The political economy of government policies toward regional inequality in China

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14 chapter

With its vast territory and rich geographic, economic, and social diversity as well as fast-changing institutional setting, China offers a valuable case study on economic geography. In particular, China's regional patterns of economic development in the last half century have been closely tied to government policies. This paper examines how government policies have shaped and reshaped China's patterns of regional development and how these policies have been linked with growth as well as other considerations.

China was an unevenly developed country when the People's Republic was established in 1949. Industries were concentrated in the Yangtze River delta, the northeast, and a limited number of industrial pockets in inland provinces. The planning era drastically changed this picture by deliberately setting up new factories in inland provinces and moving existing factories from the east coast and the northeast to inland provinces. After reform and the "open-door" policy were introduced in the late 1970s, this model of balanced development was abandoned and replaced with one of uneven development. Exemplifying this model was the opening up of the coastal region through the creation of "special economic zones" and "coastal open cities." Concurrent with this opening up was deep fiscal decentralization, which provided local governments with incentives to pursue economic growth. To a large extent, this model integrated the Chinese economy into the world market and drove China's rapid economic growth. Its downside is equally obvious: China's regional disparity has been rising steadily. Public pressures to reverse the trend have been building since the mid-1990s and have led to two significant recent policies, "Go West" (*xibu da kaifa*) and "Reviving the Northeast" (*zhenxing dongbei*), both aiming to achieve a more balanced model of regional development.

After reviewing some key facts about regional disparities, this paper seeks to answer the following questions: Why did the Chinese government choose the uneven development model in the 1980s? To what extent can the resulting policies be rationalized on the grounds of economic geography? To what extent were they successful? What factors—geography or government preferential policies—are more capable of explaining the superb record of growth of the coastal provinces? What factors, in addition to geography and the uneven development model, exacerbated China's regional disparities? What are the prospects of the recent government policies aiming to achieve more balanced development? Are there any alternative ways to reduce regional disparities? And, if yes, what are they? These are difficult questions to answer. This paper does not seek to conclude the debate; rather, it tries to provide a basis for further discussion.

Regional disparities in China

Many studies have examined China's regional disparities. This section gathers key second-hand statistics from the literature to provide a broad picture of regional disparities since the founding of the People's Republic of China.

Convergence and divergence in historical perspective

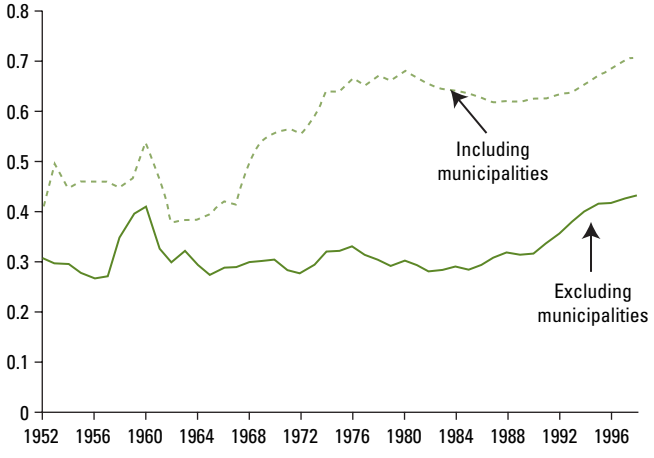
Démurger and others (2002) provide a comprehensive study of China's regional income inequality in the period of 1952–98. Figure 14.1 summarizes their results of σ-convergence among Chinese provinces based on the coefficient of variation (CV) of per capita GDP. The figure shows two sets of results, one with the municipalities of Beijing, Shanghai, and Tianjin and one without them. Because these three municipalities have much higher income than the other provinces, their inclusion results in much higher CVs. Both sets of results, however, follow the same pattern. Three periods of increased divergence are evident, all characterized by decentralization. The first one was in the Great Leap Forward period, the second was in the Cultural Revolution period, and the third started in the early 1980s and continues today. There were also three notable periods of declining divergence, all of which were associated with centralization or measures to correct the decentralization that preceded them. The first period (1952–56) was China's First Five-Year Plan period, in which the central government controlled most of the government investment. The second period (1960–65) featured a great famine and subsequent economic adjustments and recentralization. The third period (1976–82) followed the Cultural Revolution and witnessed many measures to reverse the decline of the national economy.

Before the third period of increasing divergence began in the early 1980s, there was no clear trend of divergence and, except for the Great Leap Forward period, the CVs were relatively low when the three big cities are excluded from the calculation. In contrast, there has been a steady trend of divergence since the early 1980s.

Figure 14.2 extends the two series of data to the period of 1999–2006. An interesting finding is that the trend of divergence stopped for both series, and the one with all the provinces even exhibited a weak trend of convergence, indicating that the three large municipalities were growing more slowly than other provinces in this time period. The Go West policy was initiated in 1999. Was it a coincidence that income divergence began to stabilize after this policy was implemented? This is an important question to which the paper returns later.

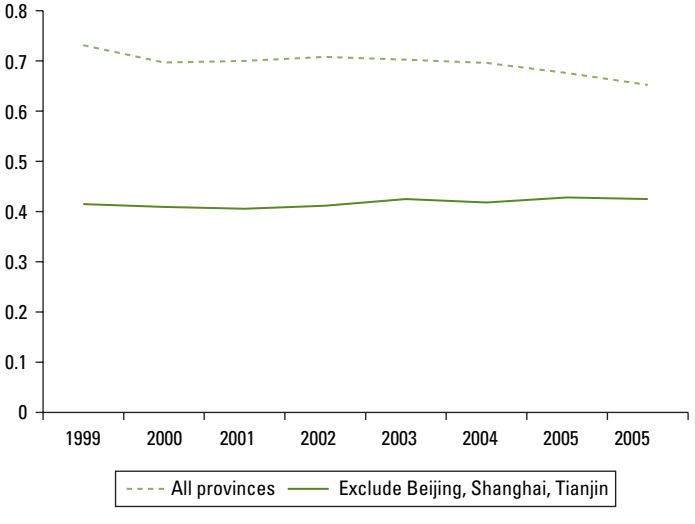
Consistent with this pattern of σ-convergence, β-convergence, or the (unconditional) convergence of growth rates, had distinct features in the three periods of time. Figure 14.3, also adopted from Démurger and others (2002), presents evidence for 1952–78. A strong trend of divergence clearly existed in that period; that is, provinces with higher

Figure 14.1 Divergence of income among Chinese provinces, 1952–98



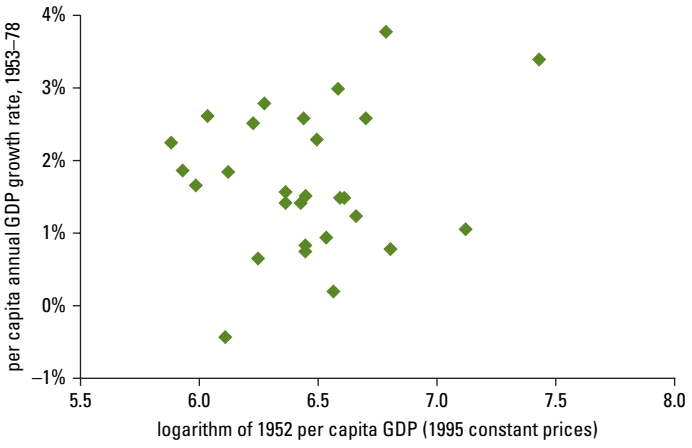
Source: Démurger and others (2002).
Note: Hainan and Tibet are excluded; Chongqing is added to Sichuan. Per capita GDP is measured at constant 1995 prices. The coefficient of variation (the vertical axis) is used to measure the degree of income convergence (σ-convergence).

Figure 14.2 Divergence of income among Chinese provinces, 1999–2006



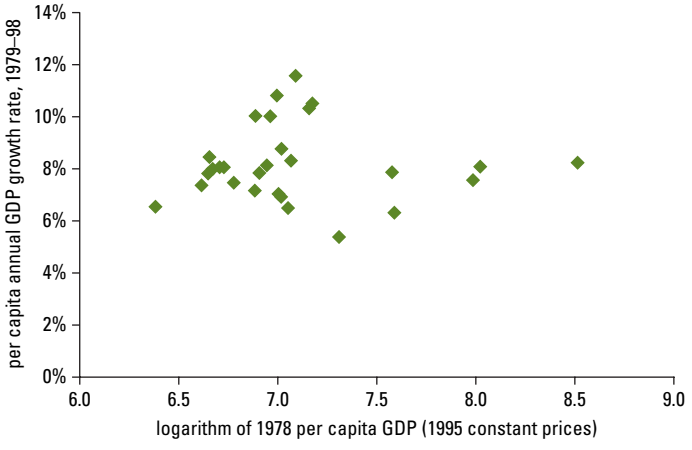
Sources: National Bureau of Statistics of China, *China Statistical Yearbook* (2000–06); National Bureau of Statistics of China, *China Statistical Abstract* (2007).
Note: All the mainland provinces are included. Per capita GDP is measured in current prices. The coefficient of variation (the vertical axis) is used to measure the degree of income convergence (σ-convergence).

