

Interregional Comparative Analysis of China's Developmental Disparity

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Abstract

Since the launching of the market reform policies in the late 1970s, China has experienced rapid economic growth. However, the eastern region of China has since developed at a relatively more rapid rate than the rest of the country due to various factors like stronger economic foundation, better geographical location, preferential government policies and well-developed infrastructures. On the contrary, due mainly to historical and geographical factors, the development in western China is much slower. This has led to a huge gap between these two regions which will become even larger if the Chinese government does not take the effort to minimize it. This paper examines and analyzes the phenomenon of interregional disparities in China from various crucial perspectives. It looks at the root causes of the existence of such disparities and examines the State's policy response in the form of the "Western China Development" strategy in the context of building a "moderately well-off" society. Recognizing that China's rapid economic growth and expanding

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trade is not a purely economic phenomenon but a multidimensional one, this paper proceeds to evaluate the prospects of the eastern region and western region of China from a multidimensional perspective encompassing the political, social, economic and technological dimensions.

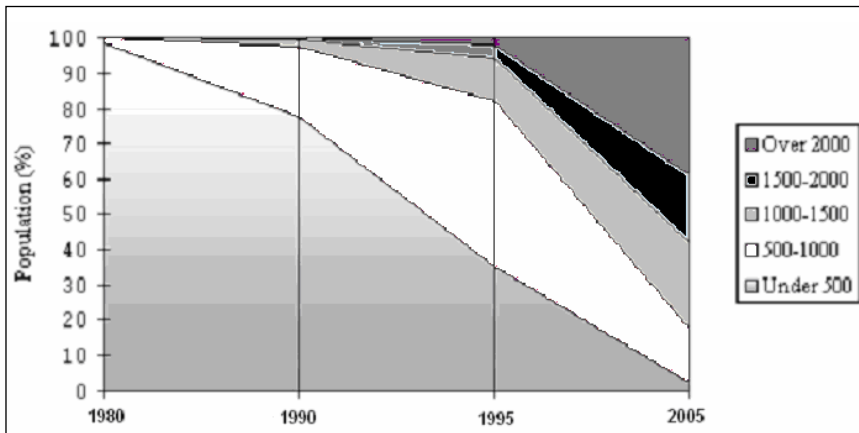
Keywords: regional development, interregional disparities, Western China Development strategy, “xiaokang” society, multidimensional perspective

1. Introduction

The central planning, command economy from 1940s to 1960s had reduced China to one of the poorest countries in the world. However, from 1980s to 1990s – the period that witnessed the ideological reforms in the USSR based on perestroika followed by the collapse of USSR – China began to open up for faster economic development. Continuous rapid growth in recent decades has since transformed China into a high-growth economic powerhouse that exports manufactured goods all over the world. China is now the world’s third largest economy in terms of Gross Domestic Product (GDP) and home to a growing number of local and transnational companies. Furthermore, China is no longer merely a technological follower but has become a manufacturing leader in some areas, most notably in electronics and basic manufactured goods. In terms of personal income, China’s remarkable transformation can be seen in Figures 1 and 2.

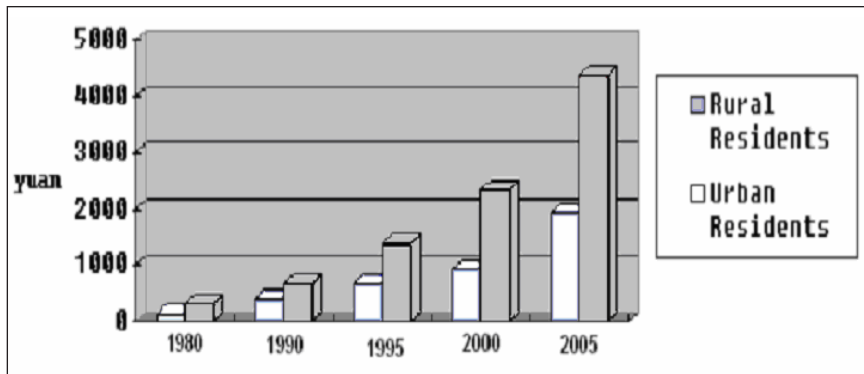
In the government document “Scientific Concept of Development and Harmonious Society” that formed *the* theme of China’s 17th National

Figure 1 China: Population Distribution by Income per Capita



Source: *China Statistical Yearbook*, 1980-2005.

Figure 2 China: Wage Income of Rural Residents v Urban Residents



Source: *China Statistical Yearbook*, 1980-2005.

Congress of the Communist Party, 2007 (15th–21st October 2007), it was reiterated that “[t]o coordinate development among different regions, we should promote the common development of all regions. Regional gaps are not only found between eastern China and western China, but also between provinces, autonomous regions and municipalities directly under the central government. This problem should be gradually addressed in the course of industrialization, urbanization and market development.”¹ While brief, this statement reflects the probably understated concern of the ruling regime of the People’s Republic of China over the widening gap in economic development between eastern and western China, between rural and urban population, and between different social strata. In spite of the astounding economic performance – nothing short of a miracle – over the past few decades, China is undeniably facing acute problems on various fronts. For instance, agriculture accounted for only about 14.6 per cent of China’s GDP in 2003 but 49.5 per cent of her labour force, while up to 59.5 per cent of the country’s total population is rural. This is in addition to the fact that only 13 per cent of China consists of arable land and the country has 40 per cent less arable land per capita than anywhere else in the world. Hence, with more people and less arable land in rural areas, the country has a lower comparative advantage in agriculture, and hence investments have been concentrated in the cities and industries and this has led to increasing rural-urban disparities in socioeconomic development and income distribution (Bi, 2005: 114), as well as the increasingly alarming socioeconomic disparity between the country’s eastern, coastal regions and the inland, especially western, regions.

This paper examines and analyzes the phenomenon of interregional disparities in China from various crucial perspectives. It looks at the root

causes of the existence of such disparities and examines the State's policy response in the form of the *Xibu Dakaiifa* (西部大开发) / "Western China Development"² strategy in the context of building a *xiaokang* (小康) / moderately well-off³ society. Recognizing that rapid economic growth and expanding trade of the People's Republic of China is not a purely economic phenomenon but a multidimensional one, this paper proceeds to evaluate the prospects of the eastern region and western region of China from a multidimensional perspective encompassing the political, social, economic and technological dimensions.

2. China's Regional Development and Disparities

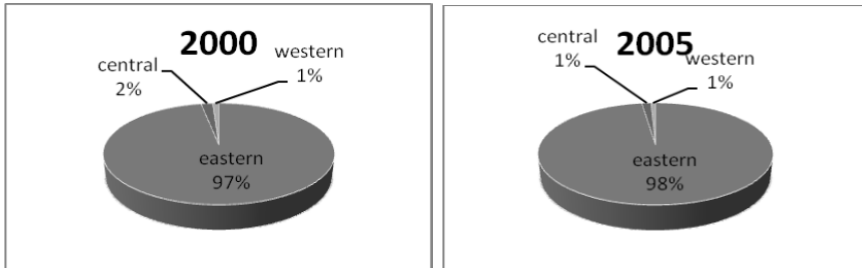
Since the establishment of the People's Republic in 1949, China has undergone a number of radical policy changes in regional development. China has adopted an equal growth strategy with the aim to help the "Third Front"⁴ in economic development during 1949 to 1972. However, China has begun to shift the priority from the inland region to the eastern region since 1973 (Liu and Liu, 2002: 15). Immediately after the adoption of economic reform and open-door policy, the Sixth Five-Year Plan (1981-1985) outlined the regional development that emphasized on comparative advantages (Chen, 2000). This shows that the government intended to have a balanced regional development in the early 1980s.

According to Démurger (2001), the distinct inequalities between the eastern, coastal region and the inland region was reflected in the growth of international trade. Guangdong is the province which derives the greatest benefit from this growth. This is mainly because of the introduction of the "open and reform" policy since 1978 that was initially established in Guangdong. As a result, the eastern region is much more export-oriented than the western and central regions. Moreover, the eastern region's share of total exports remains high as the figure increased from 97 per cent in 2000 to 98 per cent in 2005 as shown in Figure 3.

Besides international trade, the liberalization policy which successfully attracted FDI also has deep impact on regional disparity. Indeed, attracting FDI has been a pillar of China's policies to increase its openness to the world economy. Due to this open-door policy, China has become the largest recipient of FDI among developing countries, accounting for about 25 to 30 per cent of FDI flows to all developing countries (Graham and Wada, 2001).

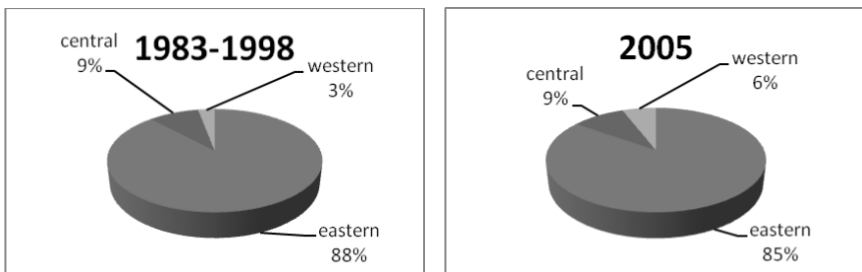
However, the geographical pattern of FDI in China shows that there is a huge disparity between different regions. The eastern region accounted for nearly 88 per cent of FDI from 1983 to 1998, while the central region took up 9 per cent and the western region attracted only 3 per cent, as shown in Figure 4. The figures have changed only slightly by 2005. After the Western China

Figure 3 China: Geographical Distribution of Exports by Foreign-funded Enterprises, 2000 and 2005



Source: *China Statistical Yearbook 2006*, Table 18-13.

