

commercial taxes (including educational surtax, but excluding agricultural tax, livestock tax, tax on special agricultural or forest products, farmland occupancy tax, contract tax and tariffs) as well as overdue fines issued before 31 December 1997;

- Applicable resource tax rates for low-yielding oil fields and exhausted mines, once approved by the provincial governments, may be deducted by up to a maximum of 30%;
- From 1 July 2004 the tax levied on fixed assets and goods and taxable services for self-made fixed assets purchased by general taxpayers (who are mainly engaged in industries such as equipment manufacturing, petrochemical industry, metallurgy, shipbuilding, automobile and agricultural product processing), as well as transportation expenses for such fixed assets, has been deductible by VAT increment in the current year, and then will continue to be so by the carried amount in the following years. This type of deduction is applicable to VAT on machines and equipment newly purchased by hi-tech industries, military product industries, and so on;
- The depreciation of useful lifespan of fixed assets (excluding houses and buildings) newly purchased after 1 July 2004, as well as those purchased before this date but not completely depreciated, may be assessed as faster, but by no more than 40% on the basis of the existing regulations;
- From 1 July 2004, the amortisable life of intangible assets that are assigned to or invested by enterprises may be shortened but by no more than 40% on the basis of the existing regulations;
- From 1 July 2004 the maximum pre-tax deduction of taxable salary for employees of enterprises was increased to per capita RMB 1200/month. Specific amounts are subject to the provincial governments in accordance with the local average salary level but must not exceed this maximum;
- From 1 December 2004 the system of ‘increment deduction’ was implemented whereby the outstanding VAT of enterprises in the north-eastern region whose scope of VAT deduction had been enlarged, regardless of VAT increment, should be deducted in the first place by input VAT for fixed assets;
- In the case of balance following VAT deduction by input VAT for fixed

assets incurred from 1 July to November 30 2004, approved by the departments (bureaus) of finance of the three provinces and one city (Liaoning Province, Jilin Province, Heilongjiang Province and Shenyang City), tax reimbursement may be calculated as per VAT income that has been earned and handed over to the treasury in 2004, rather than VAT increment in the same year. The remaining input VAT for fixed assets should be carried over to the next year for deduction.

In line with relevant policies of the Several Opinions on Promoting the Rise of Central China, in reference to related policies for areas in the Rejuvenation of Old Industrial Bases in Northeast China and the Development of Western China, some of the cities involved in the Rise of Central China enjoy the following major preferential tax policies:

- Enlarging the scope of VAT deduction;
- Shortening the depreciable life of fixed assets;
- Shortening the amortisable life of intangible assets;
- Increasing the pre-tax deductible amount of taxable salary for enterprises.

7.3 Direct Government Investment Policies

7.3.1 Special Financial Funds to Support Regional Development

To promote coordinated regional development, special funds such as national poverty relief funds, financial poverty relief funds, ethnic minority development funds, etc are mainly used for the economic and social development of former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas.

National poverty relief funds refer to the funds from the central government specially for solving the problem of food and clothing of the rural poor population and supporting the social and economic development of poverty-stricken areas, including funds to aid the development of economically underdeveloped areas, special subsidies for agricultural construction in three western regions (the arid regions of Gansu Hexi, Gansu Dingxi and Ningxia Xihaigu), new financial poverty relief funds, funds to provide employment as a tool of relief and special poverty relief loans. The funds to

aid the development of economically undeveloped areas and the new financial poverty relief funds are mainly used to improve the farming and animal husbandry production conditions of poverty-stricken areas; to develop a diversified economy; to build country roads; popularise compulsory education and eliminate illiteracy; to organise applied technology training for farmers; to prevent and control endemic diseases, etc. The management and use of the special subsidies for agricultural construction in the three western regions is subject to the Administrative Measures for Use of Special Subsidies for Agricultural Construction in Three Western Regions (Finance and Agriculture [1995] No.10) formulated by the Ministry of Finance. Funds towards providing employment as a tool of relief are mainly used to build roads at the county and township levels (excluding provincial and national roads), as well as roads which support poverty relief development projects such as the establishment of basic farmland (including livestock pasture and orchards), the launching of irrigation and water conservation projects, and projects to solve the drinking water problem for people and livestock. Special poverty relief loans are focused on seed and breeding industries which help to directly solve the food and clothing issues of the rural poor, as well as processing industries which take local agricultural and sideline products as the raw materials, have good economic returns and are capable of repaying loans. The allocation of national poverty relief funds is based on the number and the degree of poverty level of the poor population of provinces, autonomous regions and municipalities directly under the central government in the current year, their plans of how to utilise poverty relief funds, and the ratio of local supporting funds which are put into practice.

The funds to aid the development of economically underdeveloped areas (not equivalent to the poverty relief funds) are special funds established by the national finance and used without compensation for helping economically underdeveloped areas such as former revolutionary base areas, areas inhabited by minority nationalities, remote and border areas and poverty-stricken areas to shake off their backwardness and accelerate their economic and social development. The funds are used to improve the infrastructure construction of farming and animal husbandry in the above areas, to develop planting and breeding industries, utilise the local resources to drive regional economic development, support projects which can help local residents overcome poverty and achieve prosperity, build country roads and bridges, develop rural culture, education and health, organise applied technology training for

farmers, prevent and control endemic diseases, and so on. The allocation of the funds is based on certain facts about these areas such as number of total population and of poor population, poverty level, natural conditions, local financial strengths, how the funds will be utilised, the ratio of local supporting funds which are put into practice, etc. The funds from central finance are allocated by the Ministry of Finance in line with national principles and policies as well as taking the above bases of allocation into account. Matching funds from the local financial departments are required to be put into practice at 30% - 50% of the funds from the central finance and there must be no inflated budget figures, empty matching funds or multiple-purpose matching funds. The poverty relief funds for three western regions, including investment for infrastructure construction and the subsidising of operating expenses, are mainly used for solving food and clothing issues and increasing income in Hexi region, Dingxi region, the ten arctic-alpine, dank destitute counties of Longnan region in Gansu Province, as well as Xihaigu region of Ningxia Province. Funds are focused on improving agricultural production conditions, providing drinking water for people and livestock and developing township enterprises. Regarding their use, the funds follow the principle of 'proper concentration ensuring priority, overall arrangement and the pursuit of practical results', selecting projects by profits, determining investment by projects, tailoring measures to suit local conditions, eliminating personal distribution and county division, and practicing project management. Furthermore, funds can be used both at a cost and for free, with the first kind being allocated mostly to those projects with remarkable economic returns and repaying capability. The funds made available for use at a cost can make up to 25% of the total resource available.

Ethnic minority development funds, as a part of the poverty relief funds from the central finance, are special funds established by the central finance to support poverty-stricken ethnic minority areas by advancing the Program to Revitalise Border Areas and Improve Residents' Wellbeing, to assist the development of ethnic minorities with sparse populations, and to improve the production and living conditions of ethnic minorities. On the basis of the annual priorities for supporting the development of ethnic minorities, by taking into consideration the numbers of ethnic minority autonomous areas, ethnic minority populations, key counties involved in the Program to Revitalise Border Areas and Improve Residents' Wellbeing, ethnic minorities with sparse populations and agglomerated settlements in different

municipalities directly under the central government, autonomous regions and provinces, as well as the utilisation of the funds in the previous year, the State Ethnic Affairs Commission and the Ministry of Finance jointly finalise the annual plan for distributing the funds across municipalities directly under the central government, autonomous regions and provinces. The fund issuance shall rest with the Ministry of Finance with the plan being forwarded to the State Ethnic Affairs Commission and competent provincial departments for ethnic affairs after being approved by the State Council's Leading Group for Poverty Relief and Development. The funds distributed to municipalities directly under the central government, autonomous regions and provinces are scheduled, managed and audited on a project basis.

The border area development fund, a special development fund derived from the ethnic minority development funds and established after the Program to Revitalise Border Areas and Improve Residents' Wellbeing in 1999, is mainly used for assisting the development of the 135 counties located along the 22,000 km of land borders of China.

Financial poverty relief funds, including the funds to create employment, new financial poverty relief funds and development funds, are national special funds used in poverty-stricken areas, economically underdeveloped former revolutionary base areas, ethnic minority areas and border and remote areas, to help these areas shake off backwardness, improve the production and living conditions of poor populations, increase incomes of poverty-stricken farmers, and promote an overall development of economy and society. The fund to create employment and the new financial poverty relief funds are used in national poverty counties. Development funds, meanwhile, with their specific focus on national poverty counties, can also be applied in poverty-affected counties ineligible as national poverty counties but whose actual situations justify the demand. Part of the development funds based on the budget of the central government is specially used for poverty-affected counties in ethnic minority regions, as well as regions where people of ethnic minorities live in agglomerations. The applications of financial poverty relief funds include:

- The employment creation fund: mainly used in poverty-stricken areas for building infrastructure, improving the production and living conditions of residents as well as the ecological environment, focusing on construction of roads at the county, township and village levels (including bridges and culverts), establishing basic farmland and constructing small-scale irrigation

and water conservation projects, providing drinking water for people and livestock, organising comprehensive treatment of small river basins, etc., and can be used to a certain extent in the infrastructure construction of migrant villages in trans-regional development-oriented poverty alleviation;

- New financial poverty relief funds and development funds: focused on developing planting and breeding industries and promoting technology-based poverty alleviation (such as introducing quality varieties, promoting advanced applied technologies and organising relevant training). A fair portion of it may also be used in constructing rural roads and bridges, establishing basic farmland (including livestock pasture and orchards), and irrigation and water conservation projects, as well as providing drinking water for people and livestock. The sources of financial poverty relief funds include funds from the central finance and matching funds from local governments, in which the amount of matching funds put into practice by local governments should not be lower than 30% of that of the funds from the central finance. The allocation of financial poverty relief funds takes into account many factors, such as national poverty relief principles and policies, numbers of the local poor population and poverty-affected counties, local natural conditions, infrastructure level, financial strength and per capita net income of farmers in poverty-stricken areas, as well as projected effects of use of the funds.

As systematic figures for special funds are inaccessible, we will use the ‘expenditure to aid underdeveloped areas’, a similar statistical indicator, to analyse the disparity between special funds among regions. Such expenditure which comprises financial poverty relief funds, subsidies for border area construction, and ethnic affair operation funds, can be approximately regarded as the sum of financial poverty relief funds and ethnic minority development funds, in which financial poverty relief funds consist of infrastructure construction funds, production development funds, technology promotion and training funds, social development funds, project management fees, interest subsidies for poverty relief loans, special subsidies for agricultural construction of three western regions, and so on.

Regarding ethnic minority development funds, Inner Mongolia, Heilongjiang and Yunnan, three provinces largely inhabited by ethnic minorities, were respectively

given RMB 41.4 million, RMB 2,6.60³⁰ million and RMB 64 million (including subsidies from the central finance) in 2005 as ethnic minority development funds, of which RMB 21.35 million, RMB 7 million and RMB 15.50 million as border area development funds, and RMB 12.58 million, RMB 18 million and RMB 34 million as development funds to support ethnic minorities with a sparse population. The large regional disparity, as is indicated, is the consequence of both the tendencies of national policies and of the economic development levels of the provinces – special funds generally require matching funds from local governments at certain proportions, which means a direct ratio between the local economic strength and the amount of matching funds provided.

As indicated by the expenditure on aiding underdeveloped areas of provincial level administrative units in 2005 Guangdong Province was then at the top with RMB 1.7 billion, followed by Yunnan Province with RMB 1.661 billion, while no such expenditure was included into the budgets of Beijing and Shanghai. In a ranking of the four regions the western region, which ranked top with RMB 10.088 billion, accounted for 52.15% of the national total, followed by the central region (20.73%), the eastern coastal region (20.59%) and the north-eastern region (6.53%). Such expenditure, as is shown, is inversely proportional to the financial strength of the regions with the poorer regions having more underdeveloped areas to support and fewer resources to do so. This therefore further reduces the funds at the disposal of central and western poverty-stricken areas as these expenditures are basically matching expenditures earmarked for special purposes.

In general, special funds have made an enormous contribution to a faster, coordinated regional development, greatly reducing the numbers of the poor population, improving the infrastructure level and ecological environment of poverty-stricken areas and, not least, enhancing the self-development capability of these areas.

7.3.2 Budgetary and Ex-budgetary Investment from the Central and Local Governments

Government budgetary investments are mainly input in economic and social fields

³⁰*China's Ethnic Statistical Yearbook 2006*. Different statistical calibers may explain why the figure is smaller than the sum of the two sub-items.

where the ineffective resource allocation of the market needs to be remedied by the government, such as investment projects for public good and infrastructure construction, as well as projects to protect and improve the ecological environment, to promote the economic and social development of underdeveloped areas, and to facilitate scientific and technological progress and the industrialisation of hi-tech technologies. The application of government budgetary investment funds, according to the central government, should be properly tilted to underdeveloped areas and minority autonomous regions. The use of such budgetary investment funds takes several forms including direct government investments, investment allowances and interest subsidies, in which investment allowances and interest subsidies are generally lower than RMB 0.2 billion, while direct government investment or capital injection is for projects exceeding this limit.

The total scale and regional distribution of government budgetary investments is unattainable, as they are not independently listed among the financial expenditure subjects made public by the Chinese government. Estimated on basic construction expenditure which is similar in what it covers, government budgetary investment accounted for about 30% of the total government expenditure in 1985, gradually declined to about 13% in 2006, and rebounded to around 15% in 2009 due to implementation of the proactive fiscal policy and a larger scale of government investment. From the absolute size, government investment amounted to about RMB 55 billion in 1985, and upwards of RMB 100 billion in 1997. Influenced by the policy of boosting domestic demand, the figure rose above RMB 200 billion in 1999, hovered around RMB 400 billion during 2005–2008, and was estimated to surge above RMB 900 billion in 2009. The proportion of budgetary investment from the central government has experienced a drop in the national total, hovering around 55% in 1994 and declining to about 30% in 2006 according to estimations, which means local governments have grown into the major contributors of budgetary investment funds.

As for regional distribution, the input of budgetary investment funds from the central government to the regions is primarily oriented by the government's regional development strategies. There has been a remarkable increase in budgetary investment funds to the western region since the strategy of the Development of Western China was launched in 1999. Such investment in the western, eastern and central regions in 2003 respectively accounted for 40%, 30% and 22% of the national total, while the

remaining 8% didn't have clear regional boundaries. In recent years, in compliance with the strategy of the Rise of Central China, the investment in the central region has been increased, with the proportion rising up to 25% in 2006, 3% higher than that in 2003.

7.4 Financial Support and Policies

The banking system of China is based on large national banks, which decides its nationwide credit asset allocation. On the other hand, due to the commercialisation reform of the banking system, loan distribution over regions is basically subject to business principles. This explains why most credit assets of the banking system have been generally allocated to the economically developed eastern region, and the loan proportion of the eastern region is higher than its deposit proportion, which implies a fund flow from the central and western regions towards the eastern region. For example, among the domestic and foreign currency loans of all the financial institutions in 2008, the western, central and eastern regions respectively accounted for 19.7%, 13.9% and 61.3%, in which the proportion of the western region was far below its proportion in government budgetary investment funds.

Table 7-3 Regional Distribution of Domestic and Foreign Currency Deposits and Loans of Financial Institutions at the end of 2008

unit: %

	Eastern China	Central China	Western China	North-eastern China	National Total
Domestic and foreign currency deposits in proportion to national total	60.3	15.2	17.0	7.4	100
Domestic and foreign currency loans in proportion to national total	61.3	14.4	17.1	7.2	100
Among which: short-term loans	62.6	15.1	14.6	7.7	100
Medium and long-term loans	59.8	13.9	19.7	6.6	100
Foreign currency loans	85.9	5.1	4.9	4.1	100

Remarks: The summarised data of financial institutions excludes direct deposits and loans of head offices of commercial banks.

Source: Regional Financial Report 2009, People's Bank of China

Policy banks and loans are another major financial instrument of China for supporting regional development. Presently there are three policy banks in China: the China Development Bank, the Agricultural Development Bank of China and the Export-Import Bank of China. To implement the government's intentions, support the government's policies and facilitate the realisation of the government's objectives, such policy banks need to consider further the factors that can promote coordinated regional development when allocating credits, and focus on providing the financing service for government development projects in backward areas. In 2003 loans from policy banks to the western, central and eastern regions respectively accounted for 13.91%, 29.22% and 43.37%. The central and western regions apparently weigh heavier in the loans of policy banks than in those of commercial banks. However, mainly depending on bond issuance in the market and the lack of financial funds from the government for its capital resources, Chinese policy banks need to be cautious about fund returns and this prevents such banks from playing a more significant role in regional development. Bond issuance reaches 82.36% in the liability structure of the China Development Bank, much higher than that of Japan Development Bank (9.77%), Korea Development Bank (45%) and KfW Banking Group (48%), in which the loans of Japan Development Bank from the government account for 77.46% of its total liabilities. A new reform of China's policy bank system is around the corner, aiming to increase the capital strength of banks and explore more fund sources.

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Chapter 8 Promoting Regional Development by Industrial Transfer and Capital Flow

Economic globalisation has advanced in leaps and bounds since the 1980s. Transnational enterprises, as mainstays of economic globalisation, have allocated resources and sought for development space across the world, creating large-scale international industrial transfer and capital flow. Despite disputes about the influence of globalisation on the economies of nations and the financial situations of different groups it is unquestionable that, by the beginning of this century, international division of labour had reached an unprecedented high level, economic activities had grown more international, and economies of different nations had been gradually integrated (Stiglitz, 2004; Wolf, 2005). Economic globalisation, in changing the world, has also changed China.

Since the reform and opening up international transfer and domestic gradient transfer of industries, as consequences of national economic growth and the regional development pattern as well as international and domestic capital flows, have significantly affected the development of China's regional economies. Firstly international industrial capital has been transferred to coastal areas due to the reform and opening up, propelling a leading development of the eastern coastal region. Secondly, thanks to an increase of production factor prices in coastal areas, international and eastern industrial capital has started to move to the central and western regions by the law of gradient transfer, thus quickening the economic growth of these regions. International industrial transfer and capital flow have had different effects on different regions of China, which to greater and lesser degrees has worsened the imbalance of economic development among regions.

8.1 Transfer of International Industrial Capital to China

8.1.1 Eastern Coastal Region – Place of First Landing of International Industrial Transfer

The eastern coastal region is oriented towards a pioneering opening up according to China's opening-up strategy, enjoying a series of preferential policies in respect of finance, tax, credit loan, investment, land, etc., and thus has grown into a frontier for opening up and receiving of international industrial transfer.

1. The start-up stage (1979–1991). This was a stage when foreign investment in China, mostly in foreign borrowing and joint production, was small-scale and experimental, and foreign direct investment (FDI), especially from large transnational corporations, was rare. In this stage international industrial transfer to China was primarily embodied by processing trade, mostly involving light industries represented by textiles, such as clothing, toys, shoes and hats, household appliances, etc. It is worth noting that in this stage Guangdong Province exerted its territorial advantages (neighbouring Hong Kong) and provincial characteristics (a large number of overseas Chinese) and took full advantage of the national preferential policies and flexible measures to vigorously develop the export-oriented economy, and rapidly achieved a high growth of its economy.

2. The rapid-development stage (1992 - 2001). China's reform was oriented towards building a socialist market economic mechanism in 1992. The establishment of such an orientation as well as constantly improving domestic market conditions have enabled a stable institutional expectation and market environment for China to attract larger FDI and accept international industrial transfer, resulting in large-scale and systematic investment of foreign enterprises, particularly transnational enterprises. During 1992 - 1995 foreign investment in China multiplied year on year. The FDI in actual use during 1996 - 2001 hovered around US\$40-50 billion. FDI became the majority of foreign investment in China, and the amount of FDI in actual use was three to four times of that of foreign borrowing. Industries transferred to China at this stage were mostly capital intensive combined with labour intensive features, diversified in transfer methods. During this period, investment from

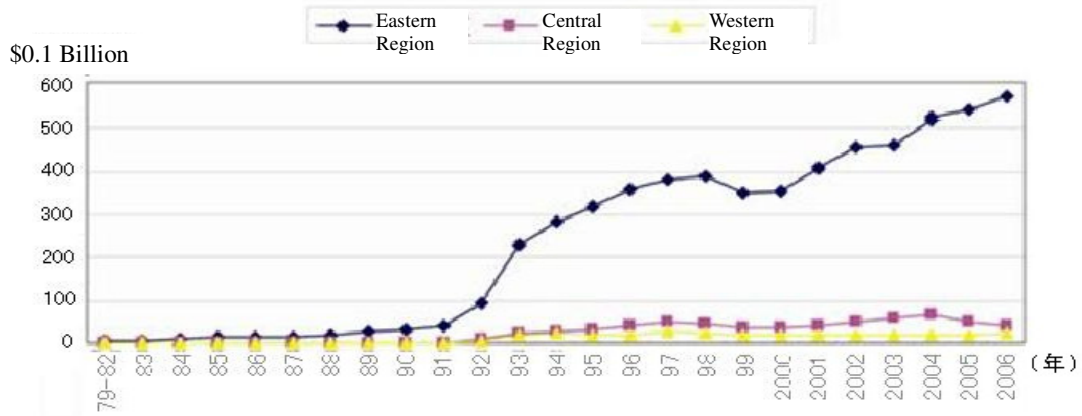
transnational enterprises in the Yangtze River Delta and the Bohai rim region, especially Shanghai, was increased and more than that in the south China coastal region. Meanwhile, international industrial transfer to Shanghai was quickened, thus greatly promoting the regional economic growth.

3. The high-growth stage (since 2002). At the end of 2001 China set up the primary market economic mechanism and entered the WTO. Attracted by a more open domestic market and a tremendous market space, transnational enterprises attach high importance to the strategic position of China, rating it as one of the first choices for direct investment. FDI has begun to extend from the production and processing of single products and procedures to downstream products and related industries. Mature technology-intensive and capital-intensive industries such as electronic information, household appliances, automobiles and petrochemicals, have been transferred on a large scale from developed countries to the eastern coastal region of China.

8.1.2 Eastern Coastal Region – Main Destination of FDI Flow

A substantial nationwide FDI increase didn't take place until the end of 1992, since when FDI has been agglomerated in the eastern coastal region at a gradually higher pace (see figure 8-1). So far nearly 480 of the Fortune 500 enterprises have invested in China. Foreign investment in actual use amounted to US\$92.395 billion in 2008, a 23.58% growth on a year-on-year basis. By then China had ranked the top among developing countries in this aspect for 17 consecutive years. Influenced by the financial crisis, foreign investment in actual use in China declined slightly to US\$90.03 billion in 2009. By the end of 2008, the number of FDI projects had accumulated to 659,885, among which 549,582 were in the eastern region, accounting for 83.28%. Foreign investment in actual use had accumulated to US\$899.059 billion during the same period, with that in the eastern region covering 82.526% (see table 8-1). FDI projects and foreign investment in actual use in the eastern region accounted for 85.64% and 72.33% of the national totals respectively in 2008 (see table 8-2).

Figure 8-1 FDI in China



Source: foreign investment statistics of the Ministry of Commerce

Table 8-1 FDI in Eastern, Central and Western Regions by the end of 2008

Region	No. of Projects	Proportion (%)	Amount in Actual Use (unit: \$0.1 billion)	Proportion (%)
Total	659885	100.00	8990.59	100.00
Eastern Region	549582	83.28	7418.91	82.52
Central Region	70228	10.64	731.61	8.14
Western Region	39990	6.06	403.57	4.49
Relevant Departments	85	0.01	436.45	4.85

Remarks:

1. Figures covered by relevant departments are FDI absorbed by banking, securities and insurance industries.
2. Eastern region: Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan.
3. Central region: Shanxi, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan.
4. Western region: Inner Mongolia, Guangxi, Sichuan, Chongqing, Guizhou, Yunnan, Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang and Tibet.

Source: foreign investment statistics of the Ministry of Commerce.

Table 8-2 FDI in Eastern, Central and Western Regions in 2008

Region	No. of Projects	Proportion (%)	Amount in Actual Use (unit: \$0.1 billion)	Proportion (%)
Total	27537	100.00	1083.12	100.00
Eastern Region	23584	85.64	783.40	72.33
Central Region	2544	9.24	74.36	6.87
Western Region	1386	5.03	66.19	6.11
Relevant Departments	23	0.08	159.17	14.70

Source: foreign investment statistics of the Ministry of Commerce.

Remarks: same as Table 8-1.

8.1.3 Factors Driving International Industrial Capital to Flow to Eastern Coastal Region

Factors in the early reform and opening up

The agglomeration of foreign capital, fundamentally, follows the location choice of FDI. According to John H. Dunning, a British economist, there are four factors affecting the location choice of FDI, namely the market factor (market scale and potential), a trade barrier factor, the cost factor, and the investment climate. Factors that drove FDI to flow to the coastal region of China in the early stage of reform and opening up mainly include:

1. Policy. As the first region of China opened up to the outside world, the coastal region not only enjoyed a series of preferential policies, but also took the lead in systematic reform of the economic mechanism and construction of the market economy.

2. Location. Enterprises with FDI in the early period were mostly export-oriented processing enterprises with 'both ends outside' (buying raw materials, machinery and spare parts from abroad and selling manufactured goods on the international market), calling for convenient transportation conditions and logistics systems for lower costs. Consequently, foreign investment favoured adjoining areas or coastal harbours. For example, investment from Hong Kong, Macao and Taiwan was concentrated in

Guangdong, Fujian and other south-eastern coastal areas in the early period.

3. Production factor endowment. The abundant labour and natural resources of China provided a guarantee for the transfer of international labour-intensive industries.

Factors in the new period

The export-oriented economy has propelled the development of coastal areas. With a rapid increase of the national economic aggregate and a higher economic level and better infrastructure of coastal areas brought by China's entry into the WTO, FDI has accelerated its flow to China and agglomerated on a larger scale in coastal areas. Such a growing agglomeration, in addition to the inherent location advantage, infrastructure and preferential policies of coastal areas, can also be attributed to the following reasons:

1. Market. The rapid economic growth of China has developed a high consumption capacity of households and considerable market potential, which attracts transnational enterprises for long-term direct investment.

2. Industrial foundation. The eastern region has not only a better industry supporting capability (such as numerous high-tech parks and economic development zones), but also clusters of industries such as automobiles, household appliances, semiconductors, electronics and petrochemicals which is very advantageous in terms of spatial agglomeration, and thus can constantly attract foreign investment.

3. Agglomeration effect. FDI is indeed featured by a high degree of spatial agglomeration, a method for foreign capital to reduce investment costs and risks.

4. Educational and technical levels. The rapid development of high-tech industries and the supply of high-quality skills, especially in Beijing, Shanghai, Guangdong, Jiangsu, Zhejiang and Shandong, have considerably affected the location choice of FDI.

5. Investment environment. A higher marketisation level, a well-honed institutional environment and better government administrative efficiency in the eastern region have established a virtuous circle of mutual promotion and support between FDI and institutional changes.

With the deepening of China's reform and opening up, the whole nation is opening itself up to the outside world. Most of all, with the State attaching more importance to the inland economy and allowing and encouraging capital (including foreign capital)

to flow to inland underdeveloped areas, local preferential policies have been unveiled one after another to attract foreign investment. Against such a background the policy factors that facilitate the agglomeration of FDI in the eastern coastal region are not effective as they used to be. Meanwhile, influenced by various factors of coastal areas, such as a difficult supply of land, water and other natural resources, greater environmental stress and a higher labour cost, the investment costs in these areas have increased. As a result FDI has started to flow to inland areas.

8.1.4 Effects of International Industrial Capital Transfer to the Eastern Region

Promoting a sustainable economic growth

The GDP of the eastern region in 1980 accounted for 50.08% of the national total. Thanks to a variety of reasons such as the rise of township enterprises, the large-scale foreign investment since the 1990s etc., the economy of the eastern region has experienced an astonishingly rapid growth, with the GDP in 2006 making up 55.7% of the national total. The national GDP was increased from RMB 8,278.025 billion to RMB 32,722.28 billion during 1998 – 2008, with a net increase of RMB 24,444.255 billion, in which the net increases of the eastern, north-eastern, central and western regions were respectively RMB 13,524.98 billion, RMB 1,992.328 billion, RMB 4,565.728 billion and RMB 4,361.22 billion. The nominal growth rates of the four regions during the ten years were 15.42%, 13.05%, 13.68% and 14.80% respectively. The eastern region has grown into the core region and the central pillar of a sustainable and rapid growth of China's economy, which can essentially be attributed to the priority status of the region in the target selection process for the transfer of international industries and foreign capital.

Promoting optimisation of industrial structure

From the launch of reform and opening up till 2007 the GDP proportion of primary industry of the eastern region dropped sharply from 23.3% to 7.1%, that of secondary industry also declined to some degree during 1978–1992 but rebounded to 51.8% in 2007, and that of tertiary industry, in a constant rise, reached 41.1% in 2007, doubling the 1978 basis. The respective proportions of primary, secondary and tertiary

industries in China were 11.26%, 48.64% and 40.10%³¹ in 2007. It is clearly shown that in the eastern region primary industry occupies a shrinking part (due to a rapid development of non-agricultural industries), secondary industry is the focus (a high industrialisation level), and tertiary industry is growing fast (a rapid development of service industries).

Promoting development of industrial clusters

Three economic zones led by city agglomerations have been established in the eastern coastal region during its acceptance of international industrial transfer, namely the Yangtze River Delta economic zone, the Pearl River Delta economic zone and the Beijing – Tianjin – Hebei economic zone.

The Yangtze River Delta is so far the economic zone with the greatest economic strength and the largest scale of industry in China, featured by a wide range of industries and advanced light and heavy industries. The largest comprehensive industrial zone in China, it is not only leading in traditional industries, but is also distinguished in high-tech industries such as microelectronics and fibre-optical communication.

The Pearl River Delta economic zone is the most vigorous in economic development in China. With the industries, mostly labour-intensive industries basically guided by processing trade, the zone has become one of the world's largest production and export bases for electronic products and consumer goods. However, with the rise of leading local transnational high-tech enterprises and the growth of a large number of innovative SMEs in Guangdong Province, it is also possible that the zone will grow into a key area for the development of high-tech and emerging industries in China.

The Beijing – Tianjin – Hebei economic zone is a base for heavy chemical industries, equipment manufacturing industries and high-tech industries. Beijing, the capital of China and a national transportation hub enjoying advantageous skill agglomeration, a vast hinterland and regional market and convenient transportation, has become one of the modern logistics centres and consumption market regions in China with a large scale, advanced and mature development.³²

Promoting a sustainable growth of foreign trade

³¹An Analysis of the Leading Effect of Eastern China since the Reform and Opening up, <http://www.isshp.com.cn/viewthread.php?tid=238>

³² Wang Chong and Zhang Yaoguang, A Comparative Analysis on Industrial Structures of Three Eastern Coastal Economic Zones of China (J), *Ocean Development and Management*, 2009, 26 (2): 71–78

Since the reform and opening up a large number of Chinese enterprises have been engaged in original equipment manufacture (OEM) for foreign enterprises and those from Hong Kong, Macao and Taiwan, actively developing a processing trade which is leading to the growth of foreign trade. It is estimated that FDI directly or indirectly related to processing trade since the opening up makes up approximately 80% of the total foreign investment in China's manufacturing industries.³³ Processing trade has been gradually developed from 'three forms of OEM and compensation trade' to processing with supplied materials by workshops with 'both ends outside' to foreign-invested enterprises, as well as from simple technical processing and assembly to processing trade of mechanical, electrical and high-tech products.

China's foreign trade had seen a sustainable growth during 1978–2007, with the total volume of import and export trade sharply increased by 104 times from US\$20.6 billion to US\$2,173.7 billion. The import and export trade during this period grew at an average annual rate of 17.4%, with those for export trade and import trade respectively at 18.1% and 16.7% (see figure 8-2).³⁴ The foreign trade of the eastern region, a key region in national foreign trade, accounted for 88% of the national total in 1978, and has unexceptionally exceeded 90% since 1996 (see table 8-3). In 2009 when the national total volume of import and export declined by 13.9% due to the financial crisis, with its import and export volume accounting for 88.2% of the national total the eastern region still played a decisive role in China's foreign trade.

³³ Developmental Stage of China in Accepting International Industrial Transfer and its Basic Characteristics
<http://theory.people.com.cn/GB/41038/4927034.html>

³⁴ Report on Achievements of China in Economic Development since the Reform and Opening up (II)
http://www.mlr.gov.cn/xwdt/jrxw/200810/t20081028_111117.htm

Figure 8-2 Total Volume and Growth Rate of Import & Export in China during 1978–2007

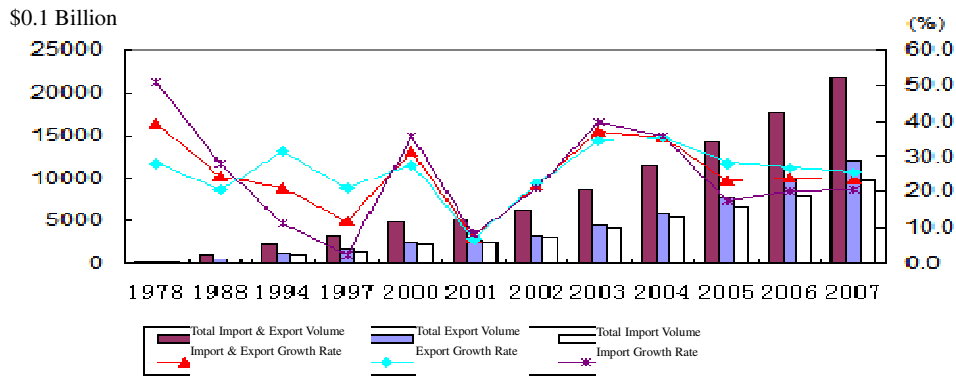


Table 8-3 Proportions of Eastern, Central and Western Regions in the Total Foreign Trade Volume during 1978–2007³⁵

Year	1978	1979	1980	1986	1995	1996	2005	2006	2007
Eastern Region	87.92	88.84	89.29	79.40	88.67	90.15	92.78	92.48	91.70
Central Region	5.61	5.91	6.05	13.63	6.19	5.43	4.05	4.25	4.69
Western Region	6.47	5.26	4.65	6.97	5.14	4.41	3.17	3.28	3.61

Promoting institutional innovations

Since the reform and opening up, by actively carrying out reform and development policies of the central government concerning the transformation of the economic growth model, the eastern region has striven to realise a faster transformation from the original planned economy to the market economy ahead of inland areas, and has achieved both a rapid growth of the non-state economy and a remarkable transformation of the operative system of the state-owned economy through constant

³⁵ Wei Hao, China's Regional Disparity in Foreign Trade: 1978–2007 (J), P35. In this article, the eastern region refers to the 11 cities and provinces of Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hunan, the central region includes the 8 cities and provinces of Shanxi, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan, and the western region includes the 11 cities and provinces of Sichuan (including Chongqing), Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang, Guangxi and Inner Mongolia.

innovations and reforms to the property rights system. A great number of state-owned enterprises have been transformed into stock companies, and agencies with clearly defined power and responsibilities have been established at different levels, which have greatly improved the efficiency of resource allocation and thus effectively promoted the economic growth and development of the eastern region.

Promoting technological progress

Since the reform and opening up, to promote scientific and technological development, the eastern region has actively deepened the reform of the management system for science and technology, optimised the allocation of scientific and technological resources, and refined the legal guarantee, policy system, incentive mechanism and market environment that encourage technical innovations and the industrialisation of scientific and technological results. Besides, the region has also seized the opportunity for transnational enterprises to set up R&D centres in China to spur on technical transfer by industrial transfer.

Statistics shows that there are over 1,200 foreign-invested R&D centres in various forms in China, highly concentrated in Beijing, Shanghai, Guangzhou, Shenzhen and other cities with plentiful human resources. A mass of industries with advanced technologies are now nesting in the eastern region, including pharmaceutical manufacturing, aircraft and spacecraft manufacturing, electronic and communication equipment manufacturing, electronic computer and office facilities manufacturing, medical equipment and instrument manufacturing, etc., and involving enterprises in diversified forms such as state-owned or state-holding enterprises, local private enterprises and foreign-invested enterprises, which are an active force to promote the industrial structure upgrading and technical innovation of China.

8.1.5 FDI Trends in China

FDI in actual use in China dropped in 2009 due to the financial crisis, but in the long run China still offers advantages to international industrial capital, and FDI will continue to grow in China. FDI in China has shown the following trends:

Transnational mergers and acquisitions have become a major form of FDI

According to the statistical data of Thomson Financial, transnational mergers and

acquisitions (M&A) have grown into a major form of FDI. Among the reorganisation cases of large-scale enterprises in developing countries since 2000, more than two thirds are participated in by foreign investment via transnational M&A. In recent years China has initially set up and completed law and regulation systems relating to transnational M&A, creating a comparatively transparent legal environment for foreign capital to enter the Chinese market in transnational M&A. The M&A of transnational companies in various types of Chinese enterprises has been a new trend of FDI in China. At present foreign-invested transnational M&A projects on the Chinese mainland account for about 30% of FDI in actual use in China. As the reform of state-owned enterprises deepens and the equity division reform advances at a stable pace, it is predictable that transnational M&A will become a distinguishing major form of FDI in China.

Sole proprietorship of FDI is growing

The sole proprietorship of foreign capital is growing at a higher rate in the new century. The actual investment in wholly foreign-owned enterprises increased from US\$19.264 billion to US\$72.315 billion during 2000–2008, with the proportion in FDI rising from 47.31% to 66.77% (see table 8-4). The actual investment in wholly foreign-owned enterprises had accumulated up to 51.20% of the total foreign capital in actual use by 2008 (see table 8-5). Wholly foreign-owned enterprises have become a leading force of foreign investment.

Table 8-4 Different Forms of FDI in China in 2008

Form	Project		Foreign Capital in Actual Use	
	Number	Proportion (%)	Amount (unit: US\$0.1 billion)	Proportion (%)
Total	27537	100.00	1083.12	100.00
Sino-Foreign Joint Venture	4612	16.75	173.18	15.99
Sino-Foreign Cooperative Business	468	1.70	19.03	1.76
Foreign-Owned Enterprise	22396	81.33	723.15	66.77
Foreign-Invested Corporate Enterprise	38	0.14	8.59	0.79
Cooperative Development				
Others	23	0.08	159.17	14.70

Source: foreign capital statistics of the Ministry of Commerce.

Table 8-5 Different Forms of FDI in China by 2008

Form	Project		Foreign Capital in Actual Use	
	Number	Proportion (%)	Amount (unit: US\$0.1 billion)	Proportion (%)
Total	659885	100.00	8990.59	100.00
Sino-Foreign Joint Venture	282901	42.87	2847.76	31.67
Sino-Foreign Cooperative Business	59166	8.97	968.70	10.77
Foreign-Owned Enterprise	317227	48.07	4603.25	51.20
Foreign-Invested Corporate Enterprise	283	0.04	50.34	0.56
Cooperative Development	191	0.03	75.07	0.83
Others	117	0.02	445.47	4.95

Source: foreign capital statistics of the Ministry of Commerce.

The number of Research and Development institutions is increasing

As FDI in China has entered a capital-intensive as well as a technology-intensive period, a large number of R&D institutions and regional operational headquarters have been established accordingly. Since China's entry into the WTO and not least in recent years, transnational companies have accelerated their establishment of R&D centres in China, in hope of gaining a larger share of the market at the highest rate and with up-to-date technologies, and taking better advantage of China's abundant human resources to carry out R&D for the global product market. R&D institutions invested by transnational enterprises in China will be focused on electronic and communication equipment manufacturing, transportation equipment manufacturing, pharmaceutical manufacturing, chemical material and product manufacturing as well as other industries, and will be mostly distributed in large cities with concentrated scientific research power such as Beijing, Shanghai, Shenzhen, Tianjin and Suzhou.

Financial, commercial and service outsourcing businesses are rapidly developing

Modern service industries that centre on knowledge and basically feature high value-added, high-level, knowledge-based production and household services will become a new hotspot in China, attracting foreign capital. Tertiary industries such as finance, insurance, tourism and consultation, as well as information, electronics and other capital and technology intensive industries will be the key fields for international

industrial transfer, as well as hot topics in international trade negotiations.

FDI has started the shift from coastal areas to inland areas

The production factor prices and production and operation costs in coastal areas have been raised in recent years, while inland areas, with the investment environment getting better, enjoy more relative advantages. Consequently, FDI in coastal areas has started to be transferred to inland areas. Hunan, Hubei, Jiangxi, Sichuan, Chongqing and other cities and provinces, especially their central economic zones which boast convenient transportation, rapid information communication and lower labour costs, have become new attractions for FDI originally aimed at coastal areas. Foreign investment absorbed by the inland central and western regions was US\$6.62 billion and US\$7.44 billion in 2008, respectively 36.4% and 79.8% higher than the same period in 2007, and 12.8% and 56.2% higher than the national average.

