

# Disparities in Mainland China's Regional Economic Development and Their Implications for Central-Local Economic Relations\*

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*Decentralization and market orientation are major issues confronting mainland China's central and local governments. Scholars and officials generally perceive that economic reforms have widened the disparities among provinces. We will analyze these disparities among the thirty provinces based on various empirical data. The results obtained indicate that there is less disparity based on a ratio comparison. This is because market-oriented economic reforms have promoted effective economic incentives and relaxed restrictions on resource transfers. The potential of each region has hence gradually emerged and further accelerated overall economic growth. This has also achieved the goal of more equitable regional development.*

**Keywords:** disparities; local protectionism; central-local relationship; regional economic development; convergence effect; divergence effect; coefficient of variation

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Decentralization has been one of the major characteristics of mainland China's economic reforms. During the earlier period of reforms, the central government carried out several decentralization measures, including developing a provincial finance contracting system, a tax-sharing system, and a profit-retention fraction system, as well as giving local governments a wider range of decisionmaking freedom. It is widely held that under these measures, provinces have had a larger

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share in the nation's economic achievement, thus providing them with economic incentives. Indeed, over the past seventeen years, these measures have stimulated impressive economic growth in mainland China.

The policy of decentralization has had roots in mainland China prior to 1978. During the Great Leap Forward, Mao Zedong decentralized state enterprises, which were previously managed by the central government, to the local governments. During the Cultural Revolution, the central authorities also carried out autonomous "cellular economy" policies, due to defense strategy considerations.<sup>1</sup> However, Mao's administrative decentralization was distinct from Deng Xiaoping's regional decentralization; the former was based on discontent with the bureaucratic system while the latter has concentrated on developing the market mechanism's own effects. In other words, Mao decentralized administrative power, whereas Deng has also liberalized economic interests.

Therefore, decentralization measures during economic reforms have not only included decentralizing power from the central to the local governments, but also encouraging local governments and their enterprises to gradually comply with market mechanisms through the principle of "self-response to one's own losses or profits," which weakened the original command economy. This new mutual relationship between the central and local governments has given rise to substantial effects on the original relationship and codes of conduct. The operational practice of the system has involved both compromise and competition between the central and local governments.

Differences in resource endowment, location, culture, level of economic development, and the strategy of economic openness which originated in coastal regions before spreading to interior regions have resulted in uneven regional development with a high degree of disparity. The interior regions, dissatisfied with the economic disparities, have desired the central government to adopt economic and noneconomic measures to push their development and narrow the gap. On the other hand, the coastal regions have demanded further preferential measures, as they have been more concerned with their own economic interests. This has reduced the central

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<sup>1</sup>Audrey Donnithorne, "China's Cellular Economy: Some Economic Trends since the Cultural Revolution," *The China Quarterly*, no. 52 (December 1972): 605-19.

authorities' fiscal ability to reduce disparities. Thus, different provincial expectations for the central government and differences in development among the provinces have contributed to new tensions between the central and local governments.

According to the above reasoning, decentralization and market orientation are major issues confronting central and local governments, and the growth of disparities has further deepened the tensions in their relationship. This paper will focus on the latter. We will analyze the disparities among the thirty provinces and, based on various empirical data, discern future trends and measures between the central and local governments.

### **Theories of Regional Growth and Mainland China's Current Regional Development**

In development economics, many theories hold different conclusions about regional growth. Specifically, there is no common belief in the nature of the development process. Whether regional development converges on or diverges from the direction of a national economy is still an open question.

According to the neoclassical model of growth theory, regions are assumed to be uniform with no barriers to entry; transportation costs are either negligible or a simple function of distance; and production factors can be freely moved among regions and without incurring any transaction costs. Under this situation, growth in the national system is assumed to be full-capacity growth; regions can grow at various rates within the system. Interest rates serve as a mechanism to equate savings and investment, and adjustments take place in the capital/output ratio. It would be expected that capital will flow from high to low capital-intensive regions, while labor will flow in the opposite direction until factor returns are equal. In the long run, low wage regions will grow faster and attract inflows of new capital. This dynamic effect will raise wages but decrease the marginal product of capital that was initially higher than in the high wage regions. Finally, convergence in welfare levels among regions will take place.