Figure 14.3 Divergence of growth rates among Chinese provinces, 1952–78



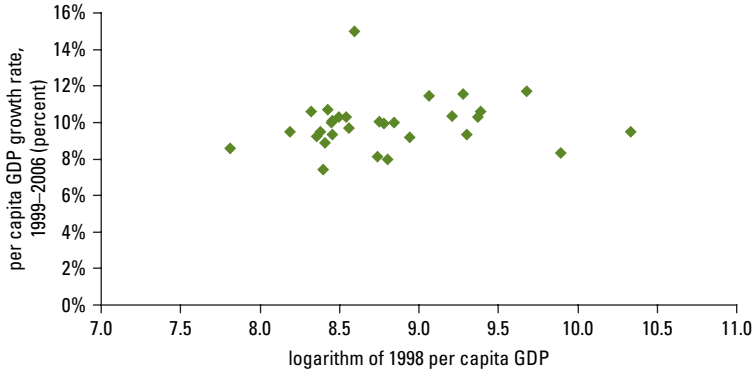
Source: Démurger and others (2002).
Note: Hainan and Tibet are excluded; Chongqing is added to Sichuan.

Figure 14.4 Divergence of growth rates among Chinese provinces, 1978–98



Source: Démurger and others (2002).
Note: Hainan and Tibet are excluded, and Chongqing is added to Sichuan.

Figure 14.5 Divergence of growth rates among Chinese provinces, 1999–2006



Sources: Author's calculations based on data in National Bureau of Statistics of China, *China Statistical Yearbook* (2000–06); National Bureau of Statistics of China, *China Statistical Abstract* (2007).
Note: All the mainland provinces are included. Per capita GDP is measured in current prices.

initial per capita gross domestic product (GDP) tended to grow faster throughout the planning period. This result was obtained even when the Chinese government deliberately tried to spread industry evenly in the country. There were two significant waves of allocation and reallocation of industry to the inland areas. One was in the First Five-Year Plan period, when many of the major projects—notably the 156 projects aided by the Soviet Union—were allocated to inland provinces. The other was the 1960s, when new investment was concentrated in the so-called third front, and many factories were reallocated from coastal to inland provinces.[1] The evidence in figure 14.3 shows that high-income provinces, mostly those on the east coast and in the northeast, continued to grow faster than the rest of the country, despite these two large-scale government efforts, indicating the strength of economic and geographic forces.

Figures 14.4 and 14.5 present evidence for the periods of 1978–98 and 1999–2006, respectively. Although neither period shows a sign of convergence, the trend of divergence is not as strong as shown in the data for 1952–78. It is even less evident in the more recent period of 1999–2006, a result that is consistent with the stabilized and even declining income disparities shown for this period in figure 2.

If we group the Chinese provinces into the three conventionally defined regions—coastal, central, and western—we can even see growth rates in the central and western regions catching up with growth rates in the coastal region. Table 14.1 shows the data. In the period of 1978–98, the average growth rate of the central and western regions was 81 and 77 percent, respectively, of that of the coastal region. However, in 1999–2006, the central region caught up with the coastal region, and the western region substantially narrowed its gap to only 7.7 percent of the coastal region's growth rate. In recent years, there have been complaints that the central region has been neglected by the central government and is sinking into a valley in China's economic landscape. In 2006 these complaints led the government to call for development of the central region. However, the data provided in table 14.1 show that the

central region has not been sinking; instead, it has accelerated its catch-up with the coastal region and has widened its distance from the western region (the growth rate of the western region was 95 percent of the growth rate of the central region in 1978–98, but fell to 91 percent in 1999–2006).

This analysis is simple but shows that China's regional disparities have passed through a dynamic and complicated process. The bottom line is that the divergence of growth rates was not as serious in the reform era as in the planning era. The planning era had smaller degrees of income disparities only because the level of income was low to begin with. The continuing divergence of income growth rates had already begun to set the stage for the divergence of the level of income, which finally showed up in the reform period. The diverging growth rates in the planning era were not likely to be a consequence of government policies, though. Rather, the establishment of the People's Republic provided a relatively stable economic environment (with little political turmoil), which enabled the advanced regions to unleash their growth potential (Perkins 2005). Economic reform and the open-door policy, viewed from a historical perspective, are not the likely causes of the growing regional disparities in the last quarter century. The signs of both the σ-convergence and (unconditional) β-convergence, especially among China's three regions since 1999, are encouraging. The question is the extent to which positive signs can be attributed to government policies, especially the Go West campaign, which aims to reduce regional disparities. It is also possible that the Chinese economy was not ready to converge until the late 1990s. Empirical research finds that there exists a hurdle for convergence to happen both internationally (Durlauf and Johnson 1995) and domestically (Peng, Wang, and Wu 2007). Perhaps China was only able to overcome that hurdle in the late 1990s.

Regional or urban-rural divide?

The urban-rural divide has been much more serious than the regional divide in China. In 2006 per capita urban disposable income was 3.14 times per capita rural net income, the highest in the world. This large gap is not a new phenomenon; it was already 2.78 times when China embarked on its reform and open-door policy in 1978. Except for a brief decline to 1.8 times in the early half of the 1980s due to institutional reforms implemented in the countryside and another period of smaller declines in the early 1990s due to higher agricultural prices, the gap has been growing for the past 30 some years.

Table 14.1 Convergence of growth rates among the three regions in China, 1978–2006

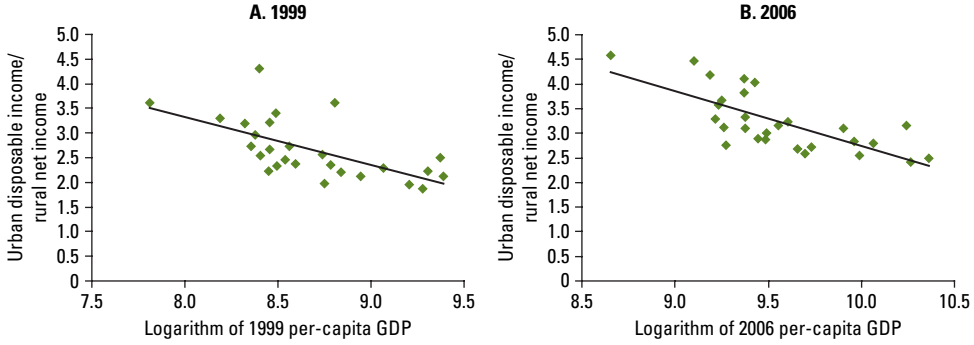
Year and indicator	Coastal	Central	Western
1978–98			
Average growth rate	9.4	7.6	7.2
Central and western as a percent of coastal	n.a.	81.2	77.0
1999–2006			
Average growth rate	10.1	10.3	9.3
Central and western as a percent of coastal	n.a.	101.8	92.3

Sources: Data for 1978–98 come from Démurger and others (2002); data for 1999–2006 come from National Bureau of Statistics of China, *China Statistical Yearbook* (2000–06); National Bureau of Statistics of China, *China Statistical Abstract* (2007).
n.a. Not applicable.

The most significant regional regularity about the urban-rural divide is that higher-income provinces have lower urban-rural income gaps. Figure 14.6 shows the relationship between per capita GDP and the urban-rural divide for Chinese provinces in 1999 and 2006. Beijing, Shanghai, and Tianjin are excluded because their urbanization rates are very high. There clearly exists an inverse relationship between per capita GDP and the urban-rural income gap. This should be obvious even to a casual observer traveling on Chinese highways. In coastal regions, modern houses dot the densely populated countryside along any highway; in western regions, a 20-minute drive out of any major city encounters sheer poverty.

Table 14.2 provides a sharp contrast between the three richest provinces (Guangdong, Jiangsu, and Zhejiang) and the three poorest provinces (Gansu, Guizhou, and Yunnan) for 2006. Per capita GDP of the three richest provinces was 3.62 times that of the three poorest provinces. However, per capita urban disposable income of the three richest provinces was only 1.72 times that of the three poorest. In contrast, per capita rural net income of the three richest provinces was 2.86 times that of the three poorest. The urban-rural income gap was 2.65 times for the three richest provinces, but 4.41 times for the three poorest provinces.

Figure 14.6 Per capita GDP and urban-rural divide in China, 1999 and 2006



Sources: National Bureau of Statistics of China, *China Statistical Yearbook* (2000–06); National Bureau of Statistics of China, *China Statistical Abstract* (2007).
Note: Beijing, Shanghai, and Tianjin are excluded; figure of 1999 does not include Tibet. Per capita GDP is in current prices.

Table 14.2 Comparison of the three richest and the three poorest provinces in China, 2006

Grouping	Urban	Rural	Urban-rural
Richest three provinces	16,121.67	6,076.00	2.65
Poorest three provinces	9,369.33	2,123.33	4.41
Ratio of richest to poorest	1.72	2.86	0.60

Source: National Bureau of Statistics of China, *China Statistical Abstract* (2007).
Note: Urban income is per capita disposable income; rural income is per capita net income. Both are in current prices. The three riches provinces are Guangdong, Jiangsu, and Zhejiang, and the three poorest provinces are Gansu, Guizhou, and Yunnan.

Table 14.3 Urban-rural and regional divides in China, 2005

Indicator	Coastal	Central	Western
Actual			
Average income (yuan)	9,907.92	5,504.70	4,463.77
Central and western as a percent of coastal	n.a.	1.80	2.22
Urban income (yuan)	12,884.09	9,207.20	8,597.80
Rural income (yuan)	5,123.36	2,971.80	2,278.40
Ratio of urban to rural income	2.56	3.11	3.84
Simulated			
Average income (yuan)	9,907.92	5,907.58	5,177.07
Central and western as a percent of coastal	n.a.	1.68	1.91

Source: National Bureau of Statistics of China, *China Statistical Yearbook* (2006).
n.a. Not applicable.
Note: Average income is the composite income of urban per capita disposable income and rural per capita net income using the urbanization ratio as the weight.