Compared to the Yangtze River Delta and the Bohai rim region, the Pearl River Delta is not as attractive to foreign-invested enterprises as it used to be

About 85% of FDI is distributed across the eastern coastal region represented by the Pearl River Delta, the Yangtze River Delta and the Bohai rim region. However, the Pearl River Delta region has been less attractive to foreign investment in recent years. First, as it is focused on labour-intensive processing trade the region is severely impacted by the rise of labour costs. Second, the region is less advantageous in location than it used to be. With the focus of opening up gradually shifted to inland areas, the Pearl River Delta, remote from the former, is less powerful at radiating towards economic hinterlands than are the inland areas. On the other hand, its convenient connections for Southeast Asian countries and areas still drive some FDI towards the latter. Third, the soft investment environment has changed. The region is inferior to the Yangtze River Delta and the Bohai rim region with respect to infrastructure, industry supporting capability, skills, policies, laws and regulations, as well as social security.

8.1.6 Prospects for China in Accepting International Industrial Capital Transfer

FDI will move away from the coastal areas of China when confronted with rising costs and difficulties in deepening the development of processing trade and other labour-intensive manufacturing industries in these areas. On one hand developing countries in South Asia and other areas that are striving to attract foreign investment are possible destinations of FDI flow. On the other hand, due to the dual economic structure among the regions in China, there is a tremendous development space for labour-intensive manufacturing industries in inland areas of China and these have the potential to accept FDI into labour-intensive manufacturing industries transferred from coastal areas. In the future the eastern region will focus on accepting high value-added industries with intensive capital and technology, while the central and western regions will be the destinations to which labour-intensive industries are transferred.

Optimised FDI use of the eastern coastal region

1. Diversifying investment-attracting channels. Developed countries, represented by Japan, some European countries and North America, with a large scale of investment and high technical level, are now a leading force of international direct investment in terms of large-scale transnational enterprises. High priority should be given to these countries in terms of attracting investment.

2. Upgrading the quality and level of inward investment. To enlarge the scale of its attraction for investment China should continue to construct special economic zones: Shanghai Pudong New Area, Suzhou Industrial Park and various kinds of national economic and technological development zones. The focus should be shifted to projects with intensive funding and technology input, especially high-tech projects. Foreign investment should be guided towards tertiary industry, not least health and sports, social welfare, scientific research and integrated technology services as well as sectors such as education, culture and the arts which are rarely invested in by foreign capital.

3. Elevating the eastern coastal industrial foundation to create agglomeration effects. Methods include: taking into account existing FDI in the local competitive industries and formulating corresponding industrial agglomeration policies and fundamental supporting measures to strengthen the industrial agglomeration effect;

taking existing FDI from specific countries or areas into account when formulating investment policies for these investing countries or areas and refining ambient supporting measures aimed at these countries in order to create industrial agglomerations of these countries or areas; targeting specific foreign investors when formulating a series of encouraging and supportive policies to attract foreign investment and to create agglomeration of these specific foreign investors.

4. Enhancing regional and interregional cooperation to promote a reasonable FDI flow. Regional core areas should focus on elevating the technical level, laying more emphasis on R&D to create proprietary intellectual property rights, optimising the use of foreign capital, and constantly refining the industrial structure. Areas peripheral to core areas should clearly define their position in a complementary cooperation with core areas, keep on improving infrastructure and promote the capacity to attract foreign investment.

Investment-attracting channel innovations of the central and western regions to create agglomeration effects

The key to advancing FDI in labour-intensive manufacturing industries from coastal areas towards the central and western regions lies in the creation of agglomeration effects and the reduction of FDI transfer costs. Therefore the central and western regions should focus on the construction of regional centres, perfect the overall supporting capability, and build core areas to accept FDI industrial transfer. Following these efforts the governments can take the measures listed below to further reduce FDI transfer costs.

- ‘Building nests to attract phoenixes’; that is, preparing well-equipped infrastructure for transferred foreign-invested enterprises to reduce FDI transfer costs;
- ‘Attracting phoenixes to build nests’; namely, providing pioneering FDI transfer with preferential policies for higher investment returns, so as to attract other investors;
- Large-scale collective migrations organised by the government to avoid the excessive costs of single migrations. Regarding this, Chongqing Municipal Government has explored in practice a model attracting transnational and trans-regional industrial transfer dubbed ‘one end inside, the other end outside’ (see Box 8-1).

Box 8-1 'One End Inside, the Other End Outside' Chongqing Transfer Model

It has been long since China started to introduce processing trade projects with 'both ends outside' (i.e. buying raw materials and selling manufactured goods on the international market while processing at home) in the late 1980s. The computer manufacturing industry introduced to Chongqing, however, follows a model in which raw materials, parts and overall units are provided at home while their sales are on the international market. As a vertically integrated model this represents a change from the horizontal division of labour generally followed in world trade.

The reason for the model is that though the potentials of the central and western regions have been generally realised by transnational companies as the costs of oil, power, coal, land and manpower in coastal areas has increased, the model of 'both ends outside' would raise the transportation cost to inland areas, which offsets the potential advantages of the central and western regions in low-price labour and supporting infrastructure.

Chongqing has chosen to introduce HP, a transnational computer company, to drive the agglomeration of part manufacturers, so as to activate the 'HP effect' – HP and three world-class Taiwanese-invested computer manufacturers are gathered in Chongqing, boasting a computer production line for processing 40 million laptops. With an estimated output value of over RMB 200 billion, this production line would create jobs for 0.2 million workers. HP's settlement centre for processing trade is also located in Chongqing. Tax paid by the industrial zone, RMB 0.4 billion in the first quarter of 2010, is estimated to amount to RMB 1.6 billion at the end of the year, and RMB 3 billion in 2011. Returns to the local banks would also reach RMB 3 billion. The Chongqing model has two advantages compared to the original one: firstly, it has brought about R&D in core technologies, and thus developed the city into a key R&D base; secondly, raw materials and parts are no longer imported, thus increasing the net foreign exchange earnings through export, and realising the earnings in the true sense. The model is in fact a transformation in foreign exchange earning and export.

Source: Economic Information Daily

Contributed by Yang Weicheng, Liu Kang, Zhu Wei and Shi Zhiliang.

8.2 Domestic Industrial Transfer and Capital Flow

Domestic industrial transfer and capital flow are bound up with national regional policies. Generally there are three stages of industrial and capital transfer between coastal areas and inland areas, i.e., the balanced regional development stage at the beginning of the founding of P.R.C, the unbalanced regional development stage tilted from inland areas towards coastal areas, and the coordinated regional development stage in the new period.

8.2.1 Domestic Capital Flow to Coastal Areas after the Reform and Opening up

After the reform and opening up, in accordance with Deng Xiaoping's ideology of 'allowing some people and areas to get rich first so as to achieve prosperity for all', China practiced the Economic Development Strategy of Coastal Areas, strategically focusing on the eastern coastal region in the first stage, and advocating inland areas to support the leading development of coastal areas.

Policy preference

For a wider opening up the State established special economic zones in coastal areas, and encouraged these areas to take the lead in any reforms and attempts at exploration of new economic models and introduction of market competitive mechanisms. Accordingly, the central policies favoured coastal areas, giving them a wide range of preferences with respect to investment, flow of production factors, tax, import and export, etc.

Resource flow from inland areas to coastal areas

Different endowments of resources were the reason for the structure of a labour division where the eastern region stressed processing and manufacturing industries while the western region focused on energy, raw materials and other basic industries. Raw materials and primary products of the western region were allocated at lower prices by the State to the eastern region for processing. In the sixth 5-year plan period, the beginning of the reform and opening up, the annual net amount of coal imported from inland areas to the 12 coastal cities and provinces was upwards of 78% of the national total. Among the raw materials for non-ferrous metallurgical plants in Liaoning, Guangdong, Shanghai, Tianjin and Jiangsu, about 85% were from inland areas.

Capital flow from inland areas to coastal areas

After the reform and opening up the market pricing policy was carried out, firstly for consumer goods of processing and manufacturing industries, and led to a serious price ratio distortion between consumer goods and energy and raw material products. Heavy chemical and raw material products from the western region were transferred to the eastern region at low planned prices, while consumer goods flew in the reverse

direction at high market prices, causing an eastward flow of capital. Besides, driven by profits, even limited capital from the western region rapidly flowed to the eastern region, of which a considerable part flew in the form of loans, horizontal investment, stock trading, etc., especially to special economic zones and coastal open cities, thus worsening further the capital shortage of the western region.

Labour flow from inland areas to coastal areas

Before the reform and opening up 58.9% of the total Chinese population inhabited inland areas. Since the reform and opening up, attracted by more autonomy in the eastern coastal region in household registration management, employment policies and wage policies, a great number of workers have moved from inland areas to coastal areas, including not only those with high-tech and management skills but also unskilled members of a cheap labour force, providing the necessary labour factor for the development of the eastern region. These labourers are classified as ‘migrant workers’ and they can’t stay permanently there. According to the fifth national population census 79.18% of the national trans-provincial migrating population was in the eastern region, 9.03% was in the central region, and 11.79% was in the western region.

National direct investment in favour of coastal areas

In the third 5-year plan period infrastructure investment in inland areas accounted for 70.6% of the national total, while coastal areas only got the remaining 29.4%. The imbalance continued in the fourth 5-year plan period, with inland areas and coastal areas respectively accounting for 60.5% and 39.5%. However, in the sixth 5-year plan period infrastructure investment in the eastern, central and western regions respectively accounted for 47%, 29.3% and 12% of the national total, the first time that national investment in the eastern region was even higher than the sum of that in the central and western regions. By the eighth 5-year plan period infrastructure investment in the eastern region had been raised up to 52% of the national total, while the central and western regions had both experienced continuous drops to 25% and 17% respectively.³⁶ The national investment in the eastern region exceeding that in the central and western regions is now a long-standing phenomenon.

³⁶ On the East–West Interaction in China’s Modernisation see: http://lw.china-b.com/jj1w/20090317/944676_1.html

8.2.2 Background of Industrial Transfer from Coastal Areas

The growing disparities between the central and western regions and the eastern region requires a coordinated regional economic development

The national strategic focus on the eastern coastal region has led to growing disparities between the eastern region and the central and western regions in the following aspects:

- Economic aggregate. Despite the fact that the GDP of the western region in the national total rose from 17.1% to 18.5% during 2000–2009, that of the eastern region was still half of the total. The west–east disparity in per capita GDP was RMB 7,000 in 2000 increasing to RMB 21,000 in 2009.
- Industrial structure. The percentage of primary industry in the eastern region is below the national average, while those of secondary and tertiary industry exceed the national averages. Conversely, with a percentage of primary industry higher than the national average as well as that of the eastern region, the central and eastern regions are inferior to the national average and the eastern region in percentage of secondary industry and tertiary industry.
- Per capita income. The per capita income of the western region during 1999–2008 was just 40–60% of that of the eastern region. In 2008, with the per capita incomes in Shanghai, Zhejiang and other major eastern cities and provinces exceeding RMB 20,000, those in most western cities and provinces were only slightly higher than RMB 10,000.

Economic disparities between rural areas of the eastern and western regions are even more astonishing. Consequently, China strove to promote coordinated regional economic development in the tenth 5-year plan period. In the Suggestions of the Central Committee of the Communist Party of China on Formulating the eleventh 5-year plan for National Economic and Social Development, it was stated that the development of western China should be continued, that old industrial bases in northeast China be rejuvenated and that the rise of central China and the leading development of eastern China be encouraged. To coordinate regional development it has

become essential to facilitate industrial transfer from the eastern region to the central and western regions, as well as to optimise the industrial structure of the former.

High costs in the eastern coastal region require regulation and optimisation of industrial structure

It has been proved by the experience of developed countries that industrial transfer is unavoidable when an economy develops to a certain level. It is inevitable that during the course of development enterprises seek to allocate resources effectively, explore new markets, and selectively move production and processing links involving sensitive costs, such as land, resources, labour and transportation, to areas with lower costs or nearer to end markets. With the emerging problems of processing industries in the eastern region in recent years, such as scarce supplies of land, labour and other production factors, greater pressure on industrial upgrading, higher business costs of enterprises, and prominent conflicts with resource environment constraints, more and more processing industries are moving from coastal areas, such as the Yangtze River Delta, the Pearl River Delta and the Xiamen - Zhangzhou - Quanzhou Delta, to the central and western regions.

8.2.3 Trends of Industrial Transfer from Coastal Areas

The scale will be growing

Regarding industrial structure 70% of the textile industry, 80% of the clothing manufacturing industry and over 90% of the processing trade of China are concentrated in the eastern coastal region. To upgrade and refocus the industrial structure on modern service industries and advanced manufacturing industries, most of these labour-intensive and processing trade industries have to be transferred. In the first half of 2008, and growing at a high speed, investment in the mid-western, north-eastern, central and eastern regions reached 28.62%, 36.36%, 35.11% and 22.08%. From the capital aspect it was estimated that by 2010 the output value of industries about to transfer from Guangdong, Shanghai, Zhejiang and Fujian would amount to around RMB 1,400 billion.

The transfer of labour-intensive industries is getting faster, and that

of industries intensive in labour and capital is starting to emerge

In addition to the large-scale transfer of labour-intensive industries, such as textiles and garments, some industries intensive in both labour and capital, including chemicals, machinery, household appliances, etc., are transferring to the central and western regions at an increasingly higher speed. Enterprise migration involves more high-end rather than low-end industries, a new trend of industrial transfer. In the eastern region, some products of such industries as chemicals, machinery and household appliances are still labour-intensive, and products of some traditional advantageous industries are still at lower levels. The transfer of low-end production links to the central and western regions is accelerating, thus making space for the development of substitute industries.

Cluster transfer of enterprises is obvious

In order to reduce costs and get closer to the market, some leading and large enterprises in the eastern region are starting to carry out large-scale transfer of entire industrial chains (including upstream, midstream and downstream products), as well as of R&D, purchase, sales, logistics, after-sales service and other operation processes. Due to cooperation and agglomeration effects, investment by large enterprises can usually trigger and lead considerable investment by other relevant industries, so as to create a favourable development pattern in which leading industries create supporting industries, and supporting industries in turn attract leading industries.

Consumer goods industries are based on the inland market and transferred to inland areas with a larger market

The total retail sales of consumer goods in inland areas have seen a substantial rise in recent years. The huge market demand has attracted investors to transfer their industries into inland areas, to meet the demands of both the overseas market and the domestic market. The textile and garment industry, for example, whose operation model 20 years ago was oriented to the international market with coastal areas processing orders from overseas markets, will gradually form a novel model in which inland areas process orders from coastal areas for a win-win situation. As an effective approach for development, more and more textile enterprises are migrating from the eastern region to inland areas.

Resource industries are transferred to inland areas to use the local resources

The massive exploitation of natural resources in the eastern region since the reform and opening up has almost exhausted the scarcer natural resources of the region. Owing to their remarkable advantages in natural resources, many raw materials in the central and western regions are obviously cheaper than imported ones, thus driving a large number of resource-dependent industries to transfer from the eastern region to those central and western regions that are rich in natural resources.

Enterprises start to regulate and optimise the production location distribution in accordance with the division of the value chain

The vertical industrial specialisation between the eastern region and the central and western regions (raw materials from the central and western regions, and finished products from the eastern region) has gone horizontal (the central and western regions involved more in processing, and the eastern region in buying part of the raw materials from the international market). This intra-industry specialisation has been further developed into the specialisation of product value chain. It is worth noting that there are some enterprises carrying out R&D and branding in large eastern cities yet transferring production bases into the central and eastern region, creating a 'Flying Geese Paradigm' of domestic industrial specialisation.

The macro-control of government is strengthened to guide the transfer

Industrial transfer was spontaneously originated by enterprises facing higher resource and raw material costs. In recent years, in order to adjust the industrial structure, the State has been engaged in guiding industrial transfer through macro control. Relevant ministries and commissions of the country have taken out a string of measures to guide the migration of enterprises westward. For instance, in October 2007 and July 2008 cities such as Nanchang, Ganzhou, Xi'an and Chongqing were listed by the Ministry of Commerce in two batches as the national key landing places for gradient transfer of processing trade, where foreign-owned enterprises would enjoy national preferential policies. Municipal and provincial governments in the central and western region have unveiled various preferential policy terms to attract more industrial transfer. At the same time the local governments in the eastern region, who used to

uphold local protectionism have realised that the rapid removal of those industries which have been absorbed yet are inappropriate for development will facilitate the entry of enterprises with higher technology and added value. Thus, in the eastern region, not least in all kinds of development zones short of development space, there is a common phenomenon of ‘emptying the cage and changing the birds’.

In the practice of actively promoting provincial industrial transfer, Guangdong Provincial Government has initiated a model of ‘double transfer of population and industries’ to guide industry upgrading as well as industrial and labour transfer (see Box 8-2).

Box 8-2 'Double Transfer of Population and Industries' of Guangzhou

'Double transfer' is a general term for the industrial and labour transfers that have been created by Guangdong and refers to transfer of labour-intensive industries from the Pearl River Delta to eastern and western Guangdong as well as to the mountainous region in northern Guangdong, and to the transfer of labour from the above-mentioned regions to the local secondary and tertiary industries on one side, and to the developed Pearl River Delta regions on the other side (with the aim of building a high-quality labour force).

Major Targets:

By 2012: the functional level of the Pearl River Delta region will have been remarkably elevated, with the industrial structure noticeably optimised. On the basis of the existing industrial transfer parks, an array of industrial transfer clusters with reasonable distributions, distinct industrial characteristics and noticeable agglomeration effects will have been formed in eastern and western Guangdong as well as the mountainous region in northern Guangdong, to drive the industrial competitiveness of the province as a whole into the national front rank. Human resources will have been fully developed, with the quality of labour force generally improved, the employment structure integrally optimised, the proportion of labour employment increased, and the employment of rural labour in cities and its transfer to the secondary and tertiary industries achieving remarkable effects. Initial success is expected in three years, and great success in five years.

Policy measures for industrial transfer:

Carry out industrial transfer agglomeration, intensify support for land use, strengthen the construction of supporting infrastructure, and feasibly enhance the environmental protection.

Policy measures for labour transfer:

Accelerate the transfer of local labour to the developed Pearl River Delta region, vigorously promote the employment of rural labourers in their home towns and nearby areas, encourage enterprises to employ local rural labour, intensify vocational skills training for rural labour, establish incentive mechanisms for high-quality rural migrant workers, and so on. With 2.575 million rural labourers transferred in the last three years, Guangdong has made great advances in this aspect.

Source: <http://www.gd.xinhuanet.com/zt08/shzhyi/>

8.2.4 Problems of the Central and Western Regions in Accepting Industrial Transfer from Coastal Areas

Obstruction from the eastern region

To avoid short-term problems caused by industrial transfer, such as loss of funds, unemployment, lowering incomes of residents and the formation of industrial vacuums, all parties have acted more slowly than expected in the industrial transfer from the eastern region to the central and western regions. To avoid sharp drops of economy and industrial vacuums, westward migration of enterprises in developed areas is encouraged by the local governments through preferential treatment and support in land, tax, funds, projects, etc.

Weak industrial foundation and inferior cooperation and support capabilities

Industrial transfer from the eastern region to the central and western regions should be not only focused on resources and costs, but also oriented to the integration of industrial chain. Only based on the latter can industrial transfer facilitate the reduction of transaction costs. No single industry can exist and develop without being connected with other industries. In comparison to the already developed eastern region, only those areas of the central and western regions that are capable of providing favourable coordination and support conditions for transferred industries can offer a home to industries. But the truth is that the supporting conditions of many areas in the central and western regions do not qualify in this respect, and this will limit the transfer of some industries.

Less favourable investment environment

The central and western regions are poorly equipped with infrastructure. Many places suffer from challenging natural conditions and are less attractive for investment due to their imperfect facilities for industrial development, the high transportation costs they will incur and the undependable information flow. Worse still, the local governments of the western region are known for their low work efficiency, slow implementation of preferential policies, violation of legal administrative requirements, low credit, irresponsibility about problems left over by predecessors, and so on. To accept industrial transfer from the eastern region, the central and western regions will be confronted with great difficulties. A survey shows that 78% of the enterprises in the eastern region that plan to transfer westward complain about excessive administrative intervention in investment in the central region.

Possible damage to ecological environment

The gradient gap in environmental standards among regions may create conditions for

obsolete or soon-to-be obsolete environmentally unfriendly technologies and products to 'hitchhike' on the move to the western region. A majority of industries transferred westward are those highly consuming in energy and materials, including petrochemicals, gas chemicals, coal chemicals, metallurgy, building materials, etc. A larger number of these industries in the western region would definitely overburden the environment; leading to a deterioration in the development environment, and severely impacting the sustainable development of the western region.

Insufficiency of technical skills

The western region, though having a large population, is rather backward in elementary and vocational education, with a high illiteracy rate and a shortage of technical skills. For many years, driven by the attractions of the eastern region such as the opportunity for more material gains, a great number of surplus labourers or ordinary labourers with certain skills have moved to the eastern developed areas for these opportunities, leaving the western region caught in a vicious circle of human capital. For transferred industries to settle in the western region will incur more costs in fostering local technical and management skills.

Deficient construction of industrial parks

Industrial parks, generally considered in the central and western regions as the model for accepting industrial transfer and regarded as superior at saving land and facilitating supervisory services, have become the major carrier for accelerating industrial agglomerations and cultivating industrial clusters. Yet there is still much to improve.

- The planning and positioning of the parks are not clearly defined, leading to homogenisation of industrial structures, duplication of constructions and waste of resources;
- There are scarcely and advantageous leading industries despite the large number of gathering enterprises. The industries are weakly connected, and industrial agglomerations are not formed yet, which can hardly attract same and affiliated industries from developed areas;
- Management and service functions of the parks need improving, such as simplifying access procedures and offering support with land, labour, customs clearance, finance and tax to more efficiently serve the transferred enterprises;

- Infrastructure and relevant, supportive, living facilities in the parks need to be enriched.

8.2.5 Prospects of the Central and Western Regions in Accepting Industrial Transfer from Coastal Areas

Actively and scientifically accepting industrial transfer from coastal areas

The central and western regions should be active in accepting industrial transfer and take into consideration the industrial operating laws and development laws when making selections. Gradient transfer is not equivalent to moving polluting enterprises to the central and western region, but rather means the transfer of industries on the premises of technology upgrading, energy conservation and environmental protection. Any transfer should be accepted in one step. Selective standards for incoming industries should not be lowered to pursue more economic benefits. Sticking to the thresholds for environmental protection, the central and western regions should firmly reject projects that are wasteful in resources and threaten serious pollution, as these are devastating to the ecological environment and unpromising for long-term development, as well as bringing only backward and defunct production techniques with them. The Strategy for Sustainable Development should be upheld as always. Besides, the establishment of local environmental standard systems in the western region should be clearly specified as soon as possible so as to protect the western environment which is fragile yet extremely valuable in ecosystem services.

Optimising the investment-attracting environment for industrial transfer

Regarding hardware construction, the State should focus on supporting the infrastructure construction of the central and western regions, create incentives to encourage domestic and foreign enterprises to participate in the construction of transport infrastructure in various ways, vigorously develop the transport system of railways, highways, shipping and river transport to construct comprehensive transportation hubs, and build fully-functional, highly-efficient and safe modern logistics systems to supply convenient channels for flows of all kinds of factors in

industrial transfer and to improve the transfer efficiency. As for software construction, the local governments should uphold the ideas of open cooperation, high efficiency and good credit, intensify the progress of the establishment of a legal and a market environment with fair competition, simplify examination and approval procedures for transferred enterprises, improve the efficiency of the examination and approval process, promote the establishment of customs clearance, and formulate measures which can promote industrial transfer such as financial support, tax support, financing facilitation, factor support, etc.

Building a financial environment with good credit to address financing problems

At present, the key and core factor restricting the development of the central and western regions is capital. Without a mature financial market and good financial services it is difficult to accept industrial transfer. Without proper intervention by the local financial industry it is hard for an incoming industry to form the industrial agglomeration and reduce costs. Special policies to facilitate the development of the financial industry in the central and western regions can be made by the State with reference to the approaches of Japan and the U.S in supporting backward areas to develop the financial industry. Favourable financial and credit environments should be set up and financing channels should be constantly broadened. Bank - enterprise financing platforms should be actively erected to promote the connection and cooperation between enterprises and banking institutions as well as financial supervision and regulation departments. Guarantee companies should grow more practical and stronger, and the guarantee capability should be strengthened. Guaranteed loans at the county and municipal levels should be properly granted with lower thresholds, larger lending ratios and longer payback periods. Financial banking institutions should be encouraged to tailor the credit evaluation system for enterprises, simplify examination and approval procedures of loans, and intensify the scale of lending.

Accepting industrial transfer on the basis of local advantageous industries

While accepting the industries transferred from the eastern region, the central and western regions should take account of the original industrial structures and favour the

fostering of locally advantageous industries. First of all the existing industrial distributions should be fully considered, and the idea of ‘all is fish that comes to the net’ should be abandoned to avoid untargeted transfer and convergence of industrial competitors, as well as to achieve a degree of coordination and unification between transferred and original industries. Second, on the basis of the original advantageous industries in the central and western regions, acceptable industries should be those that can serve to enlarge the scale and market competitiveness of the original advantageous industries, or else be highly connected with the original industries for a better collaboration in industrial development. The optimisation of industrial structures in the central and western regions should be based on the local employment situations, market conditions and development plans and aimed at a long-term development.

Strengthening park construction to promote industrial agglomeration

Industrial distribution should be centred on major traffic arteries and cities and areas with better infrastructure, and focused on developing industrial belts along railways and highways to build a framework that can support regional economic distribution. Industrial parks should be constructed to facilitate industrial agglomeration and to cultivate industrial clusters, and developed into growth poles of regional development. The growth of industrial parks should reply on key cities and industrial belts, focusing not only on enlarging and strengthening national and provincial development zones, but also on normalising and intensively developing the county-level ones. The concentration of industrial land in industrial parks should be propelled, so as to enlarge their land reserves and guide the entry of projects. The industrial specialisations of the parks should be clearly defined, and the standards for incoming industries and enterprises should be normalised. The government should put more effort into the infrastructure construction of the parks by striving to improve the conditions of roads, supplies of power, water and gas, communication and other infrastructure. Management mechanisms and market-oriented development mechanisms of the parks should be innovative and powerful enterprises should be encouraged to participate in the park constructions to elevate the management and service levels. The development of incoming leading enterprises should be prioritised, and fiscal, tax and financial support measures as well as measures to support

innovation should be pertinently formulated, so as to facilitate the formation of key industrial chains and clusters centring on leading enterprises.

Emphasising accumulation and reserve of skills

Human resources should be developed via various measures, to ensure necessary human resources and intellectual support for the central and western regions to improve industrial quality and in readiness to accept industrial transfer. Skills exchange and introduction should be enhanced the advanced experience and ideas of developed areas in accepting industrial transfer should be learnt from. This skills strategy should be vigorously carried out, with the focus on highlighting skills development and the establishment of skilled teams as a task requiring unswerving efforts in readiness for accepting industrial transfer, and great respect must be given to knowledge and skills. Equal importance should be attached to intensifying the introduction of new skills and strengthening the fostering of local talent. The advantage of the central and western regions in their abundant labour resources should be fully used. On one hand, the 'return of the labour force' project should be carried out with great effort and, on the other hand, labourers should be encouraged to seek employment in their hometowns. Training resources across the board should be integrated, and skills training should be intensified, so as to address the structural labour imbalance and minimise the employment difficulties faced by enterprises.

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Chapter 9 Rural Development and Urban–Rural Integration

The imbalance in China's economic and social development can be seen in various disparities in development level and people's income. They exist between urban areas and rural areas, as well as among different regions, cities, rural areas, and urban and rural groups with uneven incomes. Of all the disparities mentioned above, those between urban and rural areas are the most extensive, obvious and fundamental. As a result, to speed up rural development and promote urban–rural integration is not only a major long-term issue for China, but also a focus of China's economic policies.

9.1 Rural Development

Great achievements have been made in China's economy since the reform and opening up, remarkably improving the general strength of the country. However, the long-term preference of national financial and social resources to centre on cities has enlarged the urban–rural gap in development. This dual urban – rural economic structure has led to backwardness of rural infrastructure construction and the serious undersupply of public services, thus constraining not only the rural economic development but the effective expansion of China's domestic demand. Most fundamentally, due to the small per capita land area, much of the surplus labour in China needs to be permanently transferred to industry to eventually ensure a high income for land-dependant farmers, which is so far not supported by policy measures.

9.1.1 Rural Infrastructure and Public Services

Road traffic

Although overall transportation capacity has been remarkably improved in rural areas, the inconvenience of transport for farmers has not been totally resolved due to the vastness of the rural areas of China and the low starting point. According to statistics

of the Ministry of Transport, by the end of 2009 the total length of rural roads in China had amounted to 3.3356 million km, with up to 99.4% of townships being covered. Scheduled bus routes connect up to 98% of townships and 87.8% administrative villages across the country, meaning 35,000 townships and 553,000 administrative villages can be accessed via rural scheduled buses. For long-term development it is necessary to upgrade the rural roads in the central and western regions, regulate rural road maintenance and administration, enhance the quality of supervision to improve the safety of rural road traffic, construct rural passenger terminals, unveil policies and measures to support rural road passenger transport, and accelerate the urban - rural traffic integration via the regular and smooth running of scheduled rural buses.

Drinking water safety

Due to the constraints of natural, social, economic and technical conditions, the safety of drinking water in China's rural areas has been a long-standing, serious issue. According to the Ministry of Water Resources, with the increase in national investment in drinking water this century, by the end of 2009 a total number of 60 million rural residents had been given access to drinking water and 0.165 billion been supplied with safe drinking water. Yet there are still 0.17 billion rural residents whose drinking water safety problem has yet to be solved according to the plan. In an accelerated development period of industrialisation and urbanisation, China is faced with serious pollution of water resources as well as other issues such as exhaustion of water sources, project abandonment, low construction standards of original projects, interregional emigration, higher national standards for water quality, etc., leading to an increase of the population facing drinking water safety problem in various areas, and keeping the need to solve the problem still urgent.

Power supply, communication and energy

The power supply coverage in counties, townships and villages was respectively increased from 94.5%, 86.3% and 61.05% to 100%, 99.68% and 99.74% during the period from 1978 (the first year when figures were available) to 2008. Power supply to rural households rose from 59.4% to 99.89% from 1983 (the first year when figures were available) to 2008. At present, there are still serious problems such as vulnerability of rural power grids in the central and western regions, power inaccessibility to parts of the rural population, and exclusion of a large number of

rural areas from the system of ‘same power grid and same power rate for urban and rural areas’. According to the statistical data of the Ministry of Industry and Information Technology of the People’s Republic of China (MIIT), by 2009 a telephone service had been introduced in 99.86% of the administrative villages and 93.4% of the hamlets of over 20 households across the country, with the figure for natural villages increased by 1% on the 2008 basis. Full communications coverage is basically realised, and the construction of rural information service stations and rural internet is to be strengthened. Regarding the use of energy, the household fuel structure of farmers is far from reasonable. As for fuel consumption, by the end of 2006, 133.18 million households in the countryside used firewood for cooking, accounting for 60.2% of the total rural households, while those for coal, gas or natural gas, biogas, electricity and other energies were 57.62 million, 26.42 million, 1.45 million, 1.82 million and 0.59 million respectively, accounting for 26.1%, 11.9%, 0.7%, 0.8% and 0.3%³⁷ of the total rural households respectively.

Farmland water conservation facilities and agricultural mechanisation

When announcing the drought relief achievements in 2009, the Ministry of Water Resources stated that water conservation projects in China, especially farmland water conservation projects and which were mostly completed in the 1950s-60s, are aging and out of repair after tens of years of working. According to statistical data, about 40% of major buildings in large irrigation districts and about 50% in small and medium ones need repairing.³⁸ It had taken more than half a century for China to fulfil its tasks in the primary stage of agricultural mechanisation before moving into the present rapid growth period. Nevertheless, China’s overall agricultural mechanisation is still at a low level, equivalent to that of South Korea in the 1970s. The production of bulk agricultural products is inadequately mechanised in general, and the agricultural mechanisation of most major production processes with high labour intensity is lagging behind. The mechanised rates of rice seedling transplantation and corn harvesting stagnate at 11% and 8%, with the mechanical harvesting of peanuts and potato just initiated, and the mechanisation of advantageous agricultural products,

³⁷ Farmer Development Report (2008)

³⁸ Facts on Disrepair of Aging Farmland Water Conservation Projects in China, <http://www.watercyclelab.ac.cn/news/ShowArticle.asp?ArticleID=269>

such as grapes, sugarcane and garden crops, is basically non-existent.³⁹

Rural education

The present situation is that in many places the nine-year compulsory education is not practiced, and students frequently quit school. Equipment and facilities are generally in a bad condition in elementary and middle schools of rural areas, especially in those in the central and western regions where schoolhouses are run down, chairs and desks are worn out, teaching aids are insufficient, and books and equipment are in great demand. With vocational and technical education underdeveloped in rural areas, rural labour is poorly skilled. According to the General Research Report on Rural Migrant Workers in China, a mere 20% of rural labour have received short-term training, 3.4% have received elementary vocational education or training, and 0.13% have received secondary vocational and technical education. Only 16.4% of farmers are skilful in one or two applied technologies. In comparison, in developed countries such as the U.S and Japan, over 70% of farmers have received vocational training, and 40% are intermediate and senior technicians.

Cultural and recreational facilities

The statistics of the second national agricultural census show that at the end of 2006 villages with libraries (cultural centres) and amateur cultural groups of farmers respectively accounted for 13.4% and 15.1% of the total number of villages across the country, and townships with broadcasting stations, cinemas and parks were respectively 71.3%, 16.7% and 11.7% of the national total. Though better than ten years ago, rural cultural and recreational facilities are not widespread, with public cultural facilities in many rural areas, especially in the central and western regions, seriously undersupplied (see Table 9-1 and Table 9-2).

³⁹ Sharp Rise of China's Agricultural Mechanisation Accelerates the Development of Modern Agriculture
<http://www.ahnw.gov.cn/2006nwkw/html/200805/%7B67013655-C2FA-4F0B-A56D-5CD20A542719%7D.shtml>

Table 9-1 Proportion of Villages with Libraries (Cultural Centres) in Different Provinces

Proportion of Villages	Province
Above 60%	Beijing
40–50%	Shanghai and Xinjiang
20–30%	Jiangsu, Liaoning, Hainan, Zhejiang and Fujian
10–20%	Guangdong, Hebei, Gansu, Jilin, Tianjin, Guangxi, Henan, Shanxi, Jiangxi, Yunnan, Chongqing, Ningxia, Inner Mongolia, Shandong and Heilongjiang
Below 10%	Tibet, Hubei, Sichuan, Shaanxi, Guizhou, Anhui, Hunan and Qinghai

Table 9-2 Proportion of Townships with Parks in Different Provinces

Proportion of Townships	Province
Above 30%	Shanghai, Beijing and Zhejiang
20–30%	Jiangsu, Guangdong, Fujian and Shandong
10–20%	Tianjin, Henan, Ningxia, Inner Mongolia, Yunnan, Anhui and Heilongjiang
Below 10%	Hubei, Hebei, Shanxi, Xinjiang, Liaoning, Guangxi, Jilin, Jiangxi, Hainan, Gansu, Hunan, Chongqing, Sichuan, Shaanxi, Guizhou, Qinghai and Tibet

*Social security*⁴⁰

Social security in rural areas of China has lagged behind compared with urban areas, reflected mainly in medical treatment and public health, compulsory education and vocational training, as well as pension insurance.

First of all, the public health infrastructure is undersupplied and medical security is

⁴⁰ China Rural Report (2006–2007), p.93–110.

inadequate. Most of the rural health institutions in the central and western regions are dilapidated, with 33.6% of township (town) health centres rated as dangerous buildings, 70% requiring further renovation and 60% lacking in basic medical equipment. There is also an insufficient supply of professional medical staff. Only 10% of medical practitioners hold a degree above college level, and 36% of them are degreeless. Seventy per cent of the rural population are not protected by the medical security system, receiving medical treatment at their own expense. Focusing on serious diseases, the new rural cooperative medical system doesn't offer many benefits for participating farmers. Only a small part of the consultation fee can be reimbursed in the present pilot areas for the system, and due to a shortage of healthcare equipment it is even unrealistic to carry out routine physical examinations on participants who don't use the rural cooperative medical fund in the current year.

Secondly, the minimum living standard guarantee system and social relief system for rural areas are not complete. According to statistical data, the numbers of population in absolute poverty and the low-income population in China's rural areas at the end of 2006 were 21.48 million and 35.5 million respectively, of whom only 5.033 million enjoy the five guarantees (food, clothing, medical care, housing and burial expenses). The national average relief payments for rural households enjoying the five guarantees with centralised support and decentralised support are respectively RMB 1608.2 and RMB 1224.5 per person, while the actual average expenditure for each eligible person nationwide is only RMB 939.6.

Thirdly, the rural pension insurance doesn't have a wide coverage and most of the elderly in rural areas count on their children. According to the Survey on the Living Status of Rural Poverty-Stricken Elderly People which was organised by China Agricultural University in 2006, 48% of the elderly were financially supported by their children, 35.5% earned their own incomes, 5.6% relied on their savings, but only 23.6% were satisfied with their material standard of living.

Since 2009 the government has successively established pilot sites for the new rural pension insurance system and vigorously promoted the reform of the medical and healthcare security system, which will hopefully put an end to the backwardness of social security in rural areas.

Environmental sanitation

Environmental sanitation facilities in rural areas are in a bad condition. Among the

19,391 towns involved in the census, 72.3% had a centralised water supply, while only 19.4% carried out concentrated treatment of domestic sewage. Refuse depots were found in 36.7% of towns, 24.5% of the villages had drinking water treated through concentrated purification, and 15.8% of the villages collected garbage for centralised disposal. There were only 2,838 (12.8%) farmer households equipped with flushing toilets, 9,796 (44.3%) using dry latrines, and 9,474 (42.9%) with or even without privies. Only 20.6% of the villages had completed the toilet amelioration project.⁴¹

Market construction

Rural market construction has seen some considerable achievements. At the end of 2006 there were 68.4% of townships with general markets and 23.0% of townships with specialised markets for agricultural products, and chemical fertilisers were purchasable in 50.2% of villages. Markets in accordance with modern consumption concepts, however, were not fully developed, with general stores or supermarkets with an area of over 50 sq m findable in 34.4% of villages, colour TV sets purchasable in 5.2% of villages, specialised markets built in 28.2% of townships, and specialised markets for agricultural products with the annual turnover exceeding RMB 10 million available in 7.6% of townships.⁴²

9.1.2 Factors Restricting Rural Development

Urban – rural dual division mechanism

The urban – rural dual supply mechanism is not fundamentally changed, leading to less attention paid to rural development, and fewer financial supports to rural and agricultural development. Rural residents are almost deprived of social security and welfare benefits. Even rural migrant workers who move to cities and successfully find jobs there are excluded from social security due to their rural identities, while for urban workers social security is rather common.

Insufficient capital input in rural areas

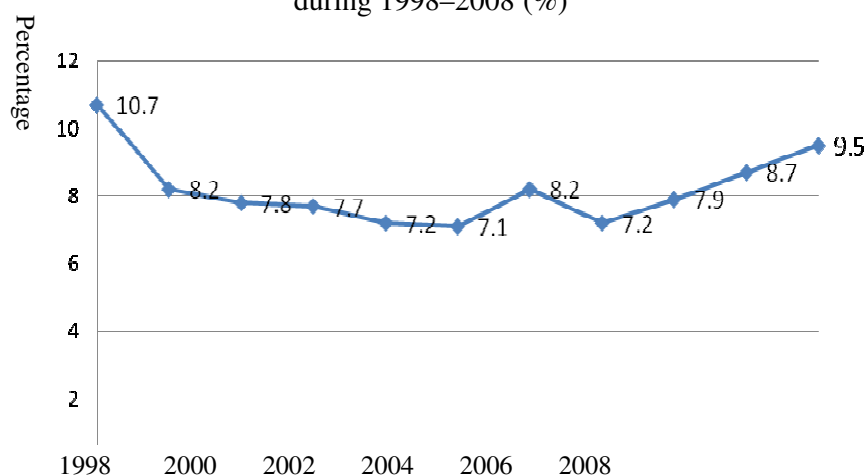
National investment in rural fixed assets is comparatively small. By 2009 rural investment had been only 13.66% of the total investment in fixed assets. Between

⁴¹Farmer Development Report (2008)

⁴²China Farmer Development Report (2008)

1998 and 2008 the annual agricultural aid expenditure made up less than 10% of the national financial expenditure (see figure 9-1), and most of the agricultural aid expenditure was in agricultural capital construction rather than rural poverty relief and public services. Public services in rural areas basically relied on finance at county and township level as well as on farmers; governments at the township level even shouldered some nationally supported services. Due to slow economic development and a low profitability of township enterprises, most local governments at the township and village levels were heavily indebted, resulting in the beyond-system supply of rural public services. Capital raising, apportioning, donations, fee charging, fines and confiscations, which emerged extensively, have only aggravated the burden on farmers. Since 2006 the central government has enlarged the input into rural public services, and clearly put forward the long-term national strategy of ‘industry nurturing agriculture’.