On the other hand, the Harrod-Domar model concludes that with initial differences in regional growth rates, divergence in welfare levels among regions will occur. The model examines growth rates in capital and output; the growth rate of labor is assumed to be constant. Regions with higher propensities to save and a lower ratio

of capital to output will grow faster. Regions with higher growth rates will attract immigration, thereby further accelerating the growth process and exacerbating the differences in welfare levels among regions.

With the acceleration of technological progress in recent decades, divergence theory has received considerable support. However, most of the evidence of divergence theory deals with short-term effects. For long-term and nonlinear cause-effect relation tests, convergence and divergence effects coexist simultaneously. In general, divergence has a leading effect in the early stage of economic development. When the economy reaches higher economic levels, the convergence effect will supersede the divergence effect.<sup>2</sup>

In the next section, we will evaluate the causes of disparities among provinces, as well as possible future trends. We will also briefly discuss the ideas and measures of mainland China's regional economic development.

Balancing regional development is the political aim of mainland China's leaders. Various measures have clearly displayed this characteristic. The ideal of equality comes from the romantic experience of communist revolution; behind the slogans of anti-oppression and anti-exploitation, any special economic treatment was considered to be immoral. Therefore, the thought of equality was completely internalized into the individual value system.

Because mainland China has a huge economy within a large territory, every region has its own natural and cultural conditions, which are inevitably reflected in levels of economic development. When mainland China began to implement national policies, reducing disparities among provinces in economic development became one of the major goals. In the First Five-Year Plan period (1953-57), the central authorities gave priority to new investments in interior regions. In those five years, the total amount of infrastructure investment was 49.36 billion *yuan*, with 26.28 billion *yuan* (53.2 percent) distributed to interior areas. During the same period, the total industrial production in interior areas increased 151 percent, while the coastal regions only increased 119 percent.<sup>3</sup>

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<sup>2</sup>Geoffrey J. D. Hewings, "Regional Growth and Development Theory: Summary and Evaluation," *FRB Chicago Working Paper*, June 1990.

<sup>3</sup>Wang Haibo, *Xin Zhongguo gongye jingjishi 1958-1965* (The industrial economic history of new China 1958-65) (Beijing: Jingji guanli chubanshe, 1995), 519-20.

In the early 1960s, mainland China adopted many measures such as liberalizing the command economy (for instance, *sanzi yibao*<sup>4</sup>) to remedy the failure of the Great Leap Forward and carried out some more radical moves to balance regional economic development. Moreover, the authorities not only allocated more new investments to interior regions, but also moved many important industrial equipment to interior areas. These measures were part of what was known as the Third Front Movement.

Besides balancing regional industrial development, defense security was also a consideration of the Third Front Movement. Since the central economic administration could not achieve efficiency during the Cultural Revolution, small-scale industry and local economic self-sufficiency were greatly encouraged among provinces. The five industries—concrete, chemical fertilizer, power, mechanics, and steel—were established everywhere. These factories supported local demands and reduced pressure on the central government to allocate materials. Whether this kind of cellular economy further reduced disparities in regional development was questionable, but those in power believed that at the very least, it would not result in the exploitation of poor regions.

In terms of regional fiscal revenues and expenditures, under both the system of “state monopoly for fiscal revenues and expenditures” (*tongshou tongzhi*) and the “fiscal revenue-payment fraction” (*fencheng shangjiao*), provinces with higher revenues could only enjoy a portion of their revenue, while provinces with deficits (for example, Tibet, Yunnan, Guizhou, Inner Mongolia, Ningxia, etc.) received subsidies from the central government.<sup>5</sup> It can be seen that mainland China implemented balanced resource reallocation for economic development through provincial budgets and economic plans.

Prior to implementing reform and opening-up policies in 1978, regional economies were characterized by the features of centrally planned economy. Under the policy of balancing regional development, the central authorities subsidized the interior provinces. To allow regions a certain level of autonomy, the central authorities

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<sup>4</sup>More plots for private use, more free markets, more enterprises with sole responsibility for their own profits or losses, and fixing output quotas on a household basis.

<sup>5</sup>Nicholas Lardy, *Economic Growth and Distribution in China* (New York: Cambridge University Press, 1978).

also planned a system of vertical division of labor among regions. Generally speaking, the coastal regions developed the manufacturing industry while the interior regions provided raw materials. During the Third Front Movement, industrial material enterprises were moved to the interior regions; product manufacturing enterprises remained in the coastal regions.