Table 14.3 presents a rough estimation for the share of the urban-rural divide in the regional divide using data for 2005. It presents two sets of data: one actual and the other simulated. The simulation assumes that the central and western regions had the coastal region's urban-rural income ratio and recalculates rural income leaving urban income unchanged. Using the ratio of urban population as the weight, this yields the simulated average income for the central and western regions. Table 14.3 shows that the income gap between the coastal and the central region would decline from the actual 1.8 times to 1.68 times, a drop of 6.8 percent, and the gap between the coastal and the western region would decline from the actual 2.22 times to 1.91 times, a drop of 13.8 percent.

A more precise estimation is provided by Gajwani, Kanbur, and Zhang (2006), who show that the urban-rural divide has played a much larger role than the regional divide in determining China's interprovincial inequality. Using data from table 14.1, figure 14.7 shows the change in interprovincial inequality measured by the Gini coefficient and the general entropy (GE) index for the period 1952–2004. The two series parallel each other. Following a decline between the mid-1970s and early 1980s, both the Gini and the GE increased dramatically during the last quarter century. However, the urban-rural divide by and large has been the dominant factor in determining interprovincial inequality (see figure 14.8). The contribution of the coastal-inland divide was minimal before the reform started but has increased substantially since then, except for a brief decline in the early 1990s. In the meantime, the contribution of the urban-rural divide decreased. However, its contribution remained at 72 percent in 2004, while the contribution of the coastal-inland divide was only 11 percent.

In summary, the larger urban-rural divide in inland provinces is an important, if not a decisive, factor in the regional divide. This is not to deny the significance of the regional divide; rather, the real gap exists between the coast and the interior—that is, between the countryside of the two regions.

Government policies to raise rural income in inland provinces are likely to have a large impact on lowering regional inequality.

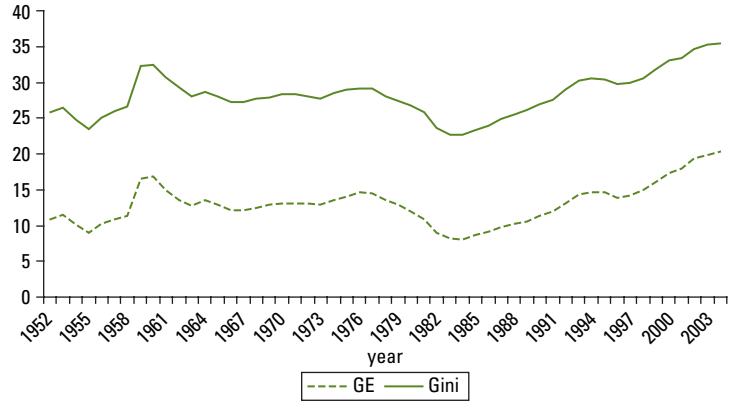
The path to the uneven development model

The model of uneven development was adopted after 1978 in a conscious pursuit of economic growth. This started with establishment of the "growth consensus," which was based on the painful lessons learned in the Chinese encounters with the Western powers, the socialist world's lagging behind the capitalist world, and the destructive forces of the political movements in China's history. The uneven development model was a deliberate choice based on market principles, notably those implied by economic geography. Central to the model is the priority given to the coast, characterized by several waves of preferential policies in the 1980s. This section reviews the formation of and rationale for the uneven development model and the various waves of preferential treatment given to the coast. The emphasis is on the alignment of government policies with economic geography and the tradeoff between the opening of the coast and the need to generate stable government revenues.

The growth consensus

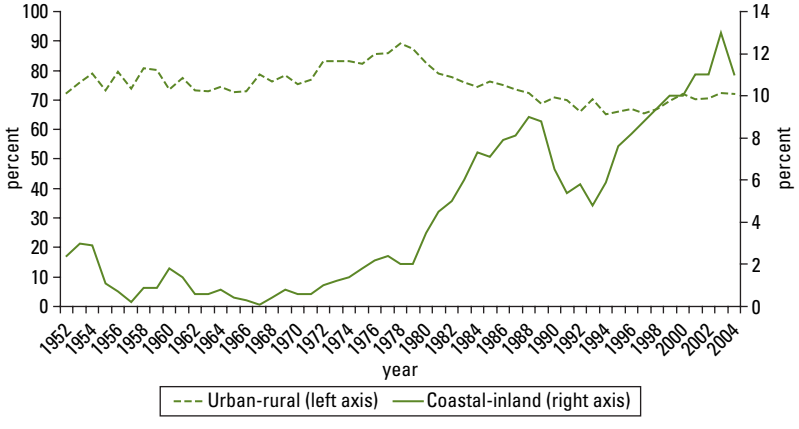
Since the Opium War, several generations of Chinese leaders have sought to build a strong China. The painful lesson learned from China's encounters with the Western powers in the 1800s was that, without economic power, China would be vulnerable to pressures. Unfortunately, economic growth was interrupted by civil wars and the Japanese invasion. The establishment of the People's Republic gave China a chance to concentrate on economic growth, but the dream was shattered again and again by political movements, one wave higher than the other. Pragmatic leadership was restored with the ascension of Deng Xiaoping in the late 1970s, giving China a chance to pursue its century-long dream of economic prosperity. Fortunately, China did not miss this chance and was able to maintain an average growth rate of 9.7 percent for the next 30 some years. The growth consensus was firmly established and maintained throughout these years.

Figure 14.7 Interprovincial inequality in China, 1952–2004



Source: Gajwani, Kanbur, and Zhang (2006: table 1).

Figure 14.8 Contribution of urban-rural divide and regional divide to interprovincial inequality, 1952–2003



Source: Gajwani, Kanbur, and Zhang (2006: table 1).

This consensus has its roots not only in history but also in contemporary thought. Socialism centered on state ownership was once thought to be the key to higher rates of economic growth, but the competition between the socialist and the capitalist worlds provided decisive evidence that this version of socialism could not outperform capitalism (Nee and Lian 1994). The fast growth of the four East Asian Tigers was a particularly painful fact for the Chinese leadership to swallow. Every piece of evidence showed that China had to introduce some elements of capitalism if it hoped to catch up economically with the developed nations. However, the introduction of capitalism

threatened the orthodox ideology of the Communist Party. To win support within the party, Deng Xiaoping initiated a nationwide debate at the end of 1978. The debate was not directed to the question of whether to have more markets; rather it was framed as a philosophical discussion about the sources of truth. This proved to be a wise political strategy, as it posed the question as a classic Marxist issue, preempting the objection of party conservatives to the debate. The conclusion of the debate was that there could be only one source of truth, which was practice, opening a door for experiments and change. These changes would ultimately transform China. The leadership at the time was convinced that embracing the market was the only way for China to grow economically. To preempt the conservatives' rebuff, Deng Xiaoping set the tone with the following simple words: "Do not debate."

Today, however, many in China are concerned that the growth consensus has been overdone. Indeed, inequality, social justice, and environmental problems are mounting issues in today's China, and the growth model deserves a reexamination. However, it is worth keeping in mind that the growth consensus propelled the country on its remarkable path.

Economic and political rationales for the uneven development model

The uneven development model was a natural result of China's decision to enter the market economy. The first steps entailed creating special economic zones (SEZs) in Shantao, Shenzhen, Xiamen, and Zhuhai, all located on the southern coast. The SEZs were designated "to experiment with the development of an outward-looking, market-oriented economic system and to serve the country as a 'window' and a 'base' along these lines" (Ge 1999: 49). That is, the uneven development model sought to experiment with a market-based system from the very start. Reinforcing this idea was the gradient theory (*tidu lilun*) put forward in the early 1980s, which distinguished China's three major regions (coastal, central, and western) as three ladders of economic growth. According to this theory, growth should start in the coastal region and gradually expand first to the central region and then to the western region (Wang and Hu 1999). This model was formally adopted by the government's Seventh Five-Year Plan, which started in 1986 (State Council 1986). In the late 1980s, a more radical theory named "big inputs, big exports" (*dajin dachu*) was put forward, which called for China's coastal region to participate in the world market via processing trade. Those theories provided a strong case for the government to concentrate its investment in the coastal region. When put into practice, they were reinforced by fiscal decentralization, which gave provinces unprecedented fiscal autonomy. The result, as we all know, was rapid economic growth coupled with large regional disparities. But before discussing the consequences, let us step back and discuss the economic and political rationale behind the uneven development model.

The economic rationale has a lot to do with the geographic advantages of the coastal region: access to international markets, historical traits, cultural proxy to overseas Chinese communities, and the concentration of large cities.