Figure 9-1 Agricultural Aid Expenditure in National Financial Expenditure during 1998–2008 (%)



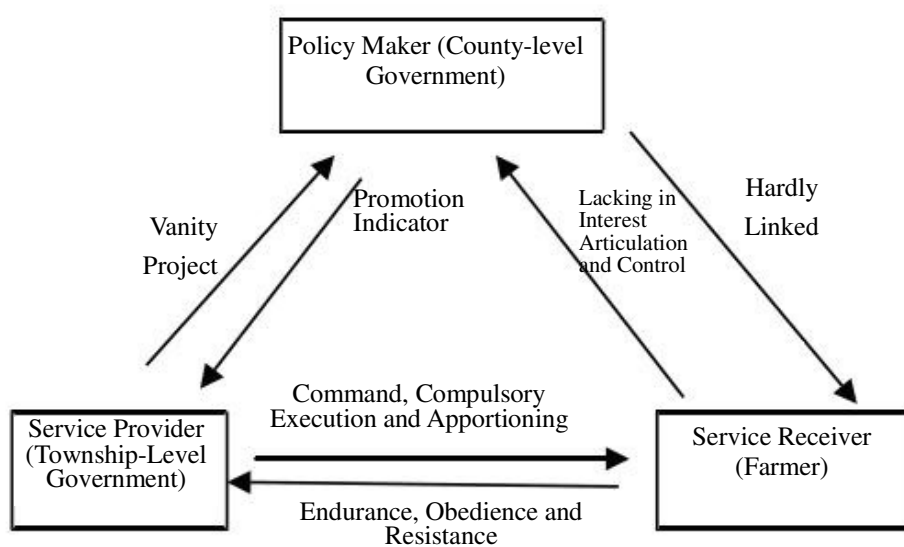
Source: *China Rural Statistical Yearbook 2009*.

‘Top-down’ supply decision-making mechanism incapable of reflecting farmers’ demands

The supply of rural public services in China is now under a ‘top-down’ decision-making mechanism, determined not by the demands of farmers and rural areas, but by departments at higher levels in terms of tasks and indicators (figure 9-2). Such a

mechanism is very likely to bring about the beyond-system supply of rural public goods, in other words, place more burdens on farmers. On the one hand public services are not supplied for the actual needs of farmers thus inflating the supply of non-productive public services that are not really needed by farmers, while severely undersupplying productive public services urgently needed by farmers and also those helpful for a sustainable rural development. On the other hand, as too much power is given to departments at higher levels, and examination and supervision of approval and implementation of rural and agricultural investment projects are lax, many investment projects with ‘strict project approval yet relaxed management’ are not profitable, and these so-called vanity projects cause a considerable waste of money and manpower.

Figure 9-2 Rural Governance Structure in China⁴³



9.1.3 New Policies to Promote Rural Development

Villager self-governance

Villager self-governance, referring to democratic elections, decision-making, management and supervision, was put forward for the first time in Article 111 of the

⁴³Xing Chuan, Topic of Social Governance in Our Country: Public Services for the Peasants, Journal of Guangdong Institute of Public Administration, 2003 (03).

Constitution of the People's Republic of China (1982), which stipulates that "villager committees are organisations for community level self-governance". The revised Organic Law of Villager Committees of the People's Republic of China was formally issued in 1998, announcing a formal, legal, villager self-governance. The Law has been enacted in all its aspects in over 0.6 million villager committees across the country, in a continuous process of refining and improving the villager self-governance system. The deepening of such a system has further pushed forward democracy at the grassroots level in rural areas, enhanced awareness of democracy and the rule of law among farmers, guaranteed the rights of farmers as the masters of China, greatly motivated the enthusiasm, initiative and creativity of farmers in socialist construction, tightened cadre–mass relations, promoted rural development and preserved rural stability.

Reform of rural taxes and administrative charges and abolition of the agricultural tax

The high agricultural production costs and the overburdening taxes on farmers brought by the agricultural tax were long-standing. In April 2000 Anhui Province and few rural counties in other administrative cities and provinces were selected as pilot sites for the reform of rural taxes and administrative charges. In 2003 the reform was extended throughout the country. The agricultural tax was abolished in China in 2006. The reform has released farmers from rural taxes and administrative charges amounting to upwards of RMB 120 billion. However, the agricultural tax wasn't abolished with the aim of charging farmers less, but rather to use the rule of law to institutionally normalise rural distribution behaviour, rationalise distribution relations, improve the social management level of rural areas, and facilitate overall progress in the rural society.

Building of a New Socialist Countryside

The Suggestions of the Central Committee of the CPC on Formulating the Eleventh 5-year plan for National Economic and Social Development, which was approved in the Fifth Plenary Session of the Sixteenth Central Committee of the CPC on 11 October 2005, clearly put forward the building of a new socialist countryside as the major task for economic and social development during the eleventh 5-year plan period. The task, as a detailed version of the target to balance urban and rural development and the principle of 'industry nurturing agriculture and cities supporting countryside', calls

for “developed production, prosperous life, civilised local customs, clean appearance of villages and democratic administration” in the countryside, which would accelerate not only the development of the rural economy, but also that of rural social undertakings such as education, culture, medical treatment, social security, infrastructure, etc. The constant development and refinement of rural public utilities is key to achieving a gradual reduction in urban – rural disparities and a better countryside.

Policy of ‘two exemptions and one subsidy’

The policy of ‘two exemptions and one subsidy’ is a financial aid policy of the government for the school attendance of students from needy rural families for compulsory education and it mainly refers to exemption from tuition and miscellaneous fees and textbook costs, and a subsidy towards the living expenses of resident students. Launched in 2001, the policy stipulates the responsibility of central finance for the free textbooks, and that of the local finance for exempting these students from tuition and miscellaneous fees and subsidising the living expenses of resident students. In 2007 the policy was extended nationwide for students from rural needy families in compulsory education. The policy, as an objective requirement of the task of ensuring compulsory education for rural students from needy families and of popularising compulsory education among school-age children, is also fundamentally essential to the implementation of the Scientific Outlook on Development and the promotion of the balanced and coordinated development among cities and countryside as well as among regions, and is an intrinsic requirement of public finance.

New rural cooperative medical system

The new rural cooperative medical system, as compared to the traditional system before the 1980s, is a medical system for farmers through mutual assistance and aid. Focused on comprehensive arrangements for serious diseases, this system is organised, guided and supported by the government, with voluntary participation from farmers and multi-channel financing from individuals, collectives and the government. By the end of 2009, the system had been implemented in 2,716 counties (cities and prefectures), involving a population of 0.833 billion, an increase of 180 million on the 2008 basis. The participation rate was 94.0%, 2.5% higher than that of 2008. The total amount of capital raised reached RMB 94.44 billion, with the per

capita amount of RMB 113.4. The expenditure of the new rural cooperative medical fund was RMB 92.29 billion, with the compensatory expenditure applying to 0.76 billion sickness episodes. With the visit frequency and admission rate remarkably increased, farmers have been relieved to a degree of illness-induced poverty or of returns to poverty due to illness. For the first time farmers are becoming beneficiaries of government-invested medical security. The new medical reform is aimed at providing basic medical and health services as public products, provided to the public under the principle of public benefit and with the idea of 'basic medical and health services for all' as the main intent and outcome. Ultimately the reform aims to achieve universal coverage and to integrate the medical insurance for urban workers, the medical insurance for urban residents, and the new rural cooperative medical system. Shenmu County of Shaanxi Province has played a demonstrating role in promoting the medical reform (see box 9-1).

Pilot project for a new rural pension insurance system

The pilot project for a new rural pension insurance system started in 2009, covering 10% of the counties (cities, prefectures and banners) in the initiatory year. Growing at a gradual pace across the country, the project is aimed at achieving total coverage of eligible rural residents by 2020. According to the project, rural residents (excluding students) over 16 years who are not involved in the basic pension insurance for urban workers can participate in the new rural pension insurance system in the places of registered permanent residence if they wish. The pension insurance fund consisting of individual contributions, collective allowances and government subsidies, encourages financial support to its participants from other economic organisations, social non-profit organisations and individuals. An individual account with lifelong records is created by the State for each participant, and the interest is calculated every year with reference to the current one-year RMB deposit rate of financial institutions as issued by the People's Bank of China. The pension benefits, including the basic pension and the pension in individual accounts, are paid over a lifelong period. According to the central government the basic pension is RMB 55 per month per person, and can be raised by the local governments as may be appropriate. The elderly over 60 without the basic pension insurance for urban workers but with permanent rural residence certificates can be pensioned every month. The so-called No.1 document issued by the central government in 2010 further requires to continue to carefully construct the pilot

project for a new rural pension insurance system and to speed up its introduction in qualified areas; implement and perfect the social security policy for farmers with land expropriated, complete the temporary assistance system, gradually improve the level of concentrated support to rural households enjoying the five guarantees, make due efforts to build nursing homes in rural areas, etc.

Box 9-1 Pilot Project for Free Universal Healthcare Reform in Shenmu County

Shenmu County is located in the north of Shaanxi Province, enjoying an abundant reserve of mineral resources. The GRDP of the county reached RMB 29 billion in 2008, with the per capita GDP and the total financial revenue respectively hitting RMB 68,700 and RMB 7.227 billion. On 9 February 2009 the Shenmu Government issued the Measures for Implementation of Free Universal Healthcare in Shenmu County (For Trial Implementation). According to the Measures, officers and staff as well as urban and rural residents, as long as they are registered permanent residents of the county and participators of the cooperative medical insurance for urban and rural residents and the basic medical insurance for urban employees, can benefit from this reform policy. The medical card system is practiced for outpatient services, and each participator is subsidised at RMB 100 each year for outpatient services. For in-patient treatment the minimum payment reimbursement system is implemented, in which the minimum payments for reimbursement in township hospitals, county-level hospitals and external hospitals are differently set at RMB 200, RMB 400 and RMB 3,000 per person at a time. Expenses below the minimum payments are borne by patients, while those exceeding the limits can be fully reimbursed. The annual maximum reimbursement for each participator is RMB 0.3 million. Designated medical institutions involved in the policy include hospitals and pharmacists within and outside the county, including seven county-level hospitals, five county-level pharmacists, twenty-one township hospitals, six hospitals in Beijing, five provincial hospitals and five municipal hospitals. Some medical treatments that are not reimbursed in other areas are also included in the reimbursement system, such as special examination fees, treatment fees and materials fees for artificial organ implantation and organ transplantation, etc.

This policy, regarded as a 'precedent for the domestic healthcare security system', breaks not only the boundary between urban and rural areas, but also the status boundary between employees and residents, unifying urban and rural residents and realising equal and unified medical services with universal welfare. The policy is funded by financial appropriations, the basic medical insurance fund collected by the county medical insurance office (RMB 20/year for each urban resident), the cooperative medical fund collected by the county cooperative medical insurance office (RMB 10/year for each rural resident), as well as by social donations.

Source: Healthcare Reform in Shenmu County,
<http://202.38.153.234/NewsDetail.aspx?id=3699>

Policy of 'domestic appliances to the countryside'

'Domestic appliances to the countryside' is a project to popularise home appliances in rural areas, in which rural consumers are targeted in the R&D, production and sale of designated domestic appliances, and subsidised by the governmental financial

departments at fixed amounts. The project is an important measure to promote the construction of a new socialist countryside, improve the living quality of farmers, expand rural consumption and comprehensively manage the overseas and domestic markets. Three provinces – Shandong, Henan and Sichuan – were involved in the first phase of the project, while the second phase is extended to 12 provinces, autonomous regions and cities directly under the central government, namely Shandong (including Qingdao), Henan, Sichuan, Inner Mongolia, Liaoning (including Dalian), Heilongjiang, Anhui, Hubei, Hunan, Guangxi, Chongqing and Shaanxi.

9.2 Rural Reform

9.2.1 Land Reform

In 2008 the State Council issued the Decision of the Central Committee of CPC on Several Major Issues in Advancing Rural Reform and Development (hereafter referred to as ‘the Decision’). As a program of action to advance rural reform and development under the new situation, the Decision clearly states that “land systems are the basic systems for rural areas.”

Stringent land conservation and intensive use of land

While clearly requiring to resolutely defend the ‘red line’ of 1.8 billion mu (120 million hectares) of arable land and carry out the most stringent land conservation system, the Decision has made a string of specifications regarding the definition of permanent basic farmland, prohibiting any trans-provincial (city) requisition–compensation balance, strictly controlling the total scale of land for urban and rural construction, etc. Specific measures to build a compensation mechanism have been explored since 2009, further specifying the policy of requisition–compensation balance as ‘compensation before requisition’, and defining the balance as provincial rather than trans-provincial, except for that for key national projects.

Long-term security - the land contractual relations will last longer

The Decision has confirmed that land contract systems will last for longer terms, emphasising that farmers should enjoy a more complete and guaranteed right of contractual land management, and that the existing land contract relations should be

kept stable and unchanged for a long time. Meanwhile, the Decision also puts stress on enhancing the management and services for the circulation of rights of contractual land management, as well as establishing and completing a market for such circulation. On the one hand, farmers are allowed to participate in the circulation of rights of contractual land management by subcontracting, rent, exchange, transfer, joint stock and other means subject to the law and on a voluntary and compensatory basis, so as to develop diversified moderate scale management. On the other hand, it is restated that such circulation should neither change the collective ownership of land and its use, nor impair the land contract rights of farmers. Not to change the collective ownership of land, in other words, is to realistically guarantee farmers' rights of contractual land occupation, use, returns, etc.

Stricter land expropriation systems

Firstly, the Decision clearly defines the land expropriation powers of government and restricts it to only being for the purpose of public interest. Land for public interest refers to state-invested, non-profit land for construction of public utilities. The government's expropriation of profit-oriented land from farmers is prohibited. Secondly, the Decision stresses a gradual reduction of the scope of expropriation, along with the refinement of the compensation mechanism to reasonably and promptly compensate rural collective organisations and farmers in line with the principle of 'the same land, the same price' and in full amount, and solving the employment, housing and social security problems of farmers with land expropriated. Lastly, the Decision focuses on gradually building an urban - rural unified land market, stipulating that the land use right for rural, collective, profit-oriented land for construction which is obtained in accordance with the law must be transferred on the unified tangible market on an open and normalised basis, and that such land and state-owned land enjoy equal rights as long as they conform to relevant planning. Moreover, farmers should be allowed to legally participate in development and management through various methods.

Implementation of rural house site system

The Decision sets out the tasks required to complete the rural house site system, strengthen house site management and guarantee the usufructuary right of farmer households to house sites. Rural house sites and village land conserved through land consolidation should be first of all reclaimed as farmland. Those areas regulated as

land for construction must be accordant with land use plans and included into annual plans of land for construction, giving priority to collectives. To allow circulation of the use right of rural house sites, as a matter of fact, is a significant institutional breakthrough of the rural structural reform to further free the rural population from some traditional ideas, vitalise the rural economy and protect farmers' rights, helping to increase farmers' incomes, realise urban - rural integration, economically utilise land resources and build a new socialist countryside. More effort will put into the circulation of house sites in the future. For example, with the basic system of the collective ownership of rural house sites preserved and the property rights of rural house sites and houses being established, rules on the circulation of house sites and houses can be worked out to allow legal trade, and reasonable and standardised circulation markets can be established and will help destroy the urban - rural dual division land use system and promote a coordinated development of urban and rural areas.

9.2.2 Reform of Rural Financial System

To promote rural development it is essential to build up a modern rural financial system. According to the Decision it is necessary to create new rural financial mechanisms, adopt more flexible policies for rural financial access, and accelerate the building of a rural financial system that integrates commercial finance, cooperative finance and policy-oriented finance and that features adequate capital, complete functions, efficient services and safe operation. Two major reforms, namely the reform of rural credit cooperatives and the establishment of village and town banks, have been already put into practice.

Reform of rural credit cooperatives

Rural credit cooperatives are financial organisations jointly established by farmers and other individuals in rural areas, managed by elected operators, and guided by the major purpose of mutual assistance. The reform of rural credit cooperatives is one of the key elements of the reform of the rural financial system in China. Issued in 2007, the Opinions on Accelerating Rural Financial Reform and Development clearly stated that the reform of rural credit cooperatives should follow market principles and be firmly oriented to the shareholding system.

- Management system. In line with the principle of ‘separating government functions from enterprise management’, the responsibilities of provincial governments and provincial credit unions as well as the authority–responsibility relationship between provincial credit unions and rural credit cooperatives with legal person status should be clarified step by step. Structural reforms of provincial credit unions should be focused on the shareholding system and diversified in various forms.
- Ownership system. The ownership structure should be optimised towards a shareholding system. The transformation of qualified rural credit cooperatives and rural cooperative banks into rural commercial banks should be encouraged and supported.
- Corporate governance. A corporate governance model with a “flexible form, normalised structure, scientific operation and effective governance” should be built in accordance with the characteristics of community institutions. A pilot project for prefectural (municipal) rural credit cooperatives with unified legal person status should be carried out in developed or less developed areas. The work to deepen the reform, such as the acquisition and reorganisation of small and medium-sized rural financial institutions with individual legal status, the invitation to strategic investment, public listing, etc., should be gradually advanced.

The reform has so far achieved a degree of initial success. By the end of 2007 there were 17 rural commercial banks, 113 rural cooperative banks, 1,818 credit unions with unified legal person status at the county (city) level, and 7 credit unions with unified legal person status at the prefecture (city) level, reorganised upon the original rural credit cooperatives in China. The 35,527 rural credit cooperatives with legal person status before the reform were shrunk to 8,348, with a total share value of RMB 222.4 billion, respectively RMB 201.8 billion and RMB 222 billion higher than those at the ends of 1996 and 1979. With clearer property relations, a completed corporate governance structure and a transformed running mechanism, rural credit cooperatives have been liberated from historical burdens and their service level is being constantly raised to support agriculture. In the future, the reform is about to clearly define the functions of provincial credit unions to reduce their intervention in the administrative power and micro-operation of rural credit cooperatives, accelerate the pace of attracting private strategic investors to deepen the property rights reform of rural credit cooperatives, further improve the service functions of rural credit cooperatives

for agriculture, rural areas and farmers, and support high-quality cooperative banks to develop in different areas and provinces.

Development of village and town banks

To address the limited coverage of financial institutions in rural areas, the insufficient supply of services and inadequate competition, the China Banking Regulatory Commission (CBRC) regulated and relaxed the policies for market access of banking institutions into rural areas at the end of 2006, putting forward the principle of ‘low threshold and strict supervision’ to encourage and guide eligible foreign and domestic financial capital, industrial capital and private capital to invest in rural areas to establish the three new rural financial institutions of village and town banks, rural mutual cooperatives and loan companies. Among these three new rural financial institutions, village and town banks have achieved the most distinguished development. By the end of September 2008 there were 68 new rural financial institutions established across the country upon approval, including 53 village and town banks. As single-level legal person institutions, village and town banks are banking institutions providing services for local farmer households or enterprises, rather than branches of commercial banks. Foreign banks, small and medium commercial banks and the China Development Bank are all active in establishing village and town banks. With a larger capital input, the capital funds of the 53 village and town banks generally exceed RMB 100 million, among which those of 5 banks are as high as RMB 0.1-0.2 billion. Mostly co-founded by several shareholders, these banks are usually interregional and are under the vigorous support of the local governments.

9.2 Policy Orientations and Prospects for Integration of Urban and Rural Development

In the Report of the 17th National Congress of the CPC, the tasks of balancing urban and rural development and promoting the construction of a new socialist countryside were attached with great significance to facilitate a sound and fast development of the national economy, and the endeavour to “build a long-acting mechanism in which industry promotes agriculture and cities elevate countryside and create a new pattern integrating the economic and social development of urban and rural areas” was put

forward. To integrate the development of urban and rural areas is to facilitate a favourable interaction between urban and rural areas, so as to realise mutual complementation between urban and rural areas as well as an overall coordinated development of economy, society, ecological environment, living environment and spatial distribution. Plans and policy orientations of some development plans are listed below:

9.3.1 Integration of Public Finance

Enlarge rural financial transfer payment

To fundamentally change the system of supplying unequal public goods to urban and rural areas, it is essential for the government to regulate the public expenditure policy and enlarge the input into infrastructure and public services of rural areas, in particular rural areas in the central and western regions. The government public finance should be focused on refining and strengthening financial budgets to gradually balance the distribution of financial funds in urban and rural areas, and the financial support should give priority to infrastructure construction and public services in rural areas. The reform of rural fiscal and tax systems should be accelerated, and normalised transfer payment systems and basic demand return systems should be established, so as to pave the way for a gradual unification of urban and rural tax systems and non-taxation burdens of urban and rural residents, and approximately match the financial expenditures of urban and rural areas with their populations. Proper forms of financial transfer payment and reasonable supporting ratios should be adopted in line with the local financial strengths and development potentials of counties and cities. Those with a lower financial strength can be supported with full appropriations, with the supporting funds remitted or reduced by possibly lower ratios. For counties and cities with stronger economies the amount of supporting funds should be equal to or even larger than that of appropriations, so as to drive the local governments to increase the input into public goods of rural areas.

Clearly define financial expenditure responsibilities to realise the balance between financial power and administrative power

Due to an overdependence of rural public expenditure on the grassroots level

governments, the finances at the township and county levels are too small and weak for the numerous and overloaded public services, and the financial power is seriously out of line with the administrative power. As a result, to balance the financial power and the administrative power, it is urgent to make policies to clearly and reasonably define the expenditure responsibilities of finance at different levels. To rationalise the supply system of finance at the grassroots level, it will be important to properly reload the responsibility for expenditure on compulsory education, medical treatment and public health as well as pension insurance of rural areas to finance at higher levels, particularly to the central and provincial finance.

9.3.2 Integration of Planning and Infrastructure Construction

Integrate urban and rural planning and clearly position urban and rural functions

As urban and rural areas are complementary to each other, it is necessary to build a system of integrated urban and rural planning, to clearly define the urban - rural functional relationship, to lay out tertiary industry reasonably, and comprehensively plan transportation, communication, power, water supply and social undertakings. Small, medium and large cities, small towns and key villages should be reasonably distributed according to the urban - rural spatial structure and functional service relationship. With rural and urban development plans completed properly, urban plans should be gradually extended into key and demonstrator villages, so that planning coherence, resource sharing and development linkage can be truly realised between city centres and small towns. Development plans should be formulated under the principle of 'three concentrations' (concentration of projects in industrial parks, concentration of population in towns and cities, and concentration of land for scale management), so as to realise intensive use of land, agglomerative development of industries and localised transfer of farmers, further optimise the urban - rural development layout and promote the urbanisation of rural areas.

Pay equal attention to construction of rural production infrastructure and living infrastructure of farmers

To promote urban - rural integration, it is necessary to improve rural infrastructure

construction at a higher pace, and gradually realise the co-building and sharing of infrastructure and the interaction and mutual promotion of industrial development between urban and rural areas. The input to rural infrastructure (including rural production infrastructure and living infrastructure of farmers) should be increased. The rural infrastructure construction should be sequential according to the development priorities, giving the first priority to infrastructure that can facilitate rural development and enhance farmers' living standards, such as rural road transportation, farmland water conservation facilities, power supply, communication, etc. Ecological construction should be harnessed as a breakthrough to improve the rural production conditions and change the living habits of farmers. Public facilities for water, gas and power supplies, drainage, communication and garbage disposal should be gradually integrated into urban and rural areas where conditions permit, such as promoting the use of biogas and other clean energies, carrying out the latrine improvement project and public water works in rural areas, and so on. The infrastructure construction should be planned and budgeted. Integrated construction standards, management models and service and price standards should be explored. The infrastructure construction in rural areas should be scientifically and reasonably intensified, and the coverage range should be extended to benefit more rural residents during the urban – rural integration.

9.3.3 Integration of Public Services

Explore more funding channels for rural public services

Though financial support from the government is considered a major source of funds for rural public service supply, it is out of the question to totally count on the government finance in reality. Therefore, it is necessary for the government to mobilise the whole of society to actively discover new financing channels: different supply models such as the government supply model, the government–enterprise supply model and the enterprise supply model can be applied to different categories of rural public services. The government can purchase rural public service institutions after clearly defining their commonweal property, so as to build a 'principal–agent' relationship for public service supply and supervise the service quality as the purchaser. Governmental incentives, such as financial and credit supports, tax

abatment, lower profits, aiding measures and the employment as a form or relief project, can be offered to enterprises, agencies and individuals participating in public service supply.

Build a mechanism for farmers to express their demand for public services

A ‘bottom-up’ demand mechanism should be established to express the needs of farmers, so that the categories and quantities of supplied public services are subject to such demands, and that the demands of farmers can be fully embodied. It is most essential to advance further the construction of democratic systems at the grassroots level in rural areas and perfect the system of villagers’ congresses, so as to completely reflect and embody the most extensive range of public opinion in rural areas. Moreover, a bridge should be built between the government and farmers by elevating the degree of farmer organisation, in order to enable farmers to express their demands for public services through certain channels.

Build a social security system covering urban and rural areas

The social security system should be extended from urban areas to rural areas, as well as from industry to agriculture. The one-sided view that ‘land is the security of farmers’ should be changed, and the original social welfare and security system that mainly involves state-owned units should be reformed, upon which a social security system should be established in which rural and urban residents as well as employees of enterprises with various forms of ownership are regarded as equal and the whole of society is benefited by pension insurance, unemployment insurance, medical insurance, etc. Employees (including rural migrant workers) working in enterprises with various forms of ownership for a certain period, regardless of their positions, should enjoy equal pension insurance and medical insurance. The system of minimum living standard allowances should be extended from urban areas to rural areas, and the system of serious disease insurance for rural areas and the system of rural cooperative medical and healthcare services should be actively improved. The popularisation of the rural social pension insurance system should be intensified. Considering the imbalance in social and economic development levels among regions, some difference should be allowable in establishment of the social security system in different regions, and a Procrustean bed for insurance levels and financing standards

should be by any means avoided.

Build an equal and balanced educational system between urban and rural areas

The unequal educational system of urban and rural areas should be reformed to secure equal opportunities within compulsory education. The management system and input mechanism for rural compulsory education should be further regulated and refined, with the central and provincial governments inputting more into rural elementary education to ensure the balanced development of elementary education and enable each school to provide basic education. To strengthen rural education it is essential to properly deploy its double function of education and service and actively seek out the optimum binding point between education and the local economic development, so as to drive education to directly participate in the local economic development and create new ways to develop agriculture through science and technology. The construction of mechanisation skill teams and training in the operation of agricultural machinery should be strengthened. The establishment of a knowledge base on rural education should be actively promoted, and the project of modern distance education in rural primary and secondary schools should be earnestly organised and carried through, so as to promote the sharing of urban - rural educational resources and improve the quality and benefits of rural education. College students and others with high-quality skills should be further encouraged to engage in rural education, and stronger teaching teams should be built for rural areas.

9.3.4 Integration of Employment System

Build a unified urban - rural labour market

The reform of the household registration system is essential for a unified urban - rural labour market. Experience of such reforms carried out in different regions at different levels in recent years should be summarised, and the policies should be further loosened, so as to fundamentally break the identity boundaries of urban and rural labourers and eliminate institutional barriers getting in the way of urban and rural

labour re-employment. Sticking to the principle of justice, urban and rural government departments should make efforts to promote the employment of urban and rural labourers and treat them equally in employment services and vocational training programs. Employers should eliminate discrimination when managing urban and rural labourers, making unified standards with respect to working hours, conditions, intensity of work, protection and payment. Information releases about labour markets should be actively organised, so as to promptly and accurately publicise the supply and demand of labour markets in different cities and overcome the blind flow of rural labour as effectively as possible.

Strengthen rural labour training and fostering new farmers

Training for labourers prior to transfer should be well carried out, and the input into elementary education in rural areas should be increased. In accordance with the requirements of labour transfer, rural labour export and import places should work in cooperation to organise various forms of vocational training, such as intensifying skills training for rural labourers, gradually establishing a mechanism connecting vocational training and the division of labour and trades in rural areas, etc. Follow-up services and management of transferred labourers should be carried out, including paying regular visits to exported labourers, offering good follow-up services, helping solve problems they encounter in work and life, and so on. The strategy of developing agriculture through science and technology should be followed, and agricultural technologies should be widely promoted, so as to support the restructuring and to optimise employment through technological progress. Governments at all levels should bring science and technology to the countryside, organising farmers to learn advanced applied technologies, helping farmers to cultivate new management ideas and acquire market competition consciousness, and encouraging farmers to build their own businesses.

Emphasis on the completion of laws and regulations to secure the rights of rural migrant workers

To further perfect and normalise services for and the management of labour markets, the local governments should take feasible and effective measures, such as perfecting legislation, rigidly enforcing laws and unveiling policies and regulations, to offer more protection to the rights of rural migrant workers. Treatment with respect to work payment, children's schooling, public health, housing rent and purchase, etc., should

be gradually equalised between rural migrant workers and urban residents. A social security system for rural migrant workers should be built and completed on the basis of establishment and completion of various social security systems for rural areas, improving their working conditions, securing their safety at work and expanding the coverage of occupational injury insurance, medical insurance and pension insurance. Measures for the transfer and succession of pension accounts of rural migrant workers should be formulated and implemented as early as possible.

9.3.5 Integration of Market System

Build an integrated urban – rural economic management system

Various institutional and policy barriers restricting free flows of resources, factors and products between urban and rural areas should be eliminated. A series of laws and regulations corresponding to the socialist market economy should be built for rural economic activities, and regulations that carve up the market, such as hampering fair competition, building administrative barriers and rejecting external products and services, should be abolished to break trade monopolies and regional blockades. The administrative law enforcement system for agriculture should be completed, and market transaction rules should be formulated so as to guarantee fair trade and equal competition and create a unified urban – rural competition order and market environment. A unified price system should be practiced in urban and rural areas to eliminate unreasonable monopoly pricing, accelerate the marketisation of factor prices, eliminate the ‘scissors gap’ (widening gap) between the prices of industrial and agricultural products, and allow prices to correctly reflect market information. Independent and impartial professional institutions for market intermediary services with a normalised operation should be developed, and self-disciplined organisations such as various industrial associations and chambers of commerce should be standardised and developed in line with the principle of marketisation, so as to enhance the capabilities for risk resistance and market competition, as well as to elevate the organisational level of farmers who enter the market.

Guarantee an equal market subject position for farmers

Farmers should be regarded as market subjects who enjoy equal rights in the market economy. The basic property rights of farmers should be put into practice, and the

land reform in rural areas should be deepened further. The shareholding reform of the rural collective economy should be explored in tandem with the advancing of the circulation of land use right, demutualising land property rights of farmers and transforming land rights into currency and liability rights, so that the reform of property rights to collective assets can integrate the collective and individual land property rights and truly fulfil the property rights of farmers. Systems in urban and rural areas regarding the rights to equal status, employment autonomy, migration freedom and access to public goods should be identical, so as to provide the national treatment for farmers, and ensure equal opportunities for farmers and urban residents in enjoying public goods and developing self interests.

Build an integrated urban – rural market platform

In line with the requirement to build a unified, open, competitive and orderly modern market system, unified urban – rural commodity and factor markets should be cultivated and developed at a faster pace, and an integrated urban – rural market network should be built and completed. Vertical links between exhibition markets in core cities, professional markets in small and medium-sized towns as well as cities and primary open fairs in rural areas should be enhanced, so as to establish urban – rural network systems with mutual dependence and existing at various levels. The concentrating and radiating functions of towns and cities should be fully exerted, and urban markets should be used to lead and drive the development of rural markets, so as to deepen the commercialisation of agricultural products and the marketisation of agriculture. Oriented to the market, the production, processing and sale of agricultural products should be included into the unified urban – rural market to facilitate the stabilisation of supply–demand relations and reduce internal transaction costs. Urban industrial and commercial organisations should be encouraged and guided to extend and develop in rural areas. New business forms such as large-scale warehouse supermarkets and supermarket chains should be developed in rural areas, and E-commerce, chain service, delivery, combined transport and other emerging modern logistics methods should be extended to suburban counties, so as to promote warehouse supermarkets, trade groups and various new factor markets towards the vast rural hinterlands.

9.3.6 Integration of Resource Allocation

Cooperation of market and government in resource allocation

To integrate the allocation of factors and resources in urban and rural areas it is necessary to fully engage the fundamental function of the market in factor and resource allocation, use the market to lead reasonable flows of land, capital, labour, technology, skills, information and other resources between urban and rural areas, and create an environment in which all urban and rural economic entities can equally use production factors in a fair competition. Furthermore, to realise a favourable interaction of urban and rural factors and resources, it is also necessary to give full play to the directing role of the government in resource allocation. The government should formulate and implement relative supporting policies to stimulate the enthusiasm of urban and rural areas. The vitality and potential of land, labour, knowledge, technology, management, capital and other factors should be activated under the guidance of government.

Leading role of cities in integration of urban and rural resources and factors

Due to the crucial position of cities in the regional development of urban and rural areas, it is necessary to harness the radiating function of cities to the rural economy. The allocation function of cities as hubs should be enhanced; proper networks of transportation, science and technology, information and social services should be developed around cities, and the close relations between cities and surrounding townships should be strengthened. Such measures as spatial distribution, transport conditions and market interaction should be used to facilitate cities supplying resources and factors to rural areas, such as support in manufacturing equipment, technical equipment, human resources and capital input. Rural areas can adjust measures to local conditions and properly learn from the experience of cities in resource allocation, production and operation to increase their resource allocation efficiency.

Absorption of industrial agglomeration of resources and factors

The construction of scientific and technical parks in suburban counties, key township industrial parks and small towns and cities should be planned to guide industrial

agglomeration and establish platforms for convergence, absorption and connection of urban and rural resources during the integration. As subjects of non-agricultural production in rural areas, township enterprises have to be concentrated in industrial parks so that the construction of industrial parks and small towns can be combined to achieve mutual promotion and development. Township industrial parks should not be distributed in an equalised pattern, but rather on the basis of the rural administrative divisions and in reply to location conditions, industrial foundations and rural resource advantages, so as to form a number of core industrial parks and create scale effects together with integrated neighbouring small parks. The government should plan, guide, supervise and control the construction and development of industrial parks, so as to rectify problems such as blind land occupancy, waste of land resources, etc.

Well aware of the enormous disparities between the development of urban and rural areas, the Chinese government is determined to promote urban – rural integration and coordinated regional development as a major approach to tackle the long-term imbalance in China’s economic development. So far general development orientations and strategic focuses have been clarified, while some specific institutional designs and policy contents are still being explored and completed.

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Chapter 10 Urbanisation and Urban Development

Urban development in China has a long history. But the economic and social development of China was rather slow before 1949. Except for a number of metropolises along the eastern coastal area and a few isolated cities in inland China, most of the towns experienced a stalled economy. Since the founding of P.R.C, not least since China started its reform and opening up to the outside world, the urbanisation as well as the urban development of China has entered a new age.

10.1 Urbanisation since the Foundation of P.R.C.

China's urban population increased from 57.65 million to 621.86 million during 1949 to 2009, with the urbanisation rate rising from 10.6% to 46.6% (see figure 10-1), and the number of cities expanded from 132 to 655. The urbanisation process since the foundation of P.R.C. can be divided into two stages, i.e. before and after the reform and opening up policy (at the end of 1970s).

10.1.1 China's Urbanisation in Twists and Turns before the Reform and Opening up

The distribution of industrial projects in China showed a preference towards inland areas in the First 5-year plan period. Consequently, cities that were newly built in this period were largely distributed in inland areas, such as Hunan, Sichuan, Henan, Gansu, Heilongjiang, Inner Mongolia, Shanxi and Anhui, resulting in the emerging of some new footholds for industrial cities. Meanwhile, medium and large cities which had taken their shapes before the founding of P.R.C, such as Shenyang, Fushun, Anshan, Harbin, Beijing, Taiyuan, Xi'an, Lanzhou and Chengdu, also saw some new development due to the distribution and investment of industrial projects. The urbanisation rate in China was increased from 10.6% to 15.4% during 1949 to 1957,

with an average annual increase rate of 0.6%.

The Great Leap Forward was launched in 1958. Driven by the high development pace of industry, urban construction was expanded and the population was sharply increased. From 1958 to 1960 the urbanisation rate was rapidly increased at an overall rate of 3.5%.⁴⁴ In the following years when the national economy saw a decline and the international political situation experienced volatile changes, a big tranche of the urban population was evacuated to rural areas, leading to a negative growth of the urban population during 1960–1964 and a decrease of urbanisation rate from 19.8% to 14.6%, which was called ‘reverse urbanisation’.⁴⁵ During 1966–1977, the period of The Great Cultural Revolution, China’s economic and social development stagnated due to political reasons, and the urbanisation rate was merely increased from 17.86% to 17.92% during 1966–1978, with several periods of negative growth⁴⁶ in between (figure 10-1).

The urbanisation rate of China only increased by 7.3% during 1949 – 1978. Such twists and turns in urbanisation due to improper economic development principles and political factors are not a common phenomenon in world urbanisation history.

10.1.2 Rapid Growth after the Reform and Opening up

A series of principles and policies have been implemented since 1978, such as the economic system reform and the deepening of opening up, contributing to a sustainable and rapid growth of the national economy, as well as a new development stage in urbanisation. This stage of urbanisation can be further divided into two periods:

Stable growth period between the end of 1970s and the middle of 1990s

The growth of township enterprises during this period became a major driver in the urbanisation of China, particularly in the urbanisation of rural population. There were 100.35 million employees in non-agricultural industries absorbed by township enterprises during 1978 – 1995, accounting for 43.3% of the national employment increase for non-agricultural industries in the same period. In terms of the relationship

⁴⁴ The period from 1958 to 1960 is referred to as the excessive urbanisation period by some scholars.

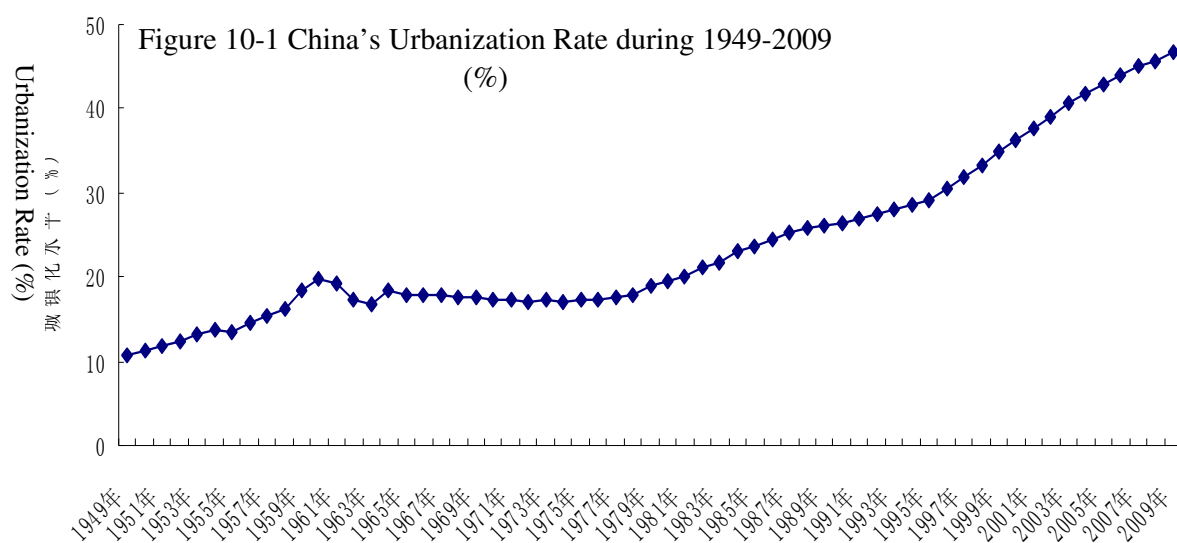
⁴⁵ Referred to as the first reverse urbanisation period by some scholars.

⁴⁶ Referred to as the second reverse urbanisation period by some scholars.

between township enterprises and urbanisation, those township enterprises involved in the town development process were mostly distributed in organic towns, the bottom rung of China's urban system. The number of organic towns in China was enlarged from 2,173 to 17,282 during 1978–1995. In addition, the deepening of opening up and the quickening of FDI further propelled the growth of coastal cities. During 1978–1995, China's urbanisation was increased from 17.9% to 29.0% at an average annual rate of 0.64%.