Figure 4 China: Foreign Direct Investments by Region, 1983-1998 and 2005



Source: *China Statistical Yearbook*, various years.

Development programme has been launched, there is a significant increase in FDI for the western region. In 2005, FDI for the eastern region dropped to 85 per cent, while that for the central region remained at 9 per cent and that for the western region doubled up to 6 per cent.

A number of studies have shown that globalization and economic liberalization have significant influence on regional growth (Lin, 2000; Sun and Parikh, 2001; Brun, Combes and Renard, 2002). However, if regions are not integrated, globalization and economic liberalization might expand regional inequalities due to regional differences in their involvement in the globalization or liberalization process within their level of development. Regions with higher share of trade and FDI tend to grow faster than those with lower share. Due to the lack of social capability which governs knowledge diffusion, resource mobility and investment, Regions at a low level of development might not be able to benefit much from the globalization or liberalization process (Jia, 1998).

According to Song, Chu and Cao (2000), Chinese government's preferential policies for the coastal region since the 1980s constitute an important reason for the increase in regional disparities. Although there is no doubt that preferential policies have promoted growth in the coastal economies, it is indisputable that the coastal economies are most strategically located to engage in international trade. According to Zhang and Zou (1996), however, the concentration of FDI in the coastal regions can be explained by their inherent local comparative advantages.

Apart from those reasons, internal reforms and sectoral structural changes at the provincial level have played an important role in the accentuation of interregional disparity. Agricultural and industrial activities were pivotal in the early 1970s in China. Most of the developing countries in Asia have relied primarily on agriculture at the early stage of development. The growth and structure of China's agricultural production and trade have been heavily affected by the government's policy that governs the country's external economy (Huang and Rozelle, 2002).

Furthermore, regional disparity can be enlarged due to a high poverty rate either in the urban or rural area. According to *China Population and Development Country Report 2004*⁵, China's rural poverty rate experienced a sharp decline over the last decade. According to the Urban Social Economic Survey by the National Bureau of Statistics (NBS), the average income per person in 1999 was 5,854 yuan, with an increase of 7.9 per cent from 1998 for almost 40,000 families nationwide. In fact, the visible income gap between China's rich and poor had started to manifest itself since about a decade ago. Rough estimates also revealed that the top 10 per cent of the country's population were holding 40 per cent of the banks' savings. By the mid-1990s, 20 per cent of the population were holding 80 per cent of such savings.⁶

It has been noted that regions with systematic infrastructural development are conducive to attract foreign direct investment because fine infrastructures facilitate investors' utilization of resources, e.g., the amount of utilized FDI in China's eastern region outnumbers that in her western region by over 25 times, and around 71.5 per cent of the country's industry was concentrated in the coastal region in 1994, *vis-à-vis* merely 28.5 per cent in the inland region (Han, 2002). Thus, this also leads to the interregional dichotomy that human resource is concentrated in eastern, coastal region while mineral resources are found chiefly in the inland region where productivity and living standard are much lower than those in the eastern, coastal region (Unel and Zebregs, 2006).

Besides this, there is a significant trend that members of the younger generation prefer to work in metropolitan cities as there are more working opportunities in cities than in small towns and villages. Cities, too, have

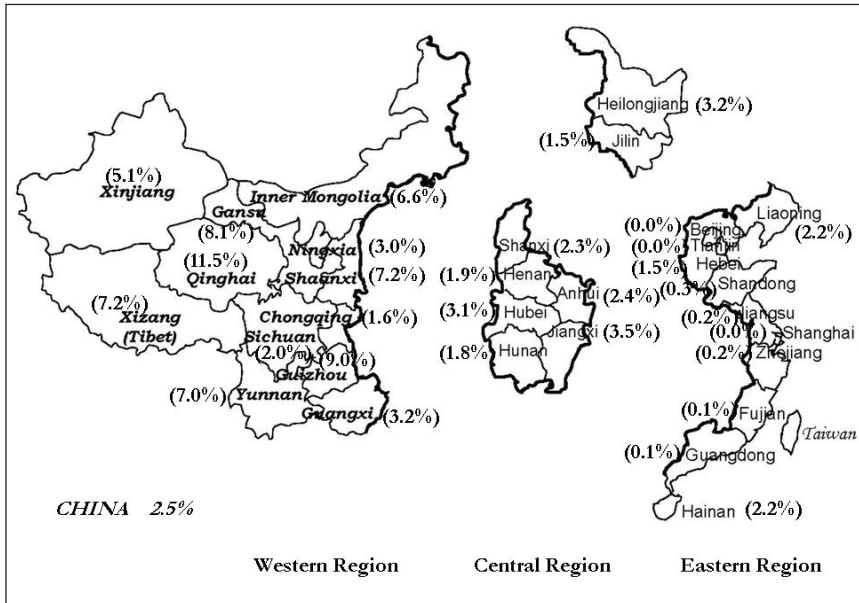
higher productivity since most of the human capital and technological advances are concentrated there. On the other hand, as more and more young people migrate to the cities, and only the children and old folks remain in the villages, the gross dependency rate in the rural areas must be higher than that in the urban areas, leading to heavier burden of the local governments in the rural areas which directly affects the growth of these areas as the local governments have to subsidize those who are not in employment such as children, old folks and women.

In this context, uneven regional development is distinct in such a big country as China where the coastal region has historically always been more advanced than the inland region in terms of development and modernization. As we have seen earlier, the Chinese government did extend substantial industrial support to the inland region during the pre-reform period (from 1949 to the late 1970s). Nevertheless, the rigid central planning system of the command economy had caused serious distortion in the market mechanism, leading to misallocation of resources and hence economic inefficiency, while the Mao era had achieved little in ameliorating interregional inequality in development.

Since the launching of the market reform policies in the late 1970s, China has experienced rapid economic growth. However, stronger economic foundation and better geographical location have led to the eastern region of China developing at a relatively more rapid pace. Besides the abovementioned factors, preferential government policies and well-developed infrastructures also contributed to the rapid economic growth in eastern China. Due to historical and geographical factors, the development in western China is slower than the development of the eastern region. Hence, a huge gap exists between these two regions and it will become even larger if the Chinese government does not take the effort to minimize it.

In order to minimize the disparity, Chinese leader Jiang Zemin (江泽民) put forward the guidelines for accelerating the development of western China on 17th June 1999, stressing that a coordinated development between the population, resources, environment, economy and society should be achieved step by step through inputs of domestic and overseas capital as well as technical personnel (*China Statistical Yearbook 2002*). The economic development in western China is accelerated after the implementation of the Western China Development programme. To a certain extent, basic infrastructures are better developed, intra-regional and interregional income gap has been narrowed and the collaboration between the eastern region and the western region has been improved. Nevertheless, according to the *Zhongguo Xibu Fazhan Baogao 2008*, even with continuous support and aid from the central government, the Western China Development programme still has a long way to proceed.

Figure 5 China: Incidence of Absolute Poverty by Province/Zizhiqu/Zhixiashi, 2005



Source: Yeoh (2009b: 240), Figure 10.29. Data from *Zhongguo Fazhan Baogao 2007*, p. 39, Table 2.3.

Although it has often been noted that the Western China Development strategy was a big gambit for Jiang Zemin (Yeoh, 2008a: 25), something that neither Mao Zedong (毛泽东) nor Deng Xiaoping (邓小平) could do during their lifetime”, the basic reason for launching the Western China Development strategy is the increasing worries on the part of China’s central State regarding the growing interregional economic disparity that could have grave consequences for the country’s stability and the security of the regime (see Figure 5).

3. “Western China Development” Programme

The “Western China Development” programme was initiated in January 2000 by the Leadership Group of Western China Development (西部地区开发领导小组) which was led by Premier Zhu Rongji (朱榕基). The main objectives of this programme are to develop the infrastructure in transportation, telecommunications and energy usage; to increase the level of foreign investment to this region; to increase the effort on ecological protection; to

promote a better education; and to reduce the poverty rate in order to narrow the gap between the eastern region and the western region (*Zhongguo Xibu Fazhan Baogao 2008*).