In terms of the access to international markets, China's coastal region has the advantage not only of transportation, but also of close proximity to Hong Kong, a dynamic and free-trade city second only to Tokyo in East Asia. For a long time, Hong Kong has been an important window for Chinese exports. Guangdong is the largest exporter in mainland China, accounting for 30 percent of China's total exports, and 60 percent of its exports are routed through Hong Kong (Yang 2006). This means that 18 percent of the mainland's exports are routed through Hong Kong. In accordance, 60–70 percent of Hong Kong's GDP is tied to exports from the mainland (Yao and others 2006). Since one of the major aims of the uneven development model is to experiment with a market-oriented system, learning from Hong Kong became a convenient route toward that goal. The influence of Hong Kong was the most evident in the initial stage of Shenzhen's astonishing transformation from a fishing village to a major city with a large population of several million. Deng Xiaoping's idea of creating an SEZ in

Shenzhen was intended to open a window for Hong Kong's influence to slip gradually into the mainland. For the first quarter century of existence, Shenzhen lived up to Deng's expectations and was a champion for economic reform, new ideas, and new forms of governance, although its advantages have diminished in recent years.

History matters a lot in the divergence of the Chinese provinces. The Chinese civilization started in the middle reach of the Yellow River in the Loess plateau and gradually moved east to the lower reach of the river in the Song dynasty. The invasion of the northern tribes forced the Song dynasty to move its capital to Hangzhou. The move was decisive, as it enabled China to move its economic center from the north to the more fertile south. The encounters with the Western powers in the 1800s added another advantage to the southern and eastern coasts: access to international markets through the treaty ports connecting China to the outside world.[2] The most significant development was Shanghai's emergence as the most dynamic city in the Far East. Since the early 1900s, Shanghai has been China's economic powerhouse.

The cultural ties with overseas Chinese communities have been a valuable asset for development of the coast. The early wave of overseas Chinese came from a few regions in Fujian and Guangdong provinces. They brought back a large amount of investment in the early reform era. Indeed, until the late 1990s, half of China's foreign direct investment (FDI) came from overseas Chinese. By the late 1990s, several other sources of investment became significant: the investment brought back by new emigrants from Zhejiang province, the investment brought by Singaporean businesses to Jiangsu province, and the investment brought by Taiwanese businesses to areas around Shanghai. Jiangsu's becoming the second-largest exporter in China had a lot to do with this new wave of FDI.

Finally, the concentration of large cities enabled the coastal region to achieve economies of agglomeration. Empirical research finds evidence in China to support the claims of the new economic geography (for example, Chen and Wang 2007; Lu and Tao 2007). The three large municipalities—Beijing, Shanghai, and Tianjin—are all located on the eastern coast; Guangzhou, the fourth-largest city in China today, is located on the southern coast; and Shenyang, the fifth-largest city, is close to the sea in the northeast. In fact, the Chinese economy is heavily concentrated in three regions centered on those big cities: the Pearl River delta, the Yangtze River delta, and the Bohai Bay area formed by Beijing, Shenyang, Tangshan, and Tianjin.

The political rationale was the need to achieve a balance between reform experiments and a stable flow of tax revenue. Reform experiments were politically risky, as failure risked a backlash from the conservatives. To make sure that the experiments were successful, the central government implemented a set of fiscal policies. On the one hand, it gave experimenting provinces preferential policies, which granted them more flexibility and helped them to attract FDI and other investments. On the other hand, through fiscal contracting, it provided them with strong fiscal incentives and gave the central government tight control over the nonexperimenting provinces. The next section is devoted to a discussion of the preferential policies. This section provides a review of the fiscal contracting system implemented in the 1980s.

The fiscal relationship between the central and local governments was not settled until the 1994 tax reform. Several rounds of centralization and decentralization occurred during the planning period. The fiscal contracting system was inspired by the model implemented in the decentralization period of 1959–67 (Wei 2000). Contracting was inspired by the success of the rural reform, which was famous for its village-household contracting of land. The central government negotiated different contracts with individual provinces, and no two contracts were identical. Generally, there were five types of contracts (Wei 2000):

- The first type of contract was offered to the two provinces on the frontier of the open-door policy, namely, Fujian and Guangdong. They had to hand in a fixed amount of revenue to the central government and were allowed to keep the

rest for their own budget. Later, Fujian received a fixed amount of transfers from the central government each year.

- The second type of contract was offered to Jiangsu, which shared revenue with the central government according to a formula that was fixed for four years.
- The third type of contract was offered to 15 provinces, which received a fixed base payment and then shared a fixed percentage of revenue growth with the central government.
- The fourth, and most favorable, type of contract was for eight minority and border provinces, which received a fixed amount of transfers from the central government.
- The fifth type of contract was offered to the three large municipalities, Beijing, Shanghai, and Tianjin. These three cities retained the smallest proportion of revenue according to a formula that was adjusted every year.

These five types of contracts can be regrouped into two broader types, one with fixed payments to or subsidies from the central government and one with a marginal sharing mechanism. Almost all of the western provinces had fixed-payment contracts, with each receiving a fixed amount of subsidies from the central government. Fujian and Guangdong were the only two coastal provinces that had this type of contract. All of the other provinces or cities had sharing contracts. According to the tenancy theory, fixed-payment contracts provide relatively strong incentives to the contractor, while sharing contracts provide relatively weak incentives. The political goal here was for the two leading reform provinces—Fujian and Guangdong—to have a strong incentive to move forward, for the western provinces to balance their budgets (most of them had deficits), and for the rest of the provinces to contribute to the central budget in a progressive way.

The three large municipalities and Jiangsu were taxed the heaviest. Beijing's retention rate was only 28.1 percent in 1980, although this was raised to 50 percent by 1988, where it remained until the 1994 tax reform. Tianjin started with 30.6 percent in 1980, and this was stabilized at 46.5 percent in 1988. Jiangsu's retention rates were more stable, starting with 39 percent in 1980 and ending with 41 percent in 1988 (Wei 2000).

The case of Shanghai is especially interesting. In 1984 Shanghai contributed 5.6 percent to the national GDP and 9.6 percent to the gross value of national industrial output, while its population was barely more than 1 percent of the national total (Ge 1999). Because of its significance in the national economy, Shanghai had the worst contract with the central government. Its retention rate was merely 8.6 percent in 1980 and was only raised to 26 percent in 1985. Starting in 1988, Shanghai began to pay a fixed amount of Y 10.5 billion to the central government each year. For comparison, Guangdong's highest fixed payment to the central government was Y 14.1 billion. Although it was made one of the 14 coastal open cities in 1984, Shanghai still got the most unfavorable deal with the central government. The contrast between Shanghai and Guangdong shows clearly that the central government was seeking to pursue reform while ensuring a continuous flow of tax revenues.

Roland and Verdier (2003) believe that one of the keys to China's successful transition is the adoption of a "reform at the margin" approach, by which the state sector was left intact to provide revenues to the government, while the private sector was allowed to expand. The same logic applies to China's uneven regional development strategy, which allowed a few frontrunner provinces to experiment and grow quickly, while holding back other provinces for the sake of tax revenues.

Preferential government policies and economic geography

The uneven development model was carried out by a series of preferential policies toward the coast. This started as a shift of central government investment away from inland provinces and toward coastal provinces through direct allocations and fiscal arrangements. This was followed by creation of the SEZs and coastal open cities, which institutionalized a set of preferential policies toward the coastal region. Finally, tax breaks for FDI benefited the coast, which

was the largest recipient of FDI. However, it is not clear whether government policies or geography played a more important role in encouraging growth in the coastal region. In the 1990s, preferential government policies were extended to inland provinces. This gives us a chance to disentangle government policies from geography in determining regional variations in economic growth.

Investment shifts and reduced interregional fiscal sharing

The planning era witnessed the central government's intentional shift of investment to inland provinces. In the reform period, there was a shift back to the coast and a decline in interregional fiscal transfers.

Changes in investment since the 1980s are shown in table 14.4, which compares four periods, 1953–78, 1979–91, 1993–98, and 1999–2005, by the share of the coastal, central, and western regions in the central government's investment. While it was already the largest recipient of central government investment in the period of 1953–78, the coastal region became even more favorable in the initial reform period of 1979–91, receiving more than half of total central government investment, an increase of 14 percentage points over the earlier period. In contrast, the shares of both the central and western regions declined significantly, the central by 5.74 percentage points and the western by 8.26 percentage points. In terms of absolute value, the contrast is even starker. The investment received by the coastal region increased more than 200 percent, but that of the central and western regions increased only 89 and 55 percent, respectively. In 1979–91, the coastal region's share was 1.9 and 2.9 times that of the central and western regions, respectively. The coastal region clearly dominated central government investment in the 1980s.

The share of the central and western regions increased slightly in the period of 1993–98, while the share of the coastal region declined. However, the trends were reversed in the subsequent period of 1999–2005. The share of the central region declined substantially, while the share of the western region remained almost unchanged. In the meantime, the coastal region recovered almost the entire share it had lost in the previous period. As a result, the distribution resembled that of the period of 1979–91.

Concurrent with the decline in equality in central government investment in the 1980s was the decline in fiscal sharing among the three regions. This is clearly shown in table 14.5, which presents the trends in fiscal transfers between 1953 and 2005. The coastal and central regions' net contribution to the central government budget increased until 1976, but declined thereafter, until the 1993 tax reform reversed the trend. The reform significantly increased fiscal sharing among the three regions. By the period of 1999–2005, the contribution of the coastal region had recovered to close to the level of the period of 1976–80. Notably, the net gain of the central region became positive and reached almost the same level as that of the western region.