Rapid growth after the middle of 1990s

In the middle of 1990s, with China's market economic system reform and its integration with the international market being at an obviously faster pace, industrialisation was rapidly developed, which further accelerated urbanisation. Moreover, the urbanisation strategy practiced in the tenth 5-year plan period (2000–2005) also favourably pushed forward the urbanisation of different regions. The urbanisation rate of China was increased from 30.5% to 46.6% during 1996–2009 at an average annual rate of 1.23%, one of the most rapid increases since 1949 (figure 10-1).



Remarks: Before 1982, urban population referred to the total population in the jurisdiction area. During 1982 - 1999, it was the sum of population in the jurisdiction area of cities divided into districts, population in streets under jurisdiction of cities not divided into districts, population in neighbourhood committees of towns under jurisdiction of cities not divided into districts, and population in neighbourhood committees of towns under jurisdiction of counties. Urban and rural populations were calculated during 2000 - 2005 according to the Stipulations on Statistical Definitions of Urban and Rural Areas (for Trial Implementation) issued by the National Bureau of

Statistics of China (NBSC) in 1999. The calculation of urban and rural populations after 2006 is subject to the Interim Provisions on Statistical Definitions of Urban and Rural Areas issued by NBSC in 2006.

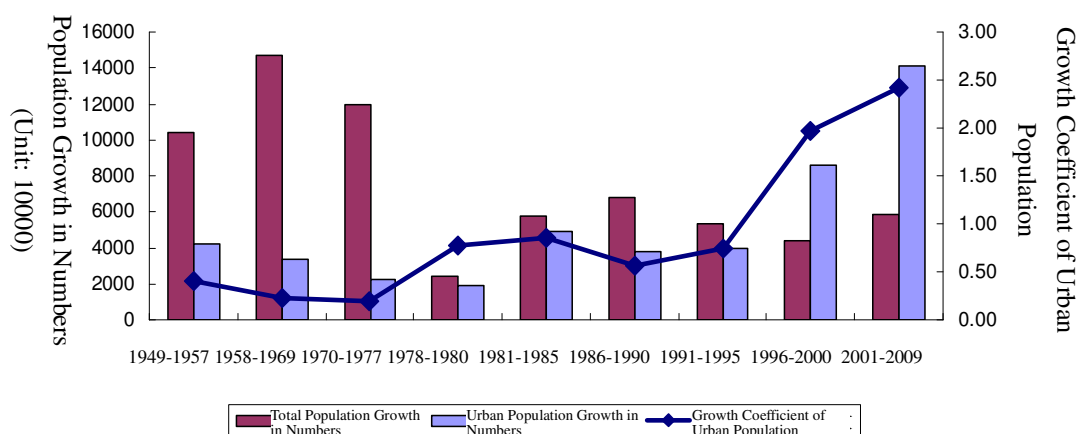
Source: *China Statistical Yearbook 1989*, *China Statistical Yearbook 2001*, *China Statistical Yearbook 2009*, and *Statistical Communiqué of the People's Republic of China on the 2009 National Economic and Social Development* (from NBSC).

Box 10-1 Statistical Calibers of China on Urban Population

Statistical calibers set in 1999	Prefecture-level cities	1	Municipal districts with the population density exceeding 1,500 per sq km	Total district population
		2	Municipal districts with the population density below 1,500 per sq km	Population in the location of the prefectural government, the territory of other subdistrict offices under the jurisdiction of the prefectural government, as well as the total administrative area of surrounding townships covered by the urban construction of the location of the prefectural government
	County-level cities	3	Population in the location of the municipal government and the territory of other subdistrict offices	
		4	Population in the total administrative area of townships covered by the urban construction of the location of the municipal government	
	Towns	5	Population in the location of the town-level government and the territory of neighbourhood committees under the jurisdiction of the town-level government	
		6	Population in the total area of the locations of surrounding villagers' committees covered by the urban construction of the location of the town-level government	
	Special areas	7	Population in industrial and mining areas, development zones, R&D institutions, colleges and universities, farms, forest farms and other special areas with the population exceeding 3,000	
Statistical calibers set in 2006	Cities at the prefecture/city level	1	Residents in the territory of neighbourhood committees under the jurisdiction of subdistrict offices	
		2	Residents in the territory of other neighbourhood committees and villagers' committees within the range of urban public and living facilities	
	Towns	3	Residents in the jurisdiction area of neighbourhood committees under the jurisdiction of towns	
		4	Residents in the territory of villagers' committees within the range of public and living facilities of towns	
	Special areas	5	Population in industrial and mining areas, development zones, R&D institutions, colleges and universities, farms, forest farms and other special areas with the population exceeding 3,000	

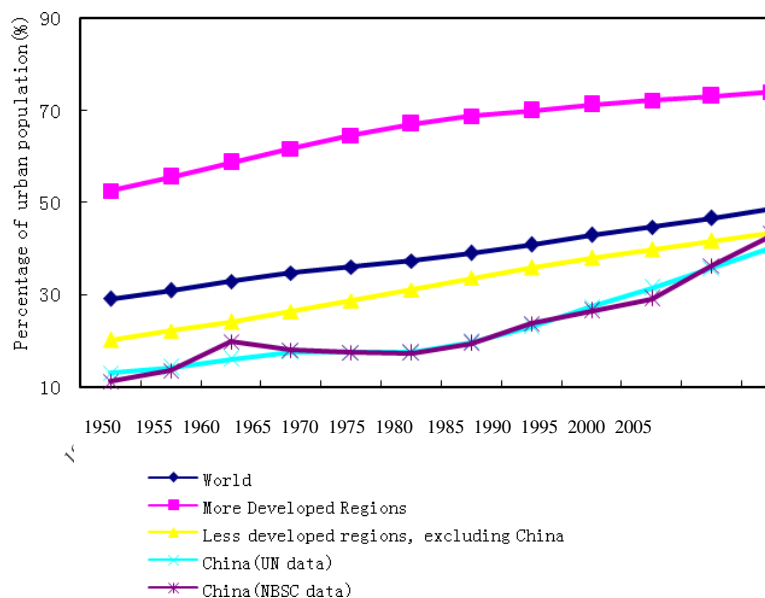
The growth of urbanisation since the founding of P.R.C. can be reflected by the changes in the growth coefficient of urban population (K), the ratio between the growth of urban population and the growth of the total population. According to the development laws of urbanisation, when K is below 0.5 the growth of urban population is outpaced by that of rural population, indicating an extremely low urbanisation rate and a slow growth. When K is equal to or greater than 0.5 but smaller than 1 urbanisation is in a new stage, where the growth of urban population constantly surpasses that of rural population. Therefore, urbanisation is at a crucial turning point when K is equal to or greater than 0.5. As for China, K was lower than 0.5 during 1949–1978, stayed between 0.5 and 1 during 1978–1995, was greater than 1 after 1996, and 2 after 1999 (figure 10-2). Since 1978, particularly after 1995, the urbanisation of China has grown at a rate not only higher than the world average, but higher than the average (excluding China) of developing countries (see figure 10-3).

Figure 10-2 Growth Coefficient of Urban Population (1949–2009)



Source: *China Statistical Yearbook 1989*, *China Statistical Yearbook 2001*, *China Statistical Yearbook 2009*, and *Statistical Communiqué of the People's Republic of China on the 2009 National Economic and Social Development*.

Figure 10-3 Comparison between Urbanisation Growth in China and the World (1950–2005)



Source: United Nations Population Division: World Urbanisation Prospects: The 2007 Revision Population Database, and China Statistical Yearbooks for corresponding years.

10.2 Conflicts and Problems in Urbanisation

Major conflicts and problems have accompanied the rapid urbanisation of China since the reform and opening up, effective solutions to which are the key to a healthy development of China's urbanisation in the future.

10.2.1 Difficulty of Incorporating Rural Migrant Workers into the Urban Population

Rural migrant workers are workers who hold rural household registration certificates but have left their hometowns to be engaged in non-agricultural industries in cities. According to the monitoring data of NBSC, the number of rural migrant workers in China in 2009 was 0.145 billion.⁴⁷ Medium and large cities are major destinations of these rural migrant workers, about 63.3% of who work in cities above the prefecture level, including 9.1% in cities directly under the central government and 19.8% in

⁴⁷Department of Rural & Social Economic Survey, NBSC, Monitoring and Survey Report on Rural Workers 2009, http://www.stats.gov.cn/tjfx/fxbg/t20100319_402628281.htm

provincial capital cities.⁴⁸ According to China's statistical practice, farmers who have worked and lived in cities for more than half a year shall be put into the category of urban population and, consequently, a considerable part of the 0.145 billion rural migrant workers and their relatives are counted as urban population by statistics. But in fact, such an urban population is quite different from the urban residents in a real sense. Most of them are living in 'urban villages', work sheds or basements in the suburbs of cities; they lead a low-quality life and get no access to social security nor the same educational opportunities for their children as urban residents have. Reasons, though complicated, can be classified as follows:

- Institutional factors. One is the household registration system. Despite the household registration system reforms in different areas since the reform and opening up, major breakthroughs in promoting the integration of rural migrant workers into the urban population are yet to happen. The situation in China is special. Metropolises and megacities tend to take a higher percentage of public finance in urban construction expenditure and hence more social welfare can be enjoyed by household registration holders in these cities (housing, employment, healthcare, pension insurance, education, occupational safety, etc.) However, the local governments, out of concerns about their financial capacity and worries about excessive urban sprawl, are typically strict in granting household registrations. In the context of the enormous number of rural migrant workers flowing to medium-sized and large cities today, the granting of more household registrations would actually mean a great deal in terms of potential impact on transforming rural migrant workers into real urban residents. Second to this would be a reform of the land system. Due to an imperfect market for circulation of rural land use rights⁴⁹ it is not that easy for farmers to obtain monetary capital from land circulation to sustain their migration into cities.
- Low income of rural migrant workers. In 2004, for example, the national annual average income of rural migrant workers was RMB 6,471, while the national average expenditure of urban residents was RMB 7,182. The low income of rural migrant workers, which is insufficient even for them to pay for housing, children's education and other expenses in cities, dooms their prospects of realising their

⁴⁸A Guide for the Outline of the Eleventh 5-Year Plan for National Economic and Social Development in P.R.C

⁴⁹The land system in China is a dual urban-rural land system, in which urban land is owned by the State, while the ownership of rural land belongs to collectives, with the land contract management of farmers remaining stable and unchanged for a long time.

dreams to settle there.⁵⁰

- Other factors include discrimination against rural migrant workers by society, the low qualifications and uncultivated behaviour of rural migrant workers, etc.

To protect the lawful rights and interests of rural migrant workers, in 2006 the State Council issued the Several Opinions of the State Council on Solving the Problems of Rural Migrant Workers. With its implementation, the life and employment of rural migrant workers in cities will be remarkably changed, but there is still a long way to go before rural migrant workers can be transformed into urban residents. The basic meaning of urbanisation is to transfer farmers from agriculture to non-agricultural industries and from rural areas to urban areas, as well as to gradually incorporate them into urban populations. As a result, to promote the integration of rural migrant workers into urban populations should be a focus of the coming urbanisation of China.

10.2.2 Land Use Issues Are still Prominent

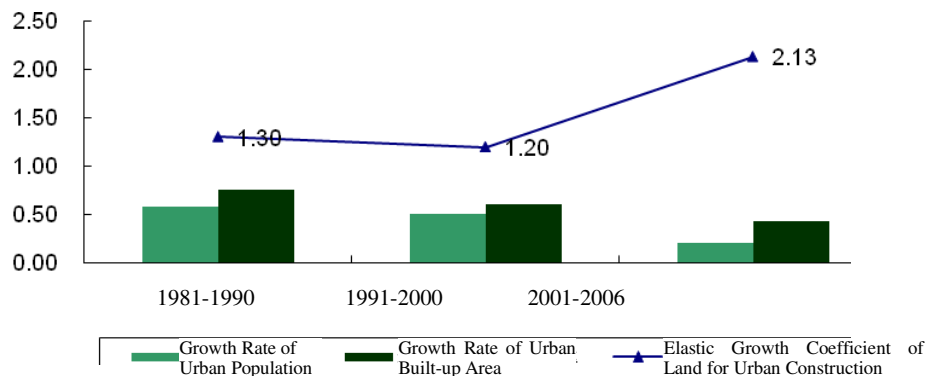
There are three major issues concerning the land use in China's urbanisation. Firstly, there was an excessively rapid increase of urban land in China's urbanisation in the middle and late 1990s. During 1996 - 2004, the urban built-up area of China was increased from 13,000 sq km to 34,000 sq km at a rate of 160%, while the urban population was increased from 0.299 billion to 0.52 billion or 74%. The increase of the former was considerably faster than that of the latter, resulting in the phenomenon of 'faster land urbanisation, slower population urbanisation'. In recent years, there has been a very rapid increase of the elastic growth coefficient of land for urban construction (the ratio between the growth rate of urban built-up area and the growth rate of urban population). The figure was sharply increased from 1.2 (in the 1990s) to 2.13 (during 2001 - 2006, see figure 10-4). Secondly, the land use efficiency is relatively low. At present, the average plot ratios of all the Chinese cities and organic towns are 0.51 and below 0.2, much lower than those of cities in some neighbouring countries and areas (which are of about 1 to 2).⁵¹ Thirdly, the land use structure is unreasonable - land for industrial use occupies a large percentage. For example, of

⁵⁰ Authorised release: Reports on China's Population and Labour, <http://www.china.com.cn/chinese/zhuanti/zgrkyld/654101.htm>, 25 September 2006.

⁵¹ Liu Xinwei, *Research on Intensive Use of Land Resources in China*, Geological Publishing House, 2006.

the 2,400 sq km of construction land in Shanghai, 1,000 sq km is for industrial use, and only 600 – 700 sq km is for urban life use. According to international standards, the minimum ratio between the two figures should be 1:1.

Figure 10-4 Elastic Growth Coefficient of Land for Urban Construction in Different Periods



Source: *China Statistical Yearbook 1989*, *China Statistical Yearbook 2001*, *China Statistical Yearbook 2008*, *China Urban Construction Statistical Yearbook 2004*, and *Statistical Communiqué of China on Construction of Cities, Counties and Villages 2006*.

Reasons for the issues are also complicated, including:

- The local governments or enterprises can acquire land at very low costs, mainly due to the low standards of compensation for land acquisition from farmers as well as the low utilisation charge for new construction land, and the disadvantages farmers have when they hold land trade negotiations with local governments;
- The government officials' performance evaluation system, which is focused on GRDP and the local financial revenue, provides local governments with an imperative towards property development and investment attraction. Consequently the local governments favour transferring land at lower prices in exchange for industrial projects with quick returns in GRDP and financial revenue.

To solve the issues the central government began to strengthen the management of land use in 2003. Measures taken include carrying out the strictest land conservation system, applying higher requirements for compensation for land acquisition and, for

farmers whose land will be acquired, including social security expenses into the compensation for land acquisition costs, increasing a new construction land utilisation fee and other relevant taxes and charges and making more land acquisitions eligible for fees and tax collection, practicing the land use auction system, etc. The implementation of these policies may somewhat alleviate land waste in the process of urbanisation, while the permanent solutions lie in the establishment of an integrated urban–rural market for construction land and further reforms of relevant systems.

10.2.3 Urban Sprawl and Excessive Construction of Development Zones

Since the late 1990s, many cities, especially medium-sized and large cities, have been engaged in a frenzied pursuit of the rapid increase of urban scales and are in the midst of the process of high-speed urbanisation (see table 10-1). Urban sprawl, characterised by large-scale construction of new city districts and shifting of city centres and mainly materialised in the form of development zones, has emerged in many large cities. Quite a number of development zones of various categories have been built in many provinces since the middle 1990s. The total number of development zones across the country was as high as 6,866 at one point, covering an area of 38,600 sq km,⁵² equivalent to the total built-up area of the whole country's urbanisation across the last 100 years. Mostly located on the outskirts of cities, development zones have gradually extended and expanded the original urban functions through development and construction, and have grown from simple industrial functional zones to comprehensive urban functional zones, and in many cases, new city centres. This whole process has paved the way for another path of urban sprawl: industrial parks – comprehensive industrial districts – comprehensive new city areas – new city centres.

The inefficient land use of development zones also directly contributes to the low use efficiency of urban construction land. In 2001, for example, the developed area of development zones above the provincial level across the country covered 53.2% of the planning area, while the constructed area was only 10.8% of the latter.⁵³ Regulation of development zones by the State started in 2003, decreasing the number

⁵²Data from the Ministry of Land and Resources.

⁵³Wang Xingping, *New Industrial Space of Cities in China*, Science Press, 2005.

and planning area of development zones to 1,568 and 9,949 sq km by the second half of 2007. However, activities such as enlarging the land use scale of some zones in the name of industrial agglomeration, industrial districts, etc., transferring already revoked development zones to other legal development zones to attract investment, and so on, still exist.

Table 10-1 Increase of Land (Built-up Areas) in Large Cities of China (unit: sq km)

	1952	1978	1997	2002 - 2003	Increase Rate
Shanghai	78.5	125.6	412.0	610	6.67
Nanjing	32.6	78.4	198.0	260	6.98
Beijing	65.4	190.4	488.0	580	7.87
Tianjin	37.7	90.8	380.0	420	10.1
Xi'an	16.4	83.9	162.0	245	13.9
Chongqing	12.5	58.3	190.0	280	21.4
Hangzhou	8.5	28.8	105.0	196	22.1
Guangzhou	16.9	68.5	266.7	410	23.3

Source: Yao Tumou, et al. *On Regional Spatial Planning and Construction in Large Cities of China*, Economic Geography, 2005 (02).

10.2.4 More Severe Ecological Problems

While urbanisation is quickly advancing, many cities are engaged in a blind pursuit of a higher urban scale and growth rates during development and construction, thus making the water and soil problems and environmental deterioration even worse and threatening the regional ecological environment.

- Air pollution is serious. Among the 338 cities in the urban air quality survey in 1999, 66.9% of them were below the Grade II national ambient air quality standards, including 137 cities (40.5% of the total) below the Grade III standards. The carbon emission of China in 2004 was 22.55 million tons, of which 84% was from industry and the majority was from major industrial cities. About 1/3 of the 0.56 billion urban residents have to breathe in polluted air every day.⁵⁴
- Water pollution is serious. The national sewage treatment rate is merely 36%. According to the relevant departments, more than 90% of urban water areas across the country are seriously polluted, and rivers running through cities are generally

⁵⁴Lu Dadao et al. *China's Regional Development Report 2006*, Commercial Press, 2007.

contaminated. The pollution is even more serious in the Haihe River, the Liaohe River, the Huaihe River, the Pearl River and the lower reaches of the Yangtze River.

- The disposal of urban domestic waste is neither efficient nor up to date. There are approximately 0.15 billion tons of domestic waste produced in China every year, with the growth rate reaching upwards of 10%. The total dumped volume has been accumulated to 7 billion tons, occupying an area of more than 0.8 million mu, a figure that has been unceasingly growing at an average annual rate of 4.8% in recent years. Two thirds of middle-sized and large cities in China are now surrounded by waste, and a quarter of cities have run out of proper places for the dumping of waste.⁵⁵

The worsening of various sorts of pollution has led to an extremely unfavourable urban environment. Among the 20 cities that are regarded by the World Bank as the most seriously polluted cities in the world, 14 are in China.⁵⁶ Problems with the ecological environment caused by a faster urbanisation have drawn much attention from governments at all levels in recent years, and they are trying to change their concepts of development and build various systems to control the situation.

10.3 Transformation of Urban Development

After the founding of P.R.C., under the economic development strategy aimed at surpassing developed countries and the planned economic system, there was a long period of time in which cities in China were focused on production functions while the government almost took the full responsibility for urban construction and management. As the economy develops and the market-oriented reform quickens, urban development in China has been transformed, from production functions to service and living functions, from the government's total control to the public's participation in planning and management, as well as from high consumption of resources and energies to environmentally-friendly and ecological orientations.

⁵⁵0.15 Billion Tons of Urban Waste Every Year, <http://www.022net.com/2009/8-21/512143312918622.html>, 21 August 2009.

⁵⁶*China City Planning and Development: Paper Collection*, China City Press, 2006.

10.3.1 Establishing the People-Oriented Urban Development

Concept

It had been a long-standing phenomenon that cities in China have been complexes of manufacturing enterprises, and urban residents were merely labourers. With the people-oriented development theory established in China, to improve the habitability and to build liveable cities have become objectives of many cities for development. The construction of living functions has been intensified in areas such as transportation, culture, sports and recreation to meet the high-quality living demands of residents. The focus is on social undertakings in urban management to promote social equity, facilitate social management, and make the construction of a habitable and attractive living environment a major objective of urban development.

10.3.2 Highlighting Public Services

Urban construction and development in China, oriented towards providing comprehensive public services for residents, puts more emphasis on the construction of urban road networks, water supply and drainage systems, power and gas grids, garbage disposal systems, and infrastructure such as public transport and medical facilities. It focuses on solving issues that are closely related to the benefits of residents (water supply, transportation, commercial networks, energy security, etc). With more importance given to service functions, public service undertakings such as education, healthcare, culture and sports are vigorously developed, and residents are organised and mobilised to participate in commonweal services and various mass cultural activities. With more attention to vulnerable urban groups, residents with financial problems can enjoy basic living allowances.

10.3.3 Actively Promoting the Integration of Rural Migrant

Workers into the Urban Population

In cities, especially middle-sized and large cities where rural migrant workers are concentrated, management of these workers has been gradually transformed into service provision. Many cities have abolished administrative laws and regulations that

discriminate against and restrict migrant workers. Beijing, for example, abolished in 2005 the Regulations of the Beijing Municipal Government on the Administration of Migrant Workers and Businessmen, a document which was put into practice in 1995 and stipulated a variety of restricting measures on social security, employment, house rental, fee charging and epidemic prevention on migrant workers and businessmen. Basic rights of rural migrant workers in work and life are also actively protected at the same time, including implementing basic labour standards, advancing and refining the comprehensive insurance system, etc. Some cities have practiced the residence permit system, ensuring equal opportunities for the compulsory education of children who live with their parents in cities, intensified training and vocational counselling for rural migrant workers, and so on.

10.3.4 Emphasising a Balanced Spatial Development

With the rapid growth of large cities in China, the traditional single-poled urban spatial structure has been changed, and the construction of satellite cities has become a major task in the development of many large cities. In Beijing, the development strategy of multiple centres and new cities is practiced, with the construction of new cities accelerated to reasonably guide the distribution of urban functions. In Shanghai, the development plan of ‘one city and nine towns’ was started in the tenth 5-year plan period. Moreover, policy preferences, favourable job opportunities and supportive tax policies are offered by the municipal governments to attract more urban population into satellite cities and lead to a balanced development of urban space.

10.3.5 Facilitating a Diversified Development

The principles for urban construction and development in China have experienced several adjustments since the reform and opening up. The master principle for urban development in the 1980s was to ‘control the scale of large cities, reasonably develop middle-sized cities and actively facilitate the growth of small cities’, while the development of small towns has been attached with more importance since the 1990s. With more knowledge about the theory of urban development that cities at different levels and on different scales have different functions and roles, the State clearly stated in the eleventh 5-year plan that the urban development in China should suit the

local conditions, and that urbanisation should be diversified with coordinated development among small, medium and large cities and small towns (see table 10-2 for the structure of Chinese cities with different scales).

Table 10-2 Number of Chinese Cities with Different Scales in Different Periods

Non-Agricultural Population in Urban Area	Above 1 Million	0.5 - 1 Million	0.2 - 0.5 Million	Below 0.2 Million
1980	15	30	69	109
1990	31	28	119	289
2000	40	54	217	352
2006	53	76	110	417

Source: China City Statistical Yearbooks for corresponding years.

10.3.6 Highlighting Historical and Cultural Characteristics

Chinese cities have long histories, but numerous historical streets and landmark buildings that were bearers of historical content and heritage have been flattened during the rapid economic and urban development. Nowadays, many cities are beginning to emphasise the display and inheritance of history and culture in their construction and development, strengthening protection of the cities' history and culture by completing local laws and regulations, making protection plans for famous historical and cultural cities as well as protection plans and laws for historical and cultural features, etc.

10.3.7 Encouraging Extensive Public Participation

With the advancing of the market-oriented reform stakeholders of cities (enterprises, residents, etc) have been more and more involved in urban planning, construction and administration. Resident meetings, expert appraisal meetings, hearings, questionnaires, petition letters, media and the internet (government websites) are the major methods at present for opinion solicitation on important decisions and communication between the government and the public. By publicising construction sites, plans and approved plans and exhibiting planning results, the government has intensified the publicity and popularisation of plans and administration.

10.3.8 Tougher Constraints on Resources and the Environment

Guided by the Scientific Outlook on Development, many cities are turning to comprehensive legal, economic and administrative measures for an economical, reasonable and efficient use of water, land, energy and other resources, so as to reduce resource consumption and the environmental costs of urban development. Meanwhile, seizing the opportunity to build ecological cities, many cities have tightened the control on ecological space and reinforced the protection of ecological source areas and corridors.

10.4 Development and Governance of City Agglomerations

While urbanisation is in rapid development, the spatial expansion of large cities has strengthened the connection among cities, thus promoting the formation of city agglomerations.

10.4.1 Existence of City Agglomerations in China

A number of city agglomerations have been formed from coastal areas to inland areas. Those in coastal areas include the Yangtze River Delta City Agglomeration, the Pearl River Delta City Agglomeration, the Beijing–Tianjin–Hebei City Agglomeration, the Shandong Peninsula City Agglomeration, the city agglomeration in middle and southern Liaoning Province, and the city agglomeration in southeast Fujian Province. As for the inland region, there are the Central Plain City Agglomeration, the Changsha–Zhuzhou–Xiangtan City Agglomeration, the Grand Wuhan City Agglomeration, the Chengdu–Chongqing City Agglomeration, the Central Shaanxi Plain City Agglomeration, etc. Due to different geographical and location conditions and economic and social development levels of different regions, the city agglomerations are at different degrees of development. The three city agglomerations of the Yangtze River Delta, the Pearl River Delta and Beijing–Tianjin–Hebei, due to their agglomeration effects, scale economies and competitive advantages, have grown into the most vigorous areas of China in economic growth, as well as becoming national and regional economic core areas and growth poles. Their rankings in national economic growth keep going up. The total GRDP of the three city

agglomerations in 2007 accounted for 38.1% of the national GDP, while in 1990 the figure was 23.6%. The GRDPs of the three agglomerations in 2007 were 18.0%, 10.2% and 10.0% of the national GDP respectively. The city agglomerations in the Liaodong Peninsula, the Shandong Peninsula, southeast Fujian Province, the Central Plain and Wuhan, though with a relatively dense distribution of towns and cities, an obvious axial development of urban space and stronger connections among cities, are still in the stage of accelerated development due to a less complete urban scale grade system, as well as weaker connections and a lower level of economic integration among cities. Some city agglomerations in the western region with shaped core areas and spatial development axes, such as the Central Shaanxi Plain City Agglomeration and the Chengdu–Chongqing City Agglomeration, are still in formation, as the urban scale systems are not well built yet.

10.4.2 Major Problems in Development of City Agglomerations

Generally speaking, city agglomerations in China are still in the start-up stage, being confronted with serious problems in development due to institutional transformation and some other factors.

- Disorderly competition and market barriers. There is disorder in the competition between cities in agglomerations in order to attract investment, enlarge foreign trade export and develop industries. They rush to unveil preferential policies for investment attraction, offer lower prices for foreign trade exports and blindly launch similar projects for industrial development, leading to excessive or cutthroat internal competition among cities of the agglomerations. Though barriers in the commodity market are no more obvious than before, those in markets of labour, capital, technology, property rights and other factors are not completely eliminated, and the higher costs of transactions among enterprises, as a result, have restricted the internal economic integration and orderly development.
- No clear division of labour based on specialisation. In order to develop urban economy and increase the local financial revenue, most cities choose to develop industries with high taxes and good turnovers. Plus, the natural endowments of cities in the same city agglomeration are similar. Consequently, the homogeneity of industrial structures of cities within one city agglomeration is quite obvious, and the division of labour among the cities is rather weak.

- The imbalance of supply and demand in terms of resources and energy is rather marked. Such an imbalance has become a bottleneck, hindering the economic development of city agglomerations. The supply of land fails to catch up with the rapid growth of manufacturing industries, leading to a ‘shortage of land supply’ and other issues. Taking advantage of the ‘revision of urban planning’, some cities have transformed large amounts of agricultural land into urban construction land, seriously countering sustainable land development and use, and specifically resulting in enormous occupancy of farmland. Moreover, tremendous discharge of production waste has made environmental pollution and ecological problems even worse. Water pollution, in particular, is so serious that some cities are confronted with water shortages.
- The directing role of planning is not fully exerted. Development plans or outlines have been formulated in many city agglomerations, either under organisation of relevant departments at the state level, such as those for the Yangtze River Delta City Agglomeration, the Beijing–Tianjin–Hebei Metropolitan Sphere, the Pearl River Delta City Agglomeration and the Chengdu–Chongqing City Agglomeration, or by the provincial governments or the relevant municipal governments, such as those for the Changsha–Zhuzhou–Xiangtan City Agglomeration, the Central Plain City Agglomeration, etc. Some of the plans have not yet been made public, like those for the Yangtze River Delta City Agglomeration and the Beijing–Tianjin–Hebei Metropolitan Sphere, while those that have been made public, since they are lacking in a corresponding legal status, still have difficulty in an overall implementation. For instance, the plan for the Changsha–Zhuzhou–Xiangtan City Agglomeration was approved by the provincial people’s congress for promulgation and implementation, while the urban plan for Changsha was approved by the State Council instead, which means that where there are conflicts between the two plans, the plan for the agglomeration is powerless to fulfil the role of directing and restricting the development of the cities.

10.4.3 Governance of City Agglomerations: Developing in Exploration

Highly concentrated in terms of population and economic activities, city agglomerations are in urgent need of effective coordination of interests among the parties, as well as stronger regional governance. Therefore the establishment of an effective regional governance mechanism is the institutional foundation for sustainable development of city agglomerations. Regional governance for city agglomeration areas in the world is diversified, including inter-city cooperation around single cities, special administrative districts (Greater Vancouver Regional District, etc), cooperation between local governments led by social societies and with a high degree of autonomy (such as New York and Chicago), coordination by the central government of multi-centre city agglomeration areas (Randstad, the Netherlands), etc.

Since city agglomerations in China are still in their initial growth stages, so too is the governance of city agglomerations. So far, planning is the major measure of the central government to manage city agglomerations. As has been mentioned, relevant agencies of the central government have organised the formulation of development plans for certain city agglomeration areas which are of national importance, including the Yangtze River Delta, the Beijing–Tianjin–Hebei Metropolitan Sphere, the Pearl River Delta, etc. Some special plans, in addition to comprehensive development plans, have been formulated or are still in formulation under the organisation of relevant state departments, such as the unveiled Outline for Modern Highway and Waterway Transportation Program in the Yangtze River Delta of China, and the Construction Plan of the Yangtze River Delta City Agglomeration System which is being formulated. The governments at the provincial level (including autonomous regions), on the other hand, are responsible for establishing leading organs coordinating the development of city agglomeration areas and organising the formulation of development plans for city agglomerations, so as to strengthen the coordination and leadership of the development of these areas. For example, the Leading Group for the Coordination and Development of the Central Plain City Agglomeration was established in Henan Province, with the governor as the director, the executive vice governor and the responsible vice governor as the vice directors,

and the principals of relevant departments directly under the cities and provinces in the Central Plain City Agglomeration as the group members. An office was set up under the group, mainly in charge of coordinating and solving problems unsolvable under the present system.

From the aspect of municipal government, governance of city agglomerations in China is based on spontaneous city cooperation mechanisms, reflecting a strong notion of self-discipline.

- **Establishing consultation and coordination mechanisms**

Cooperation and collaboration organisations, for example the Yangtze River Delta Cities Economic Coordination Committee, have been established among cities of agglomeration areas such as the Yangtze River Delta, the Pearl River Delta and the Beijing–Tianjin–Hebei Region, as well as the Central Plain City Agglomeration, the Changsha–Zhuzhou–Xiangtan City Agglomeration and other city agglomerations. Leaders of the municipal governments meet regularly to discuss major issues in regional development, or those calling for cooperative solutions. Permanent organisations are established in some city agglomerations to specifically handle daily affairs to do with regional cooperation and collaboration.

- **Establishing consultation and coordination systems**

Consultation systems, such as the quarterly meeting system for key municipal leaders and departments, the regular meeting system for key issues and the system of irregular meetings for special issues, as well as a string of rules and regulations including the news release system for inter-city cooperation, the cooperation topic research system, the financial management system, etc., have been set up in many city agglomeration areas, laying an institutional foundation for stronger management of city agglomerations.

- **Establishing relatively stable cooperative funds**

The membership dues system for member cities has been practiced in many collaboration organisations. Some city agglomerations have established special collaborative funds. A special fund, for example, is appropriated by the Shanghai Municipal Government for cooperation and collaboration between cities in the Yangtze River Delta.

- **Collaborating in more fields**

To strengthen the collaboration between member cities of city agglomeration areas it is essential to promote the connection of transportation and other regional

infrastructure, including co-building and connection of roads, bridges, harbours and other major transportation facilities among the cities, as well as telecommunication networking, public transportation connection, market information sharing, financial communication, etc. Industrial collaboration and coordination are mainly focused on jointly developing tourism markets, strengthening the construction of production bases, etc. As governments are strengthening their role in public services, more collaboration is organised in some areas, in terms of mutual recognition of skills qualifications, succession of social security, and so on.

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Chapter 11 The Impact of Labour Transfer on Regional Economic Development

In China, a developing country with an enormous population, a vast sprawl of regions, a small per capita land area and unbalanced regional development, labour transfer and population flow are playing a significant role in promoting economic growth and regional balance.

11.1 Characteristics of Labour Transfer in China⁵⁷

Labour flow policies in China have passed through three stages since the founding of P.R.C. There has been a shift from free migration to strict control, from ‘leaving farmland but not rural areas’ to ‘leaving homeland and rural areas’, as well as from ‘negative reaction’ to ‘active guidance’ as the driver of migration. There have been three waves of rural labour flow on an increasingly larger scale. The first wave was in 1989 when the Chinese government relaxed the strict control on labour flow following the 10-year economic system reform, sharply increasing the number of rural migrant workers from less than 2 million in the early period of the reform and opening up, to 30 million. In 1992 Deng Xiaoping’s ‘Talk in South China’ was published, and the 14th National Congress of the CPC announced the establishment of a market economic system, further enlarging the national rural labour flow and initiating the second wave. Afterwards, along with a deeper reform and opening up and particularly following China’s entry into the WTO, integrated domestic product and labour markets have been gradually established. Migration of farmers into urban areas for job opportunities has been actively guided by the State, creating a new stage and the third wave of rural labour flow.

⁵⁷Department of Rural & Social Economic Survey, NBSC, Monitoring and Survey Report on Rural Workers 2009

11.1.1 Total Number of Rural Workers

The monitoring and survey system for rural workers was established by NBSC at the end of 2008. According to the monitoring and survey data on 68,000 rural households and over 7,100 administrative villages in 31 cities directly under the central government, autonomous regions and provinces, the total number of rural workers in 2009⁵⁸ was 229.78 million, including 145.33 million migrant workers, an increase of 4.92 million on the 2008 basis at a rate of 3.5%. Among the rural migrant workers, there were 115.67 million leaving their families behind and 29.66 million migrating with their families, increased by 3.4% and 3.7% respectively. The number of those working in local townships for more than six months was decreased to 84.45 million, by 0.56 million at a rate of 0.7%.

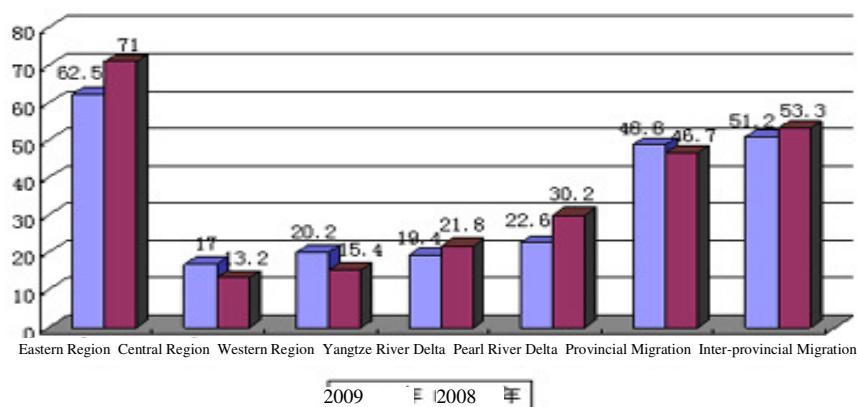
Table 11-1 Number of Rural Workers (Unit: millions)

	2009	2008	Increase (%)	Rate
Total number of rural workers	229.78	225.42	436	1.9
1. Migrant workers	145.33	140.41	492	3.5
A. Migrant workers leaving their families behind	115.76	111.82	385	3.4
B. Migrant workers moving with their families	29.66	28.59	107	3.7
2. Local workers	84.45	85.01	-56	-0.7

⁵⁸Including migrant workers who work in other areas for more than six months in the current year and local workers who are engaged in local non-agricultural industries for more than six months in the current year. Different from the annual number of rural workers in statistics, the number of migrant labourers at the end of year (season) refers to the number of rural labourers who work in other areas during the investigation, including those who work outside for less than six months.

11.1.2 Destinations of Flow of Rural Migrant Workers and Their Regional Distribution⁵⁹

Figure 11-1 Regional Distribution of Rural Migrant Workers (%)



Rural migrant workers mainly flow to the eastern region

The advanced economic growth of the eastern region⁶⁰ has attracted a huge number of rural migrant workers. For quite a long time the mainstream of rural migrant workers flow from the central and western regions to the eastern region. From the importing regions⁶¹, in 2009, the number of rural migrant workers in the eastern region accounted for 62.5% of the national total, 8.5% lower than 2008. The number in the central region was 24.77 million, an increase of 33.2% on the 2008 basis and, accounting for 17% of the national total, an increase of 3.8% compared to 2008. The number in the western region was 29.40 million, an increase of 35.8% on the 2008 basis and, accounting for 20.2% of the national total, an increase of 4.8% from 2008. As is shown, the number of rural migrant workers in the eastern region has decreased, and more rural migrant workers are moving to the central and western regions.

The number of rural migrant workers in the Yangtze River Delta and the Pearl River Delta is shrinking

The number of rural migrant workers in the Yangtze River Delta in 2009 was 28.16 million, decreased by 2.38 million at a rate of 7.8% from 2008. The number in the

⁵⁹Detailed categorical data of rural migrant workers is calculated on the basis of survey results on migrant workers leaving their families (similarly hereafter).

⁶⁰The eastern region includes Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan. The central region includes Shanxi, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan. The western region includes Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. Similarly hereafter.

⁶¹Except for the eastern, central and western regions, 0.3% of rural migrant workers work in Hong Kong, Macao, Taiwan and other countries.

Pearl River Delta, 32.82 million, was decreased by 9.54 million at a rate of 22.5% from 2008. The numbers of rural migrant workers in the Yangtze River Delta and the Pearl River Delta respectively accounted for 19.4% and 22.6% of the national total, decreased by 2.4% and 7.6% from 2008. The decreases in the two deltas, especially the sharp decrease in the Pearl River Delta, are a major reason for the labour shortage in the eastern coastal region in the latter half of 2009.

With more rural workers preferring the local province, the percentage of workers migrating to other provinces is getting smaller

The survey shows that the number of rural migrant workers saw a rise in 2009 and the number of those migrating within the local province in particular was substantially increased. In terms of regional distribution, rural workers in the eastern region prefer provincial migration, while those in the central and western regions favour migrating to other provinces. However, the percentage of rural workers in the central and western regions who choose to work in the local province has markedly increased in recent years (table 11-2).

Table 11-2 Provincial and Trans-provincial Distribution of Rural Migrant Workers in Different Regions (%)

Region	2009		2008	
	Provincial	Trans-provincial	Provincial	Trans-provincial
Eastern Region	79.6	20.4	79.7	20.3
Central Region	30.6	69.4	29.0	71.0
Western Region	40.9	59.1	37.0	63.0

Rural migrant workers mainly flow to medium and large cities above the prefecture level

From the destination of flow of rural migrant workers, there were 9.1% working in cities directly under the central government, 19.8% in provincial capital cities, 34.4% in prefecture-level cities, 18.5% in county-level cities, 13.8% in organic towns, and 4.4% in other areas. The number of rural migrant workers in medium and large cities

above the prefecture level accounted for 63.3%, slightly decreased by 0.3% from 2008.