Under this “Western China Development” policy, China is divided into three regions – eastern, central and western (see Figure 6). The western region consists of 6 provinces (Gansu, Guizhou, Qinghai, Shaanxi, Sichuan and Yunnan), 5 “autonomous regions” (Guangxi, Inner Mongolia, Ningxia, Tibet and Xinjiang) and 1 municipality (Chongqing).⁷ The western region of China is home to one-third of the country’s administrative provinces and autonomous regions. It covers an area of 5.4 million square meters and has a combined population of over 280 million, making up 56 per cent and 23 per cent of the national total respectively. The western region is used to be described as “barren, remote, poor, large, valuable and beautiful” and most of the populations are national ethnic minorities especially in Xinjiang and

Figure 6 China: Eastern, Central and Western Regions



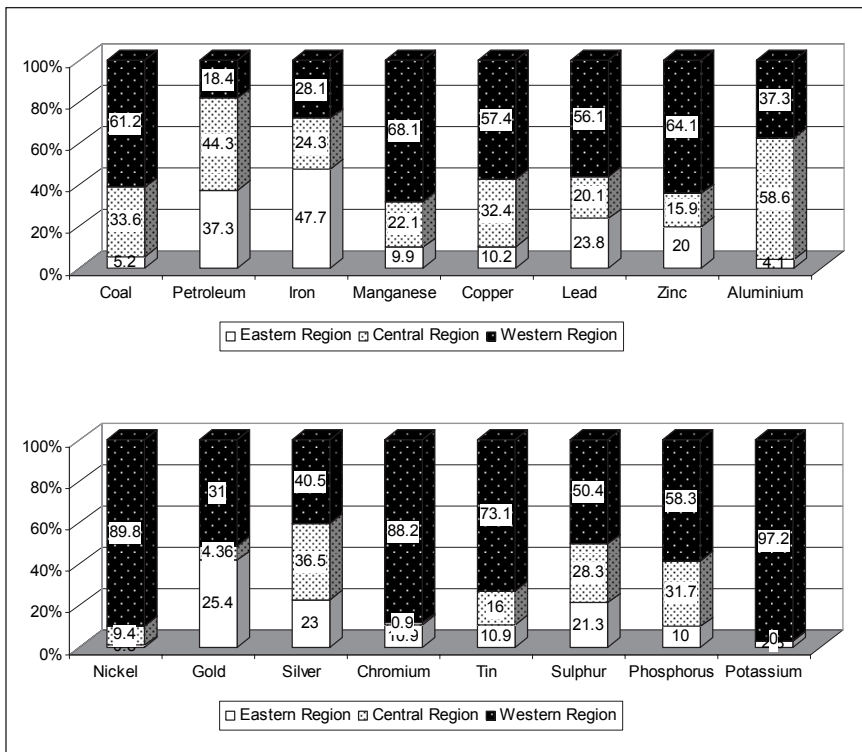
Notes: Province/Zizhiqu/Zhixishi in the officially designated Western Region in bold italics.

— Regional Boundary

Source: Yeoh (2009b: 237), Figure 10.23.

Tibet (Goodman, 2004). Besides that, the western region is rich of a variety of natural resources such as petroleum, natural gas, coal, iron, magnesia, copper, zinc and others (Figure 7). Apart from the above minerals, the water resource in western China is about 82.5 per cent of the total water resources in China (*Zhongguo Xibu Fazhan Baogao 2008*). In addition, the western region has great potential in tourism as most of the famous tourist spots in China such as, Jiuzhaigou Valley in Sichuan, Mogao Caves or Caves of the Thousand Buddhas in Gansu, the Terracotta Army in Shaanxi and the Potala Palace in Tibet are concentrated in the western region. The GDP and GDP per capita of the western region in relation to the national figures are shown in Table 1.

Figure 7 China: Distribution of Mineral Reserves (Region as Proportion of All China)



Source: Yeoh (2008c: 39), Figure 8. *Zhongguo Diqu Jingji Fazhan Zhanlue Yanjiu*, 2003, p. 122, Table 7-4. (Computed from “Quanguo Kuangchan Chuliang Hui Zongbiao 全国矿产储量汇总表”. Calculated with reserve volume as at end of 1997.)

Table 1 GDP and GDP per Capita of China's Western Region

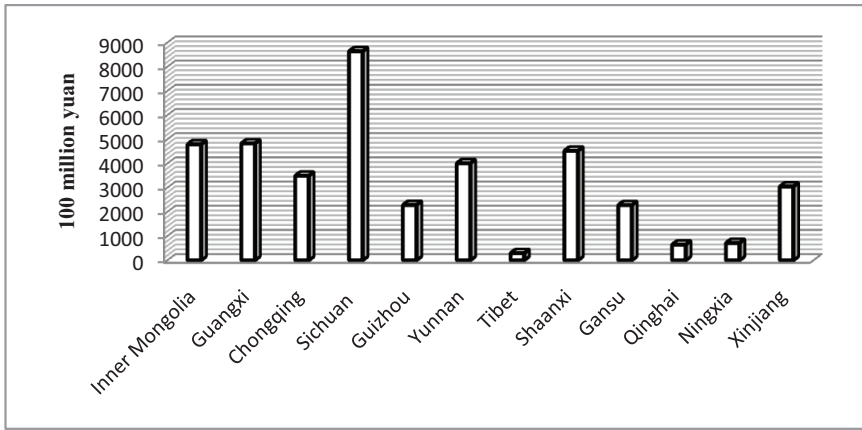
	<i>Year</i> <i>Unit</i>	1999	2000	2001	2002	2003	2004
GDP of the western region	billion yuan	1535.4	1665.5	1824.8	1988.6	2295.4	2758.5
National GDP	billion yuan	8206.75	8946.81	9731.48	10517.23	11739.02	13687.59
GDP of the western region as percentage of national GDP	%	19.0	18.9	19.0	19.1	19.7	20.1
GDP per capita of the western region	yuan	4302	4667	5070	5438	6306	7728
National GDP per capita	yuan	6551	7086	7651	8214	9101	10561
GDP per capita of the western region as percentage of national GDP per capita	%	65.67	65.86	66.26	66.20	69.28	73.2

Source: Yeoh (2008b: 176), Table 8.19. Data from *Zhongguo Xibu Nongcun Quannmian Xiaokang Zhibiao Tixi Yanjiu*, 2006, pp. 51-52, Tables 4-1, 4-2.

Figure 8 shows the gross regional product of each province/zizhiqu/zhixiashi in the western region in 2006. Sichuan has the highest gross regional product of 863,781 million yuan in 2006. On the other hand, Tibet is found to have the lowest gross regional product of 29,101 million yuan in the same year. The data show that the Chinese government needs to exert more efforts to ensure the equal growth of every province in this region.

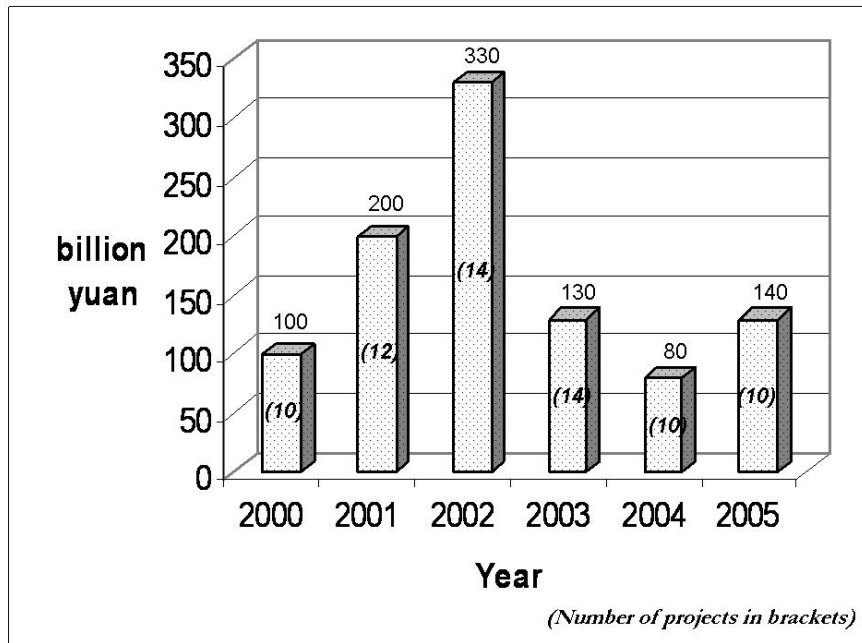
With the launching of Western China Development programme, the gross regional product in the western region has grown from 1,873,500 million yuan in 2001 to 3,952,700 million yuan in 2006 while the per capita gross regional product has increased from 5,183 yuan in 2001 to 10,959 yuan in 2006. However, the gross regional product in western China is only 17.1 per cent of the nation's gross domestic product in 2006 (*Zhongguo Quyuan Jingji Tongji Nianjian 2007*). Besides that, the revenue of local government

Figure 8 Gross Regional Product in Western China, 2006



Source: *Zhongguo Xibu Fazhan Baogao 2008*, Table 9-2-1.

Figure 9 Major Projects and Amounts of Investment in China’s Western Region since the Implementation of “Western China Development” Strategy



Source: Yeoh (2009a: 260), Table 10.10. Data from *Zhongguo Fazhan Shuzi Ditu*, 2006, p. 225.