The series of reform measures implemented after 1978 can be briefly divided into two parts: institutional reforms and open door policy. These reforms were a breakthrough in the socialist ideology and lacked precedence. Therefore, mainland China adopted a gradual approach of "touching the stones when crossing the river," which involved experimenting with the reforms first and then implementing the policies over the rest of the mainland.

In particular, during the reform process, Guangdong and Fujian were permitted to implement special open door policies in 1979. In August 1980, Shenzhen, Zhuhai, Shantou, and Xiamen were permitted to establish special economic zones (SEZs). In May 1984, mainland China further opened fourteen cities and established economic and technical development areas (ETDAs) in the coastal regions. In early 1985, several ETDAs were also established in the Liaoning and Shandong peninsulas, as well as in the delta regions of the Yangtze and Pearl rivers. Hainan was permitted to be a new SEZ in 1988. In April 1990, the Shanghai Pudong Development Plan was passed by the central authorities. In 1992, ETDAs were built in seven interior provinces. However, in terms of openness, attracting foreign direct investment (FDI), developing foreign trade, and liberalizing some relevant financial measures, the interior regions were well behind the coastal regions.

Mainland China has adopted a gradual method to reform economic institutions. Various responsibility systems in agriculture were implemented first, followed by reform measures in state-owned enterprises (SOEs), including tax reform, a system of "self-response to one's own losses or profits," wage and employment reform, responsibility systems, a stock system, a reduction of the mandatory plan duty, and so on. The government has also liberalized price control and reduced subsidies for various production activities. In terms of decentralization, the government has implemented a finance contracting system and allocated power over economic management and planning to local governments.

Institutional reforms have been oriented to specific measures and institutions. They first liberalized some controls which were

easy to handle and had small impacts on the whole economy; after receiving good results, they have moved to other regulations with larger impacts. These reforms have not been based on particular regions; however, along with the changes in the economic system's operation rules, and because of the different economic conditions in the provinces, economic reforms have created reallocation effects on provinces' benefits and thus changed their conduct.

For instance, during the liberalization of price control, priority has been given to those which had little industrial linkage effects. Gradualism has been adopted for price liberalization of upstream raw materials, as raising the prices of raw materials greatly affected all industrial sectors. This policy has been favorable to the coastal regions, which originally specialized in manufacturing products. However, the net effect has been that the interior provinces subsidized the richer provinces. The emergence of local disparities has forced the interior provinces to develop downstream manufacturing, and they have been unwilling to sell their raw materials to the coastal regions. Consequently, the enterprises with advanced technology in coastal regions have lacked the materials to extend their markets. On the other hand, since manufacturing products has high profits, small-scale manufacturing enterprises have been established throughout the interior provinces without permission of the central authorities. However, the interior provinces are weak in production technology, and the products they produce low in quality and unable to compete with products from the coastal provinces. When the economy has been in depression or products in surplus, interior provinces have inevitably prevented external products from entering their markets in order to protect their local enterprises. Finally, local protectionism has occurred, the cause of which has been the intervention of the central government on raw material prices.

Looking at mainland China's gradual opening-up process, despite the authorities' attempt to avoid discriminating against provinces by their location, the direct and indirect impacts of their policies have indeed influenced their economic development. Provinces with faster economic growth have asked the central government to liberalize various administrative controls and allocate resources through the principle of efficiency. Based on the goal of reducing the development gap in allocating resources, the interior provinces with lower development have requested the central authorities for more subsidies and favorable policies to remedy their natural disadvantage.

## Actual Changes in Unbalanced Local Development

In terms of industrial production per capita, consumption per capita, and national income per capita, many scholars have found that local disparities have become better during Deng's reforms.<sup>6</sup> This shows that the policy in Mao's era of balancing local equalized development has not achieved its goal. By contrast, the measures implemented in Deng's era which have given priority to developing the coastal regions and improving efficiency have, relatively speaking, realized the goal of equality.

Why does the conclusion, which comes from a rational and academic approach, conflict with our intuition? Scholars and officials in mainland China generally perceive that economic reforms have accelerated the speed of economic development but also widened the degree of disparity among provinces. Although there has been debate on how to narrow local disparities, a common conclusion has been reached about the trends of unbalanced development. In truth, the question is not who is right or wrong; the important issue is why there are various assessments about the degree of disparity.