11.1.3 Basic Features of Rural Migrant Workers

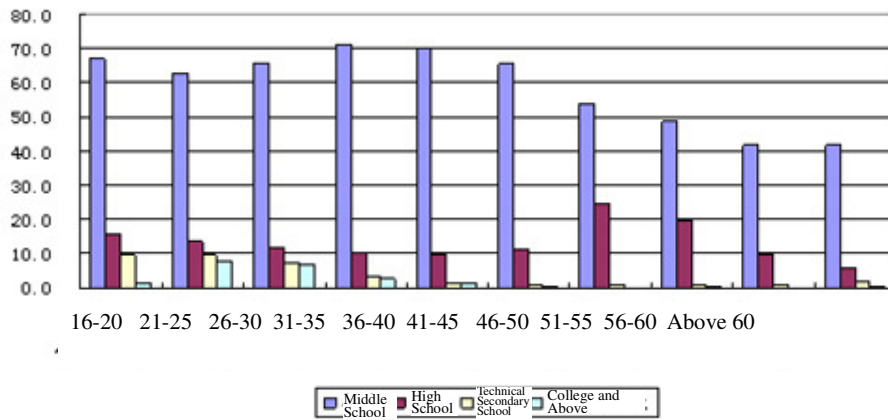
The majority are young married male workers

From gender distribution, male and female migrant workers accounted respectively 65.1% and 34.9% of the total. Regarding their age, young and middle-aged workers make up the majority, among which 41.6% were at the age of 16–25, 20% at the age of 26–30, 22.3% at the age of 31–40, 11.9% at the age of 40–50, and 4.2% above 50. As for marital status, 56% of rural migrant workers were married, 41.5% were unmarried, and 2.5% were in other situations.

Most rural migrant workers have middle school education, but the percentage of those having received high school education or above is increasing

Of rural migrant workers, 1.1% were illiterate, 10.6% had only received elementary education, 64.8% had reached middle school level, 13.1% were graduated from high school and 10.4% were from technical secondary schools or above. The percentage of rural migrant workers having received secondary education or above was increased by 1.7% from 2008, accounting for 23.5% of the total. If classified by age, the percentage of higher educated workers in younger age groups was obviously higher than that in older age groups. The percentages of rural migrant workers having high school education or above were unexceptionally above 26% in the age groups below 30, of which the percentage in the age group of 21 – 25 even reached as high as 31.1%.

Figure 11-2 Educational Levels of Different Age Groups (%)



Most rural migrant workers haven't received any skills training, and few poorly educated workers have been trained

Regarding skills training, 51.1% of the workers hadn't received any skills training. The figures also showed a direct link between the educational level and the percentage of those having received skills training. The percentages in literate and semiliterate rural workers and those at elementary school level, middle school level, high school level and technical secondary school level or above were respectively 26.3%, 48%, 54.8% and 62.5%.

Most rural migrant workers are engaged in manufacturing industries, the building industry and service industries, but the number in manufacturing industries is declining

Manufacturing industries absorbed the majority of rural migrant workers (39.1%), followed by the building industry (17.3%), service industries (11.8%), accommodation and catering (7.8%), wholesale and retail (7.8%), and transportation, storage and postal services (5.9%). The number of rural migrant workers engaged in manufacturing industries decreased by 2.6% from 2008, while those in the building industry, the wholesale and retail industry, service industries, the accommodation and catering industry and other industries all increased.

A majority are employed workers

93.6% of the workers were employed, while 6.4% ran their own businesses, a 0.5%

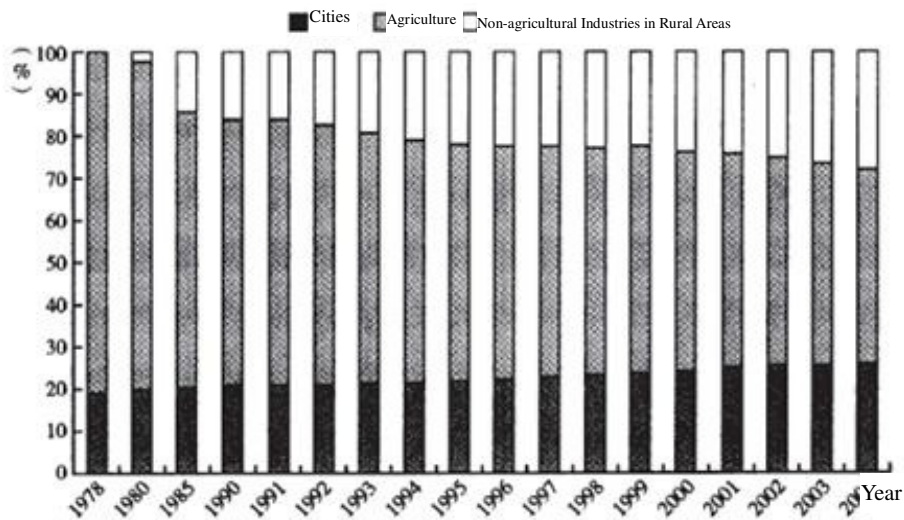
decrease from 2008. From importing regions there were respectively 5.6%, 7.9% and 8.6% of rural migrant workers in the eastern, central and western regions running their own businesses.

11.2 Trends of Labour Transfer in China

11.2.1 The Overall Trend won't Change

Non-agricultural employment in rural areas and urban employment have seen a sustainable growth since the reform and opening up, with agricultural employment continuing to decrease, and rural labour constantly moving from agriculture to non-agricultural industries (figure 11-3). The present total number of rural employees is 0.497 billion, including approximately 0.2–0.23 billion migrant labourers, while the number necessary for large-scale agriculture is about 0.18 billion, indicating a surplus number of around 0.09-0.12 billion labourers. Moreover, during the urbanisation tens of millions of farmers have lost their land and jobs and an income labour force has emerged. Farmers are faced with a huge employment pressure, and are actively seeking an increase of their incomes. As a result, the general trend of rural labour transfer will not be changed.

Figure 11-3 Distribution of Urban and Rural Labour



Source: *China Statistical Yearbook 2005*. (Original picture from *Reports on China's Population and Labour No.8: The Coming Lewisian Turning Point and Its Policy Implications*, P98)

11.2.2 The Abundant Supply of Young Labour is almost over

China will continue to possess advantageous labour resources for a considerably long period. The increase of the total numbers of labour will continue for the next 10 years, with the abundance of labour supply hovering at the highest in the coming 10–15 years, and the low population dependency and high demographic dividend continuing until 2035. Yet, since early 2004 labour shortage has emerged in some coastal developed areas. The shortage is of around 10% in some areas in the Pearl River Delta, southeast Fujian Province and southeast Zhejiang Province which are concentrated with processing and manufacturing industries, indicating that despite an oversupply of labour in total numbers, a structural employment imbalance has formed, mainly owing to the fact that the abundant supply of rural young labourers has changed to become a limited surplus or limited supply, and that the demand of the market for technical workers has enlarged.

11.2.3 The Focus on a Larger Total Number Shifted to a Higher Quality of Human Capital and Employment Transfer

Enterprises, faced with pressures from domestic and overseas market competition and industrial upgrading, favour skilled and technical workers that, unfortunately, are in shortage. One of the reasons is the insufficiency of rural compulsory education and vocational education and training, and the other is the difficulty of retraining rural migrant workers already in work. Nowadays, with more and more enterprises emphasising stabilising skilled and technical workers, the focus of employment transfer of farmers has been shifted from a larger total number to a higher quality of workers.

11.2.4 The Transfer of Rural Labour is Difficult

The supply shortage of young labourers is accompanied by the difficulties of transferring surplus, rural, middle-aged labourers. The shortage of young labourers and the surplus of rural middle-aged labourers coexist in the labour market. The oversupply of rural labour mainly includes labourers above the age of 35 (accounting for approximately 30–40% of the total rural labour), who don't have many job opportunities due to the absence of knowledge of advanced technologies and the impossibility of learning about new technologies. At the same time, a larger scale of rural labour flow also coexists with a difficult fundamental labour transfer. Among the 0.2 billion transferred labourers, a majority are in a bidirectional urban–rural flow. Though calculated into urban populations after having worked in cities for more than half a year, it is basically not possible for them to settle in cities and enjoy the same treatment as urban residents due to institutional obstacles.

11.3 Positive Effects of Labour Transfer on Coordinated Regional Development

11.3.1 Increasing the Income of Rural Residents, and Reducing Regional Disparities

From the aspect of regional development, interregional labour transfer can improve

the labour allocation efficiency, improve the overall economic growth rate and facilitate a smaller regional disparity in people's living standards. The interregional labour flow has helped to establish a bidirectional flow pattern in which labour flows eastward and capital flows westward.

Ten years ago

The transfer of rural labour force for job opportunities made remarkable achievements ten years ago. In most central and western provinces the contributions of rural labour flow to the transfer employment and income increase of farmers had considerably surpassed those of township enterprises through on-the-spot transfer. According to the sample survey of the National Rural Survey Team of NBSC in 1999, extrapolating from the 66,000 investigated households of the sample survey, there were 21.15 million rural labourers migrating to other provinces for job opportunities, and 14.977 million flowing to other counties of the local province (both the figures are below the real data and 24% lower than those from the agricultural census in 1996). Based on the figures, the capital remitted or brought by the above two labour forces back to their hometowns was RMB 3,218 and RMB 3,933 per person, amounting to RMB 12.70 billion in total, of which above 80% flowed to the central and western regions. The contributions of the income transfer channel of eastward labour flow and westward capital flow created by interregional employment of farmers far exceeded those of the national financial transfer payment to less developed areas (for example, Guizhou Province earned a labour income of RMB 2 billion in 1993 by exporting about 1 million labourers, while the poverty alleviation fund from the State and the loans of township enterprises were respectively below RMB 0.3 billion and around RMB 0.19 billion). The figures also surpassed those from introduction of foreign capital, and were equal to or even larger than the local financial revenue of some provinces (see table 11-3).

Table 11-3 Financial Revenue and Work Income of Eight Cities and Provinces in 1999

Province	Financial Revenue (unit: RMB 0.1 billion)	Work Income	
		Total (unit: RMB 0.1 billion)	Per Capita Income in Rural Area (unit: RMB 0.1 billion)
Anhui	174.3	217	431.6
Chongqing	76.7	120	491.3
Sichuan	211.5	210	302.5
Hunan	166.5	159.2	297.3
Jiangxi	105.1	98.8	276.5
Planning	74.3	53.2	371.3

Remarks: Work income generally refers to the income taken home, while the figures for Guizhou Province include all the income of some migrant labour working in the local province.

Sources: Relevant documents of the Research Centre of Rural Economy of the Ministry of Agriculture, and the Development Research Centre of Guizhou Provincial People's Government.

In 2008

The wages of rural migrant workers have increased with economic growth. To migrate to cities for job opportunities as another channel of employment has become a major method of farmers to earn more income. The average wage of rural migrant workers in 2008 was RMB 1,155.6, an increase of 49.5% from 2003 at an average annual rate of 8.4%. The higher wages have contributed to a higher per capita net income of farmers. According to the national survey on rural fixed observation spots, the per capita net income of farmers in 2008 was RMB 4,671.7, 14.1% and 73.0% higher than 2007 and 2003 respectively. Of this figure, the wage income was RMB 1,788.3, accounting for 38.3% of the annual per capita net income and contributing to the income increase of farmers at a rate of 40%. In 2008, impacted by the financial crisis, this rate decreased by 8.1%, but wage income still remained the most vital element in the income structure of farmers.

Table 11-4 Contributions of Wage Income to Per Capita Net Income of Farmers (%)

	2008	2007	2006	2005	2004	2003
Percentage	38.3	38.0	36.5	34.5	33.8	34.6
Contribution Rate	40.0	48.1	52.5	44.3	26.6	46.5

Source: *China Rural Research Report 2008*

It has been fully proved that one exported labourer can relieve a whole family from poverty, and more can do so to an entire village. With an enormous number of farmers migrating for job opportunities, the surplus rural labour force has been transformed into human capital. Nevertheless, it should be noted that with the considerably high market integration across the nation capital flows with labour, creating the effect of 'capital chasing labour'. This means labour importing areas obtain an ever-higher economic growth rate (some scholars, such as Cai Fang, have noticed the unsatisfactory effects of labour flow in increasing regional disparities). Therefore, to reduce regional disparities, we should not only eliminate institutional obstacles to facilitate a free flow of labour force, but also seek to enhance the autonomous development consciousness of the central and western regions to absorb more surplus labourers through industrial development.

11.3.2 Diffusion of Advanced Production Methods and Culture

Example of Luodian County

The growing disparities between the central and western regions and the eastern regions since the reform and opening up are closely related to the outdated ideas of the centre and the west in market economy, as well as to their backward models of operation and management. To change the ideas of functionaries and achieve the shift in ways of working, Luodian County of Guizhou Province took the lead in the mid 1990s to organise and send government functionaries and new graduates to coastal areas, allowing them to be engaged in various industries and operating management positions to obtain new ideas and higher capabilities. Such a skill cultivation method has now been popularised throughout Guizhou and other provinces.

Learning and adaptation in non-agricultural environments

The migration of rural workers has become an important channel for the central and western regions to learn advanced production methods and culture from the eastern

region, and the mobile employment has served as a kind of giant school for the training of tens of millions of farmers. Farmers, of whom the majority are educated youngsters, leave their home for modern civilised cities and frontier areas of China's modernisation, places that are quite different from their original living environments. Employed in non-agricultural industries and faced with fierce competitions, they learn new skills, suffer hardship, broaden their vision and expand their horizons to fulfil their internal needs for existence and development. During these periods away from home their ideas and capabilities are greatly changed, and some of them emerge and develop into skilled practitioners in various fields.

Backflow of rural migrant workers

There are large numbers of rural migrant workers returning to their homes armed with understanding and experience of capital, technology, management concepts, market information, market economy relations, etc., who go on to create their own businesses and inject new momentum into the local economic growth. According to the surveys of the Agricultural Department of the Development Research Centre of the State Council on employment and entrepreneurship among returned rural migrant workers in Fuyang of Anhui province and Ganzhou of Jiangxi province in 1994 and 1995, as well as its specific survey in 1997 on 1,784 returned rural migrant workers in 136 villages of 27 townships (in 11 counties and cities in the central and western Sichuan, Guizhou, Hubei, Hunan, Jiangxi, Anhui and Henan, as well as 2 underdeveloped counties in Shandong and Jiangsu), 97% of rural migrant workers had been farmers and changed their careers after returning home. Of these 51.5% were engaged in non-agricultural industries and had started their own businesses (including small businesses and enterprises). Rural migrant workers are able create their own businesses after returning home, not only because of the capital accumulated from mobile employment, but particularly thanks to an increase in their human capital, manifested in capabilities such as a higher technological level, a stronger concept of market economy and knowledge about operation and management in business.

Table 11-5 Survey of 1,784 Returned Rural Migrant Workers of 13 Counties and

Cities

Occupation	Industry	Building	Transportation	Commerce	Service Industries	Agriculture	Agro-processing
Percentage (%)	18	10.8	6.1	9	3	48.5	5.5
Job	Business	Leaders in Enterprises	Workers in Enterprises	Enterprise Establishers	Agricultural Development	Farming	Others
Percentage (%)	12.5	16	2.8	6.2	9.9	38.8	14.7
How important is your experience as an employee to being able to run your own business? (545 interviewees)							
	Capital	Technology	Stronger Market Economy Concept		Operation and Management Model	Others	
Primarily (%)	38.3	28.1	25.3		6.8	8	
Secondarily (%)	13.6	33.5	30.6		18.6	3.7	

Source: the Rural Department of the Development Research Centre of the State Council, and the Division of Science of the Hong Kong University of Science and Technology, Survey on Rural Labour Flow and Entrepreneurship of Returned Labour (1997).

A further piece of research has revealed four channels of rural labour flow that influence the economic and social development of underdeveloped areas (see Table 11-6).

- Labour flow to obtain income: triggers the backflow of capital, technology, information and other factors from developed areas, and changes the agricultural population–land ratio of exporting areas
- In-flow of operators from less developed areas to promote the operating management reform of underdeveloped areas
- Migrant workers returning home and creating their own businesses
- Migrated workers' influence on their hometowns.

Table 11-6 Influences of Rural Labour Flow on Economic and Social Development of

Underdeveloped Areas

Effects	Mechanism
Inflow of capital, technology and information	Outflow of plenty of rural surplus labour—>Combination with external assets and other resources—>Higher wage or business income—>Remittance or carrying of capital—>Acquisition of technology and market information—>Inflow to export areas (Factor transfer).
Inflow of operators from less developed areas	Inflow of a small number of commercial and service businesses - - >Promoting the growth of commodity market and spreading ideas and experience of market economy (Inflow of human capital).
Older migrant workers returning home to create their own businesses	Outflow of plenty of rural surplus labour—>Work, learning and communication in developed areas and non-agricultural industries in urban areas—> Increase of human capital—> Returning home to create their own businesses - - >Driving the growth of township enterprises, development-oriented agriculture and small towns (Increase of human capital).
Migrated workers' influence on their hometowns	Temporarily mobile employment - - > Migration to cities and developed areas - - >Information delivery, intermediary services, economic cooperation or investment to hometown

Source: Cui Chuanyi, *Institutional Innovations in Employment and Citizenization of Rural Migrant Workers*.

11.4 Problems of Labour Transfer

11.4.1 Non-citizenization of Rural Migrant Workers is Serious

A large number of rural migrant workers are still based in rural areas and move from city to city like migrating birds. Despite their contribution to urban development, it is difficult for them to genuinely integrate with cities and enjoy treatment equal to that of urban residents.

Factors restricting citizenization of rural migrant workers

- **The household registration system.** Under the special household registration system of China there are not many successful cases of rural migrant workers transferring both job and registered residence. A majority of migrant workers, though with regular jobs and stable incomes, are not really settled in cities. They are not substantially distinguishable from urban residents in working method and living standards, but both in terms of the social management system and in their own perceptions, they are not real urban residents and thus lack a sense of

belonging, of feeling at home in cities.

- **Difficult transfer of property.** Under the dual urban–rural structure the prevailing land system limits a free flow of rural population into cities. Without effective protection by the present laws of the land rights of farmers, farmers lack the integral right to dispose of land. Though closely related with the land acquisition system, the reform to the circulation system for collective construction land hasn't achieved major breakthroughs so far, constraining the circulation of urbanised rural settlement land in integrated urban–rural land markets. Regulations forbidding the circulation of house sites of farmers, hindering the transfer of land contract rights, etc., also hold back the transfer of rural labour toward towns and cities.
- **Absence of social security systems and services.** Treatment and services supposed to be given by the government to rural migrant workers are not effectively carried out, the reasons for which are due to employers, as well as to the mobility of the migrant workers themselves. Departments of public services in some cities haven't included rural workers into their services, depriving them of equal rights to enjoy necessary social services such as housing, healthcare and education of children at relatively low prices as local urban residents do.
- **Low technical skill and high mobility of rural workers.** Due to their low level of education rural migrant workers are less competitive in fierce job competitions in cities and are incapable of filling some high-end positions. Most of them can only do short-term work with high mobility. Lower earnings and unstable work conditions prevent a considerable proportion of rural workers from moving their families to settle in cities where the living costs are astronomically higher. At the same time, the high mobility caused by the lower technical level and unstable work conditions of migrant workers also objectively constrain the implementation of the securities and services offered by urban society.

11.4.2 Living and Public Services are not Fundamentally Solved

- **Compulsory education of children.** The education of children is now the most serious problem of rural migrant workers, because children of these workers are not included into the local compulsory education system in many areas. A temporary schooling fee is required by public schools in some areas, at RMB 600–

800 per term for elementary education and around RMB 1,000 per term for middle school education. Rarely supported by the local finance, schools for children of rural migrant workers have no choice but to charge high fees to sustain their operation, which further overburdens rural workers. Worse still, with parents working away from home most of the year, the left-behind children cannot receive a good education and are leaving and dropping out of school in increasing numbers. According to investigation there are about 30 million left-behind children in rural areas of China. Working far away, parents have only rare opportunities to communicate with their children, which seriously influences children's school performances. Though having realised the harm done to their growth by leaving children behind, 63.06% interviewees said they wouldn't bring their children to their working places for education, mostly because 'the tuition fee in those schools is too expensive' (38.71%), and because they 'have no time to take care of their children' (32.48%).⁶²

- **Bad living conditions and low living standards.** According to the living conditions of rural migrant workers shown by the Monitoring and Survey Report on Rural Workers 2009, 33.9% of rural migrant workers live in dormitories provided by employers or work units, 10.3% live in work sites or sheds, 7.6% live in production or operation sites, 17.5% rent houses with others, 17.1% rent houses by themselves, 9.3% commute and only 0.8% purchase houses in working places. According to surveys in some cities, though many manufacturing, industrial and mining enterprises provide dormitories, it is common to see dozens of workers crowded in one dormitory, and the sanitary and safety conditions are unsatisfactory. Construction workers usually live in simple work sheds, basements and uncompleted houses in construction sites; and the others live in urban villages at relatively low rents and in makeshift houses built by suburban farmers, suffering from very questionable sanitary and food safety conditions. The urban life of rural migrant workers is rather isolated. They wear the cheapest clothes, use the cheapest commodities, eat the cheapest food, live in the cheapest dwellings, and rarely have diversified cultural activities in their spare time. Many husbands and wives are separated, while those who are working in the same city can't lead a normal family life due to living restrictions.

⁶²Development Research Centre of the State Council, The Effect of Parental Migration and Remittances on the Education of Children, P95-P116.

- **Incomplete inclusion of the urban family planning service system and low coverage of public healthcare services.** Urban family planning at present is mainly for local urban residents. Family planning for rural migrant workers has been an unsolved problem and blind area for a long time. The accessibility of planned immunity, maternity and childcare and other basic public healthcare services for rural migrant workers is very low. Even in Shanghai, which does a better job in services for rural migrant workers, the vaccination rate for incoming children in 2004 was 65%, while that of local children was above 99%.

11.4.3 Employment and Social Securities are Insufficiently

Provided

Employment

In some areas, overall plans for urban and rural employment only include local or suburban farmers, while employment discrimination towards incoming rural labourers still exists. In some cities it is stipulated that enterprises should give priority to local workers and should not employ incoming rural workers until after a 15 day period of holding the work open to local residents. Some public employment services and government-funded labour markets in many large cities are focused on urban residents and closed to rural migrant workers, while some others charge migrant workers for services free for local urban and rural residents. Moreover, facts such as a small number and unreasonable distribution of public employment service institutions, exclusion of external employment service institutions from the local market, etc., also keep rural migrant workers from being employed through intermediary service institutions. Without many channels to acquire job information, rural migrant workers have to count on their fellow villagers and friends to introduce them to jobs. Meanwhile, without relevant vocational training organisations and mechanisms, the quality of rural migrant workers still remains very low.

Social securities

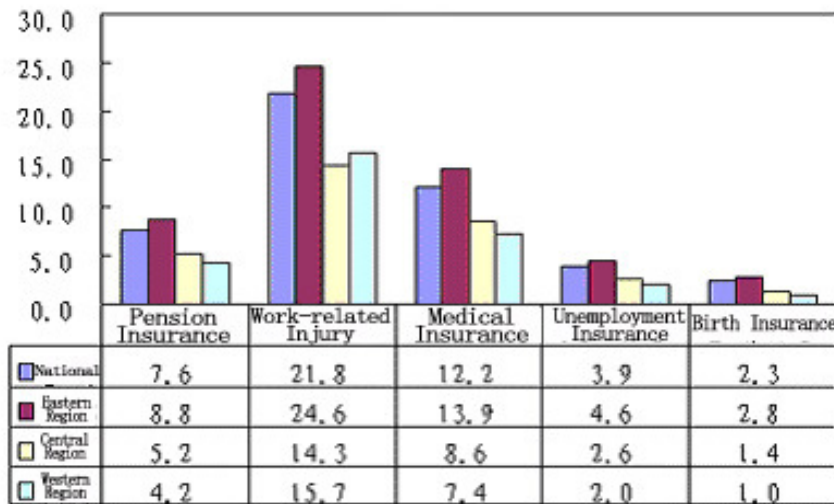
The social security offering for rural migrant workers is generally absent. Due to the prevailing urban social security system and the lack of appreciation by urban governments and enterprises, most rural workers are excluded from basic social securities. According to the Monitoring and Survey Report on Rural Workers 2009,

there were a small percentage of rural workers with labour contracts, and nearly 60% didn't enter into any labour contract. From investigation of major industries involving rural migrant workers, it can be seen that different industries provide social securities for rural migrant workers at markedly different levels, among which manufacturing industries ranked the top. Only 15.6% of employers or work units in the building industry bought work-related injury insurance for their employees, far below the standards of the Work-Related Injury Insurance Regulations. The coverage rates of pension insurance, medical insurance and unemployment insurance in the industry, 1.8%, 4.4% and 1% respectively, were also obviously lower than those of other industries (see table 11-7). The figures for the central and western regions were much lower than those for the eastern region (figure 11-4).

Table 11-7 Coverage Rates of Social Securities for Rural Migrant Workers in Different Industries (%)

Industry	Pension Insurance	Work-Related Injury Insurance	Medical Insurance	Unemployment Insurance	Maternity Insurance
Manufacturing Industries	8.8	27.5	14.7	4.2	2.4
Building Industry	1.8	15.6	4.4	1.0	0.6
Transportation, Storage and Postal Services	10.7	27.2	15.4	6.1	3.5
Wholesale and Retail	6.1	11.6	8.3	3.1	1.8
Accommodation and Catering	3.6	11.7	7.1	1.7	0.8
Neighbourhood Services and Other Service Industries	4.8	14.2	9.4	2.7	1.6

Figure 11-4 Social Security Participation Rates of Rural Migrant Workers in Different Regions (%)



11.4.4 Unequal Rights In Terms of Social Security Commonly

Exist

The dual urban–rural division and regional divisions have led to the inequality of rights between urban residents and rural migrant workers in terms of social security. In cities rural migrant workers are only regarded as cheap labour, whose cultivation and pension costs are to be shouldered by rural areas. Under such a dual urban–rural division system, the inequality between rural migrant workers and urban residents is reflected in many aspects such as employment, education, housing, healthcare, pensions, etc.

Unequal pay for equal work

The average wage of rural migrant workers is lower than that of urban labourers (table 11-8). Even for equal work, rural workers are paid only 80% of the wages of urban workers.

Overtime work

According to the Monitoring and Survey Report on Rural Workers 2009, employed rural migrant workers on average worked for 26 days per month, and 58.4 hours per week with 89.8% of them working for more than 44 hours per week, the limit stipulated by the Labour Law. Among the major industries where rural migrant workers are concentrated, the average weekly working time of rural migrant workers

in manufacturing industries, the building industry, service industries, the accommodation and catering industry and the wholesale and retail industry were respectively 58.2 hours, 59.4 hours, 58.5 hours, 61.3 hours and 59.6 hours. On average it was rural workers in the accommodation and catering industry who worked the longest hours (over 60 hours) each week.

Table 11-8 Per-hour Wages of Migrant Workers and Local Urban Workers (Unit: RMB Yuan)

Educational Level	2001		2005	
	Migrant Workers	Urban Workers	Migrant Workers	Urban Workers
Middle School or Below	2.68	4.18	3.25	4.62
High School or Secondary Technical School	3.56	4.99	5.05	5.97
College or Above	7.04	7.96	8.76	9.97
Total	2.91	5.66	3.78	6.77

Source: Calculated from the 2001 and 2005 survey data of urban labour.

(Original data from *Reports on China's Population and Labour No.8: The Coming Lewisian Turning Point and Its Policy Implications*, *Green Book of Population and Labour*, p.251)

Wage arrears

According to the Monitoring and Survey Report on Rural Workers 2009, governments at all levels have paid high attention to wages arrears of rural migrant workers in recent years, and a series of policies and measures unveiled to solve the issue have made remarkable achievements. The data shows that in 2009, only 1.8% of employed rural migrant workers have wages in arrears, 2.3% lower than 2008, and they are mostly working in the building industry and manufacturing industries.

11.5 Labour Force Development Trends and Prospects for Labour Transfer in China

11.5.1 The Aging Population Grows More Seriously, and the Demographic Dividend is almost Exhausted

The ‘active labour force’, referring to labourers between the ages of 15–64 in international society, refers to male labourers between the ages of 16–59 and female labourers between the ages of 16–54 in China. For a very long time the abundant resource of cheap labour has made an enormous contribution to the sustainable and rapid economic growth of China. Such a phenomenon, according to demographers, is called a ‘demographic dividend’, and describes the situation whereby the active labour force makes up the majority of the total population of a country, and where there is a relatively low ratio between the labour force and its children and elderly dependants, thus creating favourable demographic conditions for economic growth and contributing to the high savings, high investment and high growth of the national economy. So far, the contribution rate of acquirable demographic dividend to the GDP growth of China has reached as much as 26.8%.

However, with gradual changes in the population structure of China, the aging of the population and a lower demographic dividend have become urgent issues. Estimated by NBSC, the Chinese population will ascend a peak in 2035 (1.5 billion), while the growth rate of the active labour force has started a rapid decline that will not stop until 2013. The average growth rate of China’s labour force is not as high as commonly believed. In a foreseeable future it will hover at around 0.4%, even below the average 1.1% among developing countries. Meanwhile, the percentage of children in the population structure will keep declining, while that of the elderly people will continue to rise.⁶³ It is estimated that the Chinese population at 65 or above will increase to 0.27 billion by 2023 and exceed 0.4 billion by 2035, and that the aging rate will reach above 30% by 2035, which indicates a larger percentage of aging population in the Chinese society or, in other words, a smaller percentage of active labour force. A shrunken labour resource will to some extent influence the development of social

⁶³Growth Sources of Labour Force should be Preserved to Prevent Exhaustion of Demographic Dividend, People’s Daily (Overseas Edition), http://finance.ifeng.com/news/opinion/200701/0117_196_64248.shtml

productivity.⁶⁴

11.5.2 China still has 25 years to enjoy the Demographic

Dividend

The labour force population encompassed 71.68% of the total Chinese population, the highest percentage in the world, said Ma Li, a consultant of the State Council, when giving a report titled Trends and Judgements on Labour Changes in China at the China's Population and Development Consultation Meeting 2010 on 28 May 2010. According to Ma, the dependency ratio⁶⁵ of population would hit the minimum value in 2013 (38.3%), stimulating the maximum growth potential of China in the twelfth 5-year plan period. An inflection point, however, would appear in 2013 and reverse the declining trend of dependency ratio. But the ratio during 2010–2035 would still remain below 53%, the standard for a demographic dividend period with abundant labour resources, a low dependency burden and high savings ratio, which would facilitate the economic development and social transformation of China. Relevant government policies promoting employment, encouraging entrepreneurship and supporting unemployment should be formulated to take full advantage of the potential demographic dividend.

11.5.3 Seek the Opportunity to Create the Second Demographic

Dividend

According to Cai Fang, Director of the Institute of Population and Labour Economics, Chinese Academy of Social Sciences (CASS), “it is essential to create more job opportunities to continue the first demographic dividend, as well as to improve the quality of labourers to create new savings motives through arrangement of the social security system. With these combined measures, not only can the second demographic dividend be created, but the two demographic dividends can be superposed”.

To fully use the present labour resource, it is very important to organise the transfer of rural labour well. It is the migration of a large number of cheap labourers into cities

⁶⁴Aging of Population Grows Faster in China, China Education Daily, <http://theory.people.com.cn/GB/11416716.html>

⁶⁵The ratio between non-labour force population and labour force population.

that has built the comparative advantage of China in the world economy. Yet since rural migrant workers are deprived of the status of urban residents, their labour supply is incomplete, segmented and insufficiently utilised. Due to their low consumption levels, the contributions of rural migrant workers to the domestic demand are not fully realised. Besides, owing to an imperfect social security system for rural migrant workers, their contributions to social public services are not reflected either, all of which indicates an insufficient use of the demographic dividend of rural migrant workers.

11.5.4 Policy Options Serve to Further Promote China's Labour Flow

Labour transfer is not only an inevitable choice of China for industrialisation and urbanisation, but also the only way to reduce regional disparities. There are many issues involved in the labour transfer of China, such as regulation of urban and rural household registration systems, generalisation of public services, investment of human capital, etc. To solve these institutional issues will require a rather long period of time to complete the transfer of surplus rural labour. From the finalised development orientations and strategic plans of the Chinese government, policies to promote labour transfer will be focused on the following:

- **Promoting the reform of household registration system.** The reform oriented to an integrated urban–rural household registration system and focused on the residence registration system in living and working places should be actively yet prudently promoted. The citizenization of rural migrant workers who have worked in cities for a long time should be permitted and encouraged, so as to accelerate the urbanisation of rural population.
- **Promoting reform of welfare systems in relation to household registration.** Reform of systems in relation to household registration, regarding employment, wages, education, healthcare, endowment and housing, should be actively yet prudently promoted, so as to achieve breakthroughs in eliminating the institutional barriers of the dual urban–rural structure. Rural migrant workers with legal and permanent residences as well as stable jobs or sources of income should be gradually transformed into urban residents, legally enjoying equal rights to those

of the local residents and undertaking equal obligations.

- **Promoting the land system reform.** The land contract right of rural migrant workers should be stabilised and protected. No organisation or individual should have any right to optionally deprive farmers of their contract right for the reason of their migration. The system for circulation of land use rights should be refined and completed according to law and on a voluntary and compensatory basis. Land circulation of farmers should neither be forced nor prevented by any organisation or individual.
- **Building an integrated urban–rural labour market and establishing systems for equal employment of urban and rural labourers.** Approaches limiting and discriminating against the migration of farmers for work should be further abolished. Unequal systems between urban and rural residents as well as between local and migrant rural workers should be changed, so as to protect the autonomy of farmers in choosing jobs and that of enterprises in selecting employees.
- **Developing an open and standardised urban–rural labour market system as well as employment agencies and other intermediary service organisations, so as to supply employment information to rural migrant workers.**
- **Enhancing rural vocational education and training for rural migrant workers.** The governments should put emphasis on the local rural vocational education and training for farmers, giving active support in terms of policies, capital, schooling environment, etc. The governments should publicise and guide more training by employers of their employees, and meanwhile intensify the education of rural migrant workers to build up a higher consciousness for them to voluntarily accept training and upgrade their skills.
- **Establishing the social security mechanism for rural migrant workers to protect their lawful rights.** The governments should intensify contract administration and coordination of labour relations, punishing employers who violate relevant regulations. Trade unions should be developed and established in line with Trade Union Law. Unemployment insurance and subsistence allowances for urban residents should be enlarged, free vocational and entrepreneurship training should be offered to groups who have difficulties in finding jobs, and an aid system should be built to solve temporary problems of rural migrant workers.
- **Adhering to a coordinated and parallel development of industrialisation, transfer of surplus rural labour and urbanisation.** Industrialisation and

urbanisation should be centred on transferring surplus rural labour to non-agricultural industries and cities.

- **Protecting economic and social rights of rural migrant workers.** The transfer of rural migrant workers to non-agricultural industries and cities involves not only the market system and employment rights of labourers, but also a string of basic social rights of migrant farmers, including rights and systems concerning labour rights, education and training, social securities, social participation, housing, migration, residence registration, and transformation of farmers into urban residents. To improve the institutional environment of transfer of surplus rural labour entails the regulation of the unbalanced benefit relations on the basis of civil rights and equal rights (see table 11-9).

Table 11-9 Basic Needs and Rights of Rural Migrant Workers and the Institutional Environment

Basic Needs	Rights	Institutional Innovations	Effects
Employment	Employment right	Integrated urban–rural labour market system for equal employment	Promoting employment, increasing incomes, meeting the needs of enterprises, optimising integration, and standardising contract relations
Payment and rest	Rights to be fully paid on time and to enjoy official weekly days off and holidays	Minimum wage guarantee system, employer–employee interest coordination mechanism, trade union system, and government coordination and supervision system	Protecting rights of labourers, building harmonious employer–employee relations with mutual benefits, and realising a sustainable development
Housing	Right of habitation	Housing system for low-income groups in urban areas	Facilitating people to live and work in peace and contentment
Personal safety	Protection on work-related injuries, prevention of occupational diseases, etc.	Labour protection system and citizen health guarantee system	Guaranteeing the health of citizens
Endowment and medical services	Pension and the right to medical treatment	Social security system	Getting used to urbanisation and coping with the aging of population
Expression and maintenance of interest demands	Rights to participate in social management, to vote and to be elected	Democratic system	Coordinating interest relations and promoting social harmony, stability and unity
Skill upgrading and education of children	Education and training for workers themselves, and equal educational opportunities for their children	Compulsory education system and training system	Increasing human capital
Migration	Right to migrate	Household registration system	Getting used to labour migration
Land property preservation	Land contract right	Land system	Reducing risks of labour migration and increasing migration capital by income from selling estates

To summarise, in the process of modernisation, to transform the growth mode and create new growth sources should essentially rely on the increase of human capital and the permanent transfer of labour to non-agricultural industries. As a result, it is necessary to develop education and training, as well as to eliminate institutional barriers in labour transfer.⁶⁶ The increase of human capital and the labour transfer will promote the economic growth of China, reduce the disparities between urban and rural areas as well as among regions, and realise a sustainable development and a harmonious society.

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⁶⁶Cai Fang, Avoid 'Getting Old before Getting Rich', and Create the Second Demographic Dividend, Yangtze River Business, <http://news.cnxianzai.com/2010/03/254410.html>

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Chapter 12 Contributions of Health to Economic Growth

Health is an important part of human capital. As science and technology move ahead, human capital, including health, is influencing the economic and social development in a more and more obvious manner. Research and analysis on health in China is, therefore, of great significance in promoting not only the development of China's economy and society, but also the development of human beings.

12.1 Health as a Factor for Growth and Development

12.1.1 Health is an Important Part of Human Capital

People are the primary factor of productivity, and those with specific knowledge, skills and in good physical and psychological health represent the most important human capital for a sustainable social and economic development. Therefore health and education are regarded as the corner stones and as important internal factors of human capital. Boundless happiness and a long life are upheld as the best a man can wish for from his time on earth, wishes which are reflected in the relentless human pursuit of good health, happiness and longevity. The reality, however, is not as perfect as these wishes. Throughout human history diseases, like nightmares, have been haunting humans, shifting nebulously from one place to another. From plague, cholera, tuberculosis (TB), smallpox and influenza to AIDS, avian influenza and SARS; from acute infectious diseases to non-infectious chronic diseases such as neoplastic diseases, diabetes mellitus, cardiovascular and cerebrovascular diseases, none of them had spared any endeavour to seriously affect social and economic development.

12.1.2 Health is Wealth

According to statistics, economic loss caused by disease, injury and untimely death of China's urban and rural population is equivalent to 8.2% of the national GDP, excluding the additional costs of medical treatment (6.4% of GDP). So we can say that health is wealth and GDP. Firstly, only healthy people can create the material and spiritual wealth needed for social and economic development. Secondly, a higher health level and a longer duration of healthy life can reduce the economic loss caused by untimely death and diseases. Therefore, the role of health in promoting economic growth is significant. On the other hand, social and economic development has constantly elevated the ability of humans to fight against diseases. According to an estimation made by UNDP, there were three elements influencing the mortality and life expectancy of human beings during 1960–1990, namely increase of per capita income, a higher educational level of women, and technological progress. When looking back at history humans have clearly realised the close relationship between health and economy; that is, health promotes economic growth, and economic growth in turn further improves the health of humans. As a result, the interaction between health and economy has become a focus of social attention.

12.2 Health in China

In 2000, the beginning of the new millennium, China signed the Millennium Declaration with another 188 member countries of the UN. China is now working on a train of specific commitments of the millennium development goals, including alleviating poverty and starvation, guaranteeing universal elementary education, reducing the mortality of children, improving maternal health, promoting gender equality and women's empowerment, fighting against AIDS and other infectious diseases, ensuring the sustainability of the environment, and establishing global partnerships among developed countries and developing countries (including the least developed countries). Among the goals, three are directly related to people's health: namely, reducing the mortality of children, improving maternal health, and fighting against HIV (AIDS), malaria and other infectious diseases.

12.2.1 Reducing the Mortality of Children

Throughout the 30-year reform and opening up, by making laws, reinforcing administration, exerting the function of non-governmental organisations, vigorously organising international cooperation and exchange etc., the Chinese government has constantly refined the legal construction of maternal and child healthcare, strengthened the lawful management, fully exerted the function of the service network and deepened the implementation of relevant projects in an effort that has gradually improved the health conditions of women and children. The Law of the People's Republic of China on Maternal and Infant Healthcare, the first law of the P.R.C to protect the health of women and children, was issued in 1994 and established a legal ground for maternal and infant healthcare. In 2001 China unveiled the Program for the Development of Chinese Women (2001–2010) and the National Program of Action for Child Development in China (2001–2010). The Measures for Implementation of the Law of the People's Republic of China on Maternal and Infant Healthcare were published afterwards. Through these efforts, a relatively complete system of laws and regulations for maternal and child healthcare has been built to back the protection of health of women and children. Now there are over 3,000 maternal and child healthcare institutions across the country, boasting a team of 0.5 million medical workers, supported by a three-level (village, township and county) maternal and child healthcare network, and taking the responsibility for maternal and child healthcare nationwide. The mortality of children below the age of 5 was decreased from 64% to 18.1% during 1980–2007.