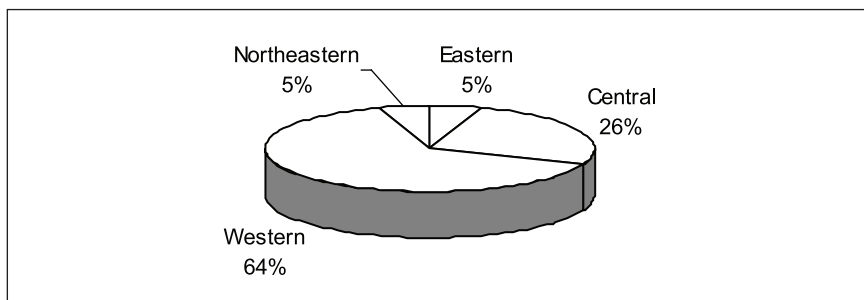
in western region increased from 130,070 million yuan in 2001 to 305,900 million yuan in 2006 while the total investment in fixed assets was brought up to 2,199,700 million yuan in 2006 and the increment was about triple as compared to 715,900 million yuan in 2001 (*Zhongguo Xibu Fazhan Baogao 2008*). Figure 9 shows the major projects and amounts of investment in the western region since the implementation of the Western China Development programme.

4. Poverty in Western China

Due to the huge gap between the eastern region and the western region in China, an issue which has gained serious concern is the poverty rate in western China. China's rural poverty is concentrated in the western region (see Figure 5 earlier). For instance, the poverty rate at Inner Mongolia, Yunnan, Shaanxi, Gansu, Ningxia and Xinjiang is between 5 to 10 per cent. The poverty rate in Guizhou, Tibet and Qinghai at more than 10 per cent is even worse. In fact, in 2006, the rural absolute poor plus rural low-income population reached 13.7 per cent of total rural population in the western region (Yeoh, Liong and Ling, 2009: 182). Figure 10 shows the distribution of population in absolute poverty in the countryside by region in 2006.

The distribution of population in absolute poverty in China can be divided geographically into four regions, namely the eastern region, central region, northeastern region and western region (Figure 10). Almost 64 per cent of the population in absolute poverty are found in the western region, followed by 26 per cent in the central region. However, only 5 per cent are found in the eastern region and another 5 per cent in the northeastern region. Hence, the absolute poverty rate is unmistakably very much higher in the western region.

Figure 10 China: Distribution of Rural Population in Absolute Poverty by Region, 2006



Source: *Zhongguo Xibu Fazhan Baogao 2008*, Chart 7-1.

On the other hand, the annual disposable income per capita of urban households is about 14,967 yuan and 9,728 yuan in the eastern region and the western region respectively, while the net income per capita of rural residents is 5,188 yuan and 2,588 yuan in the eastern region and the western region respectively (*Zhongguo Xibu Fazhan Baogao 2008*), with the huge income gap leading to imbalance in living standard between the two regions.

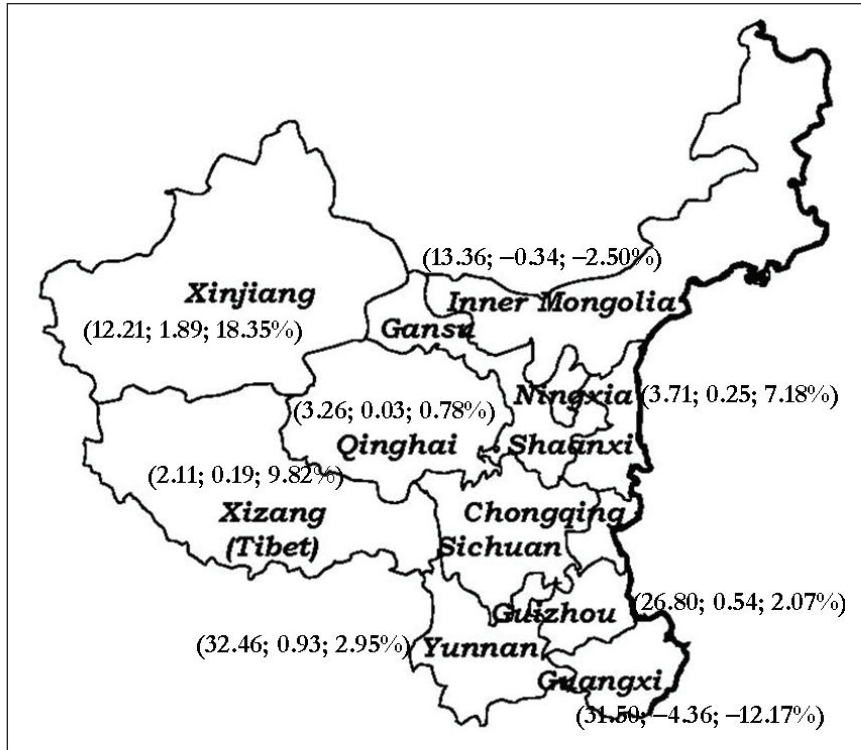
From Table 2, it can be observed that more than 50 per cent of the population in the western region are involved in the primary sector. Most of the population in the western region work in agriculture (Figure 11), agribusiness, fishing, forestry and mining sectors. Due to the availability of rich natural resources and arable land in the western region, the primary sector takes up the biggest proportion of industrial composition. The land area in the eastern region is about 916,000 km² while the land area in the western region is about 6,867,000 km² (*Zhongguo Quyu Jingji Tongji Nianjian 2007*). On the other hand, most of the population in the eastern region are involved in the tertiary sector. In Beijing and Shanghai respectively, 69 per cent and 54 per cent of the population are involved in the tertiary sector (*ibid.*: 33). Hence, the income per capita for the western region, especially in the rural areas, is comparatively low because wages in the primary sector are lower and less stable as compared to the tertiary sector.

Table 2 Industrial Composition in Western China, 2006

Region	Primary Sector (%)	Secondary Sector (%)	Tertiary Sector (%)
Inner Mongolia	53.8	15.6	30.6
Guangxi	56.2	11.2	32.6
Chongqing	45.3	21.5	33.2
Sichuan	50.6	18.4	31.0
Guizhou	57.4	10.3	32.3
Yunnan	69.4	10.0	20.6
Tibet	61.5	9.2	29.3
Shaanxi	50.8	18.5	30.7
Gansu	57.2	13.7	29.1
Qinghai	49.1	17.4	33.5
Ningxia	48.4	22.3	29.3
Xinjiang	53.3	13.3	33.4

Source: *Zhongguo Xibu Fazhan Baogao 2008*, Table 9-4-2.

Figure 11 China: Population Engaged in Agriculture in Ethnic Zizhiqu and Multiethnic Provinces (million people in 2000; growth in million 1990-2000; growth rate)



Source: Yeoh (2009b: 240), Figure 10.30. Data from *Zhongguo Minzu Fazhan Baogao, 2001-2006*, p. 232, Table 19 (original data source: 2000 Population Census).

5. Xiaokang Society Construction in Western China

Although the poverty rate is still considerably high in the western region, the construction of a *xiaokang* society in the western countryside has gained momentum since the implementation of the Western China Development programme. A *xiaokang* society refers to a society with good economic growth and a satisfactory standard of living. The criteria which are taken into account include consistent economic growth, well-developed infrastructure and telecommunication services, good education system and clean environment.⁸ Table 3 shows the degrees of realization of *xiaokang* society in the eastern region, central region and western region of China from 2002 to 2006.

Table 3 China: Degree of Realization of *Xiaokang* Society by Region, 2002-2006

Year	Total (%)	Eastern Region (%)	Central Region (%)	Western Region (%)
2002	12.5	30.8	9.8	-14.1
2003	16.9	35.6	13.8	-9.7
2004	21.6	40.5	18.3	-5.1
2005	28.2	47.6	24.6	1.3
2006	34.9	54.7	31.0	7.8
Average Growth	5.6	5.975	5.3	5.475

Source: *Zhongguo Xibu Fazhan Baogao 2008*, p. 303, Table 8-1.

Table 3 shows that a huge gap exists between the *xiaokang* society composition in the eastern, central and western regions. In 2006, about 55 per cent of the society in the eastern region is *xiaokang*. This means that the eastern region has almost completed half of the journey towards a *xiaokang* society. On the other hand, about 31 per cent of the society in the central region is *xiaokang*. This means that the central region has gone through almost one third of the journey. However, in the western region, only 7.8 per cent of its society is *xiaokang*. This shows that the construction of a *xiaokang* society in the western region is only at the initial stage and there is still a long journey for the western region to achieve the *xiaokang* society target. Although the percentage of society which is *xiaokang* in the western region is comparatively lower, it is growing at a faster rate (6.5 per cent) compared to the central region (*Zhongguo Xibu Fazhan Baogao 2008*, p. 302). This could be a good indicator to show that the Western China Development programme has started to slowly show its effect. More details by province/zizhiqu/zhixiashi are shown in Table 4.

The main factor which has contributed towards the abovementioned imbalance is the weak and fragile social background in the western region. The western region started off with the lowest percentage of *xiaokang* society and lags behind the central region and eastern region in this respect. Although the average growth of *xiaokang* society in the western region has been dramatically fast since 2003, the region still has the lowest percentage of *xiaokang* society among the three regions.