The coastal region's dominance since the 1994 tax reform was more subtle. Fiscal decentralization in the 1980s was so deep that the central government's share of tax revenues declined sharply from 25 percent in 1981 to 14 percent in 1994 (Wang and Hu 1999: fig. 6.7). The reform was intended to reverse this decline by strengthening the central government's position. In the meantime, the government promised that poorer provinces would get more transfers through a predetermined formula based on provincial income and government revenues. While the first objective was obtained (currently,

Table 14.4 Central government capital investment, 1953–2005

Indicator	Coastal	Central	Western
1953–78			
Investment (billion yuan)	223.39	192.21	149.64
Percent of total	39.52	34.01	26.47
1979–91			
Investment (billion yuan)	686.28	362.42	233.63
Percent of total	53.52	28.26	18.22
Change over last period	14.00	–5.74	–8.26
1993–98			
Investment (billion yuan)	1,003.6	690.2	464.0
Percent of total	46.51	31.99	21.50
Change over last period	–7.01	3.72	3.28
1999–2005			
Investment (billion yuan)	4,696.7	2,255.1	1,920.4
Percent of total	52.94	25.42	21.65
Change over last period	6.43	–6.57	0.13

Sources: Data for 1953–91 are from Li (1995: 89). Quoted in Wang and Hu (1999: 176). Data for 1993–2005 are from National Bureau of Statistics of *China, China Statistical Yearbook* (1994–2006). There are no data for 1992.

Table 14.5 Net transfers received from the central government, 1953–2005[a]

Time period	Coastal	Central	Western
1953–57	–9.4	–1.4	7.6
1958–62	–15.6	–1.6	8.6
1963–65	–15.7	–4.2	9.1
1966–70	–20.2	–6.2	20.9
1971–75	–21.2	–4.1	15.2
1976–80	–20.5	–2.9	10.8
1981–85	–12.8	–1.2	12.2
1986–92	–4.0	–1.0	11.1
1994–98	–10.9	1.5	7.1
1999–2005	–17.8	10.1	11.4

Sources: Data before 1994 come from Wei (2000: table 4.9). Other data come from National Bureau of Statistics of China, *China Statistical Yearbook* (1995–2006); National Bureau of Statistics of China, *Finance Yearbook of China* (1995–2006).
a. Percentage of net transfers received from the central government in total central government budget. Net transfers equal transfers from the central government (including tax returns) minus taxes handed over from local governments to the center.

central government tax revenues are 60 percent of the national total), the second objective largely fell through. Instead, central government transfers have been relying largely on project financing. Provinces that need money from the central government must submit a proposal to the National Development and Reform Commission (NDRC) and the Ministry of Finance, among other central government agencies. Once a project is approved, NDRC and the Ministry of Finance require the province to match the central government's contribution. This matching rule creates a field tilted in favor of coastal provinces, which are rich, and against inland provinces, which are much poorer. As a result, more central government revenues flow back to coastal provinces than to inland provinces.

Government preferential policies

Starting in 1980, China began to offer preferential policies to a few cities through various initiatives. In the 1980s, most of these initiatives only covered cities in the coastal region. After Deng Xiaoping's visit to the south in 1992, inland provinces began to receive the benefits of opening up through the establishment of economic and technological development zones. The initiatives undertaken since 1980 include the following (Wang and Hu 1999):

- *Special economic zones*. Four SEZs were created in Shantou, Shenzhen, Xiamen, and Zhuhai in 1980. In 1988 Hainan Island was separated from Guangdong province and became the fifth SEZ. In 1992 Shanghai's Pudong became the sixth SEZ.
- *Coastal open cities*. In 1984, 14 coastal cities were designated as coastal open cities, whose purpose was mainly to attract FDI through the establishment of economic and technological development zones (ETDZs).
- *Coastal economic open zones*. Between 1985 and 1988, five coastal economic open zones were created along the coast, covering all the major economic centers there.
- *Customs-free zones*. These were created between 1990 and 1993 along the coast.

In the 1990s economic opening spread to other regions through the creation of new open economic zones. These included major cities along the Yangtze River, border economic cooperation zones, capital cities of inland provinces and autonomous regions, ETDZs outside the coastal open cities, and bonded areas (see Démurger and others 2002). By the mid-1990s, opening finally spread to almost every corner of the country, and "zone fever" led to the establishment of numerous ETDZs and high-tech zones throughout the country. However, the number of ETDZs approved by the central government was limited. Even by the end of the 1990s, the distribution of special zones was tilted toward the coastal region (Démurger and others 2002).

These special zones received substantial preferential policy treatment, as summarized in table 14.6. These policies involved three types of preferential treatment: tax breaks, more freedom to approve FDI, and a larger retention rate of foreign exchange earnings.[3] They provided substantial benefits to firms operating in the zones. This raises the question of whether the rapid development of the coastal region has been a result of economic forces including economic geography or a result of preferential government policies that arose because the zones were concentrated in the coastal region (Wang and Hu 1999). The next section turns to this question and tries to evaluate the roles played by government policies and geography in different periods since 1978.

Table 14.6 Preferential policies offered to different zones

Policy	Special economic zones	Central open cities	Economic and technological development zones	Coastal economic open zones	Customs-free zones
National income tax[a]	15 percent, exempted in first three years	24 percent	15 percent	24 percent	
Local income tax	Reduced or exempted	Reduced or exempted	Reduced or exempted	Reduced or exempted	
ICT on exports[b]	Exempted	Exempted	Exempted	Exempted	Exempted
ICT and custom duties on imports					Exempted
ICT and custom duties on FDI's imported equipment	Exempted	Exempted	Exempted	Exempted	Exempted
Right to approve FDI	Much greater	Greater	Much greater	Greater	Much greater
Right to retain foreign exchange earnings[c]	100 percent	50 percent			

Source: Wang and Hu (1999: table 7.2).
a. Standard rates were 30 percent for joint ventures and 20–40 percent for foreign-owned companies.
b. ICT stands for industrial and commercial tax. It was replaced by value added tax after the 1994 tax reform.
c. The standard ratio was 25 percent.

Policy versus geography

Démurger and others (2002) provide a comprehensive study of the factors determining China's uneven economic development for the period of 1978–98. In particular, they examine the relative importance of preferential policies and geography in determining variations in growth across provinces. For that, they construct two variables, one measuring policy preferences and the other measuring geographic advantages. For the first, they create a preferential policy index, called *Policy*, based on the number of designated open zones in a province and the extent of preferential treatment they get. They then assign different weights to different zones according to the following rule:

Weight = 3: SEZ or Shanghai Pudong New Area;

Weight = 2: economic and technological development zone or border economic cooperation zone;

Weight = 1: coastal open city, coastal economic open zone, open coastal belts, major city, bonded area, or capital city of an inland province or autonomous region; and

Weight = 0: no open zone.

If a province (such as Guangdong) has one or more SEZs, it gets a score of 3 for its preferential policy index. That is, the value of the variable *Policy* does not increase when a province has more than one zone.

For geography, Démurger and her coauthors create a variable, *Pop100cr*, measuring a province's ease in getting access to the sea. To be precise, it is "the proportion of the population distribution of a province in 1994 within 100 km [kilometers] of the coastline or ocean-navigable river[s], excluding the coastline above the winter extent of sea ice and the rivers that flow to this coastline" (Démurger and others 2002: 21). The correlation coefficient between *Pop100cr* and the average value of *Policy* in 1978–98 is 0.54. Therefore, the two variables have enough variations for us to disentangle the effects of geography and policy.

Using *Pop100cr* and the average scores of *Policy* for different periods and controlling initial per capita GDP, Démurger and her coauthors estimate separate growth equations for three periods: 1979–84, 1985–91, and 1992–98. The results are presented in the first three rows of table 14.7. The last row of the table presents results for the period 1999–2006. The *Pop100cr* variable is the same as in the first three regressions; *Policy* uses its values in 1998. Several relevant results emerge from the table.

First, there is no evidence for β-convergence among Chinese provinces. The coefficient for initial GDP is not statistically significant in any of the four periods.

Second, the role played by government policy has changed throughout the years. In the period 1985–91, the coefficient of *Policy* was significantly higher than in 1979–84. However, it became insignificant in 1992–98 and 1999–2006. That is, preferential

Table 14.7 Policy versus geography: Regression results

Period	Initial GDP	*Pop100cr*	Policy	R^2
1979–84	–1.23	1.51	0.56	0.28
	(1.47)	(2.31)	(2.88)	
1985–91	–0.34	–0.64	1.19	0.38
	(0.29)	(0.73)	(2.67)	
1992–98	–0.60	4.27	0.99	0.71
	(0.57)	(7.14)	(1.35)	
1999–2006	0.52	0.51	–0.58	0.06
	(0.78)	(0.66)	(1.10)	

Source: The results for the three periods between 1979 and 1998 are from Démurger and others (2002: table 12); the results for 1999–2006 are calculated by the author based on data from National Bureau of Statistics of China, *China Statistical Yearbook* (2000–06); National Bureau of Statistics of China, *China Statistical Abstract* (2007).
Note: The dependent variable is average growth rate (percent) of per capita GDP in each period. Regressions for 1979–98 are based on data for 30 provinces (Chongqing is excluded); regression for 1999–2006 is based on data for all 31 provinces. Initial GDP is the logarithm of per capita GDP of the year immediately before each period started. *Policy* takes the average values of each period in the three regressions for 1979–98 and takes the 1998 values in the regression for 1999–2006. A constant is added in each regression. Numbers in parentheses are *t*-statistics for the estimates.

government policies were important in the 1980s, but not since the 1990s.