Strictly speaking, equality is a subjective matter. Its formation and characteristics involve complicated causes, which cannot be wholly reflected in statistical variables. In many cases, the differences in absolute value are substantial. Moreover, reducing the differences *ex post* cannot completely ensure that an equitable outcome will be achieved. Receiving a subjective, fair treatment *ex ante* is more important. Whether local development in provinces is equitable involves the problems of how to deal with various statistics in economic development, and how local governments should interpret the central government's policy. In the following, we will analyze this issue with statistics related to decentralization policy.

First, in determining the national income per capita indicator,

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<sup>6</sup>Zhao Xiaobin and Guan Rongjia, "An Analysis of the Pattern of Chinese Regional Development and Central-Local Relations," *Zhongguo shehui kexue jikan* (Chinese Social Science Quarterly), no. 9 (Autumn 1994): 144-58; Tsui Kai-yuen, "Economic Reform and Inter-Provincial Inequalities in China" (Paper delivered at the Conference on China's Regional Economic Development, Chinese University of Hong Kong, May 18-21, 1993); Woo Tun-oy and Hsueh Tien-tung, *Regional Disparities in the Sectoral Structure of Labour Productivity 1985-1989* (Hong Kong: Chinese University of Hong Kong, 1992); Thomas P. Lyons, "Interprovincial Disparities in China: Output and Consumption, 1952-1987," *Economic Development and Cultural Change* 39, no. 1 (1991): 471-506.



besides considering the changes of local proportion due to different growth rates, the different absolute values of national income per capita must be noted. Along with rapid economic growth, the average national income per capita has substantially increased. This has made the absolute difference of national income per capita level among provinces larger. Although the ratio among provinces has not changed significantly, one still has the impression of a stark distinction between the rich and poor. For example, in terms of national income per capita, east, middle, and west mainland China had a ratio of 1:0.78:0.64 in 1953. In 1979, this ratio was 1:0.6:0.56 and it became 1:0.58:0.50 in 1992. Comparing the above, one finds that the disparity change in the first period (1953-79) was higher than that in the second period (1979-92). However, the absolute difference between the east and the west was 70 *yuan* in 1952, 106 *yuan* in 1979, and 1,164 *yuan* in 1992. The increase in the second period was almost thirty times greater than that in the first period.

In comparing the Mao period (1953-80) with Deng's period (1980-92), table 1 shows that coefficient of variation (CV) in the Mao period is higher than that in the Deng period. In the former, the CV is 0.84, while in the latter it is 0.64. In terms of regional equality, performance since 1980 has been better than that in the period 1953-80. Thomas Lyons supports this finding with his time-series examination of the mainland's provincial data for industrial and agricultural output and social and private consumption over the period 1952-87.<sup>7</sup>

In terms of the disparity changes in regional economic development from 1978-94, the regional CV calculated from the gross domestic product (GDP) reached its peak in the beginning (1978) and declined thereafter, but rose again in 1994, although to a lower level than the 1978 peak level (see table 2). Since the beginning of the 1990s, there has been a clear tendency toward widening regional disparities. This is the reason why many scholars worry about the regional income disparity in mainland China. When we check the causes of the higher CV in the 1990s, the higher GDP in the coastal areas is the dominant factor. Why this trend exists and how to resolve it in the future are difficult problems mainland China's authorities must face.

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<sup>7</sup>See Lyons, "Interprovincial Disparities."



**Table 1**  
**Per Capita National Income by Region (Yuan)**

Region	1953-80	1981-92
Beijing	537	2,962
Tianjin	644	2,577
Hebei	184	944
Shanxi	194	884
Inner Mongolia	224	881
Liaoning	399	1,685
Jilin	235	1,110
Heilongjiang	345	1,323
Shanghai	1,202	4,396
Jiangsu	196	1,411
Zhejiang	189	1,269
Anhui	158	728
Fujian	151	1,241
Jiangxi	186	759
Shandong	157	1,157
Henan	129	723
Hubei	194	1,008
Hunan	158	802
Guangdong	201	1,516
Guangxi	129	785
Hainan	n.a.	1,220
Sichuan	141	727
Guizhou	114	545
Yunnan	142	715
Tibet	n.a.	989
Shaanxi	174	756
Gansu	177	748
Qinghai	242	878
Ningxia	194	823
Xinjiang	245	1,138
Mean	258.61	1,223.33
C.V.	0.84	0.64

**Note:** C.V. represents coefficient of variation.

**Sources:** Simon Xiaobin Zhao, "Spatial Disparities and Economic Development in China, 1953-92: A Comparative Study," *Development and Change* 27 (1996): 156-57; and *Zhongguo tongji nianjian* (Statistical yearbook of China), various issues.