While undoubtedly the Chinese government has realized fully the need to develop the western region, there exist a number of constraints in enhancing the proportion of *xiaokang* society in the region. First of all,

Table 4 China: Degree of Realization of *Xiaokang* Society by Province/Zhizhiqu/Zhixishi, 2002-2006

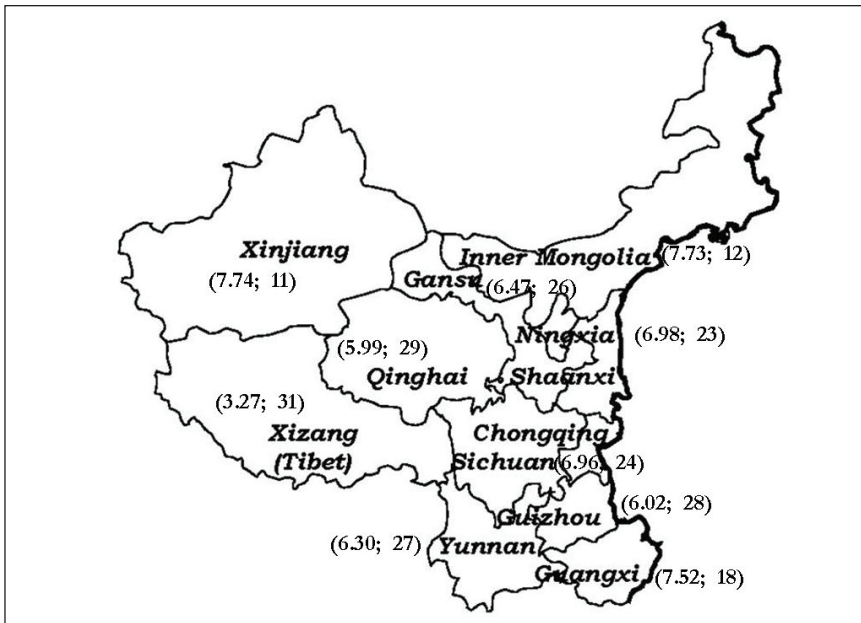
REGION	2002			2003			2004			
	%	Ratio to Whole China (%)	Ratio to Western Region (%)	%	Ratio to Whole China (%)	Ratio to Western Region (%)	%	Ratio to Whole China (%)	Ratio to Western Region (%)	
Inner Mongolia	1.2	-11.3	15.3	6.4	-10.5	16.1	12	-9.6	17.1	
Guangxi	-1.8	-14.3	12.3	2.3	-14.6	12	7	-14.6	12.1	
Chongqing	-	-	-	5.8	-11.1	15.5	10.2	-11.4	15.3	
Sichuan	0.3	-12.2	14.4	2.6	-14.3	12.3	9.1	-12.5	14.2	
Guizhou	-20.7	-33.2	-6.6	-15.7	-32.6	-6	-10.1	-31.7	-5	
Shaanxi	2.34	-10.16	16.44	5.8	-11.1	15.5	9.7	-11.9	14.8	
Gansu	-	-	-	-13.4	-30.3	-3.7	-9.2	-30.8	-4.1	
Qinghai	-28.6	-41.1	-14.5	-17.8	-34.7	-8.1	-14.7	-36.3	-9.6	
Ningxia	-	-	-	-6.0	-22.9	3.7	-2.3	-23.9	2.8	
Xinjiang	-7.4	-19.9	6.7	-2.8	-19.7	6.9	1.6	-20	6.7	
				2005			2006			Average Growth
Inner Mongolia	19.9	-8.3	18.6	27.3	-7.6	19.5	6.5	0.9	1.0	
Guangxi	13.4	-14.8	12.1	20.3	-14.6	12.5	5.5	-0.1	-	
Chongqing	16.4	-11.8	15.1	21.4	-13.5	13.6	5.2	-0.4	-0.3	
Sichuan	15.9	-12.3	14.6	22.6	-12.3	14.8	5.6	-0.1	0.1	
Guizhou	-6.3	-34.5	-7.6	-0.1	-35	-7.9	5.2	-0.1	-0.3	
Shaanxi	16.2	-12	14.9	22.8	-12.1	15	5.1	-0.4	-0.4	
Gansu	-5.4	-33.6	-6.7	-0.5	-35.4	-8.3	4.3	-1.2	-1.2	
Qinghai	-7.9	-36.1	-9.2	-0.1	-35.0	-7.9	7.1	1.5	1.7	
Ningxia	3.5	-24.7	2.2	9.5	-25.4	1.7	5.2	-0.3	-0.3	
Xinjiang	7.8	-20.4	6.5	14.5	-20.4	6.7	5.5	0	0	

Source: *Zhongguo Xibu Fazhan Baogao 2008*, pp. 307-314, Tables 8-3 – 8-13.

the government faces the problem of improving the education of peasants (Figure 12). The average education level for most of the population in the western region is only 6.5 years (*Zhongguo Shehui Tongji Nianjian 2008*). The region experiences a high drop-out rate and a low school enrolment rate for children. The main reason is the lack of awareness of the importance of education among the population in this region. Besides that, low and insufficient education funds also lead to high drop-out rate in the region. The school enrolment rate in Yunnan, Tibet and Qinghai is below 90 per cent. (*Zhongguo Xibu Fazhan Baogao 2008*) Hence, the Chinese government must invest more in education, especially for the population in the western region. The standard of living for the population in the western region can only be improved via a reform of the education system. A high literacy rate is pertinent for encouraging economic growth in the region.

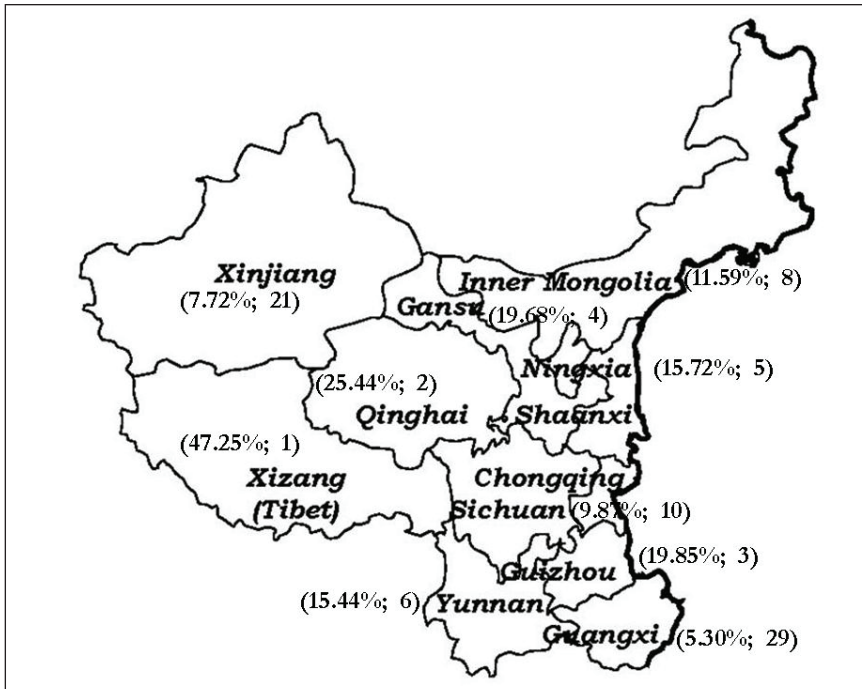
Apart from the problem in the education system, the low level of income which is linked to low literacy rate is another constraint for the development of the western region (Figure 13). Due to illiteracy, most people in the

Figure 12 China: Average Education Level in Ethnic Zizhiqu and Multiethnic Provinces, 2000 (years of schooling; national ranking of education level)



Source: Yeoh (2009b: 239), Figure 10.27. Data from *Zhongguo Minzu Fazhan Baogao, 2001-2006*, p. 231, Table 17 (original source: *Zhongguo Renkou Wenhua Suzhi Baogao, 2004*).

Figure 13 China: Illiteracy in Ethnic Zizhiqu and Multiethnic Provinces, 2000
(illiteracy rate; national ranking of illiteracy rate)

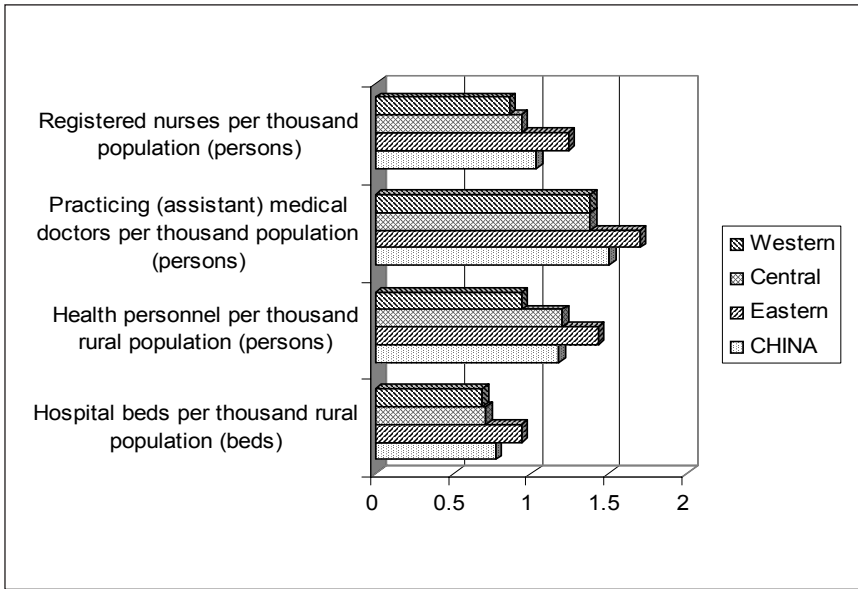


Source: Yeoh (2009b: 239), Figure 10.28. Data from *Zhongguo Minzu Fazhan Baogao, 2001-2006*, p. 230, Table 16 (original source: *Zhongguo Renkou Wenhua Suzhi Baogao*, 2004).

western region are involved in agricultural activities. In 2005, the per capita disposable income in the western region is only 2,029 yuan, which is lower than the minimum per capita disposable income requirement of 2,200 yuan for a *xiaokang* society (*Zhongguo Shehui Tongji Nianjian 2008*). The reason is that the disposable income per capita in the western region has always been low and the average disposable income growth rate has been weak.