Third, the geography variable *Pop100cr* is statistically significant in the two expansionary periods of 1979–84 and 1992–98, but not in the less expansionary periods of 1985–91 and 1999–2006.[4] The coastal region apparently has experienced more volatility than the other two regions: in expansionary periods, it moved ahead of the other two regions; in recessionary periods, it contracted more than the other two regions.

Fourth, the predictive power of the growth regression declines significantly for the period 1999–2006, with its R^2 decreasing to only 0.06. Neither geography nor government policy played a significant role in this period. This result is consistent with the data presented in table 14.1, which show that the growth rates of the central and western regions were catching up with the growth rate of the coastal regions in the period of 1999–2006. Some of this can be attributed to convergence, and some can be attributed to the diminishing role of government policies, but neither is significant enough to dominate.

In summary, we have the following two major conclusions. First, geography played a diverging role only in periods when the economy was on an expansionary track. This is a piece of evidence for the coastal region's deeper integration into the world economy. Second, preferential government policies played a significantly diverging role in the 1980s but have since lost strength. This has been caused partly by the dispersion of preferential government policies to inland provinces in the 1990s. In 1991, the year before Deng Xiaoping's visit to the south, the average score of *Policy* for the coastal region was 2.18, but the average score for the other two regions was 0.10. By 1998, however, the score had a small increase for the coastal region, reaching 2.36, but a large increase for the other two regions, reaching 1.50.

Recent government initiatives to reduce regional disparities

Beginning in the late 1990s, regional inequality caught the attention of the central government. This was partly related to the 1994 tax reform. One major consequence of the reform was to increase the central government's share of government revenues. Less-developed provinces felt the pressure more than developed provinces because their budgets were smaller. The amount of formula-based revenue transfers did not increase to a level sufficient to counterbalance the inequality created. In the meantime, project-based revenue transfers worked against less-developed provinces. Less-developed provinces felt that they had been abandoned by the central government. The Go West policy, which was adopted in 1999, was an effort to respond to this sentiment. At the same time, the northeast, one of China's old powerhouses, also experienced a sharp decline because of economic restructuring. Industries in the northeast were overwhelmingly state owned, resource based, and lacking new investment and research and development (R&D). In the new era of private economy and globalization, these industries lost their competitiveness and began an inevitable decline. A once glorious region became China's backwater of stagnation and a source of social unrest. To revitalize the industrial bases in the northeast, the central government initiated the Reviving the Northeast program in 2003.

The central government set up a special office for each of the two programs, committed considerable amounts of financial resources, and offered them favorable policies. The positive responses from the central government, however, encouraged the central provinces to request preferential

treatment. A theory of "the falling central" was developed, which believes that, while the east is forging ahead as a result of geographic and policy advantages and the west and the northeast are getting preferential policies and money from the central government, the central provinces (Anhui, Henan, Hubei, Hunan, Jiangxi, and Shanxi) do not get anything from the central government and thus are falling behind. The central provinces have used this argument to request support from the central government. In April 2006 the central government, in its tenth directive of 2006, pledged to give the central provinces more support and to set up an office in the NDRC to lead the efforts.

This section reviews these three initiatives and comments on their merits and shortcomings. In particular, it seeks to find the political economy logic behind the central government's regional policies.

Go West

The main purpose of the Go West program is to support infrastructural construction and environmental protection. Between 2000 and 2005, 70 main construction projects were started, and the total amount of investment reached Y 1 trillion. More than one-third of the funds raised by long-term government bonds for construction were directed toward the western region during this period, and the percentage exceeded 40 percent from 2002 to 2005. About 220,000 kilometers of new roads were built in the region in the six years of 2000–05, among which 6,853 kilometers were highways. In addition, 5,000 kilometers of railways were built, and 10 airports were under construction. Among these projects, some, such as the Qinghai-Tibet Railway, West-East Power Transmission Project, and West-East Natural Gas Pipeline Project, have become national landmarks.

Environmental conservation is an important part of the Go West program. The "Land for Forest" and "Land for Grass" programs were introduced to restore the ecosystem. Under the Land for Forest program, 5.26 million hectares of cultivated land were converted to forest. In addition, about 16 million hectares of land suffering from water and soil losses were controlled, and 28 million hectares of land's natural ecosystem were restored. New trees were planted on some 7.65 million hectares of wasteland. Under the Land for Grass program, 19.33 million hectares of grassland were restored.

The Land for Forest and Land for Grass programs displaced a large number of farmers from agriculture. The central government started various complementary programs to help displaced farmers find alternative employment. For the transitional period, displaced farmers were eligible for a subsidy of Y 20 for each mu (one-fifteenth of a hectare) of land converted back to forest. In 2007, the subsidy was raised to Y 105 in the south and Y 70 in the north (State Council 2007).

The Go West program also allocates money to support social development in the western region. Investment in education in this region amounted to Y 15 billion, and investment in public health services reached Y 8 billion in the six-year period of 2000–05.[5]

In addition to financial resources, the central government gives the western region a variety of preferential policies to attract FDI and domestic and foreign companies to construct infrastructure and environmentally friendly businesses. They include:[6]

- For domestic and foreign companies engaged in industries promoted by the central government, the rate of corporate income tax is 15 percent for a designated period of time.
- In minority autonomous regions, corporate income tax can be reduced or exempted after getting approval from the provincial government.
- For new companies in transportation, power supply, water conservation, postal services, and radio and television services, corporate income tax can be exempted or reduced for 3 years.
- In old revolutionary bases, minority regions, remote border areas, and poverty regions designated by the central government, corporate income tax can be exempted or reduced for 3 years, subject to government approval.
- For agricultural cash products covered by the Land for Forest and Land for Grass

programs, the agricultural cash crop tax is exempted for 10 years.[7]

- Road construction is exempted from land occupation tax subject to approval by the provincial government.
- For companies engaged in government-promoted industries, imported equipment for self use are exempted from tariffs and import value added tax.

Table 14.8 compares the western region and the country in some key economic and social indicators for the period of 2000–05. Road construction and telecommunications users grew faster in the western region than in the nation as a whole, reflecting the emphasis of the Go West program on infrastructural construction. In addition, the Land for Forest and the Land for Grass programs also paid off because the western region lost arable land and gained forest more quickly than the nation as a whole. In the same period of time, population in the western region declined 0.6 percent. This decline probably was a result of large-scale migration from the west to the east. Lastly, the western region's growth rates for other indicators were comparable to those of the nation as a whole.

The Go West program seems to have fulfilled its primary goals of providing infrastructure, conserving the environment, and improving social development in the western region. While the last two achievements should be applauded in their own right, the first needs to be evaluated against the primary purpose—economic growth—it was meant to serve. In this regard, we do not have adequate data to provide a conclusive answer.

Reviving the Northeast

The Reviving the Northeast program seeks to revive the industrial potential of key cities and facilitate a smooth economic transition. The decline of the northeast as one of China's powerhouses was a result of several concurrent factors.

The first was the declining efficiency of state ownership. The northeast lagged behind the rest of China in privatizing its state-owned enterprises (Garnaut and others 2005). This, in turn, was a result of its relative superiority before the mid-1990s. The performance of the region's state-owned enterprises in the 1980s and early 1990s was relatively good, and people working for them enjoyed relatively high income. However, the emergence of the private economy in the southern and eastern parts of China since the mid-1990s has posed a serious challenge to the state-owned enterprises, resulting in declining profitability. In the eastern and southern parts of the country, privatization was relatively easy because a viable private sector was ready to absorb the redundant workers released from state-owned enterprises. In the northeast, however, the task was much harder because there were fewer employment opportunities outside the state sector. Therefore, having a

Table 14.8 Comparison of the western region and the country, 2000–05[a]

	2000		2005		Growth rate[b]	
Indicator	Western	National	Western	National	Western	National
Population (million)	362	1,267	360	1,306	[–0.6]	[3.1]
Arable land (million hectares)	4.846	12.824	4.503	12.208	[–7.1]	[–4.8]
GDP (billion yuan)	1,665.5	9,720.9	3,349.3	19,778.9	11.3	11.9
Per capita GDP (yuan)	4,624	7,766	9,180	15,386	14.7	14.7
Railroads (kilometers)	22,109	58,656	27,594	75,438	[24.8]	[28.6]
Paved roads (kilometers)	553,874	1,402,698	780,339	1,930,543	[40.9]	[37.6]
Highways (kilometers)	3,677	16,314	10,530	41,005	23.4	20.2
Number of airports	58	121	66	142	[13.8]	[17.4]
Landline phone subscribers (million)	2.623	14.483	7.030	35.045	21.8	19.3
Mobile phone subscribers (million)	1.382	8.453	8.012	39.341	42.1	36.0
Middle school students (million)	1.834	7.369	2.354	8.581	5.1	3.1
Hospital beds (thousand)	830	3,177	877	3,351	[5.7]	[5.5]

Source: Statistical yearbooks of various provinces.
a. Figures for "western" are aggregated on all the provinces in the western region. For comparison purposes, figures for "national" are aggregated on all the provinces in the country. Growth rates are based on comparable prices. Other financial figures are based on current prices.
b. Most figures are annual growth rates, but those in square brackets are accumulative growth rates in 2000–05.

strong state economy became a curse for the northeast.