12.2.2 Improving Maternal Health

The 30-year reform and opening up has not only brought the economic boom, but significantly facilitated maternal healthcare and reproductive health. Attaching great importance to maternal and reproductive health, the Chinese government has included them into the national development strategy, unveiled a series of relevant laws, regulations and policies, and gradually established a comprehensive policy and law system consisting of the Law of the People's Republic of China on Maternal and Infant Healthcare, the Law of the People's Republic of China on the Protection of Rights and Interests of Women, the Population and Family Planning Law of the

People's Republic of China, the Regulations on the Administration of Technical Services for Family Planning, the Program for the Development of Chinese Women (2001–2010) etc. The system has laid a solid legal foundation for protecting the rights of women and improving the reproductive health of China. More effort has been going into the healthcare reform in recent years and China is determined to build up a basic healthcare system including prenatal care and reproductive health services and covering urban and rural residents by 2010. Moreover, by actively increasing the governmental input and integrating various social resources, China has spared no efforts in establishing a nationwide maternal healthcare system, and has constantly improved the quality of maternal and reproductive healthcare services. Knowledge dissemination and promotion as well as education have been organised to update scientific knowledge and ideas of the public about maternal and reproductive healthcare. All these measures have greatly elevated the level of maternal and reproductive healthcare services, substantially reducing maternal mortality. The maternal mortality rate dropped from 100/100000 to 36.6/100000 during 1980–2007. With an extensive coverage of reproductive healthcare services, the living and health conditions of Chinese women have been fundamentally changed.

12.2.3 Fighting Against HIV (AIDS), Malaria and Other

Infectious Diseases

The prevention and control of major infectious diseases has made remarkable achievements since the reform and opening up. Infectious diseases and parasitic diseases, the primary cause of death in the 1950s, dropped to the ninth in 2005. China is the first developing country to eliminate smallpox, poliomyelitis and other major infectious diseases. Since the first AIDS case was reported in 1985, China has constantly enlarged the policy support and funding input into AIDS prevention and control, establishing an AIDS prevention and control mechanism in which the government takes the lead, government departments take on relevant tasks, and the whole society participates, and this has achieved significant results. As one of the top 22 high-burden countries for TB, China has the world's second largest TB population. Two ten-year national plans for TB prevention and control have been formulated and carried out since 1981, forming a modern TB control strategy suiting the national

conditions of China. From the 1970s to the end of 2007, the actual number of malaria cases has dropped from more than 24 million to hundreds of thousands, with the range of heavily endemic areas sharply reduced at the same time. Frequently hit by natural disasters, China has had several years of success in controlling epidemic diseases following disasters, including SARS in 2003, avian influenza in 2004, and the Wenchuan Earthquake in 2008. So far, disease prevention and control institutions at the state, provincial, municipal and county levels have been set up across China, and prevention and control as well as medical treatment systems for AIDS, TB, malaria, schistosomiasis, hepatitis B and other serious infectious diseases have also been established and completed.

12.2.4 Average Life Expectancy of Chinese Citizens

Substantially Prolonged

In line with the development of society and the improvement in people's living standards, the average life expectancy of Chinese residents has experienced a constant rise: from 35 in the early period of the P.R.C to 67.8 in the early reform and opening up (the end of 1970s), and is 73 at present.

12.3 Medical and Healthcare System Reform

The medical and healthcare system in China is concerned with the medical security mechanism (about how patients pay medical expenses), and the features of medical service institutions (about establishment, investment, management, targets, and salaries of medical workers for medical institutions of disease treatment). Considering the several problems existing in both these two fields, a reform should be advanced at a higher pace for relevant solutions.

12.3.1 Existing Problems

Unequal medical services

Due to a rapidly growing income gap, the needs of wealthy social members for medical treatment and healthcare can be fully satisfied, while the needs of the

majority (including considerable numbers of rural population and a part of urban residents) find it hard to be fulfilled within their financial capability. The poverty-stricken population, worse still, can't even afford basic medical and healthcare services. The present medical security mechanism in China, with a small coverage, excludes employees in private and foreign-funded enterprises, rural migrant workers, laid-off workers, unemployed workers and residents who enjoy the minimum living standard guarantee. Meanwhile, with a large number of medical resources and high-level medical workers concentrated in large cities, qualified medical employees are in shortage in rural areas and urban communities, thus making medical treatment even more difficult.

Unreasonable allocation of medical and healthcare resources and low macro performances.

Subject to the economic growth level and mass affordability, China's medical and healthcare services should be oriented towards low level and wide coverage. The allocation of medical and healthcare resources should be pyramid-shaped; that is the delivery of basic medical and healthcare services for the public should be given the priority and regarded as the mainframe and foundation of medical services. A complete system, with well-built facilities, cheap charges and at a proper level to meet the needs of the public for basic medical services should be realised to provide the public with convenient and quick services. High-level, large, general and specialised hospitals should be built afterwards to fulfil the actual needs of different groups and patients. The truth, however, is that medical and healthcare services in China are high in level yet low in coverage, leading to unsatisfactory macro performances of healthcare input.

Acute conflicts between commercialisation and marketisation and the basic requirements of medical and healthcare services.

These include the conflict between the characteristics of medical and healthcare services as public products and the commercialised and market-oriented service mode, the conflict between the accessibility of medical and healthcare services and the commercialised and market-oriented service mode, the conflict between the macro targets of medical and healthcare services and the commercialised and market-

oriented service mode, as well as the conflict between disease risk and the financial capability of individuals.

12.3.2 Reform Orientations and Focuses

The implementation plan for the medical and healthcare system reform⁶⁷ was unveiled in March 2009, putting forward orientations, targets and focuses of the reform in the coming years. A brief introduction is given as follows.

Accelerating the construction of basic medical security system.

The coverage of basic medical security should be enlarged. The basic medical insurance for urban employees, the basic medical insurance for urban residents and the new rural cooperative medical system should totally cover urban and rural residents within three years, and the participation rates should be increased to above 90%. The quality of basic medical security should be improved, with the payment standards for individuals properly elevated. The urban–rural medical aid system should be completed. The aid funds should be used effectively used, and their approval and issuance should be simplified. Urban and rural families receiving the minimum living standard guarantee and households enjoying the five guarantees should be financially supported to participate in the basic medical insurance for urban residents or the new rural cooperative medical system. Allowances for self-paid medical expenses of families with financial problems should be gradually increased.

Initially setting up a national basic medicine system.

A mechanism for election to, adjustment and management of the national basic medicine catalogue should be established. A basic medicine supply security system should be initially shaped. The guiding retail prices of basic medicines should be fixed by the State. A system for priority selection and reasonable use of basic medicines should be established. National basic medicines should be supplied and sold in all the retail pharmacies and medical institutions to meet the needs of patients.

Perfecting the grassroots medical and healthcare service system.

The construction of grassroots medical and healthcare institutions should be

¹ Notice of the State Council on Printing and Distributing the Plan on Recent Priorities in Carrying out the Reform of Medical and Healthcare System (2009-011) (No. 12 [2009] of the State Council)

enhanced, and the three-level rural medical and healthcare service network should be completed. Medical resources should be restructured in areas with surplus public hospital resources, so as to enrich and strengthen grassroots medical and healthcare institutions. Public healthcare services provided by non-governmental grassroots medical and healthcare institutions should be compensated through government purchase or other forms. Qualified staff should be encouraged to establish clinics or carry out individual medical practices. The compensation mechanism for grassroots medical and healthcare institutions should be reformed, so that their operating costs can be compensated by service charges and government subsidies.

Facilitating a gradual equalisation of basic public health services.

Basic public health services should be extended among urban and rural residents, offering regular health examinations to the elderly above the age of 65, growth examinations to infants below the age of 3, antenatal examinations and postpartum visits to pregnant women, as well as prevention and control guidance services to groups suffering from hypertension, diabetes mellitus, mental diseases, AIDS, TB, etc. The number of national key public health service projects should be increased, the capability building of public health services should be strengthened, and public health institutions specialised in mental health, maternal and child health, health supervision and family planning should be given priority to update their facilities.

Advancing the pilot project of the public hospital reform.

The management, operation and supervision mechanisms for public hospitals should be reformed. Public hospitals should adhere to the principle of maintaining public and social benefits and provide patient-oriented services. The local governments should be encouraged to take active attempts in effectively separating the functions of government from those of institutions, as well as separating hospital supervision from operation. The reform of public hospital compensation mechanism should be pushed forward, gradually reshaping the three compensation channels of service charges, medicine price addition and financial allowances into the two channels of service charges and financial allowances. To accelerate the establishment of a diversified medical pattern, a part of public hospitals should be actively yet prudently transformed into private medical institutions, and private capital should be encouraged to set up non-profit hospitals.

12.4 Focus Areas in Promoting Population Health

Population health in China will be aimed at deepening the medical and healthcare system reform, strengthening the infrastructure of the system, integrating healthcare services in urban and rural areas as well as across different regions for a coordinated development, coordinating the development of public health and medical services, building a relatively complete medical and healthcare service system which can meet people's health needs, improving the level and quality of healthcare services, reducing the disparities in healthcare services between urban and rural areas as well as among different regions and groups, striving to realise the target of equal basic healthcare services for everyone, alleviating the problems of inconvenient and expensive medical treatment, and contributing to a higher health level of urban and rural residents as well as a further step forward in the national economic and social development.

12.4.1 Preventing and Curing Major Diseases

Effectively controlling the spread of infectious diseases.

AIDS prevention and control should be intensified, and a prevention and control mechanism with the government taking the lead, the government departments doing their jobs and the public participating should be completed. A stronger promotion and education and the popularisation of various effective intervention measures should be focused on target groups. Medical treatment should be actively carried out, and the policy of 'four free and one care'⁶⁸ should be implemented. The centralised management by specified departments and supervised treatment of TB patients should be put into practice. Research on quick TB diagnosis and the resistance of tubercle bacilli should be vigorously organised. The prevention and control of major infectious diseases such as plague, cholera, SARS and highly pathogenic avian influenza to humans etc., should be intensified with great effort. The entry–exit inspection and quarantine should be reinforced, so as to effectively prevent the import and export of infectious diseases.

⁶⁸ By the end of 2003, China launched a policy called 'four free and one care' that includes free blood tests for those with HIV, free education for orphans of AIDS patients and free consultation, screening tests and antiretroviral therapy for pregnant women.

Effectively carrying out programmed immunisation.

The polio-free situation should be maintained, and the incidence rates of measles as well as of Japanese B encephalitis, hydrophobia, hemorrhagic fever and other preventable infectious diseases should be substantially decreased. The implementation of vaccination measures should be focused on the rural and the floating population. More vaccine categories should be included into the national immunisation program. Giving priority to newborns, students and other key groups, comprehensive measures focused on immunoprophylaxis and supported by prevention and control should be taken to effectively control the high epidemicity of hepatitis B.

Preventing and controlling parasitic diseases and endemic diseases.

The spread of schistosomiasis, malaria, echinococcosis, kala-azar and food-borne parasitosis should be effectively controlled. Efforts such as water supply and latrine improvement, replacement of cattle by machines, captive livestock breeding, bio-safe disposal of human and animal excreta, and snail elimination in high-risk areas, should be put into practice. Comprehensive malaria prevention and control strategies, such as control of sources of infection and use of the media and health education should be implemented to control infected target areas in counties, cities and prefectures in order to basically eliminate malaria in most counties, cities and prefectures (except for a few high incidence areas). Iodine deficiency disorders (IDD) should be eliminated in most counties, cities and prefectures.

Preventing and controlling chronic and occupational diseases, and promoting mental health.

Nationwide prevention and control as well as monitoring networks for chronic diseases should be set up. Comprehensive prevention and control of chronic diseases should be extensively organised in communities, schools, hospitals, enterprises and other public organisations, and intervention to address risk factors should be intensified to control the incidence of cardiovascular and cerebrovascular diseases,

diabetes mellitus, cancer, chronic respiratory disorders, etc. Efforts should be made to promote early detection and treatment (such as organising research into the prevention and control of chronic diseases), to standardise treatment plans, to popularise appropriate technologies and organise cancer screening. An effective prevention and control system for occupational diseases should be established to improve the prevention and control capability and reduce the incidence rate. The diagnosis and recovery of patients with occupational diseases should be effectively carried out. The establishment of mental illness prevention and control institutions should be strengthened, and a mental illness prevention and control network should be set up. Supervision and treatment measures for patients with severe mental illnesses should be implemented to improve the treatment and recovery effects and reduce the disability rate. Consultation and counselling as well as intervention in the psychosocial behaviours of key groups should be intensified.

12.4.2 Comprehensively pushing forward the construction of the new rural cooperative medical system and strengthening rural healthcare

Relevant management systems should be standardised to intensify the management of the new rural cooperative medical system. The rural medical assistance system should be made to assist extremely poor farmers and other priority rural residents to participate in the new rural cooperative medical system. The three-level (village, township and county) medical and healthcare service system should be consolidated and completed. The construction of township health centres should be strengthened, with one government-funded health centre in each township and under the unified administration of the county-level government. Various measures should be taken to support each administrative village to build one clinic. Responsibilities of township health centres and village clinics for public health services should be clearly defined, so as to ensure disease monitoring and reporting and that vaccination and other public health tasks are specially assigned. The activity of ‘10,000 doctors supporting rural healthcare’ should be continued, so as to promote the pilot project of counterpart assistance between medical and healthcare institutions above the second level and township (town) health centres, as well as facilitate university graduates to work in

rural areas. Urban assistance to rural healthcare should become regular and institutionalised, and rural primary healthcare should be reinforced.

12.4.3 Vigorously Developing Urban Community Health Services to Provide Urban Residents with Safe, Effective, Convenient and Cheap Basic Health Services

Urban medical and healthcare resources should be restructured, and a novel urban health service system should be established, based on community health services and featuring a reasonable division of labour and close cooperation among community health service institutions, prevention and healthcare institutions and hospitals. Development plans for community health services should be formulated and implemented, and complete community health service systems should be built in cities above prefecture level and qualified county-level cities, so as to provide residents with public health and basic medical services.

12.4.4 Intensifying Maternal and Child Healthcare and Improving the Health of the Newborn Population

The maternal mortality rate should be reduced. The project of reducing the maternal mortality rate and eliminating neonatal tetanus should be continued, grassroots medical and healthcare institutions should be equipped with necessary facilities, training of maternal and child healthcare staff should be intensified, and appropriate technologies should be popularised, so as to elevate the grassroots health service level, increase the hospital delivery rate and ensure the fertility safety of pregnant and post-partum women. Hospital deliveries and hospital post-partum care for rural women should be basically realised, and maternal healthcare should totally cover urban and rural areas.

12.4.5 Greatly Enhancing the Cultivation of Appropriate Healthcare Skills and Construction of Healthcare Teams in Urban and Rural Areas, and Organising Research into Medical Technologies

The Program of Healthcare Human Resource Development (2010–2015) should be carried out to enhance the development of healthcare skills. Educational reform and management of medical colleges and schools should be intensified, with the focus on skill cultivation, retention and implementation and in cooperation with education and other relevant departments. The construction of rural medical and healthcare teams should be reinforced as far as feasible, so as to foster medical technicians suitable for rural areas and help a majority of rural, barefoot doctors grow into assistant medical practitioners or medical practitioners. The cultivation of general practitioners in communities should be intensified, following the principle of 2–3 general practitioners and 1 public health doctor for every 10,000 residents. Medical education, continuing education and various on-the-job training systems should be further developed.

12.4.6 Intensifying Universal Health Education and Actively Advocating Healthy Lifestyles

Universal health education should be intensified, knowledge on public health, healthcare and nutrition should be popularised, and healthy behaviour patterns should be advocated. Health education activities should be actively organised and focused on public places and floating populations. Activities to establish healthy schools, enterprises and units should be vigorously promoted. Personnel training should be intensified to improve the quality and service capacity of health education teams. The Framework Convention on Tobacco Control should be implemented to reduce the smoking rate of different groups.

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Chapter 13 Environmental Protection and Sustainable Development

To protect the ecological environment and realise a sustainable development are not only priorities in promoting a coordinated regional development of China, but major focuses of China's regional policy. Sustainable development has served as an important guiding principle of China's economic and social development since the early 1990s, and a series of policies and measures have been enacted to form efficient institutional mechanisms.

13.1 The Strategy of Sustainable Development

The strategy of sustainable development has been given great importance in China. Following the strategy, the Chinese government has made a series of laws and regulations regarding protection of the ecological environment and economical utilisation of resources, and has put into practice a line of projects for ecological protection and environmental governance.

13.1.1 Setting Sustainable Development as a Major Strategy

The United Nations 1992 Rio de Janeiro Conference on Environment and Development approved the Earth Charter and Agenda 21, and set sustainable development as a common strategy of the global community, symbolising the start of a joint effort by the entire human society to translate the concept of sustainable development into action. The Chinese government, after setting out to the conference its five ideas (economic growth must be coordinated with environmental protection, etc.), signed Agenda 21 and other documents centred on sustainable development in June 1992, indicating its recognition of the sustainable development concept. Later, in August 1992, China published the Ten Measures for Environment and Development, straightforwardly clarifying its determination for a sustainable development. In March

1994 the Chinese government issued China's Agenda 21: White Paper on China's Population, Environment and Development in the 21st Century, putting forward the strategies, measures and action plans for a sustainable development of China on the basis of its national conditions of population, environment and development. In the Ninth 5-Year Plan for National Economic and Social Development and Outline for the Long-Range Objectives through the Year 2010, which was approved in the 4th Plenary Session of the 8th National People's Congress in March 1996, sustainable development was stated as a major strategy for China's modernisation. In March 2006 sustainable development was specified as the task of building a resource-conserving and environmentally-friendly society in the Outline of the Eleventh 5-Year Plan for National Economic and Social Development in P.R.C., which was approved in the 4th Plenary Session of the 10th National People's Congress.

13.1.2 Intensifying Resource Protection

China has a very low per capita resource ratio, especially in water and land resources. The per capita volume of water resources in China is 2,220 m³, approximately 1/4 of the world average. The figures in 16 cities directly under the central government, autonomous regions and provinces are below 1,700 m³, the limit defined by UN for an insufficient water supply, among which 10 are even below 500 m³ and suffer from a severe water shortage. Of the 660 Chinese cities, more than 400 have insufficient water supply throughout the year, including 110 seriously deficient in water. The per capita arable land is about 1.4 mu, less than 1/3 of the world average. The per capita recoverable reserves of petroleum, natural gas and coal are respectively 11.1%, 4.3% and 55.4% of the global average level. These figures have attracted great attention from the Chinese government, which has successively unveiled 17 laws for resource conservation and protection, including the Renewable Energy Law, the Energy Conservation Law, the Land Administration Law, the Water Law, the Forest Law, the Grassland Law, the Mineral Resources Law, the Coal Law, the Electricity Law, the Law of the People's Republic of China on Promotion of Cleaner Production, etc. Protection of land and water resources are top priorities in this regard.

Box 13-1 Chinese Government's Protection of Land Resources

The Chinese government has clearly stated that to protect land is to protect our lifeline. Land protection is an overall and strategic issue concerning the national economic and social development of China. According to the land use change survey 2005, China now owns 1.831 billion mu of farmland, and the per capita farmland is 1.4 mu. Yet back in 1996, nine years ago, the figures were 1.951 billion mu and 1.59 mu respectively, which indicates a drop of 0.12 billion mu during the nine years. According to the Outline of the Eleventh 5-Year Plan for National Economic and Social Development in P.R.C. which set the rigid target of a preserved farmland quantity of 0.12 billion hectares (1.8 billion mu), it will be arduous but it is essential to contain the farmland decrease within 30 million mu. It is a long-held basic state policy of China to “cherish and reasonably use land and protect farmland as much as feasible”. A series of policies and guidelines have been successively set out to strengthen land management and protect farmland, including the Notice of the Central Committee of the CPC and the State Council on Strengthening Land Management and Preventing Unauthorised Farmland Occupancy in 1986, the Emergency Notice of the State Council on Strictly Preventing Unauthorised Occupancy and Indiscriminate Use of Farmland in 1992, the Regulations on the Protection of Basic Farmland in 1994, the Notice of the Central Committee of the CPC and the State Council on Further Strengthening Land Management and Protecting Farmland (No. 11) in 1997, and the Criminal Law which included the offences of farmland destruction, illegal land grant and illegal land transfer in 1998 for land protection. To achieve a better land protection the basic farmland protection system has also been established, in which basic farmland refers to farmland free from occupancy for a long period, and which is then defined by the demands of the population and the social and economic development for agricultural products within a certain period and in line with the overall plan for land use. Strengthening the protection of basic farmland, the most essential farmland, and carrying out special protection of high-quality farmland have played an active role in protecting national food safety. The discussion about and definition of basic farmland was basically completed in 2001, finalising a total area of basic farmland of 1.632 billion mu. A survey was organised in 2004 founded upon this initial knowledge of the base size of the area and changes of basic farmland, and the results show a total documented basic farmland area of 1.589 billion mu, which is the priority in protection.

Box 13-2 Chinese Government's Protection of Water Resources

Water resources are natural bodies of water in various forms and capable of being developed and utilised by humans for benefit, comfort or value. Water is the source of life. Without water, there would be no life activity. In China, which is one of the countries in the world with scarce water resources in terms of per capita water volume, the spatial and temporal distribution of water resources are neither even nor coordinated with the distribution of population, land and mineral resources. Consequently, protection of water resources is a very important part of resource protection in China. In addition to a series of policies and measures to protect water resources, the Chinese government is also focussing on building a stronger protection consciousness in the public, and strengthening the learning, information and training to do with the Water Law, so as to establish a water-saving society. The public, realising from all aspects the importance of water in the national economy and the people's livelihoods will spontaneously develop consciousness of water conservation. The development of new sources and the conservation of existing resources should be attached with equal importance as is protecting groundwater resources. That is, the development and use of surface water resources should share equal importance with a proper development and use of groundwater resources. Regulation and control measures should be taken to solve the severe water undersupply caused by a sharp decrease of groundwater production volume through such measures as digging and dredging ditches, transforming pits and ponds, returning an appropriate amount of farmland to lakes, carrying out rainwater harvesting projects, increasing the retention volume of surface water, using flood seasons for water refreshing, organising research on the desalination treatment of shallow salt water for humans and animals consumption as well as for industrial and agricultural use, developing secondary water sources, and implementing water diversion projects between different areas. (The South-to-North Water Diversion Project, as a good example, introduces surplus water from the south to the north, which can not only relieve the north from water undersupply, but also solve the water surplus of the south. The protection, supervision and management of water resources should be strengthened according to the responsibilities defined by laws and regulations, so as to achieve a cooperative and coordinated management.

13.1.3 Carrying out Ecological Construction Projects

To fortify the extremely fragile ecological environment in a considerable number of areas, China has carried out a train of ecological construction projects, such as the Shelter Forest System Program in Three North Regions of China (northeastern, northwestern and northern China), restoring farmland to forest, restoring grazing land to grassland, the natural forest protection project, the Beijing and Tianjin Sandstorm Source Control Project, the Protection Project of the Sanjiangyuan Region of Qinghai Province, etc., and has achieved remarkable effects.

Box 13-3 Shelter Forest System Program in Three North Regions of China

The program, involving major ecologically fragile areas in northeastern, northwestern and northern China, covers nearly half of China's territory. With a construction period of 73 years and a project area of 4.06 million sq km, the program is recognised to be the world's largest ecological construction program. According to the statistical data of the State Forestry Administration, since its initiation in 1978 the program has afforested an accumulated area of 0.235 million sq km, increasing the forest coverage rate within a certain scope, a certain period and some areas, and improving the local production and living conditions.

Box 13-4 Restoring Farmland to Forest

Made in 1999, the 10-year plan for restoring farmland to forest (grassland) involves 22 cities and provinces, and is aimed at accomplishing an area of 5.3 million hectares (79.5 million mu) by restoring farmland to forest, 8 million hectares (0.12 billion mu) by afforesting afforestable barren hills, 36 million hectares (0.36 million sq km) for conservation of soil and water, and 70 million hectares (0.7 million sq km) by the control measures of wind prevention and sand fixation.

Box 13-5 Restoring Grazing Land to Grassland

The State Council officially approved the project on 16 December 2002 for implementation in 11 cities and provinces in western China. Since 2003 an initial centrally managed treatment had been practiced in the desert grasslands in the west of the Shaanxi–Gansu–Ningxia border region, the degraded grasslands in the east of Inner Mongolia, the degraded grasslands in the north of Xinjiang and the Jiangheyuan Grasslands at the east of the Qinghai–Tibet Plateau, covering a total area of 0.067 billion hectares (1 billion mu) and approximately 40% of the severely degraded grasslands in the western region. There are three ways of restoring grazing land to grassland: grazing prohibition, grazing suspension, and rotational grazing based on division of areas. For the duration of the restoration herders are subsidised by the state in terms of grain and feed.

Box 13-6 Natural Forest Protection Project

The project is intended to classify forest farms for management. Specifically, major forest districts are classified into key ecological public welfare forests, general ecological public welfare forests, commercial forest bases, etc., in which key ecological public welfare forests are strictly protected, while commercial forests are used to compensate for an compulsorily smaller cut of natural forests.

Box 13-7 Beijing and Tianjin Sandstorm Source Control Project

The project involves 75 counties in Beijing, Tianjin, Hebei, Shanxi and Inner Mongolia, covering a total area of 0.46 million sq km. According to the planning, there are ten measures practiced in the project, including closing hillsides to facilitate afforestation, restoring farmland to forest, building sand prevention and fixation systems, restoring grazing land to grassland, ecological migration, etc. It was estimated that during 2001–2010 the areas accomplished by restoring farmland to forest, forest management and afforestation as well as grassland treatment would respectively reach 2.63 million hectares (39.45 million mu), 5 million hectares (75 million mu) and 10.6 million hectares (159 million mu). There will be 114,000 supporting water conservation facilities built; the comprehensive management of small river basins will involve an area of 23,000 hectares, and the ecologically migrated population would reach 0.18 million.

Box 13-8 Protection Project for the Sanjiangyuan Region of Qinghai Province

The project target is that by 2010 the ecological environment of the protected region would embark on a virtuous circle and seek to achieve an ecological balance between natural grassland, livestock and people, with 8.1464 million sheep units of grazing animals or 3.53 million domestic animals (12.7359 million sheep units at present) and a population of 133,700 (220,000 at present) living in natural grassland in an area of 172.1542 million mu, a reasonable bearing capacity of the environment. The number of population for ecological migration is estimated at 893.58 million to achieve this target.

13.1.4 Carrying out Pollution Control Projects

There are nine laws regarding environmental protection which been successively formulated to control pollution, including the Environmental Protection Law, the Law of the People's Republic of China on Evaluation of Environmental Effects, the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, the Water Pollution Prevention and Control Law, the Law of the People's Republic of China on the Prevention and Control of Environmental Noise Pollution, the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, the Law of the People's Republic of China on the Prevention and Control of Radioactive Pollution, etc. A series of pollution control projects, such as the Huaihe River Water Pollution Control Project, the Dianchi Lake Water Pollution Control Project, campaigns to control and reduce sulphur dioxide emission, etc., have been carried out at the same time, focusing on the control of water and air pollution. See details in the following boxes.

Box 13-9 Huanhe River Water Pollution Control Project

Water pollution in the Huanhe River Valley started in the late 1970s and has grown serious since the 1980s due to the rapid national economic growth and a faster urbanisation, accompanied with frequent river basin water pollution accidents. Particularly serious water pollution accidents happened to main streams of the river in 1989, 1992 and 1994, with polluted water flowing from Shaying River and other branches into the main streams and massed at a length of nearly 100 km. Where the polluted water masses flowed, the water quality was abruptly changed and all the fish and shrimp were killed, which severely damaged the local water environment and seriously broke down the water supply system of riverside areas. The growing water pollution of the Huanhe River has drawn great attention from the central government. To improve the water environment and protect water resources, the State Council made the decision in 1994 to comprehensively and integrally control water pollution of the Huaihe River. On 8 August 1995 the State Council published the Interim Regulations Concerning the Prevention and Control of Water Pollution within the Territory of the Huaihe River (hereafter referred to as the Regulations), the first regulatory document of China for the prevention and control of river basin water pollution. Later, on 29 June 1996, the State Council approved the Program for Prevention and Control of Water Pollution and the ninth 5-year plan for the Huaihe River Valley, including the protection and control of water pollution of the Huaihe River into the priorities for treatment of 'three rivers and three lakes' (Huaihe River, Haihe River, Liaohe River, Taihu Lake, Chaohu Lake and Dianchi Lake) in the ninth 5-year plan period. The Program for Prevention and Control of Water Pollution of the Huanhe River Valley and the relevant ninth, tenth and eleventh 5-year plans have been successively formulated and implemented afterwards.

The measures include:

- Practicing the treatment of industrial pollution, which is featured by the shutdown of small enterprises and the treatment of major enterprises. In the light of the principles of ‘shutdown, suspension, prohibition, transformation and transfer’, enterprises that are not suitable for development along the river due to their high water consumption and high pollution are shut down to push forward the industrial restructuring, and key polluting enterprises are required to undergo treatment within a prescribed limit of time.
- Building urban sewage treatment plants. There were no Level-II sewage treatment plants along Huaihe River prior to 1995, and 10 sewage treatment plants were built during 1995–2000, capable of treating 1.1 million tons of sewage water per day.
- Strengthening the water withdrawal permit system. According to relevant regulations on water withdrawal permits, water conservation departments at all levels along the river should strengthen the water quality management for water use and return, control the sources and prohibit water withdrawal without permits or exceeding the quotas. For enterprises that don’t fulfil a standardised discharge within the time limit, the withdrawal volume is restricted at first and the water withdrawal permit is then revoked if they continue to be disqualified.
- Strictly monitoring the quality of river water at provincial boundaries. According to the Regulations, the Huaihe River Basin Water Resources Protection Bureau carries out monthly monitoring of the water quantity and quality of the 31 provincial interfaces of 30 major trans-provincial rivers within the river basin, so as to be informed of changes in the quality of exit water at the provincial boundaries as well as the discharge of major pollutants. The monitoring results are promptly sent to relevant government departments and the local governments of the four provinces within the river basin area (Henan, Anhui, Jiangsu and Shandong).
- Organising joint pollution prevention in key water areas and strengthening a unified management of water quantity and quality.

After years of treatment, the growing water pollution of the Huaihe River basin has been initially controlled, with the amount of discharge into the river noticeably decreased, the water quality gradually improved, and the water body function of some reaches restored to varying degrees.

Box 13-10 Dianchi Lake Water Pollution Control Project

Before 1986, with level III quality, water in Dianchi Lake was drinkable by the national standards. After 1986, however, the water was no longer drinkable due to eutrophication. The quality was at level V after 1994, only suitable for agricultural use. During 1998–2000, the quality was below level V for three consecutive years, which indicated the water had almost lost all its functions and become wastewater. Following the outburst of blue-green algae crises in 1999 and 2000, the lake was declared to have ‘ecological cancer’ by ecologists. According to data of the environmental protection departments, the amounts of total phosphorus, total nitrogen, chemical oxygen demand (COD), toxic and harmful substances and other major pollutants in the water exceed the standards by rates ranging from 50% to 8000% or 80 times. There are 60 carcinogenic, mutagenic and teratogenic substances contained in Caohai Lake, an inner lake of Dianchi Lake. Consequently, Dianchi Lake has been given the top priority among the ‘three lakes’ for key water pollution control. The Plan for the Prevention and Control of Water Pollution of the Dianchi Lake Basin by 2030 has been formulated to treat the water pollution of the lake, stipulating short-term, medium-term and long-term objectives:

Short-term objectives (2001–2005): eliminate black water and bad smell of Caohai Lake, and basically control the water quality degradation of the outer lake area.

Medium-term objectives (2006–2010): achieve a better water quality of the lake, so as to lay the foundation for gradual ecological restoration.

Long-term objectives (2011–2030): achieve an obviously better water quality and activate the virtuous circle.

The tenth and the eleventh 5-year plans for Prevention and Control of Water Pollution of the Dianchi Lake Basin, formulated in the light of the Plan for the Prevention and Control of Water Pollution of the Dianchi Lake Basin by 2030, further state that the focus of the lake treatment is on sewage interception projects and ecological projects around the lake, treatment projects for incoming river channels, sediment dredging projects, water source area protection projects and water diversion projects from other river valleys, which are jointly funded by the central government, Yunnan Provincial Government and Kunming Municipal Government.

Box 13-11 Campaigns to Control and Reduce Sulphur Dioxide Discharge

Acid rain control zones and sulphur dioxide control zones approved by the Chinese government in 1998 involve 175 cities and areas in 27 provincial level administrative units, covering a total area of approximately 1.09 million sq km. The overall control targets are: by 2010 the total discharge of sulphur dioxide will be controlled below the level of 2000; the sulphur dioxide concentration in urban ambient air would reach the national ambient air quality standards; and the area with a PH value of precipitation lower than 4.5 in acid rain control zones would be obviously smaller than the figures for 2000. The plan of 'two control zones' for sulphur dioxide and acid rain control practices the following energy-related measures:

- The building of mines with a sulphur content exceeding 3% should be prohibited, while those already built ones should be gradually restricted in production or shut down. The building and transformation of mines with the sulphur content exceeding 1.5% should be supported by coal washing and dressing equipment with relevant capacities. Coal washing and dressing equipment should be built in existing mines by stages and in groups according to the planning. The sulphur content in fuel coal and heavy oil in cities should compulsorily accord with the stipulations of the local municipal governments.
- Coal thermal power plants, except for heat and power cogeneration plants, should be prohibited from being built in urban areas and suburbs of medium and large cities. Newly built power plants should be equipped with desulphurisation facilities. Existing coal-fired power plants should either build desulphurisation facilities by stages and in groups by 2010, or take other measures to achieve equal effects in sulphur dioxide discharge reduction. Enterprises engaged in major polluting industries, such as the chemical industry, the metallurgical industry, the building industry and the non-ferrous metals industry, should either build process off-gas treatment facilities or take other discharge-reducing measures.

The plan has accomplished certain achievements. Compared to 1998, the percentage of cities in sulphur dioxide control zones and with their annual sulphur dioxide concentration in compliance with the standard level was increased from 32.8% to 45.2% by 2005, while the percentage of cities in acid rain control zones with annual sulphur dioxide concentrations above the national standard level-III was dropped from 15.7% to 4.5% at the same time. However, the sulphur dioxide discharge in China is still serious, and more efforts should be made in the clean utilisation of coal, the development of diversified energy supply, etc.

13.1.5 Clearly Defining the Targets for Energy Conservation and Emission Reduction

According to the reports on national environmental statistics for the corresponding years, the total volume of discharged wastewater of China amounted to 46 billion tons in 2003. A large amount of untreated or unqualifiedly treated waste water is directly discharged into reservoirs, lakes and rivers, leading to different levels of pollution of the seven water systems, lakes, reservoirs and underwater and offshore areas in some regions, as well as universal organic pollution and an increasingly serious pollution of domestic water sources. Acid rain, having polluted 1/3 of the total national land area, is most seriously concentrated in Central China, Southwest China, East China and South China, but particularly in Central China. To reverse this situation, in the Outline of the 11th 5-Year Plan for National Economic and Social Development in P.R.C. which was approved at the 4th Plenary Session of the 10th National People's Congress in March 2006, the Chinese government put forward the important strategic task of energy conservation and emission reduction, and specified the planned targets. These are that by 2010 the energy consumption per 10,000 yuan of GDP shall be reduced by 20% and the total discharge of pollutants by 10% on the 2000 basis.

13.2 Mechanisms to Achieve a Sustainable Regional Development

To ensure the implementation of the sustainable regional development strategy through active attempts, China has established ecological compensation mechanisms such as 'who pollutes the environment pays', 'who damages mine environments pays' and 'who protects public welfare forests benefits, and has set up stringent evaluation systems for energy conservation and emission reduction. The public is encouraged to participate in the protection and construction of an ecological environment, and to express their wishes and offer their advice.

13.2.1 Who Pollutes the Environment Pays

The pollutant discharge fee system is a system whereby the government collects the

funds for pollution control, in which dischargers who discharge pollutants to the environment or whose discharge of pollutants exceeds official discharge standards are charged according to pollutant category, quantity and concentration and subject to legal charge standards. Such a system, as a legal approach to bind economic measures to environmental protection, has been popular globally since the early 20th century. Principled stipulations on the charging for above-standard discharge of pollutants were made in the Environmental Protection Law of the People's Republic of China (for Trial Implementation) in 1979, symbolising the landing of the system in China. In 1982 the State Council published the Interim Measures on Collection of Pollutant Discharge Fees, stipulating the purpose, range, standards, surcharging and reduction qualifications, fee management and application measures for levying pollutant discharge fees on industrial enterprises for above-standard discharge of wastewater, gases and solids. In 2003, the State Council issued the Administrative Regulations on Levy and Use of Pollutant Discharge Fees (hereafter referred to as the Regulations), and the State Development Planning Commission, the State Environmental Protection Administration and other ministries and commissions issued the Measures for the Administration of the Charging Rates for Pollutant Discharge Fees (hereafter referred to as the Measures), further legalising and refining the pollutant discharge fee system in China. In the present five special laws regarding prevention and control of environmental pollution, i.e. the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, the Water Pollution Prevention and Control Law, the Law of the People's Republic of China on the Prevention and Control of Environmental Noise Pollution, the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste and the Marine Environment Protection Law, relevant stipulations are made to charge for waste gas, water and solid discharge.

13.2.2 Comments on 'Who Pollutes the Environment Pays'

Objectively speaking, the mechanism has played a significant role in controlling environmental pollution, but there is still some room for refinement, which, in our opinion, should be focused on a scientific formulation of charge standards.

- The charge standards should be higher than pollution control costs, so as to make the external costs of environmental pollution intrinsic ones, and force polluting

enterprises to reinforce pollution control and reduce pollutant discharge. It is suggested that the charge standards for sulphur dioxide, sewage and other major pollutants be raised up to the level of the total pollution control costs in the next five years.

- The aim to “reduce the total discharge of pollutants by 10% on the 2000 basis by 2010” should be set as a binding target, and the charge standards should be authorised on the basis of total discharge control and stepwise breakdown of the limit. A new and general trend is now reflected in the environmental economic policies of all countries, i.e. from ‘polluter pays’ towards total discharge control, discharge limitation and quota transactions. Following the trend, discharge performance indicators can be introduced to define the charge standards, so as to effectively allocate environmental capacity resources while controlling the total discharge amount.

Box 13-12 China Calls for Tax-for-Fees or Price-for-Fees Reforms in Pollutant Discharge

The pollutant discharge fee system has grown into an important economic means for environmental management since it was launched over 20 years ago, and will continue to play a positive role. But, as shown in pollution control practices of some countries, the traditional pollutant discharge fee system is gradually transforming into the pollutant discharge tax system (tax for fees), or the pollutant discharge rights trade system (price for fees). There are many examples concerning the tax-for-fees reform, including the collection of carbon tax in UK since 1972, the collection of water pollution tax in Germany since 1981, the collection of sulphur dioxide tax in Sweden since 1991, and garbage tax collection in many countries, etc. Regarding the price-for-fees reform, the government environment departments evaluate the maximum pollutant discharge amount allowable by the environmental capacity of a certain region, and then divide it into a certain number of fixed shares, i.e. the pollutant discharge right, according to the targets for total discharge control. By free distribution or paid transfer (bidding, auction, etc.), the government transfers the pollutant discharge right to dischargers in the primary market, and the latter can freely trade their pollutant discharge rights in the secondary market as needed. The system was applied to the management of atmospheric and river pollution sources by the U.S. Environmental Protection Agency in the 1970s, turning out to have enormous economic and social benefits. The EU and countries such as Australia have also successively practiced these types of measures. The tax-for-fees reform helps to achieve a more standardised and transparent collection management as well as a more mandatory and authoritative pollution control management, while the price-for-fees reform can better control the total discharge and enables market pricing upon the fixed total discharge amount, so that dischargers can control the discharge by themselves through the ‘invisible hand’. Compared with the pollutant discharge fee system they enjoy more institutional advantages. It is suggested that tax-for-fees or price-for-fees measures be actively explored while reforming and refining the pollutant discharge fee system. The optimum timing for institutional changes needs to be selected as well.