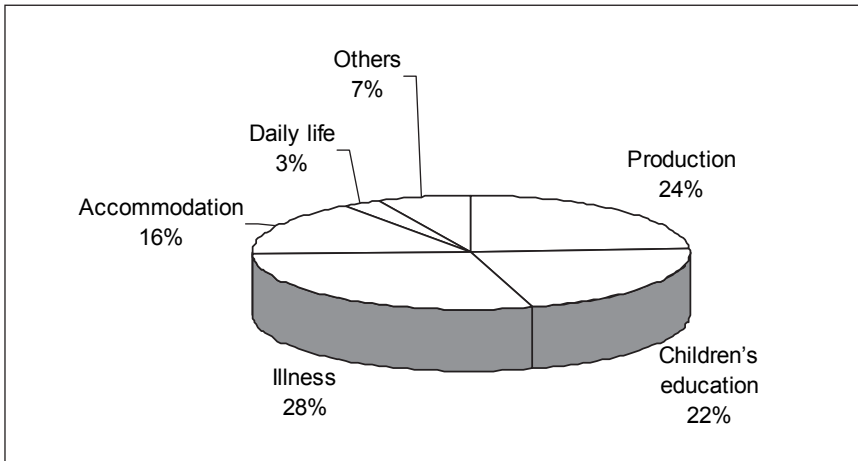
Besides that, low health consciousness among the population and inadequate public infrastructure in the western region is another constraint. In the western region, the accessibility of medical services is limited and the quality of the services has not achieved the national standard (Figure 14). In 2005, the medical coverage rate in the western region is only 14 per cent (*Zhongguo Weisheng Nianjian 2007*). Most patients have to pay the medical expenses with their own fund, and this becomes a huge burden for most people in the western region (Figure 15).

Figure 14 China: Healthcare by Region, 2004



Source: Yeoh (2008b: 191), Table 8.32. Data from Nie and Yang (2006: 287-288), Tables 7-1, 7-2.

Figure 15 Reasons for Peasants' Indebtedness in China



Source: Yeoh (2009a: 267), Figure 10.12. Data from Han and Luo (2005), cited in Nie and Yang (2006: 292), Table 7-6.

Due to the complicated geographical factor and low population density, developing the western region becomes a costly affair. Thus, the development of this region has inevitably to be a slow process.

The development of the western region thus poses a dilemma for the Chinese government. If the current situation in the western region remains unchanged and the other regions in China enjoy rapid growth, regional disparity in China will only worsen. This will cause increased dissatisfaction in the western region and possibly bring about instabilities in the region. As a result, the peace of the nation will be threatened and the economic growth of China will be jeopardized. However, the Chinese government has shown that it has not given up the idea of developing the western region. For instance, the building of the Qinghai-Tibet railway is one of the efforts by the Chinese government in developing the western region. The total length of this railway is 1,956km and it connects Xining in Qinghai to Lhasa in Tibet (*Zhongguo Xibu Fazhan Baogao 2008*). While in certain ways controversial, the building of this railway does accelerate the growth in tourism and transportation. Continuous development of the western region is crucial. Only if the region's poverty rate could be reduced and its per capita income could be increased, the standard of living in the western region would improve.

6. Interregional Disparities in Chinese Development: A Multidimensional Perspective

This section of our paper moves on to examine China's regional development and evaluate the prospects of the eastern region and western region of the country from a more global perspective that encompasses not only the economic dimension but other relevant dimensions as well, in recognition that rapid economic growth and expanding trade of the China in recent decades represent not a purely economic phenomenon but a multidimensional one. To do so, in contrast with the existing analytical methodologies that all measure changes of welfare based on the evaluation of the some basic variables in the study of the development process of a country, this section of the paper focuses on the developmental process of China with the simultaneous inclusion of the social, economic, political and technological dimensions, utilizing the Domestic General Development (DGD) Model⁹ which is based on the General Dimension of Regional Integration (GDRI) Model developed by Ruiz Estrada (2004a). The defining characteristic of the model is that it looks at regional development simultaneously from the political, social, economic and technological perspectives. We apply the model to a comparative analysis of the development levels of China in the 1980s, 1990s and 2000-2006.¹⁰

For this purpose, as in line with the Western China Development strategy, we still divide the People's Republic of China into "Eastern" China (coastal)

and “Western” China (inland), but for analytical purposes, included under Eastern China (coastal) are only the cities and municipalities of Dalian (大连), Beijing (北京), Jinan (济南), Shanghai (上海), Hangzhou (杭州), Fuzhou (福州), Guangzhou (广州), the special administrative regions (SARs) of Hong Kong (香港) and Macau (澳門), and the island province of Hainan (海南), and under Western China (inland), Lanzhou (兰州), Kunming (昆明), Hohhot (呼和浩特), Ürümqi (乌鲁木齐), Lhasa (拉萨), Chengdu (成都), Xi’an (西安), Kashgar/Kashi (喀什) and Guiyang (贵阳). This East-West division is used here to analyze the gap of development between the two sides.

A discussion of each of the four basic phases through which this analysis is conducted should begin with the design of the multi-input database table that indicates global regional political development. Here, “global” refers to the multidimensional nature of political development, represented by a wide range of political variables while “regional” refers to the specific region of interest to the research. Therefore, in this case, global regional political development refers to the political development of China as measured by the 15 political variables utilized in this model. There is no reason why the number of variables in a multi-input database table should be constant and therefore it can vary according to the objectives of the research and data availability. Hence, multi-input database tables can similarly be constructed for global regional economic, social and technological development.

The second phase of the DGD-Model is to measure the Global Development Indices (X_i) using the variables in the four multi-input database tables described in Ruiz Estrada (2004a). The four Global Development Indices are the Global Political Development Index (X_1), Global Social Development Index (X_2), Global Economic Development Index (X_3) and Global Technological Development Index (X_4). The data we input for each country in a region, or in this case, different regions of a country – Eastern China (coastal) and Western China (inland) – are based on statistical and historical data. Furthermore, all our data are binary – i.e. either 1 or 0 – and determined by either quantitative or qualitative criteria. A main reason for using binary data is that we attach the same level of importance to all the variables in our multi-input database tables. Another reason for using binary data is that this allows us to analyze countries with limited data, such as Western China (inland).

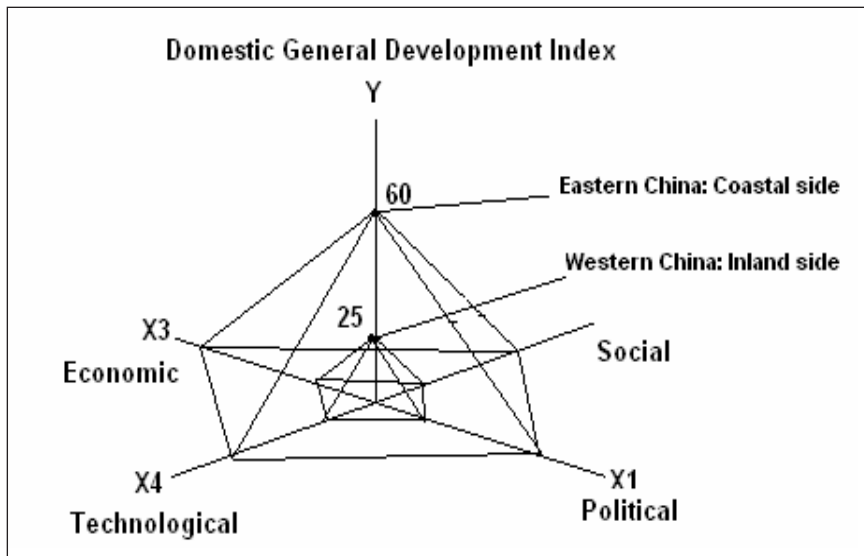
We can similarly input binary data for all the variables in the multi-input database tables for social, economic and technological development of Eastern and Western China from 1980 to 2006. We find the global social development of Eastern China (coastal) and Western China (inland) in the 1980s to be 57 per cent and 29 per cent respectively, the global economic development of Eastern China (coastal) and Western China (inland) in the 1990s to be 40 per cent and 14 per cent respectively, and the global technological development

of Eastern China (coastal) and Western China (inland) in the 1980s to be 60 per cent and 30 per cent respectively.

The third phase of the DGD-Model is to use the four Global Development Indices (X_i) found in the model's second phase – i.e. political, social, economic and technological – to estimate the Global Overall Development Index (X), which sums up the information contained in the four indices. Intuitively, the Global Overall Development Index (X) measures a country's overall level of development from a multidimensional or global perspective encompassing political, social, economic and technological development. Furthermore, as seen earlier, we measure political, social, economic and technological development themselves from a multidimensional or global perspective, using a wide range of variables relevant to the development of each sphere.