The second factor was related to the northeast's industrial structure. Many cities in the region were dependent on a single resource such as coal or crude oil. The "resource curse" had real bite. Most cities were not prepared for the depletion of these resources. As a result, many cities suffered from massive unemployment in the mid-1990s. For example, Fuxin, a coal mining city, had an unemployment rate of 40 percent in the early 2000s (Garnaut and others 2005). Another deficiency of the industrial structure was that the economy was dependent on heavy manufacturing. This did not appear to be a problem when economic planning was in place and orders were secured, but it became increasingly problematic when the market became the primary tool of resource allocation. The dependence on heavy industry slowed the process of privatization in the northeast. The development in the east and south, especially the industrialization of their rural areas, was closely tied to their advantages in light industry. Private firms are mostly small and lack capital in their early years. They are more suitable to producing consumer goods than intermediate inputs. In the eastern and southern parts of the country, such firms benefited from technological spillovers from the existing state sector (Lin and Yao 2001). The dominance of heavy industry in the northeast prevented this kind of spillover from happening, retarding the process of privatization. In addition, state-owned enterprises in heavy industry are difficult to privatize because they are much larger in both capital stock and employment.

The third factor was related to the inferior technology in the northeast. This was actually tied to the first two factors. Because the profitability of the state-owned enterprises was declining and the industrial structure was inadequate, technological upgrading in the northeast has been very slow.

Notwithstanding these weaknesses, the northeast has rich stocks of human capital and technological know-how that, if used properly, could serve as the base for its revival. The Reviving the Northeast program acknowledges this potential. Large amounts of central government money have been invested in the program. According to the Office of the Leading Group for Reviving the Northeast Old Industrial Bases (2005), in 2004 alone the central government:

- Pledged Y 108.9 billion of government bonds for 297 projects in industrial structural adjustments and revitalization of old factories. By the end of 2004, Y 880 million had been disbursed;
- Provided Y 560 million to support the commercialization of key high-tech projects;
- Pledged Y 3.43 billion of government bonds for projects related to agriculture, forestry, and water conservation;
- Gave Y 5.31 billion to support the abolition of agricultural taxes;
- Arranged Y 2.02 billion for key road construction projects and Y 2.2 billion for rural road construction;
- Subsidized Y 1.82 billion to convert the old pension scheme to a new pension scheme;
- Provided Y 2.75 billion for the settlement of redundant workers in state-owned enterprises;
- Invested Y 4.05 billion in the rehabilitation of 15 coal mining areas; and
- Gave Y 1.3 billion to settle redundant workers in the petroleum industry.

The heavy investment has paid off in some respects, but it has not reversed the decline of the northeast in the national economy. An official report of the Office of the Leading Group for Reviving the Northeast Old Bases (2007) finds that the share of the three northeastern provinces (Helongjiang, Jilin, and Liaoning) in national GDP was 9.6, 9.3, 8.7, and 8.6 percent in 2003, 2004, 2005, and 2006, respectively. Their gap with Guangdong grew wider in these four years. In 2003 the sum of the three provinces' GDP was only 80.3 percent of Guangdong's GDP. The share declined further to 77.1, 76.6, and 58.3 in 2004, 2005, and 2006, respectively.

The same report finds that the economy in the northeast is still dominated by state ownership. In 2006 state-owned and state-controlled enterprises contributed 35.7 percent of the total industrial value added in the

country, but 53, 63, and 86 percent in Liaoning, Jilin, and Helongjiang, respectively.

In addition, the industrial structure has not changed. The total profit of enterprises with an annual sales volume larger than Y 5 million was Y 191.1 billion for the three provinces. This is a remarkable increase of 22.5 percent over the year before, but still 8.5 percentage points shy of the national rate. Most important, 74.7 percent of the profit was contributed by central government–owned petroleum and natural gas companies. Indeed, except for a limited number of resource-based sectors such as petroleum, natural gas, steel, transportation equipment, power generation, and utility supply, other sectors were barely making money. The oil refinement and nuclear power sector, the largest sector in the northeast, lost Y 14.5 billion and Y 19.3 billion in 2005 and 2006, respectively.

Finally, the banking system is siphoning money out of the region, while the central government is pumping money into it. Since 2004, more than Y 10 million have been diverted by the banking system out of the region each year, and the total amount diverted during this period reached Y 858.1 billion by the end of 2006. The banking system diverts money out of the region because investments in other parts of the country can bring better returns than investments in the northeast. Thus the question of whether direct government investments can do better than private investments warrants serious consideration.

Central Rising program

The huge amounts of central money pledged to the west and the northeast were the envy of other provinces. The plea made by the central region was especially appealing politically. Although there is no evidence that the central region was failing (see table 14.1 for counterevidence), there is a strong political case for the central government to provide support to provinces in the region. In April 2006, the Central Committee of the CCP and the State Council (2006) issued a joint directive to launch the *zhongbu jueqi*, or Central Rising program. This directive indicates nine areas for improvement: articulation of overall objectives and principles, promotion of the construction of the Socialist New Countryside, optimization and upgrading of industrial structures, enhancement of transportation advantages, promotion of the development of urban clusters and county economies, efforts to deepen the opening up, efforts to accelerate social development, promotion of sustainable development, and strengthening of the leadership. Although the details of the program have not been worked out, this program has a broader mandate than the other two programs, placing more weight on continuous development of the central region.

The political logic of regional development programs

The economic rationale for the three regional development programs varies, but the political case for all of them is strong.

The Go West program has lofty goals, but is a relatively modest program. It does not aim to narrow the gap between the west and the east; rather, it aims to restore the region's ecological balance, preserve the environment, and build better infrastructure. This is a much-needed program because China's western region is environmentally fragile and experiencing serious ecological challenges. It was named *da-kai-fa*—big development—for the sake of political viability. The true aims of the program are considered to be too conservative to receive support in the western provinces and too limited to soothe the dissenting voices opposed to enlarging the gaps between east and west.

In comparison, the Reviving the Northeast program is socially driven more than economically and environmentally motivated. While it is right to help the northeast in transforming its ailing industrial structure, the program tends to ignore the real impediments to growth in the northeast, which are rigid mind-set, poor incentive structure, and overwhelming state dominance of the economy. There is a danger that the influx of money from the central government will disguise the consequences of these impediments. To catch up, the northeast needs to adapt the reforms taken by the south and east coast. The central government should facilitate the transition in the northeast instead of trying to keep ailing

enterprises afloat. However, caution is needed in drawing attention to the weaknesses that have prevented the northeast from catching up with the coastal regions because doing so puts the blame on local governments. The Reviving the Northeast program is a benefit the central government gives the northeast to win local support.

Likewise, the Central Rising program is a response to regional pressures. The central government has already pledged money to some of the key areas for improvement. For example, Y 200 billion has been allocated to the Socialist New Countryside for each year of the Eleventh Five-Year Plan spanning from 2006 to 2010. While the spread of preferential treatment to regions other than the coast may narrow the gap between the coast and other regions, the gaps among the other regions are likely to remain and even expand. There is a "race to the bottom" effect in the competition for central government money, in which every province compares itself with the worst-performing province and is ready to ask for more central government support. The effects of preferential treatment then cancel each other out and may fail to rebalance regional development.

Alternative ways to address regional disparities

The previous section shows that other considerations are as prominent as economic considerations in reducing regional inequality in the three major government programs, although the Go West program is more practical than the other two. This section discusses some alternative ways to address regional disparities. It does not provide an exhaustive list of the alternatives; rather, it concentrates on three areas where policy changes could bring significant results. These three areas are migration and urbanization policy, fiscal policy, and investment policy.

Migration policy

China's migration policy has long been criticized for its lack of efficiency as well as its violation of people's basic economic rights. Since it was instituted soon after the great famine of 1959–62, the *hukou*, or resident registration, system has served as the major barrier preventing people from moving from the countryside to the city, from one village to another, and from one city to another. The fast growth of the coastal region since the early 1990s, however, has drawn a large number of migrants from the central and western regions. These migrants, now estimated at 140 million, have become an indispensable part of the growth of the coastal region. Yet it has taken more than 10 years, and sometimes political heat, for the government to acknowledge migrants' rights to move freely about the country. The *hukou* system is still the major obstacle preventing migrants from settling freely in a place of their choosing. While most of the restrictions, such as no movement across county or city borders, and the benefits, such as free housing and food subsidies, associated with *hukou* have been reduced, *hukou* still holds significant implications in two important areas (Bhide and Yao 2007; Yao 2001).

The first area is providing more political representation to migrants in the recipient city. The right to political representation is important because it instills a sense of responsibility—not necessarily accountability—on the part of local government officials to include migrants in their calculations. Without *hukou*, migrants are often regarded as "outsiders" who only stay for short periods of time and whose welfare can rightly be ignored. For example, local urban residents can be qualified for *dibao*, the low-income maintenance program, but migrants cannot. Local governments need to worry about the employment of local residents, but not about the employment of migrants.

The second area is the education of migrant children. It used to be very expensive for migrants to send their children to local public schools, and migrants opted to set up their own schools. However, the schools faced constant harassment from local governments because they were not licensed. Starting in 2003, the situation began to improve. Fees charged on migrant students were lowered, and many migrant schools were licensed by the local governments. However, migrant students cannot take the college entrance exams in the

recipient province because each province has a quota for college admission. This severely limits a migrant family's future in the city. Migrants with children in high school have to return to their home province if they want their children to receive a higher education.

The restrictions put on migration are closely linked with China's urbanization policy. While large urbanized areas are emerging along the east coast, the government is still averse to population concentration. Local governments of large cities all have population caps. For example, Beijing's population is capped at 19 million by 2020, a target many experts believe will be exceeded.