**Table 2**  
**Mainland China's Regional GDP Per Capita (Yuan)**

Region	1978	1980	1985	1990	1994
Beijing	1,249	1,537	2,599	4,537	10,266
Tianjin	1,160	1,392	2,198	3,621	8,164
Hebei	362	424	715	1,357	3,376
Shanxi	365	442	838	1,528	2,819
Inner Mongolia	317	361	809	1,478	3,013
Liaoning	345	391	583	738	6,406
Jilin	381	446	872	1,743	3,829
Heilongjiang	484	594	959	2,028	4,428
Shanghai	2,485	2,720	3,836	5,804	15,204
Jiangsu	430	541	1,053	2,016	5,785
Zhejiang	331	470	1,063	2,122	6,149
Anhui	242	288	642	1,162	2,521
Fujian	273	350	741	1,788	5,386
Jiangxi	276	342	597	1,128	2,586
Shandong	315	400	884	1,794	4,473
Henan	232	317	580	1,091	2,446
Hubei	332	428	808	1,556	3,341
Hunan	286	365	626	1,228	2,701
Guangdong	367	473	982	2,395	6,380
Guangxi	225	275	471	1,066	2,772
Hainan	n.a.	n.a.	729	1,589	4,820
Sichuan	252	328	595	1,097	2,516
Guizhou	175	219	420	810	1,552
Yunnan	223	266	483	1,211	2,490
Tibet	n.a.	n.a.	894	1,276	1,984
Shaanxi	294	338	608	1,244	2,431
Gansu	348	388	608	1,063	1,925
Qinghai	428	473	808	1,558	2,910
Ningxia	370	433	737	1,393	2,685
Xinjiang	313	410	820	1,799	3,954
Average	379	460	856	1,634	3,679
C.V.	1.21	1.10	0.82	0.66	0.77

Sources: Various regional statistical yearbooks.

**Table 3**  
**Mainland China's Regional GDP Ratio (%)**

Region	1978	1980	1985	1990	1994
Beijing	3.33	3.08	2.87	2.70	2.41
Tianjin	2.53	2.29	1.96	1.62	1.61

Table 3 (Continued)

Region	1978	1980	1985	1990	1994
Hebei	5.61	4.85	4.43	4.69	4.77
Shanxi	2.70	2.41	2.44	2.32	1.90
Inner Mongolia	1.78	1.51	1.83	1.72	1.52
Liaoning	6.99	6.23	5.64	5.21	5.74
Jilin	2.51	2.18	2.17	2.13	2.15
Heilongjiang	5.35	4.89	3.84	3.56	3.60
Shanghai	8.36	6.90	5.21	4.02	4.38
Jiangsu	7.64	7.08	7.27	7.12	9.02
Zhejiang	3.79	3.98	4.62	4.52	5.93
Anhui	3.47	3.07	3.54	3.27	3.31
Fujian	2.03	1.90	2.13	2.48	3.74
Jiangxi	2.67	2.46	2.31	2.25	2.29
Shandong	7.17	6.67	7.22	7.20	8.60
Henan	4.99	5.07	5.04	4.83	4.89
Hubei	4.63	4.41	4.42	4.45	4.17
Hunan	4.50	4.24	3.90	4.02	3.76
Guangdong	5.66	5.44	6.17	7.94	9.42
Guangxi	2.32	2.15	2.02	2.42	2.76
Hainan	n.a.	n.a.	0.47	0.51	0.74
Sichuan	7.50	7.13	6.76	6.18	6.17
Guizhou	1.43	1.33	1.38	1.40	1.16
Yunnan	2.12	1.87	1.84	2.44	2.16
Tibet	n.a.	n.a.	0.20	0.15	0.10
Shaanxi	2.49	2.11	2.02	2.02	1.88
Gansu	1.98	1.64	1.38	1.26	1.00
Qinghai	0.48	0.39	0.37	0.38	0.31
Ningxia	0.40	0.35	0.34	0.35	0.30
Xinjiang	1.19	1.17	1.25	1.48	1.50

Sources: See table 1.