The first step in estimating the Global Overall Development Index (X) is to plot the values of the four Global Development Indices (X_i), as shown in Figure 16. To illustrate how we compute X , Figure 16 consists of four different triangular areas – each bounded by the values of two of the four global development indices – for Western China (inland), Eastern China (coastal) and the Chinas. Let us define the triangular area between the political and social axes as A_1 , social and economic axes as A_2 , economic and technological axes as A_3 , and technological and political axes as A_4 . Each area has a maximum value of 0.25 and the total value of the four areas is 1.

Figure 16 Global Development Stage of Western and Eastern China, 1980s



We compute the overall global development index (X) as the sum of the four areas – A_1 , A_2 , A_3 and A_4 . In computing A_1 , it is useful to think of the value of the Global Political Development Index (X_1) as the base and the value of the Global Social Development Index (X_2) as the height. We compute A_1 by first multiplying X_1 and X_2 , and then dividing their product by four. Similarly, we can compute A_2 , A_3 and A_4 by doing the same with the pairs (X_2, X_3) , (X_3, X_4) and (X_4, X_1) respectively. For example, for Eastern China (coastal), A_1 is 35 per cent since X_1 is 47 per cent and X_2 is 57 per cent. Likewise, we compute A_2 , A_3 and A_4 for Western China (inland) to be 15 per cent, 12 per cent and 20 per cent. Therefore, Eastern China's overall global development index (X) is 25 per cent. We can similarly compute X for Western China (inland) as 15 per cent. Therefore, in the 1980s, Western China's overall development level was about eight times higher than that of Eastern China.

The fourth and final phase of the DGD-Model is to use the four Global Development Indices (X_i) and coefficients to measure the Global Development Stage (Y) of Western China (inland) and Eastern China (coastal). The coefficients indicate the relative importance of the political, social, economic and technological dimensions, and sum up to one. For example, if we attach equal importance to the four dimensions, the coefficient for each dimension is 0.25. To obtain the Global Development Stage (Y), we first multiply the Global Development Index (X_i) with the corresponding coefficient – for example, the Global Political Development Index (X_1) and the political coefficient – and then sum up the four products. Assuming that each of the four coefficients is 0.25, so that the four dimensions are equally important, we can compute the Global Development Stage (Y) for Eastern China (coastal) and Western China (inland) as 51 per cent and 20 per cent respectively in the 1980s. The large gap in Y between Western China (inland) and Eastern China (coastal) indicates a large gap between the two parts of China in terms of overall development. Figures 16, 17 and 18 provide a graphical representation of the Global Development Stage (Y). The height corresponds to Y and the quadrangular area inside the dotted lines corresponds to the Overall Global Development Index (X).

The Global Development Stage (Y) is broadly similar to the Global Overall Development Index (X) since both reflect the overall development level of a country or a region. We define a value of Y between 0 per cent and 33 per cent as the underdeveloped stage, 34 per cent and 66 per cent as the developing stage, and 67 per cent and 100 per cent as the developed stage. Therefore, in the 1980s, Eastern China (coastal) was in the developing stage whereas Western China (inland) was in the underdeveloped stage. It should be noted that Y is more flexible than X in the sense that it allows us to attach any combination of relative weights to the political, social, economic and

technological dimensions. For example, if we attach more importance to the political dimension than the other dimensions, the political coefficient may be 0.40 while the social, economic and technological coefficients may each be 0.20. More generally, we can flexibly vary the relative sizes of the four coefficients to suit our needs.

Figure 17 Global Development Stage of Western and Eastern China, 1990s

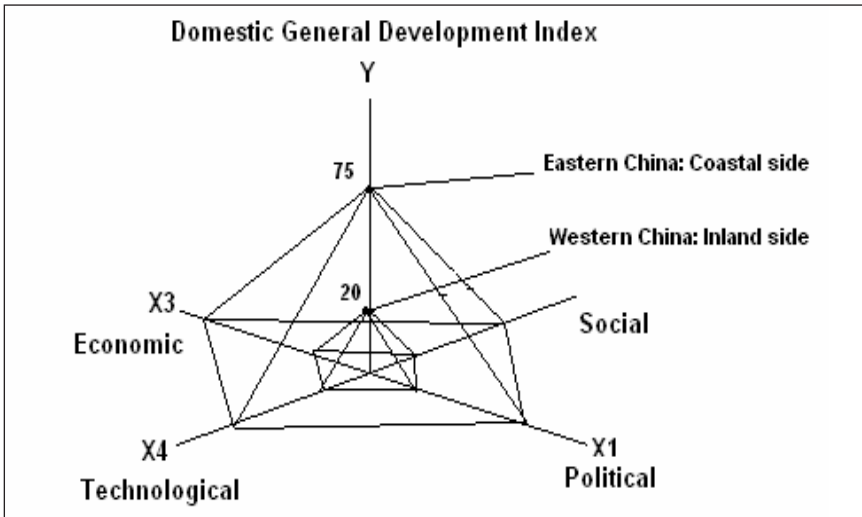
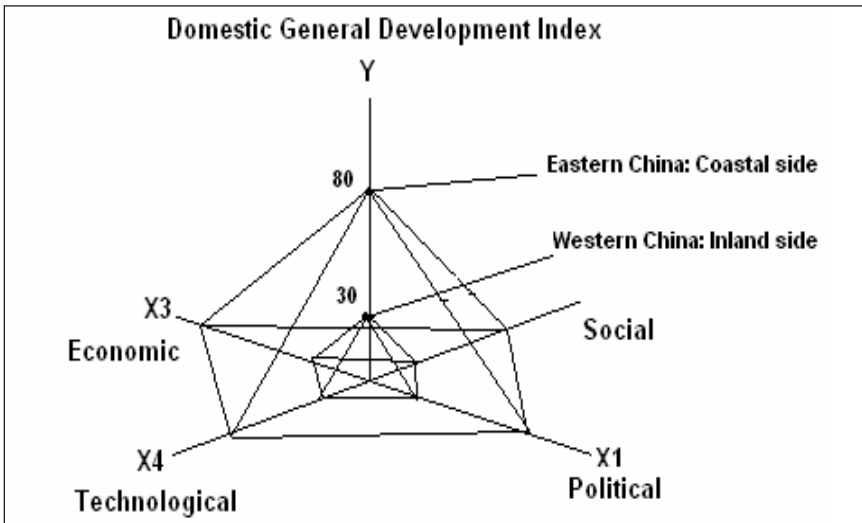


Figure 18 Global Development Stage of Western and Eastern China, 2000-2006



We now report the main results of our DGD-Model analysis of Western and Eastern China during the 1980s and the 1990s. Eastern China's Global Political Development Index (X_1) increased from 47 per cent in the 1980s to 67 per cent in the 1990s and 79 per cent in the 2000-2006 period, which indicates that Eastern China (coastal) has become progressively more politically developed over time. The social development of Eastern China (coastal) has moved significantly forward in the 1990s and 2000-2006, in contrast to Western China (inland), which has failed to make any progress in this area. Eastern China's Global Social Development Index (X_2) rose from 57 per cent in the 1980s to 80 per cent in the 1990s and 85 per cent in the 2000-2006 period. To a large extent, this reflects Eastern China's rapid economic development since basic social services such as healthcare and education tend to improve with a country's living standards. In stark contrast, the same index declined from 29 per cent in the 1980s and 1990s to 14 per cent in the 2000-2006 period for Western China (inland), and this decline paralleled the country's steep economic decline.

Eastern China's economy has achieved rapid growth and development, in sharp contrast to the Western China's economy, which has deteriorated sharply over time. Eastern China's Global Economic Development Index (X_3) has more than doubled, from 40 per cent in the 1980s to 75 per cent in the 1990s and 84 per cent in the 2000-2006 period. This is consistent with the country's radical transformation from a poor developing country to a highly successful newly industrializing economy (NIE) that has become a model of economic development for the Third World. On the other hand, for Western China (inland), the same index has plummeted from 14 per cent in the 1980s to 10 per cent in the 1990s and 15 per cent in the 2000-2006 period. Eastern China (coastal) has made substantial technological progress and has reached a high level of technological development, as evident in the evolution of its Global Technological Development Index (X_4), which rose from 60 per cent in the 1980s to 70 per cent in the 1990s and 90 per cent in the 2000-2006 period. This is hardly surprising in view of the fact that technological upgrading has been an essential ingredient of Eastern China's successful economy. On the other hand, Western China's X_4 fell from 30 per cent in the 1980s to 10 per cent in the 1990s and rose to 25 per cent in the 2000-2006 period, reflecting a sharp decline in the region's technological base. This decline is both an effect and a cause of the region's poor economic performance. The large and increasing technological gap between the two regions raises the technological costs of national harmonic development.

The global development of Western China (inland) and Eastern China (coastal) in the political, social, economic and technological spheres during the 1980s, 1990s and 2000-2006 clearly shows an unmistakable difference

between the two parts of China. While Eastern China (coastal) has achieved substantial progress in all four spheres, Western China (inland) has failed to do so in any of the four spheres. The wide and growing East-West gap is not limited to economic development but extends to development in other areas as well. The fact that the two parts of China are becoming less similar in all aspects rather than more similar does not bode well for their national harmonic development.