Yet migration may be one of the most effective ways to neutralize regional disparities. In a simulation study, Whalley and Zhang (2004) find that eliminating *hukou* could lower regional income inequality. The intuition is a straightforward application of the law of one price: free movement of labor tends to equalize the wage rates in different regions. Although in reality the effect may not be as strong as the simulation predicts, allowing people of inland provinces to settle permanently in the coastal region would relieve some of the environmental stress widely observed in inland provinces.

The coastal provinces will certainly need to confront the problems caused by population concentration. But precisely because of concentration, many of those problems are easier to solve than when they happen in a dispersed area. For example, waste treatment is cheaper when the quantities are larger. Other issues can also be handled with proper urban design and government policies. Cities like Tokyo and New York provide good examples of big-city management for China.

Fiscal policy

China's fiscal system provides incentives to local governments that exacerbate regional disparities. This happens through two mechanisms at the central and local levels, respectively.

At the central level, there is no properly designed and enforced revenue transfer scheme. There is a formula-based transfer scheme, but the money allocated to it is limited. Instead, the central government relies heavily on project-based transfers, which invariantly favor rich provinces. As a result, investments by the central government often exacerbate regional inequality rather than narrow it. This seemingly unwise result has a sound political economy basis. The formula-based scheme does not allow the central government to provide selective favors to certain provinces or regions, whereas the project-based scheme gives the central government considerable discretion to exchange favors with select provinces. To the extent that they allocate money via projects, the programs that aim to narrow the regional gaps have the same logic.

At the provincial level, Zhang (2005) demonstrates forcefully that the current fiscal arrangements hurt poor provinces. As he puts it in the summary of his paper,

> Regions initially endowed with a broader nonfarm tax base do not need to rely heavily on new and existing firms to finance public goods provision, which creates a healthy investment environment in support of nonfarm sector growth. In contrast, local governments in regions where agriculture is the major economic activity spend the majority of their resources on their own operating costs, leaving little for public investment. Because of the relatively high transaction costs associated with collecting taxes from the agricultural sector, local governments tend to levy the existing nonfarm sector heavily, thereby greatly inhibiting its growth. As a result, regional differences in economic structures and fiscal dependent burdens may translate into widening gaps in equality.

Table 14.9 shows that inland provinces tax their farmers more heavily than coastal provinces, although the overall tax burden is about the same level in all three regions. Since inland provinces have higher shares of agricultural GDP, the consequences of this skewed distribution of the tax burden cannot be underestimated.

In combination with inland provinces' heavier tax burdens, extending the central government's preferential tax policies to inland provinces would likely do more harm than good. These policies almost always promise to cut the corporate income tax. For existing firms, the corporate income tax is a 100 percent local tax; for new firms, it is split

evenly between the central and provincial governments. As provincial government officials like to say, "The central government invites the guests, but provinces end up paying the bill." This is fine with rich provinces but becomes a burden for poor provinces that are financially constrained. Western provinces often opt not to extend preferential tax policies to enterprises, which invites the inevitable complaints from businesses (CPDF 2004).

A better approach to addressing regional disparities is to strengthen formula-based revenue transfers. Although this ties the central government's hands, it also creates tangible benefits. One benefit is that it allows the central government to address regional disparities in a more equitable and less distortionary way. It is more equitable because poorer provinces automatically get more transfers from the central government; it is less distorting because it does not introduce selective incentives to the economy. Another benefit is that it preempts local governments' demands for special favors, which makes the central government's life easier.

However, the central government may not want to adopt this approach precisely because it ties its hands. As in other cases, political will is needed.

Investment policy

Even though the central government insists on project-based fiscal transfers, there are better ways to conduct projects. Zhang and Fan (2000) study the contributions of different public investments to reducing regional income inequality for the period of 1978–95.[8] Table 14.10, adopted from table 14.6, reports their estimates for the marginal contribution of different public investments to regional inequality for the western, central, and eastern regions. All the investments in the coastal and central regions increase inequality, although the contribution of investments in the central region is minimal. All the investments in the western region reduce inequality. Investments in education and irrigation have very large effects on agricultural GDP; investments in education and telephones have very large effects on rural nonagricultural GDP; and investments in education and telephones have very large effects on total rural GDP. It is noteworthy that investments in education have the largest effect on reducing inequality in the western region, but they also have the largest effect on increasing inequality in the coastal and central regions. To the extent that education in the western region is inferior to education in both the coastal and central regions, investment in the western region to ensure more equitable access to education is the most important way to reduce regional income inequality.

Another interesting finding in table 14.10 is that roads have a very mild impact on both reducing and increasing regional

Table 14.9 Composite tax rates of inland and coastal regions

Year and region	Per capita GDP (current yuan)	Agricultural tax rate (percent)	Overall tax burden (percent)
1994			
National	3,849	2.14	10.55
Coastal region	5,262	2.16	10.53
Inland region	2,773	2.78	9.58
2000			
National	7,077	2.33	12.62
Coastal region	10,578	1.61	11.40
Inland region	5,670	2.73	9.91
2005			
National	14,002	0.25	16.67
Coastal region	21,426	0.16	14.81
Inland region	11,070	0.34	12.62

Sources: National Bureau of Statistics of China, *China Statistical Yearbook* (1995, 2001, 2006); National Bureau of Statistics of China, *Finance Yearbook of China* (1995, 2001, 2006).
Note: Agricultural tax rate = total agricultural tax / agricultural GDP; overall tax rate = total tax / total GDP.

Table 14.10 Marginal contribution of public investments to regional income inequality

Type of GDP and investment	Coastal	Central	Western
Agricultural GDP			
Roads	0.004	0.003	–0.005
Education	0.137	0.086	–0.221
Electricity	0.022	0.014	–0.033
Telephones	0.043	0.027	–0.068
Irrigation	0.127	0.080	–0.204
Agricultural R&D	0.018	0.011	–0.027
Rural nonagricultural GDP			
Roads	0.033	0.002	–0.036
Education	0.251	0.018	–0.268
Electricity	0.064	0.004	–0.068
Telephones	0.129	0.009	–0.138
Total rural GDP			
Roads	0.018	0.009	–0.028
Education	0.185	0.093	–0.277
Electricity	0.041	0.021	–0.062
Telephones	0.084	0.042	–0.125
Irrigation	0.052	0.026	–0.078
Agricultural R&D	0.007	0.003	–0.010

Source: Zhang and Fan (2000: table 6).
Note: Inequality is measured by logarithmic variance of each type of GDP among the provinces. Figures are percentage changes of inequality as a result of a 1 percent increase in individual types of public investment.

inequality. A more detailed study is provided by Fan and Chan-Kang (2005), who find that high-quality roads do not help to reduce poverty, but that low-quality and rural roads have a significant effect. This result makes sense because poor people have few chances to use highways, and more rely on local roads for their production and commercial activities.

The results provided by Fan and Chan-Kang (2005), Fan, Zhang, and Zhang (2002), and Zhang and Fan (2000) may not be conclusive, but at least they show the merits of identifying better ways of investing public resources to reduce regional inequality. Chinese officials tend to conduct large-scale projects, such as building highways, and give lower priority to long-term investments, such as in education. The aforementioned studies have shown that a more balanced approach is needed.

Conclusions

This paper has reviewed regional income inequality in China and discussed the political economy behind China's uneven development model and its recent programs aiming to reduce regional inequality. These reforms have several facets. First, the uneven development model seeks to explore the geographic advantages offered by China's coastal region. Second, the Go West program aims to preserve the environment and improve economic and social infrastructure in the western region, but the Reviving the Northeast and the Central Rising programs are driven as much by non-economic as by economic considerations. Third, there are often more efficient approaches to addressing regional inequality, but they are less likely to be implemented precisely because government decisions are often driven by factors other than efficiency considerations.

The driving force behind Chinese central-regional politics is the "selective favor exchanges" by which the central government retains large discretionary power in distributing government revenues and the provincial governments bargain for favors and give regional support in return. But such decisions are not limited to China, although they may take a different form in other administrative systems.

Notes

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1. Construction of the third front started when China split from the Soviet Union and the Vietnam War began to escalate. The Chinese leadership sensed that a war was looming and believed that the country should be prepared for it. The country was then divided into three strategic fronts: the coast and border area was the first front; the hinterland was the third front; and between them was the second front (Wei 2000).

2. In an interesting paper, Banerjee, Duflo, and Qian (2005) find that the distance to the nearest treaty port still has predictive power for a county's contemporary growth rates.

3. Before 1994, China had a dual-track system for its exchange rate regime. The central bank set an official exchange rate, and the Shanghai foreign exchange swap market generated a market exchange rate. Domestic firms had to buy foreign currencies if they imported inputs beyond the government plan. Therefore, a higher retention rate saved firms' money that could be used to import inputs.

4. The period 1985–91 included 1989 and the slowdown years that followed; the period 1999–2006 included years of major deflation.

5. If not otherwise indicated, data used in this subsection all come from the Office of the Leading Group for Western Region Development (2006).

6. See http://www.developwest.gov.cn/content.asp?filename=txt/200707318 for details.

7. This policy lost its effect after the central government abolished all kinds of agricultural taxes in 2006.

8. Fan, Zhang, and Zhang (2002) provide another study for a longer period of time (1952–97) and obtain similar results.

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