Prior to economic reforms, mainland China's trade volume was small, and there was almost no FDI. Economic development in every province was characterized by autarky. Exports and imports were not the major indicators for measuring local development. Since the implementation of economic reforms, foreign trade has grown very quickly and the amount of FDI in mainland China has increased. The export-oriented economy has also been encouraged by the central authorities. However, economic activities have also been influenced by each region's initial conditions and locations,

which have been very unbalanced. In addition, the eastern coastal regions have had more opportunities to develop their own economies under the opening-up policy. This has fostered animosity between the inland areas and the coastal regions.

Furthermore, the experience of gradual experimental (*shidian*) reform has not completely spread throughout the whole mainland. Taking bonded areas and free ports as examples, even though they have been successful in coastal regions, spreading these policies to interior remote areas has been impossible due to location and economics of scale considerations.

Similar to the GDP trend, foreign trade in every region has significantly increased in the seventeen years since economic reforms began. However, the growth rates among regions have considerably large disparities. For instance, the four coastal provinces—Guangdong, Fujian, Zhejiang, and Jiangsu—have the fastest export growth rates. In addition, these provinces originally had relatively large export scales, so the increases in exports have been much higher than other regions. In some traditional export-oriented provinces such as Shanghai, Tianjin, Liaoning, and Shandong, exports have grown at a relatively slower rate. The main reason is the fact that the regions near the export-based cities and provinces have promoted exports through their own trade companies. On the other hand, some interior regions have concentrated on exporting agricultural or industrial raw materials. Along with the increase in domestic demands for raw materials, the provinces' specialization strategies have served to lower the export growth rates in these regions. Liaoning and Shandong are two such examples. In spite of the endowment and export pattern differences, there has been a shrinking trend in the regional export growth rate's CV since 1980 (see table 4).

Most interior provinces located far away from ports have been weak in basic manufacturing technology. It has not therefore been easy for them to compete with the coastal regions in exports. Usually, the products exported by inland provinces have been agricultural and mineral raw materials which the coastal regions have not been able to export. Because of the shortages of transportation and the restriction of domestic demands, material exports have not greatly increased. Interior regions have thus felt that they have been exploited and their development restricted by central policy. Hence, exports by interior provinces such as Shanxi (mineral raw materials), Heilongjiang (oil), Guizhou (iron), Xinjiang (agricultural and livestock products), and Inner Mongolia (livestock products) grew relatively fast in the 1980s

**Table 4**  
**Mainland China's Average Annual Export Growth Rate by Region (%)**

Region	1980-85	1985-90	1990-94
Beijing	0.93	16.34	13.07
Tianjin	-5.65	9.15	16.05
Hebei	16.36	5.99	9.81
Shanxi	71.85	15.10	17.45
Inner Mongolia	38.60	18.97	16.39
Liaoning	4.84	2.13	5.22
Jilin	45.16	11.98	28.07
Heilongjiang	33.27	21.36	14.04
Shanghai	-4.66	9.61	16.86
Jiangsu	12.78	13.62	32.25
Zhejiang	31.04	19.22	50.71
Anhui	50.45	16.33	18.19
Fujian	6.25	35.42	38.55
Jiangxi	22.64	16.89	17.38
Shandong	8.63	5.56	19.30
Henan	12.24	18.75	16.67
Hubei	16.12	15.12	18.27
Hunan	4.76	15.26	24.70
Guangdong	5.71	29.51	45.24
Guangxi	0.34	14.42	21.74
Hainan	34.71	42.18	20.29
Sichuan	56.30	26.15	19.55
Guizhou	13.03	33.91	25.04
Yunnan	6.09	34.24	16.98
Tibet	14.78	22.37	36.97
Shaanxi	60.49	34.79	27.30
Gansu	12.56	21.22	19.09
Qinghai	12.09	26.23	16.07
Ningxia	-6.33	19.07	19.60
Xinjiang	60.12	13.29	14.44
Mean	6.12	14.44	26.67
C.V.	3.51	0.66	0.37

Sources: *Zhongguo duiwai jingji maoyi nianjian* (Almanac of China's foreign economic relations and trade), various years.