We now use the four Global Development Indices (X_i) to estimate the Global Overall Development Index (X) for the two parts of China in the 1980s and 1990s. To repeat, the Global Overall Development Index (X) measures a country's overall level of development from a multidimensional perspective encompassing the political, social, economic and technological aspects. As described earlier for the 1980s, we sum up the four triangular areas between the axes to compute X . We find X to be 55 per cent for Eastern China (coastal) and 10 per cent for Western China (inland) in the 1980s, and 82 per cent for Eastern China (coastal) and 10 per cent for Western China (inland) in the 1990s. The evolution of X over time confirms the picture of a wide and growing gap between the two parts of China. Eastern China has managed to reach a high overall development level through rapid progress in all four areas whereas Western China's overall development level continues to stagnate at a very low level.

We use the four Global Development Indices (X_i) and coefficients reflecting the relative importance of each X_i to measure the Global Development Stage (Y) of Eastern China (coastal) and Western China (inland) in the 1980s and 1990s. To repeat, the Global Development Stage (Y) is similar to the Global Overall Development Index (X) in the sense that both reflect a country's overall development level. Assuming that each coefficient is 0.25, so that the political, social, economic and technological dimensions are equally important, we compute the Global Development Stage (Y) for Eastern China (coastal) and Western China (inland) to be 60 per cent and 15 per cent respectively in the 1980s (see Figure 16). Our computed value of Y rises to 75 per cent for Eastern China (coastal) but falls even further to 20 per cent for Western China (inland) in the 1990s (see Figure 17). Finally, Y rises to 80 per cent for Eastern China (coastal) but rises even further to 30 per cent for Western China (inland) from 2000 to 2006 (see Figure 18).

According to our earlier definitions, Eastern China (coastal) is well into the developed stage while Western China (inland) remains at a very low stage of development. The large and growing difference in Y between the two parts of China mirrors the large and growing difference in their overall development level.

7. Concluding Remarks

China's spectacular economic growth has benefited her provinces and regions quite unequally. In fact, China has also become one of the countries which have the highest degrees of regional income inequality in the world (Jian *et al.*, 1996). The Western China Development programme, however, is not a "mission impossible" for the Chinese government. This programme needs time to succeed. Although there are already some significant developments in the western region, the Western China Development programme remains a long-term task for the Chinese government. The Chinese government has implemented a number of policies to accelerate the development of the western region. To encourage the development of the western region, the Chinese government has continuously stabilized and enhanced the pro-peasant/*huinong* (惠农) policy. The Chinese government has also reduced the operating cost and increased the income of peasants to improve their standard of living. Besides that, recruiting knowledgeable human resources is another important policy to develop the western region. The western region will be able to develop further if it has ample k-workers in hand. Knowledgeable human resources will boost the region's economy through various innovations. Last but not least, the development of transportation, education, culture and healthcare is also important for the growth of the western region. If all of these policies can be implemented successfully, the gap between the western and other regions can then be bridged.

The large gap we found in the analysis presented in the last section of this paper between "Eastern" China (coastal) and "Western" China (inland) is inherently a complex and multidimensional phenomenon entailing the national development of China in terms of her economy, political system, social system, and a wide range of other societal hardware and software. In the last section, we look at the prospects for China's developmental harmonization by comparing the two regions' development from a multidimensional perspective rather than focusing solely on any single dimension.

While the growing economic gap between the prosperous Eastern China (coastal) and the impoverished Western China (inland) clearly increases the costs of the general development of China, a more comprehensive comparative analysis of the two parts of China calls for comparing their overall development rather than solely their economic development. To carry out such a broader analysis, in the last section of this paper we have utilized the Global Dimension of Regional Integration Model (DGD-Model) developed by Ruiz Estrada (2004a), which evaluates the prospects for regional development from a global or multidimensional perspective. Our main finding is a large and growing gap between the two parts of China in terms of political, social, economic and technological development. Eastern China

(coastal) has achieved sustained progress in all four areas and a high level of overall development. In stark contrast, Western China (inland) has failed to make progress in any of the four areas and remains mired in a very low level of overall development. Our analysis in this paper clearly reveals a divergence between the two parts of China rather than a convergence. This suggests that China's development needs to improve more based on development expansion policies such as more open domestic market and easy mobility of domestic investment and labour in the country.

Finally, an appropriate government policy plays a vital role in maintaining a country's peace and stability. The recent efforts to boost economic development in the western region are encouraging. It seems that they have already brought some positive results in the provinces/zizhiqu/zhixiashi in these regions. For instance, during the first half of 2007, the increases in urban fixed asset investment in the eastern, central and western regions are 22.3 per cent, 35.6 per cent and 30.2 per cent respectively (Zheng and Chen, 2007). One of the main reasons that the Chinese central government has launched these regional development programmes is to ease the dissatisfaction of minority peoples and relieve development disparities among ethnic groups. These development programmes to a large extent are to support the development of the minority regions and improved the living standards of minority groups. All these are in line with the overall efforts to bring up the developmental level of China's western region *vis-à-vis* her other more developed regions.

Notes

1. <http://www.china.org.cn/english/congress/227029.htm>
2. Also variously translated as "Western Regional Development", "Develop the West", "Open up the West" and "Go West".
3. Officially usually translated as "well-off", *xiaokang* literally means "moderately well-off".
4. The "Third Front" refers to the large-scale development of industry in China's southwestern hinterland – a government strategy to have a secure industrial hinterland in facing a perceived imminent war.
5. http://english.peopledaily.com.cn/200409/07/eng20040907_156240.html
6. http://english.peopledaily.com.cn/english/200007/12/eng20000712_45330.html
7. Besides the *sheng* (省)/provinces, China's 31 province-level administrative units also includes 5 *zizhiqu* (自治区)/(ethnic) "autonomous regions" and 4 *zhixiashi* (直辖市)/municipalities directly ruled by the central government.
8. These evaluation yardsticks are summarized in this rhyme composed for propaganda (*Zhongguo Xibu Fazhan Baogao 2008*, p. 301):

经济翻两番，收入超六千；
楼房随处见，村庄连成片；

室内通水电，房外有花园；
 家家彩电放，户户电话连；
 教育九望十，就医不走远；
 寿命七十五，山青水天蓝。

9. The DGD-Model is based on the application of a group of indicators and graphs which are designed to show the evolution and stages of the development process of any country from a general perspective. The DGD-Model is not intended to be used as a forecasting model in any case. However, its application is not limited to the study of a special group of countries. It is not constrained by issues about the regions or countries to which the DGD-Model is applied (see Ruiz Estrada, 2004a). The difference between the DGD-Model and other analytical models, such as the human development index is that the DGD-Model presents a general understanding in the study of development process from the economic, political, social and technological perspectives simultaneously. The objective of the DGD-Model is to offer policy-makers and researchers a new alternative analytical toolbox for studying the results achieved for any country in its development process.
10. Data are from the Federal Reserves System (2004), General Information and database statistics <<http://www.federalreserve.gov/pf/pf>>; Green-Peace (2004), General Information and database statistics <<http://www.greenpeace.org>>; Haya-Court (2004), General Information and database statistics <<http://www.wpc-in.org>>; Human Rights Watch (2004), General Information and database statistics <<http://www.hrw.org>>; Inter-American Development Bank (2004), General Information and database statistics <<http://www.iadb.org>>; International Federation of Production Rights Organization (2004), General Information and database statistics <<http://www.ifrro.org>>; International Monetary Found (2004), General Information and database statistics <<http://www.imf.org>>; The Library of Congress U.S. (2004), General Information and database statistics <<http://www.loc.gov>>; Ministry of Commerce of China <<http://english.mofcom.gov.cn>>; Ministry of Education of China (2006) <<http://www.moe.edu.cn>>; Ministry of Finance of China <<http://www.mof.gov.cn>>; Ministry of Foreign Affairs of China (2006) <<http://www.fmprc.gov.cn>>; Ministry of Justice of China <<http://www.legalindo.gov.cn>>; Ministry of Land and Natural Resources <<http://www.mlr.gov.cn>>; Ministry of National Development and Reform Commission <<http://en.ndrc.gov.cn>>; Ministry of Sciences and Technology of China (2006) <<http://www.most.gov.cn>>; National Audit Office of China <<http://www.cnao.gov.cn>>; National Population and Family Planning Commission of China <<http://www.npfpc.gov.cn>>; NATO (2004), General Information and database statistics <<http://www.nato.int>>; Oil Producers Organization (OPEC) (2004), General Information and database statistics <<http://www.opec.org>>; People's Bank of China <<http://www.pbc.gov.cn>>; Transparency International (2004), General Information and database statistics <<http://www.transparency.org>>; United Nations (2004), General Information and database statistics <<http://www.un.org>>; United Nations (2004), Human Development Report 2004, U.N. Development Program <<http://hdr.undp.org/reports/General/2004/>>; World Bank (2004), General Information and database statistics <<http://www.wb.org>>; World Health Organization (2004), General Information and database statistics <<http://www.who.int>>.

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