- For a convenient supervision the charge standards should be easy to understand. Under the present ones most of the pollution charges are collected by pollutant equivalent and involve numerous chemical, physical and biological indicators and professional testing measures, which are beyond the knowledge of common people. Consequently, pollution prevention and control becomes an 'exclusive right' of environmental workers, inevitably leading to relationship-dependant or negotiated charging. It is suggested that the collection basis be translated from pollutant equivalent to the yield of products (amount of generated electricity, hard coke, etc), of which the specific number should be made public, so as to simplify the standards to facilitate social supervision and ensure collection in full amount.
- Stipulations upon the prevailing enterprise accounting system for the accounting of pollutant discharge fees should be regulated at the same time. Pollutant discharge fees and fines due to excessive and above-standard discharge should not be accounted into the pricing costs.

13.2.3 Who Damages Mine Environments Pays

Right back in the 1980s some provinces in China started their attempts to build such a mechanism (see details in box 13-13). The system of guarantee deposits for mine environment restoration was launched in China in the 21st century, to basically ensure the restoration of damaged mine environments in the light of the requirements for environmental protection and land restoration, as well as to stimulate the initiative and enthusiasm of mining enterprises in mine environment protection. Efforts of Yunan, Guangdong, Heilongjiang, Zhejiang, Ningxia, Jiangsu, Shandong, Hebei and other provinces in recent years, including issuing and implementing regulations regarding mine environment protection and practicing the system of guarantee deposits for mine environment restoration, have promoted a healthy development of the local mining industry, and laid a sound foundation for a national unified version of the system. The Guiding Opinions of the Ministry of Finance, the Ministry of Land and Resources and the State Environmental Protection Administration on Gradually Establishing a Mine Environment Governance and Ecological Restoration Responsibility Mechanism (No. 215 [2006] of the Ministry of Finance), which was issued in the latter half of 2006, serves as the basis for the local governments to make measures for mine environment

governance and to manage guarantee deposit for ecological restoration.

Box 13-13 Practices in Building the Mechanism of Who Damages Mine Environments Pays

In 1983, with the mining industry severely impacting and damaging the ecological environment, Kunyang Phosphate Mine as the pilot site started to pay the Yunnan provincial government at a rate of RMB 0.3 per ton of ores for the revegetation of mining areas as well as for the restoration and management of other ecological damage, which is regarded as the first step of China in practicing the ecological compensation policy. Later, there were a succession of provinces and autonomous regions starting to collect compensation for the development of mine resources. In 1989 the Trial Measures on Charging Collectively Owned Mining Enterprises and Privately Owned Mining Undertakings in Jiangsu Province was issued by the Jiangsu provincial government, announcing the collection of the mineral resources fee and the environmental remediation fund from collective mining enterprises and individuals engaged in the mining industry. In 1990 the Fujian provincial government started to collect the ecological environment protection fee from state owned, collectively owned and privately owned mines. In 1992 the pollutant discharge fee system was launched in Guangxi Zhuang Autonomous Region and practiced among township collective mines and privately owned mining enterprises. In 1993 the State Council approved the trial implementation of the ecological environment compensation policy and other policies in energy bases in the border region of Shanxi, Shaanxi and Inner Mongolia. Upon approval of the State Council, the Regulations on Water and Soil Conservation in the Development and Construction of the Border Region of Shanxi, Shaanxi and Inner Mongolia was formulated in 1998, authorising the three provinces to collect the water and soil conservation compensation fee from coal sales income at RMB 0.5–1.0 per ton of coal for the control of soil erosion and water loss in mining areas and the restoration of the ecological environment. Shenhua Group, a large state owned enterprise developing coal resources in the region, has input an accumulated RMB 0.11 billion in water and soil conservation by provision of RMB 0.45 for the production cost per ton of coal.

13.2.4 Trial Implementation of the Pollutant Discharge Rights

Trade System

The pollutant discharge rights trade system, while practicing pollutant discharge permit management and the control of total amount of pollutants discharged, encourages enterprises to save pollutant discharge allowances by the means of technological progress and pollution control, so that the allowances saved as environmental capacity resources can serve for future production scale extension, or

be transferred with compensation to other enterprises. Among the 16 cities practicing the pilot project of the atmospheric pollutant discharge permit system, there are 6 listed as pilot sites for the policy of trading atmospheric pollutant discharge rights. It has turned out that the policy has made it possible for areas with air quality below the required standard to develop their economies, accelerated the pace of movement towards regional ambient air quality targets, promoted technological progress and optimisation of the industrial structure as well as reasonable industrial distribution, and minimised the costs of regional atmospheric pollution prevention and control.

Box 13-14 Cases of Pollutant Discharge Rights Trade

On 28 November 2008 Changsha Environmental Resources Exchange, the first environmental resources trading platform of Hunan Province, was formally founded. There were 52 tons of COD discharge allowance and 261.39 tons of sulphur dioxide discharge allowance sold in the ensuing auction of pollutant discharge rights. The discharge right for 61.39 tons of sulphur dioxide, at a starting price of RMB 700/ton, was bought by Hunan Jiuzhitang Co. Ltd. at a transaction price of RMB 1000/ton, RMB 61,390 in total. The discharge right for 200 tons of sulphur dioxide, auctioned at a starting price of RMB 700/ton under the authorisation of Changsha Xincheng Thermal Power Plant, was won by Changsha Power Co. Ltd. of Huadian Power International at a transaction price of RMB 1100/ton, RMB 0.22 million in total. Authorised by Changsha Paper Mill, the discharge right for 52 tons of COD was auctioned at a starting price of RMB 800/ton, and finally bought by Changsha Research Institute of Mining and Metallurgy at a price of RMB 2240/ton, 180% of the starting price. The total transaction price was RMB 116,480.

The pollutant discharge rights trade system was officially launched in Hangzhou on 8 April 2009, initiating the open sale of pollutant discharge rights in the city as a commodity product. An auction was held on the same day where one company spent RMB 6.04 million on 302 tons of sulphur dioxide discharge allowance. According to environmental evaluations, the sulphur dioxide discharge in the phase III project of the company amounted to more than 2,600 tons, while the distributed discharge allowance was only for 2,300 tons. To fill the gap of more than 300 tons, the company took an active part in the auction and bought the 302 tons of discharge allowance. According to the company the cost was high but worthwhile.

13.2.5 Who Protects Public Welfare Forests Benefits

The policy of protecting public welfare forests was initiated in Chengdu, Sichuan Province. After years of efforts, the policy to financially compensate public welfare forest protectors has been finally included into the Forest Law. It is clearly stipulated

in the Forest Law of the People's Republic of China (1998) that the forestry ecological efficiency compensation fund should be established for the establishment, cultivation, protection and management of forest resources and trees which can yield ecological efficiency, such as protection forests and forests for special use. In 2001, 658 counties (units) of 11 provinces as well as 24 national natural reserves were selected by the Ministry of Finance and the State Forestry Administration as pilot sites for the forest ecological benefits subsidy fund. Upon a complete success of the 3-year pilot project, the central forest ecological benefit compensation fund (hereinafter referred to as the central compensation fund) was officially established in 2004 to subsidise public welfare forests recognised by the State at a rate of RMB 5 per mu. By 2007 the subsidy fund input by the central finance to key public welfare forests with an area of 0.668 billion mu had accumulated to RMB 13.3 billion, with an annual input of RMB 3.3 billion.

13.2.6 Establishment of Performance Assessment Systems for Energy Consumption and Emission Reduction

The evaluation system for per unit GDP energy consumption and the evaluation system for reduction of total discharge of major pollutants were respectively unveiled in 2006 and 2007, of which the evaluation objects, content, methods and procedures as well as reward and punishment measures are detailed as follows.

Box 13-15 Objects, Items and Methods of per unit GDP Energy Consumption Evaluation

Objects: the people's governments of cities directly under the central government, autonomous regions and provinces (hereafter referred to as the provincial level governments), and the 1,000 major energy-consuming enterprises.

Items: fulfilment of energy-saving targets and implementation of energy saving measures.

Methods: quantitative methods are used for evaluation, with the criteria for fulfilment of energy saving targets and implementation of energy saving measures respectively defined, and the 'hundred mark system' is adopted. The criteria for fulfilment of energy saving targets are quantitative, and are marked on the basis of the annual energy saving targets made by the provincial level governments in accordance with the Reply of the State Council to the Plan of per unit GDP Energy Consumption Reduction Targets of Provinces (Letter No. 94 (2006) of the State Council) (hereafter referred to as the Reply), as well as with the annual energy saving targets set by the 1,000 major energy consuming enterprises in the duly signed Document of Energy Saving Target Fulfilment Responsibility. Fulfilment is evaluated by the regional energy saving indicators authorised by NBSC and the enterprise energy saving indicators

approved by the provincial level competent departments for energy conservation. The full mark is 40, with over-fulfilment properly rewarded. The criteria for implementation of energy saving measures are qualitative, and are marked for the performance of the provincial level governments and the 1,000 major energy consuming enterprises in implementing energy saving measures. The full mark is 60.

Levels: the evaluation results are graded into four levels, i.e. over-fulfilment (above 90), fulfilment (80–94), basic fulfilment (60–80), and non-fulfilment (below 60). Governments and enterprises that fail to fulfil energy saving targets are rated at the non-fulfilment level.

Box 13-16 Procedures of per unit GDP Energy Consumption Evaluation

The provincial level governments are required to set the annual energy saving targets in accordance with the Reply, and submit the targets to the Office of the Leading Group of Energy Conservation and Emission Reduction of the State Council (hereafter referred to the Office of Energy Conservation and Emission Reduction) by the end of March in the current year for registration.

By the end of each March a self-evaluation report should be submitted by the provincial level governments to the State Council on their performance in local energy conservation and fulfilment of energy saving targets in the previous year, and forwarded to NDRC and the Office of Energy Conservation and Emission Reduction. An examination and evaluation group, jointly founded by NDRC, the Ministry of Supervision, the Ministry of Personnel, the State Owned Assets Supervision and Administration Commission, the General Administration of Quality Supervision, Inspection and Quarantine, NBSC, the State Energy Office and other departments, is responsible for evaluating, supervising and verifying the performance of the local governments in energy conservation and their fulfilment of energy saving targets through on-site examinations and focused random inspections, and then submitting a comprehensive examination and evaluation report to the State Council by the end of May. The evaluation results on the fulfilment of the local governments of their energy saving target responsibilities are made public by NDRC upon the approval of the State Council.

The examination and evaluation of the performance of the 1,000 major energy consuming enterprises in fulfilling their energy saving target responsibilities is in the charge of the provincial level competent departments for energy conservation. The enterprises are required to submit a self-evaluation report on their performance in fulfilling energy saving targets in the previous year to the local provincial level competent departments for energy conservation and forward the report to NDRC by the end of each January. An evaluation team, consisting of experts from all walks of life and organised by the provincial level competent departments for energy conservation, evaluates and verifies the fulfilment of energy saving targets, and submits a comprehensive evaluation report to the provincial level governments and NDRC by the end of March. The evaluation results are made public by NDRC after examination and summarising.

**Box 13-17 Reward and Punishment Measures per unit GDP Energy Consumption
Evaluation**

The evaluation results of the local governments' fulfilment of energy saving target responsibilities, after approval by the State Council, are referred to by the competent department for cadres as an important basis for comprehensive evaluation of provincial level government leading groups and leaders according to the Trial Measures on Comprehensive Evaluation of Local Party and Government Leading Groups and Leaders for Scientific Outlook on Development and other regulations. The accountability system and the single vote veto system have been adopted for evaluation.

Those provincial level governments at fulfilment and over-fulfilment levels are rewarded in national awards ceremonies for energy conservation. But for those failing to fulfil their targets, the leaders are excluded from annual awards and conferment of honorific titles, and the State suspends the examination and approval on application of these provinces for building of new high energy consuming projects.

Within one month of the publishing of evaluation results, a written report on rectification measures within a certain time frame should be submitted to the State Council by the provincial level governments at the unfulfilment level, and forwarded to NDRC. In case of a failure in the implementation of rectification measures, relevant leaders of the area shall be liable for the failure, based on the judgement and investigation of audit departments according to related regulations.

Enterprises at the fulfilment and over-fulfilment levels are rewarded not only with a notice of commendation from NDRC and the provincial level governments, but also in national awards ceremonies for energy conservation. Those failing to fulfil their targets are unexceptionally excluded from annual awards and conferment of honorific titles as well as national inspection exemption and other measures to support good performers. The examination and approval by the State of these enterprises' proposals to build new high energy consuming projects and applications for more land for industrial use is also suspended. Within one month of the publishing of the evaluation results a written report on terminable rectification measures should be submitted to the local provincial governments by enterprises at the unfulfilment level. The evaluation results of wholly state owned and state holding enterprises among the 1,000 major energy consuming enterprises are referred to by the state owned assets supervision and administration institutions at all levels as an important basis for the single vote veto performance evaluation of enterprise leaders.

Governments and enterprises that underreport or provide fake reports of their performance are punished with a circulated notice of criticism, and the responsibilities of directly liable persons are investigated and affixed according to relevant laws and regulations.

Box 13-18 Evaluation Items for Reduction of Total Discharge of Major Pollutants

Fulfilment of targets for reduction of total discharge of major pollutants, and changes in environmental quality. The former is verified in accordance with the relevant regulation of the statistical and monitoring measures for reducing the total discharge of major pollutants in the eleventh 5-year plan period, while the latter is verified according to the Document of Target Responsibility for Reduction of Total Discharge of Major Pollutants in the eleventh 5-year plan period, which is signed between the competent department for environment protection under the State Council (authorised by the State Council) and the provincial level governments.

Construction and operation of the index system, monitoring system and evaluation system for reduction of total discharge of major pollutants. The evaluation is on the basis of formal documents submitted by the local governments on construction and operation of the above systems, as well as relevant results from random inspections and re-examinations.

Implementation of measures to reduce the total discharge of major pollutants. Relevant material and statistical data for evaluation include acceptance documents for commissioning or completion of pollution control facilities, the specific time of eliminating backward production capacity, the implementation of measures and plans formulated by the local governments for discharge reduction, etc.

Box 13-19 Evaluation Measures for Reduction of Total Discharge of Major Pollutants

The yearly implementations of the provincial level governments in reducing total discharge of major pollutants are examined and supervised every half a year by the environmental protection supervision centre of the competent department for environmental protection under the State Council. A self-evaluation report on the local reduction of total discharge of major pollutants in the previous year should be submitted to the State Council by the provincial level governments by the end of each March, and forwarded to the competent department for environmental protection under the State Council and the Office of Energy Conservation and Emission Reduction at the same time.

The competent department for environmental protection under the State Council, together with the development and reform department, the statistical department and the supervision department, are responsible for evaluating the implementation of the provincial level governments in reducing total discharge of major pollutants in the previous year. The evaluation results are reported to the State Council by the competent department for environmental protection under the State Council by the end of May, and made public upon the approval of the State Council.

A written report on terminable rectification measures should be submitted to the State Council within one month by the provincial level governments that fail the yearly evaluation, and is then forwarded to the competent department for environmental protection under the State Council.

Box 13-20 Evaluation Results for Reduction of Total Discharge of Major Pollutants

After approval by the State Council, the competent department for cadres can refer to the evaluation results, as an important basis for the comprehensive evaluation of provincial level government leading groups and leaders according to the Trial Measures on Comprehensive Evaluation of Local Party and Government Leading Groups and Leaders for the Scientific Outlook on Development. The accountability system and the single vote veto system are adopted for evaluation.

The qualified provinces are given priority in the support of the competent department for environmental protection under the State Council, the development and reform department and the financial department for local pollution control and environmental protection capability building, and are rewarded at national awards ceremonies for discharge reduction. But for those failing in the evaluation, the competent department for environmental protection under the State Council suspends examining and approval of environmental assessments of all the new construction projects for discharge of major pollutants in these areas, and deprives these areas of national honours and awards for environmental protection or improvement. Moreover, the leaders of these areas are excluded from annual awards, conferment of honorific titles, etc.

In cases of non-qualifying discharge reduction and implementation of rectification measures or serious social damage due to irresponsible work, the responsibilities of relevant liable persons are investigated and affixed by the supervision department in accordance with the Provisional Regulation on Disciplining Dereliction of Duty in Environmental Protection Activity.

The governments that underreport or provide fake reports of their discharge reduction performance are punished with a circulated notice of criticism, with responsibilities of directly liable persons investigated and affixed according to relevant laws and regulations.

The yearly total discharge of major pollutants in cities directly under the central government, autonomous regions and provinces should not be published by the local governments until jointly examined and approved by the competent department for environment protection under the State Council, the development and reform department and the statistical department.

13.2.7 Publication of Evaluation Results

NDRC and the relevant departments of the State Council, after having examined and evaluated the performance of the 31 cities directly under the central government, autonomous regions and provinces in fulfilling energy saving targets and implementing energy saving measures in 2008, published the evaluation results in October 2009.

Grade 1, Over-fulfilment: Beijing, Tianjin, Hebei, Liaoning, Jiangsu, Shandong and

Yunan;

Grade 2, Fulfilment: Shanxi, Inner Mongolia, Jilin, Heilongjiang, Shanghai, Zhejiang, Anhui, Fujian, Jiangxi, Henan, Hubei, Hunan, Guangdong, Guangxi, Chongqing, Guizhou, Shaanxi, Gansu and Ningxia;

Grade 3, Basic fulfilment: Hainan, Tibet and Qinghai;

Grade 4, Non-fulfilment: Sichuan and Xinjiang (due to earthquake and other disasters).

Fulfilment of energy saving targets stipulated in the eleventh 5-year plan:

Over 60%: Beijing, Tianjin, Hunan, Shaanxi, Jiangsu, Hubei, Hebei, Guangxi, Fujian, Guangdong and Zhejiang;

50%–60%: Shandong, Chongqing, Jiangxi and other 13 provincial level units;

Below 50%: Sichuan, Hainan, Xinjiang and Qinghai.

See details in table 13-1.

Table 13-1 Fulfilment of Energy Saving Targets in 2008 (%)

	Target reduction rate of energy consumption per 10000 yuan of GDP (2008)	Actual reduction rate of energy consumption per 10000 yuan of GDP (2008)	Accumulated reduction rate of energy consumption per 10000 yuan of GDP	Fulfilment of energy saving targets in the eleventh 5-year plan
Beijing	5.0	7.36	17.53	86.37
Tianjin	4.5	6.85	14.94	72.53
Hebei	4.5	6.29	12.83	61.54
Shanxi	4.4	7.39	13.32	57.52
Inner Mongolia	5.0	6.34	12.79	55.09
Liaoning	4.0	5.11	11.83	56.44
Jilin	4.2	5.02	12.22	52.47
Heilongjiang	4.5	4.75	11.43	54.37
Shanghai	3.6	3.78	11.67	55.60
Jiangsu	4.4	5.85	13.04	62.60
Zhejiang	4.0	5.49	12.63	60.51
Anhui	4.0	4.52	11.59	55.20
Fujian	3.5	3.70	10.05	60.77
Jiangxi	3.6	5.53	12.20	58.32
Shandong	4.5	6.47	13.81	59.80
Henan	5.1	5.10	11.71	55.82
Hubei	4.4	6.29	12.98	62.30
Hunan	4.0	6.72	13.88	66.95
Guangdong	3.5	4.32	10.05	60.74
Guangxi	3.5	3.97	9.47	61.21
Hainan	1.0	2.55	4.46	35.70
Chongqing	4.6	4.97	12.30	58.82
Sichuan	4.2	3.55	9.76	46.04
Guizhou	4.1	6.11	11.51	54.78
Yunnan	4.4	4.79	9.97	56.36
Tibet	2.5	2.50	7.13	57.88
Shaanxi	4.0	5.92	13.23	63.61
Gansu	4.5	4.53	10.82	51.34
Qinghai	4.0	4.18	4.79	26.37
Ningxia	4.0	6.79	10.98	52.12
Xinjiang	4.0	3.15	7.13	33.16

Remarks:

1. The target in reducing energy consumption per 10,000 yuan of GDP (2008) is subject to the confirmation letters from the local governments.
2. The reduction rate of energy consumption per 10,000 yuan of GDP (2008) is subject to the authorised data from NBSC (that of Tibet is from the local government).
3. Hong Kong, Macao and Taiwan are not included in the evaluation.

Source: Notice of the National Development and Reform Commission of the People's Republic of China (No. 13 [2009]), issued on 9 October 2009.

13.2.8 Public Participation

The public is the primary driving force of environmental protection. Without their participation there would be no environmental movement. To embark the whole society on 'a road of civilised development with developed production, affluent lifestyles and a sound ecological environment', it is essential to mobilise people of all walks of life to enlarge public participation in environment protection, and to reinforce democratic and law-based supervision and restraint mechanisms.

In terms of a sustainable development, public participation in environmental protection of China is generally characterised by a low level of participation and the absence of universal individual sustainable behaviour. More work should be done in these aspects.

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Chapter 14 Climate Change and Responding Strategies

Climate change is one of the most important global environmental issues. Its impact is manifold, ranging from large-scale changes of regional and global temperature, precipitation, soil moisture and sea levels to latent negative or positive influences on regional and global natural and ecological systems, human health and social and economic sectors. The basic experience of China in the face of climate change can be summarised as:

- Combating climate change in the context of sustainable development, which is an important common desire of the international community, as well as a basic choice of China on climate change;
- Proactively combining policies on climate change with other relevant policies. To actively adapt to climate change and endeavour to mitigate greenhouse gas emissions involves many economic and social fields. Consequently, the proactive combination of policies on climate change and other relevant policies is the only key to effecting these policies.

14.1 National Strategies of China on Climate Change

14.1.1 China's Economic Growth and Greenhouse Gas Emissions

The year of 1950 is generally accepted as the earliest year for statistics on China's carbon dioxide (CO₂) emissions. According to the findings of the World Resources Institute, China's CO₂ emissions in 1950, 79 million tons, accounted for 1.31% of the annual world total emissions, while the cumulative emissions of the country during

1950–2002 were 9.33% of the world total in the same period. However, the figure after 2002 has increased year on year. By using the Kaya Equation, professors at Massachusetts Institute of Technology have found that the CO₂ emissions of China have increased at an annual rate of 4%.

A comparison is given in table 14-1 between greenhouse gas emissions of China and of major developed countries. The figures for Denmark, France, Germany, Norway, Sweden, the UK and other developed countries dropped during 1990–2005. The greenhouse gas emissions of the EU in 2005 were 4% lower than in 1990. But there are still some developed countries seeing an unceasing rise of greenhouse gas emissions, such as the US (by 16.3%) and Japan (by 7.1%). The greenhouse gas emissions of China increased by 113.83% during 1990–2005.

Table 14-1 Comparison between Greenhouse Gas Emissions of China and Major Developed Countries (including land use or land use changes as well as forestry)

Country and Area	CO ₂ Equivalent Emissions (unit: 1000 tons)			Change in 2000 on the 1990 Basis (%)	Change in 2005 on the 1990 Basis (%)	Reduction Target (%)*
	1990	2000	2005			
Australia	499903	510200	522189	2.1	4.5	8
Denmark	70933	71298	64033	0.4	-9.8	-8
EU	4040425	3846862	3877452	-4.8	-4.0	-8
France	533314	526735	495440	-1.2	-7.1	-8
Germany	1199619	985832	965400	-17.8	-19.5	-8
Japan	1179935	1254700	1263872	6.3	7.1	-6
New Zealand	42920	50081	52658	16.7	22.7	0
Norway	35032	28237	26934	-19.4	-23.1	1
Russia	3166421	2335309	2289167	-26.2	-27.7	0
Sweden	68652	35585	63042	-48.2	-8.2	-8
UK	774310	673541	655361	-13.0	-15.4	-8
US	5529241	6390514	6431935	15.6	16.3	-7
China	2218880		4744520		113.83	N/A

Remarks: * are the reduction targets by 2012 stated in the Kyoto Protocol on the 1990 basis.

Resources: Data released by the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC), and relevant emission data of China.

The development stage and resource endowment of China are the reasons for an excessive increase of greenhouse gas emissions

For the U.S., which has accomplished industrialisation, the growth of economy and society is stable and the contribution of service industries to the national GDP is at 70%. But China, which is still in the process of industrialisation, is faced with a rapid economic and social growth, with the contribution rate of industries to its GDP as high as 50%. The industrial energy consumptions of the U.S. and China are respectively at 30% and 70%, indicating a high dependency of China on high energy consuming industries. High energy consumption inevitably entails high emissions. On the other hand, the present technical level of China determines a dominant role of coal in consumable energy resources, which further leads to a larger proportion of coal in energy consumption over renewable and clean resources. In 2005, for example, the primary energy consumption of China was 2.233 billion tons of standard coal equivalent. In total energy consumption coal made up 68.9%, 21.0% was petroleum, and 10.1% was natural gas, hydropower, nuclear power, wind power, solar energy, etc. However, the percentages in terms of global primary energy consumption in the same year were respectively 27.8%, 36.4% and 35.8%.

The per capita greenhouse gas emissions of China are far below the levels of western developed countries

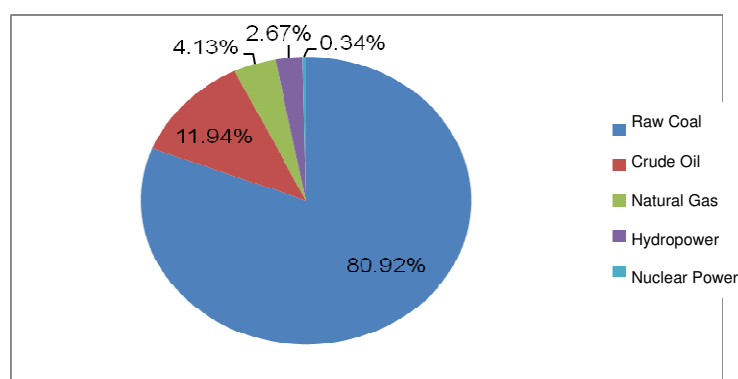
The per capita cumulative CO₂ emissions of China during 1950–2002 were 61.7 tons, ranking 92nd in the world. The per capita CO₂ emissions in 2004 were 3.65 tons, equivalent to 87% of the world average, as well as 33% of the level of Organisation for Economic Cooperation and Development (OECD) countries. In comparison with major developed countries, the per capita greenhouse gas emissions of China in 2007 were merely 18% of the level of the U.S., 39% of Japan and 39.3% of Germany and the UK.

With industrialisation and urbanisation growing rapidly, China is facing great pressure from greenhouse gas emissions

The annual energy consumption increase rate of China during the tenth 5-year plan period (2001–2005) was 9.2%, higher than the annual GDP increase, thus driving the energy intensity per unit of GDP upwards. During the eleventh 5-year plan period (2006–2010), though the energy intensity per unit of GDP dropped slightly, the high

growth of energy consumption was not reversed, with the annual rate close to 9%. The percentage of coal in primary energy consumption rose from 67.75% to 69.11% during 2000–2005. Increased at a more moderate rate in the first two years of the eleventh 5-year plan period, the percentage reached 69.5% in 2007. The total energy production of China in 2007 was 2.231 billion tons of standard coal equivalent, of which 80.97%, an absolute dominant part, was occupied by raw coal, 11.93% was crude oil, and 4.13%, 2.73% and 0.34% were respectively covered by the three clean resources of natural gas, hydropower and nuclear power (see figure 14-1). The total energy consumption in 2007 was 2.535 billion tons of standard coal equivalent, of which coal covered 72.82%, also an absolute dominant part, crude oil accounted for 20.64%, and the percentages of natural gas, hydropower, nuclear power and other clean energies were all below 4%.

Figure 14-1 Primary Energy Consumption of China in 2007 (standard quantity)



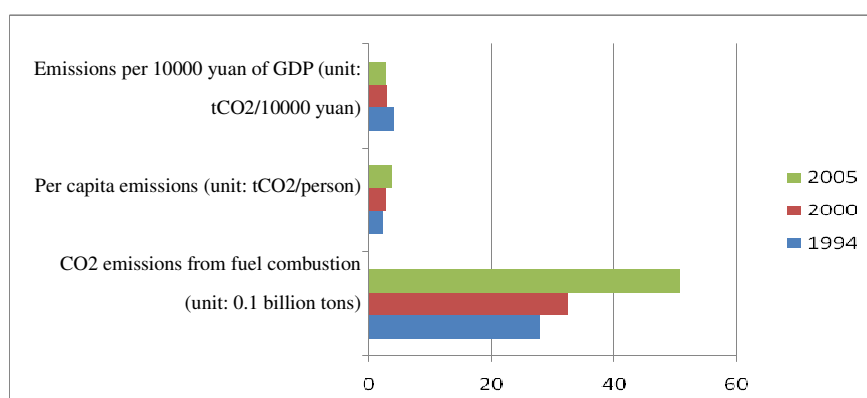
Source: *China Energy Statistical Yearbook 2008*.

The policies of China in energy conservation and emission reduction, environmental protection and climate change in recent years have achieved favourable effects

Firstly, the emission intensity defined as the CO₂ emissions per unit of GDP declined generally. According to the International Energy Agency (IEA) China's emission intensity dropped to 2.76kgCO₂/US\$ in 2004 (constant 2000 U.S. dollar) as compared to 5.47kgCO₂/ US\$ in 1990, a 49.5% decrease (figure 14-2). During the same period the emission intensity of the world average dropped by only 12.6% and that of OECD countries dropped by 16.1%. Regarding the latest years, the national energy

consumption per unit of GDP has experienced a year on year decrease (1.79% during 2005–2006, 3.66% during 2006–2007, and 4.59% during 2007–2008). In the eleventh 5-year plan and China's National Climate Change Program, the government promises to reduce the energy consumption per unit of GDP by 20% from the 2005 level by 2010.

Figure 14-2 CO₂ Emission Changes in China



Secondly, the development of renewable energy is significant. The utilisation of hydropower, biogas, biomass, wind power, solar energy and other renewable energies in 2005 covered about 7.5% of the total energy consumption, equivalent to an emission reduction of 0.38 billion tons of CO₂. According to the Chinese government the percentage of renewable energy would be increased to 10% by 2010, and 16% by 2020.

Thirdly, afforestation and other campaigns have increased the carbon sink. According to expert estimations the cumulative net absorptions of CO₂ through afforestation and forest management during 1980–2005 were about 3.06 billion tons and 1.62 billion tons respectively, and there was an emission reduction of 0.43 billion tons of CO₂ achieved by restrictions on deforestation.

14.1.2 China's Efforts in Tackling Climate Change

Special plans and the national program on climate change

To actively respond to climate change China has stated, in the overall plan for national economic and social development, the emphasis on the strenuous control of

greenhouse gas emissions and a higher sustainability, and has unveiled five special plans and the national program on climate change. See details in Table 14-2.

Table 14-2 Major Action Plans of China on Climate Change

Name	Date of Issuance
China's National Climate Change Program	June 2007
Medium and Long Term Energy Conservation Plan	November 2004
Medium and Long Term Development Plan for Renewable Energy	August 2007
Medium and Long Term Development Plan for Nuclear Power (2005–2020)	October 2007
White Paper on China's Energy Conditions and Policies	December 2007

Box 14-1 Policies and Measures of China on Climate Change

China's National Climate Change Program, the first comprehensive policy document of China on climate change, was officially issued and implemented in June 2007. It clearly defined China's targets, basic principles, key fields and policies and measures on climate change by 2010. The issuance and implementation of the Program, regarded as the announcement that China is a responsible great power, will not only play an active role in China's efforts to combat climate change, but make new contributions to the global response to climate change.

Respecting the need for mitigation of climate change, China will adopt a series of legal, economic, administrative and technical policies and measures in key fields such as transformation of the economic growth model, improvement of energy efficiency and energy conservation, development of renewable energy, construction of nuclear power plants, utilisation of coal-bed methane, industrial processes, management of agricultural, forestry and urban waste etc., so as to control greenhouse gas emissions. As for adaptation, agriculture, forests (or any other natural ecological systems), water resources, littoral belts and coastal regions will be given the priority in implementing extensive adaptation measures to improve the capability to adapt to climate change. Moreover, to enhance the ability to mitigate and adapt to climate change, China will actively accelerate the R&D of relevant scientific technologies on climate change, and strengthen the public awareness, education and training related to climate change as well as the construction of relevant institutions and systems.

The Outline of the Eleventh 5-year plan for National Economic and Social Development in P.R.C. has put forward the task to strenuously realise the control of greenhouse gas emissions and achieve a higher sustainability. As a great and strategic decision made by the Chinese government in the new situation, out of its awareness of responsibilities for the global climate change, the task, while fully reflecting the need and determination to build a resource saving and environmentally friendly society, is an essential way to gain present and future benefits, and has a clearly defined policy orientation. Listing the development of energy resources and environmental protection technologies as the first among the top five national strategic focuses, the Outline of the National Medium- and Long-Term Program for Science and Technology Development, in the section on global environmental change observation and response strategies in key fields and priority topics, gives priority to technologies on the emission control, disposal and utilisation of CO₂, methane and other greenhouse gases in major industries, as well as to measures to mitigate climate change.

Table 14-3 Major Action Targets of China for Mitigating Climate Change

Category	Target
Energy conservation and efficiency improvement	Energy consumption per unit of GDP reduced by 20% from 2005 level by 2010 ⁱ . Energy consumption per unit of GDP reduced by 40% from 2002 level by 2020 ⁱⁱ .
Renewable energy	The utilisation of renewable energy (including large hydropower) to account for 10% of the primary energy supply by 2010 ⁱ . The consumption of renewable energy covers 15% of the total energy consumption by 2020 ⁱⁱⁱ .
Forest coverage	The forest coverage rate reaches 20% by 2010 ⁱ .

Sources: i) China's National Climate Change Program (2007), ii) Medium and Long Term Energy Conservation Plan (2004), and iii) Medium and Long Term Development Plan for Renewable Energy (2007).

Active participation in international cooperation on climate change

With the whole world actively coping with climate change, it is essential for China to clearly locate the strategic position of responding to climate change in its modernisation and peaceful development, as well as to comprehensively coordinate the two overall situations, namely, earning more development space in the international world, and realising the transformation to a low-carbon economy. The following are some major standpoints and opinions of China in coping with climate change.

- Climate change concerns the development of all countries and the future of the human race, and is a major challenge for the entire international community. The historical high cumulative emissions of developed countries are the major reason for climate change, while developing countries are innocently suffering from the most serious adverse effects. For humanity's common interests all the countries should work together and make due contributions under the principle of 'common but differentiated responsibilities'.
- Harmony and balance are the two focuses, including:
 1. The harmony between humans and nature, and the balance between economic growth and environmental protection;
 2. The harmony between humans, and the balance between the poor and the

- rich;
3. The harmony between generations, and the balance between the past, the present and the future;
 4. The harmony between countries, and the balance between different interests.
- Suggestions for cooperation in climate change:
 1. The efforts of the international community on coping with climate change should be legally based on the UNFCCC and the Kyoto Protocol. International cooperation in this regard after 2012 should be discussed in depth according to the two track negotiation process agreed at the 11th Conference of the Parties (COP 11) in Montreal.
 2. Annex I countries of the UNFCCC should show their political sincerity, negotiating and settling emission reduction targets of developed countries after 2012 by 2009.
 3. The implementation of the UNFCCC should be further strengthened, so that its regulations on mitigation, adaptation, capital and technology transfer and capability building can be feasibly carried out and achieve substantial results.

14.1.3 National Greenhouse Gas Inventory of China

To cope effectively with climate change the UNFCCC clearly states that “the parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective responsibilities”. According to the UNFCCC all the parties are committed to provide “national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases”, formulate, implement and publish national plans containing measures to mitigate climate change and to facilitate adequate adaptation to climate change, promote the development and application of technologies capable of reducing or preventing anthropogenic emissions of greenhouse gases, enhance sinks and reservoirs of greenhouse gases, formulate plans to facilitate adaptation to climate change, promote exchange of information related to climate change and helpful in coping with climate change, promote education, training and public awareness related to climate change,

etc. Each party should be liable for communicating to the Conference of the Parties the elements of information, including a national inventory of sources and sinks of greenhouse gases, a general description of steps taken or envisaged to implement the UNFCCC, and any other information that the party considers suitable for inclusion in its communications.

*Actively preparing and submitting the Initial National
Communication on Climate Change of the People's Republic of
China*

Paying close attention to its international responsibilities, the Chinese government has organised officers and experts from related institutions, such as relevant government departments, social groups, R&D institutions, colleges and universities as well as industrial enterprises, to compile the national information communication in accordance with the Guidelines for the Preparation of National Communications from Parties not Included in Annex I to the Convention which was approved at COP 2. Through almost three years of work, more than 400 experts from nearly 100 institutions have finally completed the Initial National Communication on Climate Change of the People's Republic of China. As a collection of extensive opinions, the national communication, after discussion and approval by the National Coordination Committee on Climate Change, was submitted to the Secretariat of the UNFCCC on October 2004 upon approval of the State Council. The 1994 National Greenhouse Gas Inventory of China included in the national communication is shown in table 14-4.

Table 14-4 1994 National Greenhouse Gas Inventory of China

Sources and Sinks of Greenhouse Gases	CO2	Methane	Nitrous Oxide
Total emission (net amount) (unit: 1000 tons/year)	2665990	34287	850
Energy activities	2795489	9371	50
Fuel combustion	2795489		
Energy production, processing and conversion	961703		50
Industries	1223022		
Transportation	165567		
Commerce	76559		
Inhabitants	271709		
Others (the building industry and agriculture)	96929		
Biomass combustion		2147	
Fugitive emissions of fuels		7224	
Petroleum systems		124	
Coal mining		7100	
Industrial processes	277980		15
Agriculture		17196	786
Enteric fermentation		10182	
Rice cultivation		6147	
Burning of savannas		Don't exist	
Others		867	786
Land use changes and forestry	-407479		
Biomass live weight changes of forests and other woody plants	-431192		
Transformation of forests and grassland	23713		
Abandoned land	Not estimated		
Others		7720	
Waste Disposal		7720	

Source: Initial National Communication on Climate Change of the People's Republic of China, 2004.

The publishing of the national communication has laid a sound foundation for the international community to acquire an overall knowledge about the efforts of China in combating climate change, and has made the following contributions; it has:

- Documented all aspects of basic information about greenhouse gas emissions in China
- Improved the capability of China to carry out scenario analysis and forecasting methods for greenhouse gas emissions

- Established the national greenhouse gas inventory database and effectively managed and utilised the inventory database platform
- Lead to a better understanding of China's vulnerability in climate change, and evaluated the influence of climate change on agriculture, water resources, natural and ecological systems, littoral belts and costal ecological systems as well as on human health;
- Improved public awareness in China on climate change;
- Acquired and presented clear information about greenhouse gas emissions and climate change in Hong Kong and Macao;
- Facilitated the incorporation of relevant policies and measures on climate change into national and regional economic and social development plans.

Intensifying research on China's Carbon Balance Trading Framework

Box 14-2 Research on China's Carbon Balance Trading Framework

The Research on China's Carbon Balance Trading Framework was published in November 2008, putting forward for the first time the idea of using carbon, a quantifiable analysis element, as a tool to monitor, distinguish and regulate economic activities, and recommending a provincial level implementation of the 'carbon source and sink' trading system in China. According to the Research, the implementation of the 'carbon source and sink' trading system should be based on the establishment of carbon source and sink balance accounts in cities directly under the central government, autonomous regions and provinces. Therefore, a set of independent calculation procedures has been established to make a statistical analysis of the carbon balance (carbon sources and sinks) in all the 31 provincial-level administrative units of China, with the aim that ecologically benefited areas can spare the spillover economic benefits of the 'external benefit' to compensate ecological protection areas, while enjoying ecological benefits themselves. In its essence, this system regards the emission space of carbon sources as a rare resource and carbon sinks as a profit-making undertaking, so that ecological services can be shifted from a free service to payable service via the measuring of differences between regions in carbon sources and sinks and the generation of reasonable trading prices through effective exchange forms.

The collection and awarding of China Carbon Fund: a province (as well as cities directly under the central government and autonomous region) with a total carbon source amount higher than the total carbon sink amount is obliged to pay in cash in proportion to the excessive part. The payment should be directly made to the Carbon Fund Management Committee and used for compensating areas with a high carbon sink contribution, implementing CDM plans, carrying out technical innovation in energy conservation and emissions reduction, etc. A province (as well as cities directly under the central government and autonomous region) with a total carbon source amount lower than the total carbon sink amount will be supported by ecological compensation, encouragement of its ecological protection and the increase of carbon sinks according to relevant proportions. According to the proposed trade system, with the exceptions of Yunnan, Qinghai and Tibet, which are eligible for the carbon sink compensation, all the other provinces (as well as cities directly under the central government and autonomous region) should contribute to the Carbon Fund at different ratios.

The collection and awarding of the China Ecological Compensation Fund: the fund adopts a mean value differentiation method, with the calculated difference between national carbon sources and sinks as the base line. Provinces with values above the mean value should contribute to the fund according to their proportions to the total, while those below the mean value should be awarded by the fund according to their proportions to the total. The ecological compensation shall be collected annually, and shall be awarded in the current year rather than being retained. The Ecological Compensation Fund facilitates ecological construction, economic structure adjustment and consumption pattern shift of the provinces.

The implementation of China's carbon balance trading mechanism has to be based on the strengthening of the administrative guiding function of the government, with a strong and powerful organisational structure being established. A leading group shall be established for the carbon balance trading, responsible for the preparation of carbon trading strategy and planning, the establishment and management of low carbon economy development projects, the implementation planning of carbon trading, as well as the coordination of provinces (autonomous regions and cities directly under the state council) in their carbon trading organisation, management, arbitration, and supervision, in order to ensure an orderly operation of the carbon trading mechanism.

14.2 Development of a Low-Carbon Economy in China

14.2.1 What is the Intention and Essence of a Low-Carbon Economy?

A low-carbon economy is the general term for economic forms such as low-carbon development, low-carbon industries, low-carbon technologies, low-carbon lifestyles, etc. The essence of a low-carbon economy is to promote the utilisation efficiency of energy, facilitate clean regional development, promote the low-carbon development of products, and preserve the ecological balance of the world. To develop a low-carbon economy can be regarded as the second industrial revolution in human history. According to the statistical data of the World Bank, if we suppose that the entire 100 years of the 20th century is the typical period of the first industrial revolution, human society consumed in total 265 billion tons of coal, 142 billion tons of petroleum, 38 billion tons of steel, 0.76 billion tons of aluminium and 0.48 billion tons of copper during these 100 years. The considerable emissions of greenhouse gases during this period have increased the CO₂ concentration in the atmosphere from less than 300ppm in the early 20th century to 400ppm at present, and have also seriously threatened the global ecological balance. The first industrial revolution has cast a pall over the future of world civilisation for the single reason that it has brought about a worldwide carbon imbalance due to high carbon emissions.

Box 14-3 Low-Carbon Economy

A white paper entitled *Our Energy Future – Creating a Low Carbon Economy* was published by Tony Blair, the Prime Minister of the United Kingdom, on 24 February 2003, promising to reduce CO₂ emissions by 20% from 1990 levels by 2010 and 60% by 2050, as well as to build a low-carbon economic society. The white paper stresses prioritising the development of renewable energy through scientific innovation, including wind power, hydropower (sea waves, tides, etc.), biomass energy, energy crops, solar power, solar photo-electricity, fuel cells, etc. The white paper locates the highest potential for substantial breakthroughs in the technical fields, including CO₂ absorption, energy efficiency, hydrogen production and storage, nuclear energy (in particular nuclear waste disposal), and tidal energy. Though technically feasible, the emission reduction objectives of the white paper should be bolstered by constant actions to eliminate technical, economic and managerial barriers in the transition to a low-carbon economy. As concluded by the Stern Review, timely action will reap economic advantages. Ignoring climate change will do no good to economic growth. The absence of active measures on climate change will possibly risk damage to economic and social activities in the coming tens of years. The earlier effective action is taken, the less costly it will be. The less difficult it will be as well.

It is now generally accepted by the international community that climate change has worldwide causes and effects, and international communication is the basis of an effective and fair response to climate change. To develop a low-carbon economy in China is in accordance not only with the sustainable economic and social development of China, but also with global environmental cooperation. To coordinate the relationship between China's economic growth and climate conservation, to break the restraints of resources and the ecological environment, protect energy safety and realise sustainable development, as well as to seize a new round of development opportunities in the international society for a long-term development of China's modernisation, it is essential to develop low-carbon energy, promote innovation of low-carbon technologies, and transform the models of economic growth and social consumption.

14.2.2 Improving Carbon Productivity and Substantially

Reducing CO₂ Emissions per unit of GDP

To develop a low-carbon economy represents an attempt to form a new model of economic and social development, and entails a long period of effort and practices. As CO₂ is now a major greenhouse gas in China the development of a low-carbon economy is aimed at reducing carbon emissions down to a relatively low level to realise sustainable development and modernisation.

Box 14-4 Carbon Emission Intensity Targets

Carbon emission intensity, defined as the CO₂ emissions per unit of GDP, is mainly used to measure the relationship between a national economy and carbon emissions. The coexistence of economic growth and a decrease of the CO₂ emissions per unit of GDP indicates a low-carbon development of a nation. At the United Nations Summit on Climate Change held on 2 September 2009 Hu Jintao, President of the People's Republic of China, announced the substantial reduction of carbon emission intensity by 2020. On 25 November 2009 an executive meeting of the State Council further discussed and arranged the work on climate change for the next stage, specifying the action target of China for greenhouse gas emission control by 2020; that is, reducing the CO₂ emissions per unit of GDP by 40–45% from 2005 levels by 2020. This binding target is included into the twelfth 5-year plan and the following medium and long term plans for national economic and social development, with corresponding measures for domestic statistics, monitoring and assessment formulated to facilitate the implementation.

Moreover, through actions such as vigorous development of renewable energy and active promotion of nuclear power construction, China will increase the share of non-fossil fuels in primary energy consumption to around 15% by 2020. Afforestation and stronger forest management will increase forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic metres by 2020 from 2005 levels.

14.3 China's Participation in UNFCCC

14.3.1 Kyoto Protocol

The Kyoto Protocol, as the first legal document in human history stipulating specific obligations of developed countries rather than developing countries in reducing greenhouse gas emissions, is a significant step in promoting sustainable development and protecting the global environment. According to the Kyoto Protocol, parties included in Annex I should reduce their greenhouse gas emissions by at least 5% below 1990 levels in the commitment period of 2008 to 2012. Differentiated 'emission limitation and reduction commitments' for parties included in Annex I are defined in the Protocol (see table 14-6). It is also stated in the Protocol that each party included in Annex I should have made demonstrable progress in achieving its commitments under the Protocol by 2005.

Table 14-6 Commitments of Major Parties in the Kyoto Protocol

Party	Quantified emission limitation or reduction commitment (percentage of base year or period)
EU	92
Czech Republic	92
United States of America	93
Canada	94
Poland	94
Russia	100
Ukraine	100
New Zealand	100
Norway	101
Australia	108
Iceland	110

Source: Kyoto Protocol

14.3.2 Bali Roadmap

The Bali Roadmap further defines the principle of 'common but differentiated responsibilities' under the new situation. To reinforce across the board the implementations of the UNFCCC and the Kyoto Protocol, negotiations on the second commitment period of the Kyoto Protocol and international regimes after 2012 were officially launched at the UNFCCC COP 11 in November 2005. Yet the Bali Roadmap, which sets the key elements and tone of the negotiations, was not created

until the convening of the UNFCCC COP 13 in December 2007, as developed countries had been trying to ignore the principle of ‘common but differentiated responsibilities’ in the responsibilities and obligations for climate change mitigation. According to the Bali Roadmap, Annex I parties in the Kyoto Protocol should continue to undertake quantified, ambitious and legally binding emission limitation and reduction objectives. Annex I parties not included in the Kyoto Protocol (mainly referring to the U.S.) must undertake mitigation commitments or actions appropriate to their national circumstances and capabilities under the Convention (including quantified emission limitation and reduction objectives) while ensuring the comparability of efforts among them, and developing country parties should take ‘measurable, reportable and verifiable’ nationally appropriate mitigation actions in the context of sustainable development and supported and enabled by the technology, finance and capacity-building of developed countries in a ‘measurable, reportable and verifiable’ manner. The Bali Roadmap, though carrying on the principles of the UNFCCC and the Kyoto Protocol, in particular the principle of ‘common but differentiated responsibilities’, and setting the general tone of differentiated qualities of obligation and methods of performance between developed and developing country parties, did not clearly define overall emission reduction targets of developed countries in the second commitment period.

14.3.3 Evolution of China’s Policies and Measures on Climate Change

Regarding development stage and major characteristics, there are no clear time boundaries and reforms in China’s policies on climate change. Yet, in terms of the specific obligations of China, the policies before and after the Kyoto Protocol became formally effective obviously differ. Before Kyoto there had been merely a focus on climate change in the context of sustainable development, rather than clear and specific responding policies. But after the clean development mechanism (CDM) and other relevant policies were introduced into the Kyoto Protocol, China has laid more emphasis on organically integrating these policies into related domestic policies. According to the UNFCCC policies, referring to actions adopted or commanded by the government to accelerate the application and utilisation of technologies to control

greenhouse gas emissions, are usually associated with national commerce and industries, and sometimes associated with other countries. By ‘measures’ the UNFCCC mean technologies, techniques and practices adopted to implement the policies, for the purpose of reducing anticipated greenhouse gas emissions.

Before the Kyoto Protocol came into effect

The Kyoto Protocol was formally approved by the Chinese government in 2002. Though, as a developing country, China is not one of the parties with quantified greenhouse gas emission limitation or reduction commitments to the UNFCCC and the Kyoto Protocol, it has still made positive contributions to mitigating the increase of greenhouse gas emissions and protecting the global climate, driven by its awareness of responsibility for the global environment and the necessity of promoting a sustainable development strategy.

Box 14-5 China’s Promotion of Sustainable Development

The Chinese government has carried out a series of actions and measures since 1992 with caution and responsibility since 1992.

The Ten Countermeasures of China on Environment and Development was issued in August 1992, clearly stating that sustainable development is the inevitable choice of China at present and in the future.

In 1994 China formulated and issued its sustainable development strategy: China’s Agenda 21: White Paper on China’s Population, Environment and Development in the 21st Century.

In March 1996 the Ninth 5-Year Plan for National Economic and Social Development and Outline for the Long-Range Objectives through to the Year 2010 was approved at the 4th Plenary Session of the 8th National People’s Congress, initially setting sustainable development as an important guideline and strategic target of China’s economic and social development.

The Tenth 5-Year Plan for National Economic and Social Development in P.R.C. (2001–2005) was published in March, 2001, fully reflecting the sustainable development strategy and its requirements, specifying time governed targets of different fields for sustainable development, compiling key special plans for ecological construction and environment protection, and organising the implementation of these plans.

In 2003 the Program of Action for Sustainable Development in China in the Early 21st Century was formulated right after the 2002 World Summit on Sustainable Development (WSSD). The Decision of the Central Committee of the Communist Party of China on Some Issues Concerning the Improvement of the Socialist Market Economy was issued in the same year, further including “placing people first”, “establishing the concept of a comprehensive, coordinated and sustainable development”, and “promoting an overall development of the economic society and human beings” into the guiding ideas and principles for a deeper economic system reform.

Through over ten years of hard work and effort the sustainable development strategy is reflected in all respects of China’s economic and social development, which has forcefully promoted a sustainable and coordinated development between economy, population and resources as well as environment.

The Chinese government has paid great attention to climate change. Back in 1990 the National Climate Change Coordination Group was established under the Environment Protection Committee under the State Council (now defunct) with Song Jian, a former member of the State Council, as the group leader and with its office set up in the State Meteorological Administration (now known as China Meteorological Administration). The National Coordination Committee on Climate Change was established in 1998, responding to the reform of central state organs. In October 2003 a new National Coordination Committee on Climate Change was formally founded under the approval of the State Council. As a trans-departmental advisory and coordinating organ set up by the government to combat climate change, the Committee was mainly responsible for discussing key issues regarding climate change, coordinating policies and activities of departments on climate change, organising international negotiations, and making decisions on general trans-departmental issues concerning climate change. Key issues or major bifurcations among departments were submitted to the State Council, whose decisions would be followed in international negotiations and the country's implementation of the UNFCCC. According to the Committee, NDRC, the Ministry of Foreign Affairs and the China Meteorological Administration respectively took the lead in the responsibilities for overall coordination of policies responding to climate change, international negotiations on climate change, and cooperation with special committees of other countries on climate change.

After the Kyoto Protocol came into effect

China's response to climate change, after the Kyoto Protocol came into effect, has been focused on strengthening policies and activities on climate change, including:

- Promoting the implementation of relevant mechanisms in the Kyoto Protocol, and giving priority to the development of CDM projects
- Organising the compilation of national and provincial response plans to improve China's capability in combating climate change
- Establishing higher-level administration organs on climate change to strengthen the leadership in relevant work

- Promoting the progress of international negotiations on the second commitment period of the Kyoto Protocol

The Office of the National Coordination Committee on Climate Change issued the Measures for the Operation and Management of CDM Projects in October 2005, further standardising the management of CDM project development. As a pioneering action of the Chinese government in the global response to climate change, the China Clean Development Mechanism Fund and its management centre were formally inaugurated on 9 November 2007.

In June 2007 China's Special SciTech Campaign to Cope with Climate Change was jointly issued by the Ministry of Science and Technology and another 13 departments, to strengthen the R&D of climate change technologies. The campaign will develop technologies for controlling greenhouse gas emissions and mitigating climate change, mainly including technology in the areas of energy conservation and energy efficiency improvement, renewable energy and new energy, advanced nuclear technologies, CO₂ capture and storage technologies, biological carbon sequestration technologies etc. By 2020, with the help of the campaign, China will have substantially improved its capability for independent innovation in climate change, successfully developed a number of key technologies with proprietary intellectual property rights for controlling greenhouse gas emissions and mitigating climate change, and achieved an extensive application of these technologies in its economic and social development.

The National Leading Committee on Climate Change was established in June 2007 as an advisory and coordinating state organ on climate change. The Committee is responsible for:

- Researching and formulating national key strategies, principles and measures on climate change
- Uniformly deploying tasks on climate change
- Researching and discussing international negotiation and cooperation counterproposals
- Coordinating and solving major issues in combating climate change

14.4 Local Efforts in Climate Change

14.4.1 Active Compilation of Provincial Programs on Climate Change

In hopes of a more active and effective response to climate change, NDRC has been devoted to seeking for international cooperation to effectively implement principles and policies of the national program and feasibly promote the provincial governments' formulation of programs on climate change. Since 2006, supported by the Italian government, the Norwegian government, the EU, the World Bank and the United Nations Development Program, thirty-one provincial level governments have completed local programs on climate change. The compilation of provincial programs on climate change is aimed at implementing the national program through local strategies and actions to facilitate the transformation to a low-carbon economy, and to incorporate climate change into the local development strategies by building provincial level organs and local capability on climate change, improving public awareness and establishing new partnerships in financing and technology development and transfer.

14.4.2 Local Progress in Climate Change

Accelerating regional pilot sites and comprehensively promoting the development of a low-carbon economy

It is essential to establish and develop pilot units for a low-carbon economy in different areas and high energy consuming industries, compile low carbon development plans for pilot areas and industries, and discover low carbon regional and industrial models. At present some developed provinces have and should have the ability for absolute emission reductions, and the economies of some developed cities and provinces, restructured or in the process of being restructured, are now in transition to a green economy. Research has shown that areas such as Beijing, Guangdong and Shanghai are capable of taking the lead in national emission reduction after 2020.

Strengthening regional cooperation and facilitating the central and western regions acceptance of the transfer of low-carbon industries

Arid and semi-arid, ecologically fragile and water-deficient areas in north-western China are the most concentrated with high energy consuming industries, followed by the Yangtze River Valley with a serious shortage of good quality water, and densely populated areas such as North China and Central China. The centralised development of high energy consuming industries in these areas has further intensified the water crisis of China, deeply influenced the production and living qualities of residents, restricted the local development space, prevented the coordination and integration of ecological productivity and industrial productivity, and highlighted the necessity and urgency of industrial restructuring. Apart from optimising industrial structure and controlling the development of high energy consuming industries, it is also necessary to promote the central and western regions for a faster transfer of low-carbon industries and to realise low-carbon development.

Box 14-6 Targets of Some Cities and Provinces on Climate Change

Beijing	By 2010 the total energy consumption to be controlled at about 65 million tons of standard coal equivalent, high quality energy to cover above 70% of the energy consumption structure, and the energy consumption per 10,000 yuan of GDP to be reduced by 20% from 2005 level.
Tianjin	By 2010 the CO ₂ emissions from fossil fuel combustion per unit of GDP to be reduced to 2.0 tons per 10,000 yuan, and the energy consumption per unit of GDP to be reduced at 0.85 ton of standard coal equivalent per 10,000 yuan, by 23.2% from 2005 level.
Hebei	By 2010 the energy consumption per 10,000 yuan of GDP to be reduced to 1.57 tons of standard coal equivalent from 2005 level (1.96 tons of standard coal equivalent).
Heilongjiang	By 2010 the energy consumption per 10,000 yuan of GDP to be reduced to around 1.17 tons of standard coal equivalent, by 20% from 2005 level. The energy consumption per 10,000 yuan of industrial added value would be reduced from 2.34 tons of standard coal equivalent to 1.76 tons of standard coal equivalent. The accumulated CO ₂ emission reduction to reach approximately 0.21 billion tons.
Jiangsu	The energy consumption per unit of GDP to be reduced to 0.79 ton of standard coal equivalent from 2007 level (0.853 ton of standard coal equivalent) by 2010, and to 0.7 ton of standard coal equivalent by 2015.
Anhui	The energy consumption per 10,000 yuan of GDP to be reduced by about 20% from 2005 level by 2010, and by at least 15% from 2010 level by 2015.
Fujian	By 2010 the energy consumption per 10,000 yuan of GDP to be reduced to 0.79 ton of standard coal equivalent, below the national average and 16% lower than 2005 level.
Jiangxi	By 2015 the energy consumption of per 10,000 yuan of GDP to be reduced to 0.72 ton of standard coal equivalent by above 20% from 2007 level (0.92 ton of standard coal equivalent).
Shandong	By 2010 the energy consumption per 10,000 yuan of GDP to be reduced by about 13% from 2007 level.
Hubei	By 2012 the energy consumption per unit of GDP to be reduced to 1.12 tons of standard coal equivalent, by about 15% from 2008 level (1.314 tons of standard coal equivalent).
Hunan	The energy consumption per unit of GDP to be reduced by 4% by 2010.
Chongqing	By 2010 the CO ₂ emissions per 10,000 yuan of GDP to be strenuously controlled below 2 tons, and the per capita CO ₂ emissions to be controlled below 4 tons.
Guizhou	By 2010 the energy consumption per unit of GDP to be reduced by 20% from 2005 level.
Yunnan	By 2020 the per capita energy consumption to be controlled at around 2.58 tons of standard coal equivalent, and the energy consumption per unit of GDP to be strenuously

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Chapter 15 International Financial Crisis and Regional Development

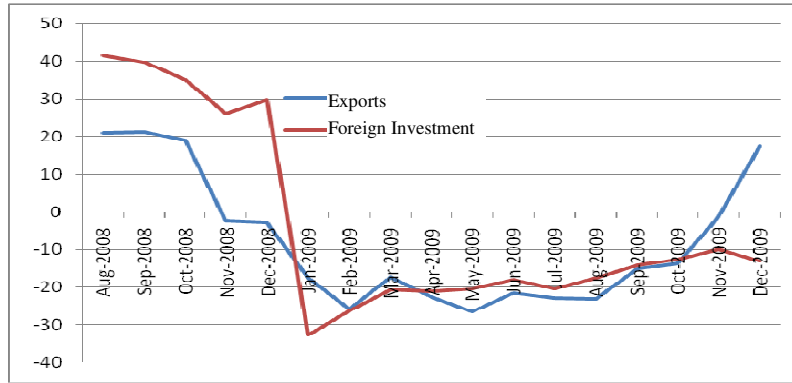
15.1 Impact of International Financial Crisis on China's Economy

China's economy has been seriously impacted by the global financial crisis due to its high degree of openness and the high interdependence between the economies of China and the U.S. Unlike in EU countries, the impact of the financial crisis on China's economy was initiated in real economy, bringing a substantial drop of exports which further led to the chain reaction of a decline of domestic investment, high pressure on consumption growth and an obvious decrease of the economic growth rate. Though some financial institutions investing in sub-prime bonds have suffered from certain economic loss, the impact of the financial crisis on China's financial market and financial institutions is generally not serious. But with a lower economic growth and fewer profits of enterprises, financial institutions will be faced with a higher risk of bad debts. Special attention should be paid to the medium and long-term impact of the global financial crisis on China's financial institutions.

15.1.1 Impact on Economic Growth

The impact of the U.S. financial crisis on China's economic growth was first revealed by the impact on China's exports. The global financial crisis has triggered the most serious financial crisis since World War II in developed economies such as the U.S., the EU and Japan, driving China into a grim situation of external demand. An unexpected negative growth of China's exports started in November 2008, and grew at an increasingly higher pace to 26%. The annual exports of China in 2009 were 16% below 2008 levels where exports had been growing at a rate of above 17% in 2008. The growth of China's exports thus dropped by 33% due to the financial crisis.

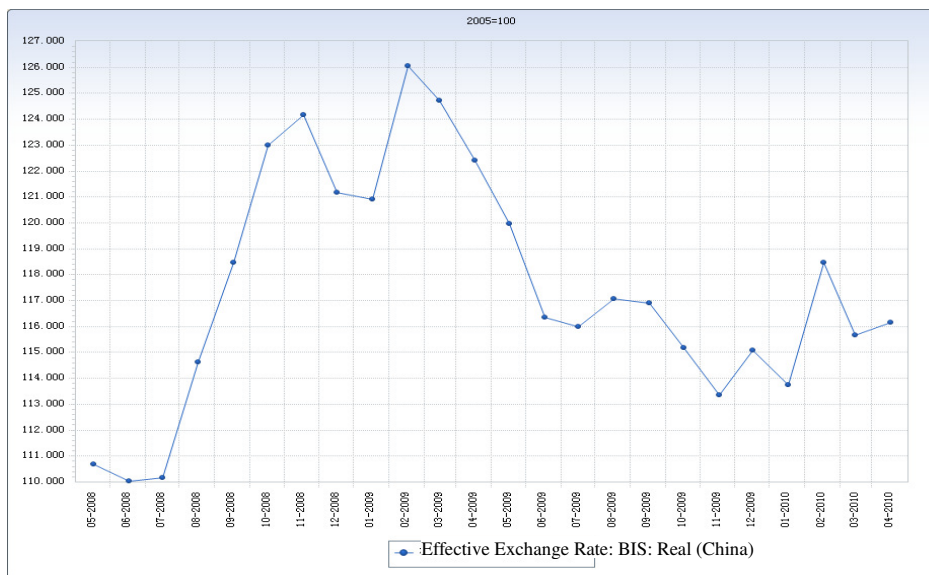
Figure 15-1 Changes to China's Exports and Utilisation of Foreign Investment since the Financial Crisis



Source: <http://egov.mofcom.gov.cn/>

In addition to demand and supply factors, the exchange rate has also set back the growth of China's exports. After the sub-prime crisis, more worried about a slower growth of America's economy, the Federal Reserve consecutively lowered the interest rates leading to the dumping of dollar assets and a more rapid devaluation of the dollar to other major currencies. The RMB real effective exchange rate index at one point reached up to 126 (against the base of 100 for 2005), directly resulting in a cost increase of 26% for foreign trade enterprises. Making no profits, some of them have quit the export business. Despite a recent appreciation, there are still possibilities of dollar depreciation in the medium term as the financial crisis is still impacting, which will definitely create long-term pressure on China's export enterprises.

Figure 15-2 Changes of RMB Real Effective Exchange Rate since the Financial Crisis



Source: CEIC Databases.

The financial crisis has also seriously impacted foreign investment in China. The foreign investment in actual use in 2008 was US\$108.3 billion, 29.7% higher than the 2007 level. In 2009, however, the foreign investment inflow grew at a negative rate, with the lowest hitting below -30%. The annual foreign investment in actual use was US\$94.1 billion, 13.2% lower than that in 2008.

As exports have become a major force driving China's economic growth in recent years, the substantially lower increase rate and the negative growth would inevitably create huge burdens on China's economic growth. Sharply decreased from 9% to 6.8% during the third quarter and the fourth quarter of 2008, the GDP growth of China continued to drop at 6.1% in the first quarter of 2009. A shrunken overseas demand is the main reason for such an obvious decline of economic growth. FDI, due to its smaller percentage in the total investment, is not that influential on short-term economic growth. But considering the functions of FDI as the bearer of technical and managerial experience transfer and the bridge between domestic production and the international market, the decrease of FDI will still adversely influence the economic growth in the medium and long term.

15.1.2 Impact on Industry

China's industries have been impacted by the U.S. financial crisis to different degrees. As shown in table 15-1, the export growths of almost all the major industries in March 2009 were below the levels of the first half year of 2008, when the crisis impact was not yet revealed. Investment goods industries were more seriously impacted than general consumer goods manufacturing industries. Industries with the smallest growth changes in table 15-1 are unexceptionally consumer goods industries, including the clothing industry, whose export growth in March 2009 was even higher than the level of the first half year of 2008. It proves the certain rigidity of the demand for consumer goods – even in the crisis, necessary consumption carries on.

The impact of the crisis on investment goods export, however, is obviously more serious. Telecommunication products, transportation equipment and steel, above all, have experienced a sharp decline of growth, with the rates ranging from 30% to 90%. By March 2009 the exports of telecommunication products, transportation equipment and steel had dropped by about 20%, about 40% and above 50% from the levels of the first half year of 2008, respectively. Such a sharp decline is closely related to a sudden drop of enterprise investment due to the dim future of developed economies.

Table 15-1 Impact on Major Export Industries

Category	March 2009	First Half Year of 2008	Growth Change
Clothing	9.8	4.8	5.0
Luggage	11.8	27.1	-15.3
Furniture	0.1	21.1	-21.1
Spinning and Finished Products	-6.5	22.5	-29.0
Office and Data Processing	-18.5	14.2	-32.7
Pharmaceuticals	3.2	41.6	-38.4
Telecommunications	-22.6	17.8	-40.3
Power Machinery	-1.5	52.5	-54.0
Plastics	-44.1	22.4	-66.5
Transportation Equipment	-40.3	30.9	-71.2
Steel	-54.8	40.4	-95.2

Service industries related to foreign trade have also been dragged down by the lower exports. It is reported that the MICE industry (meetings, incentives, conferences, exhibitions), due to its relation to trade, has been obviously impacted by the financial crisis. Some websites providing information and trade platforms for import and export enterprises have also experienced a sharp decline of business. Industries closely related to international trade, such as the shipping industry, have also suffered a serious impact.

Some local real estate markets did not escape the impact either, due to a smaller foreign investment inflow. Overseas investment institutions started to land in China's real estate market in 2003, purchasing high quality projects at a total amount of over RMB 35 billion according to preliminary statistics. Since the third quarter of 2008, however, the number of overseas buyers investing in real estate in China has seen an obvious decrease. When the financial crisis intensified in September 2008 foreign investment funds which were deeply involved in the crisis, such as Morgan Stanley, Citibank, Lehman Brothers and Merrill Lynch, started to seek for buyers through intermediaries for the property assets they had previously purchased in China. Certain impact was thus inevitably exerted on real estate markets in Shanghai, Beijing and other areas with a relatively higher concentration of foreign investment.

15.1.3 Impact on Regions

The impact of the global financial crisis on different regions of China is significantly varied, mainly owing to the differences in their dependence on foreign trade.

First, the impact on the eastern region is the most direct and obvious. The total imports and exports of the region between January and February of 2009 dropped by 27.86%, nearly 50% below the levels of 2008. Among the ten eastern cities and provinces except for Hainan, which held its positive growth, the others have unexceptionally experienced an absolute decrease of imports and exports. The decrease rates in major export cities and provinces, such as Guangdong, Shanghai, Jiangsu and Tianjin, all exceeded 25%. As a growth engine, exports, when they shrink, will hold back the growth of investment and of consumption demand. The fixed asset investment in the eastern region had been increased by 14.44% by the end of February 2009, nearly 8% below the level of the previous year, hitting the lowest of the regions. Such a low rate also led to a 5% decrease of the region's share in the

national total. Despite a smaller impact on the consumption growth of the region, the total social consumer goods retail sales of major eastern cities and provinces, such as Guangdong, Shanghai, Zhejiang and Beijing, all grew below the national average rate. A smaller demand also led to an obvious decline of industrial production. The regional growth rate of industrial added value during January and February of 2009 was decreased by 12.84% from the level of the year before, in which the rate of Guangdong was approximately zero, and Beijing, Shanghai and Zhejiang had negative growth. The share of the ten eastern cities and provinces in the national total industrial added value dropped by 1.14%.

Second, due to the economic structure, the impact on the western region although noticeable is less serious. The western region mainly exports raw materials and resource products. Hit by the crisis, the imports and exports of the region during January and February of 2009 decreased by nearly 30% from a year earlier, with the growth rate down by over 70%. The region ranked the top in both decrease rate and range among the regions. But as exports of the region share a relatively small part in GDP and are loosely related with investment and consumption, the crisis' impact on the overall economy of the western region, as compared to the eastern region, is clearly smaller. Fixed asset investment and consumption of the region grew positively. The fixed asset investment during January to February of 2009 increased by 46.7% on a year-on-year basis, with the growth rate 25% higher than the previous year's level. The total social consumer goods retail sales of most western provinces grew faster than the national average, in which Yunnan, Gansu and Qinghai even attained a growth rate higher than the previous year's level. Driven by the investment and consumption increase, the industrial added value of the region also grew faster than the national average. The growth rate during January and February of 2009 was 9.27%, higher than the national average by 5.5%.

Third, due to a low dependence on foreign trade, the north-eastern region was also less seriously impacted. The imports and exports of the region during January and February of 2009 dropped by 16% from the previous year's level, which was the smallest drop among the regions. Loosely connected with exports, fixed asset investment and consumption of the region grew rapidly instead. The fixed asset investment during January and February of 2009 was increased by 52%. The growth rate was 19% higher than the preceding year's level and 25.32% higher than the national average, hitting the top of all the regions. The growth rate of consumption

was also high enough to exceed the national average. Thanks to the positive growth of fixed asset investment and consumption, the regional industrial added value also grew faster than the national average. The rate during January and February of 2009 approached 7%, second to the level of the western region. Among the three north-eastern provinces, Liaoning and Jilin had positive growth, while Heilongjiang almost achieved zero growth.

Fourth, compared to the western and north-western regions, the central region is more dependent on foreign trade and closely related to the eastern region, which made it the second most seriously impacted region after the eastern region. The imports and exports dropped by 27% during January and February of 2009, close to the national average. The fixed asset investment was increased by 33.5%, with the rate 7% higher than the national average. The increase in consumption was also above the national average level, with total social consumer goods retail sales growing at a rate of about 18%. The increase of industrial added value at 6.2% was higher than the national average yet lower than the levels of the western and north-eastern regions.

15.2 Stimulus Package to Tackle the Financial Crisis

To address the international financial crisis and control the decline of economic growth, China has promptly adjusted the orientations of its macro economic policies, carried out proactive financial policies and moderately relaxed monetary policies, and unveiled the stimulus package, which has gained time to tackle the crisis. The stimulus package, which has been crucial for an overall economic upturn of China, mainly includes the following:

15.2.1 Massively Increasing Government Input

Focused on infrastructure, civil engineering, social undertakings, independent innovation, restructuring and ecological construction, the central government has carried out the economic stimulus plan of investing an additional RMB 4,000 billion within two years to properly enlarge financial deficits and government bond issuance. Structural tax reductions have been implemented to mitigate difficulties of enterprises in production and operation. Measures such as properly adjusting the capital ratio of

fixed asset investment projects, enlarging corporate bond issuance and activating growth enterprise markets have been adopted to encourage enterprise investment. All these approaches have effectively stimulated a rapid upturn of investment demand and become a major driving force to compensate for a shrunken external demand and are fuelling economic growth. The total investment in fixed assets was increased by 30.1% in 2009, with the rate hitting its highest for the last 15 years, second only to the investment peak of 1992–1994. Investment demand contributed 8% to the 8.7% GDP growth. A substantial increase of infrastructure investment and a vigorous rebound of real estate investment are the main reasons for the economic upturn. The annual infrastructure investment in 2009 (excluding electric power) increased by 44.3%, with investment in railway transportation achieving a 67.5% increase. After the downturn in 2008, China's real estate development and investment has rapidly regained its strength with the total volume in 2009 amounting to US\$156.2 billion, a figure US\$38.3 billion higher than the level of the U.S. (which experienced a 64% decrease in the same year), and the annual increase hitting 16.1%. China now owns the world's largest real estate investment market.

Driven by the stimulus package consumption demand, instead of falling back under the crisis, rebounded against the overall downturn. A stable increase of urban and rural consumer goods markets has been stimulated by such approaches as increasing the minimum grain purchase prices, elevating urban and rural guaranteed income supplement and retirement allowance standards, and adopting the policies of 'home appliances going to the countryside', 'cars going to the countryside', vehicle purchase tax reduction, home appliance trade-in allowance and others. The total retail sales of social consumer goods in 2009 increased by 15.5% and 16.9% after deducting price factors. The increase in total retail sales of social consumer goods in villages, townships and counties even exceeded the urban level, which was unprecedented. Final consumption, contributing 4.6% to the economy, was generally stable. With a faster formation of the consumption pattern oriented to housing and transportation, the sales of commercial houses quickly recovered. The saleable area amounted to 937.13 million sq m, at an increase rate of 42.1%. The annual automobile sales were 136.45 million, hitting a new historical high and increased by 46.2%. China's automobile sales market is now the largest in the world.

15.2.2 Extensively Implementing Industrial Restructuring and Revitalisation Plans

Ten top industrial restructuring and revitalisation plans have been implemented under government coordination to promote the merger and restructuring of enterprises and eliminate backward production capabilities. Effective measures, in particular the establishing of a special RMB 20 billion fund to support the technical transformation of enterprises, have been adopted to facilitate a rapid recovery of key industries heavily hit by the financial crisis such as energy, steel, nonferrous metals, machinery, building materials, etc. Industrial production grew quarter on quarter, by 5.1% in the first quarter, 9.1% in the second quarter, 12.4% in the third quarter, and 18% in the fourth quarter of 2009. The annual added value of industries above a designated size increased by 11% from the previous year's level, with the year-on-year growth upwards for a consecutive eight months. From the view of specific industries, not only those industries heavily reliant on the domestic market saw an obviously more rapid growth (for example transportation equipment manufacturing with an annual increase of 18.4%), but also those highly dependent on the international market were gradually stepping out of the decline, such as the manufacturing of communication facilities, computers and other electronic equipment which experienced a 5.3% increase.

15.2.3 Forcefully Strengthening Scientific and Technical Support

The efforts to accelerate the implementation of national key science and technology projects and support technical innovation in enterprises have effectively reversed the decline of hi-tech industries. Practices aimed at cultivating strategic new industries and building diversified investment and financing mechanisms have facilitated a rapid growth of strategic new industries such as new energy, biopharmaceuticals, new materials, etc.

15.2.4 Substantially Elevating the Level of Social Security

The implementation of more proactive employment policies has brought a markedly better job situation. The annual increase of employees in 2009 exceeded 11 million, with the number of migrant workers at the end of 2009 increased by 1.7 million from the level of the first quarter. Through such measures as accelerating the construction of the social security system, carrying out the pilot project for the new rural pension insurance system in 10% of counties and cities, promoting in all aspects the reform of the medical and healthcare system, and intensifying the government-subsidised housing project and the renovation of rural dilapidated houses, urban and rural living standards have been further improved.

In all, the stimulus package has effectively enlarged investment demand, stimulated consumption demand, promoted an upturn of industrial production, mitigated employment pressure, and effectively reversed the declines of economic benefits and economic growth. After falling back to the lowest rate of 6.2% in the first quarter of 2009, economic growth bottomed out in the second quarter at 7.9%, putting an end to the seven consecutive quarters of decline. The third and fourth quarters saw a quarter-on-quarter increase, with the growth rates standing at 9.1% and 10.7% respectively. The annual economic growth in 2009 reached 8.7%. The bottoming out of China's economy and the overall economic upturn fully proves the remarkable effects of the stimulus package.

15.3 Regional Economic Development in the Post-Crisis Period

To cope with the complicated and volatile domestic and international conditions brought by the global financial crisis, China has carried out and perfected the stimulus package, integrating economic growth with restructuring, connecting short-term policies with medium and long term development objectives, and promoting regional structure adjustment and development model transformation, which has resulted in positive changes in regional economic development. New challenges in regional economic development, however, have emerged at the same time.

15.3.1 Growing Regional Disparities May be Somewhat

Controlled

The outburst of the financial crisis has further propelled the eastern coastal region to accelerate the industrial structure adjustment, transform the economic growth model, and pay more attention to the quality, structure and benefits of economic growth. But with the economic aggregate reaching a certain high level (that is, a high base level), and the costs of land, labour and other factors increasingly rising, the economic growth of the region can no longer be as great as 30 years ago. On the other hand, counting on the abundance and low prices of labour, land, energy and minerals and other resources, the central and western regions have fully exerted their late-developing advantages and comparative advantages and accelerated the acceptance of industrial transfer from the eastern region and foreign countries, which has created valuable opportunities for reducing the disparities between the central and western regions and the eastern coastal developed region. Moreover, a series of actions of the State, such as enlarging investment and promoting economic growth, have clearly stated their preference to the central and western regions, thus creating more advantages for a faster development of the two regions. In 2008 and 2009 the economic growths of the western, central and north-eastern regions surpassed the level of the eastern region, and the gap between the per capita GDP of the eastern and western regions was smaller. It is predictable that within a certain period, the growing regional disparities will be possibly controlled.

15.3.2 Equalisation of Public Services among Regions will be Accelerated, and that between Urban and Rural Areas will Grow even Faster

To preserve a stable economic growth in the crisis, China has taken a series of measures to expand domestic demand. According to the economic stimulus plan, the central government is to invest RMB 1,180 billion and stimulate a social investment of RMB 4,000 billion within two years, with focuses on infrastructure and people's livelihoods in areas such as low-income housing, transportation, water conservation,

protection of the ecological environment, medical and health care, education and culture, etc., and with a clear preference to the central and western regions as well as to rural areas. Such efforts will inevitably quicken the equalisation of public services among regions, not least between urban and rural areas, thus building a favourable foundation for the control of development disparities among regions and between urban and rural areas, as well as for the promotion of a coordinated economic development among regions. It can be predicted that the equalisation of public services among regions will be accelerated, and that between urban and rural areas will grow even faster.

15.3.3 Industrial Transfer and Merger and Restructuring among Regions Will Become More Vigorous

After the outburst of the crisis, some small and medium enterprises, private enterprises and export-oriented enterprises in the eastern coastal region were shut down or reorganised, while some medium and large ones with a high impact resistance seized the opportunity to adjust their development strategies and organise strenuous asset merger and restructuring. Consequently China has formulated ten top industrial restructuring and revitalisation plans, focusing on:

- Eliminating surplus and backward production capabilities. The steel industry, for example, is aiming to eliminate a backward iron making capability of 72 million tons, and steel making capability of 25 million tons in the next three years;
- Encouraging enterprises towards merger and restructuring as well as higher industrial concentration. For instance, by 2011, several internationally competitive super-large steel groups with capacities of over 50 million tons will be established across the country, and 2–3 large automobile enterprise groups with a production and marketing scale exceeding 2 million automobiles will be built within the automobile industry;
- Encouraging enterprises to upgrade their technology and carry out more independent innovation, and practicing the development strategy for new energy automobiles;
- Encouraging the adjustment of production distribution, and promoting the

transfer of the R&D and manufacturing of refrigerators, air-conditioners, washing machines and other key products in the home appliance industry from the Pearl River Delta, the Yangtze River Delta and the Bohai rim region to qualified central and western areas.

It can be predicted that the industrial transfer and merger and restructuring among regions will become more vigorous.

15.3.4 Regional Restraints of the Resource Environment will be Mitigated in Some Areas

After the outburst of the crisis, some eastern backward enterprises with high energy consumption and pollution were heavily impacted. Many enterprises have accelerated the structural and technical adjustments and intensified asset merger and restructuring, while some enterprises or techniques with a high resource consumption and environmental pollution were eliminated, shut down or switched to other productions, which will mitigate the increasing pressure on the resource environment in some areas. New national investment is clearly prohibited from highly polluting, high energy consuming and resource dependent industrial projects, which will further loosen the constraints of the resource environment on future regional economic development in terms of increment. The combination of stock adjustment and increment will mitigate the regional constraints of resource environment, and create favourable conditions for the promotion of a sustainable regional development and the construction of a resource conserving and environmentally friendly society. It is predictable that the regional constraints of resource environment will be mitigated in some areas.

15.3.5 Duplicate Construction Triggered by Local Investment Impulse Should not be Overlooked

With the central government unveiling a series of policies on enlarging investment and promoting economic growth, the local governments have made corresponding investment plans, and taken advantage of local financing platforms for large scale financing, which will probably trigger a new round of local development impulse and

blind investment expansion, and will end in duplicate construction, resource waste and disorderly competition. This issue is cause for concern and should be taken most seriously, with more efforts put into prospective and preventive studies and responses.

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