**Table 5**  
**Mainland China's Regional Export Ratio (%)**

Region	1980	1985	1990	1991	1992	1993	1994
Beijing	3.26	2.54	2.75	2.45	2.24	1.96	1.75
Tianjin	8.48	4.71	3.72	2.88	2.56	2.24	1.94
Hebei	3.35	5.31	3.62	3.11	2.60	2.29	2.04
Shanxi	0.08	0.93	0.95	0.91	0.85	0.74	0.71

**Table 5 (Continued)**

Region	1980	1985	1990	1991	1992	1993	1994
Inner Mongolia	0.15	0.56	0.68	0.75	0.86	0.75	0.48
Liaoning	21.09	20.60	11.66	10.33	9.02	7.17	5.55
Jilin	0.36	1.75	1.57	1.84	1.91	1.87	1.64
Heilongjiang	0.54	1.69	2.26	2.47	2.67	2.18	1.49
Shanghai	23.47	13.74	11.07	10.28	9.58	8.46	8.02
Jiangsu	4.70	6.37	6.14	6.20	6.82	6.88	7.30
Zhejiang	1.34	3.83	4.70	5.22	5.41	5.13	5.11
Anhui	0.22	1.25	1.36	1.26	1.21	1.11	1.03
Fujian	2.00	2.01	4.66	5.24	6.25	6.73	6.66
Jiangxi	0.51	1.05	1.17	1.09	1.13	1.02	0.86
Shandong	9.70	10.90	7.28	6.86	6.87	6.90	5.73
Henan	1.12	1.50	1.81	1.87	1.90	1.58	1.30
Hubei	1.38	2.17	2.23	2.08	2.02	1.95	1.70
Hunan	1.73	1.62	1.68	1.82	0.21	1.86	1.58
Guangdong	12.08	11.85	21.99	24.51	26.94	31.21	38.01
Guangxi	2.01	1.52	1.52	1.49	1.62	1.53	1.30
Hainan	0.10	0.33	0.98	1.20	1.28	1.04	0.80
Sichuan	0.21	1.43	2.32	2.36	2.17	1.91	1.84
Guizhou	0.11	0.15	0.32	0.33	0.33	0.28	0.30
Yunnan	0.53	0.53	1.17	0.94	0.94	0.89	0.85
Tibet	0.01	0.02	0.03	0.02	0.03	0.02	0.04
Shaanxi	0.05	0.42	0.96	1.08	1.12	1.15	0.98
Gansu	0.22	0.29	0.39	0.45	0.51	0.33	0.30
Qinghai	0.07	0.09	0.14	0.14	0.13	0.12	0.10
Ningxia	0.24	0.13	0.16	0.16	0.16	0.13	0.12
Xinjiang	0.09	0.74	0.70	0.65	0.66	0.57	0.47
Total	100	100	100	100	100	100	100

Sources: *Zhongguo duiwai jingji maoyi nianjian*, various years.

but slower later.

Those provinces with trade disadvantages have desired the central government to develop transportation and improve access to product exports. Moreover, they have requested the central government to improve the unfair phenomenon of lower domestic prices for agricultural or mineral raw materials. Under these strategies, the inland regions could shift from developing downstream industries to concentrating on upstream industries. However, strengthening transportation has been restricted by the central government's fiscal limitations. In addition, liberalizing the prices of agricultural or mineral raw materials has been postponed because of inflation considerations.

In mainland China's export structure, the labor-intensive indus-

tries such as electronics and textiles constitute a high share of all exports. Exports of these products have grown rapidly and played a crucial part in exports and foreign trade. According to statistics, mainland China's domestic enterprise exports declined 8.7 percent in the first quarter of 1996, compared to the same period of the previous year. This is contrary to the previous trend of constant growth; nevertheless, foreign enterprise exports still increased 37.2 percent.<sup>8</sup> This shows that foreign enterprise exports have been relatively stable. Taking 1995 as an example, foreign enterprise exports totalled 46.88 billion *yuan*, accounting for 31.5 percent of mainland China's total export value (note that the share of foreign enterprises' production value was less than 10 percent of mainland China's total industrial production value). Their annual export growth rate was 35 percent and greater than mainland China's total export growth rate of 22.9 percent.<sup>9</sup>

In viewing the importance of foreign enterprises in exports, almost all provinces with high export growth rates, such as Guangdong, Fujian, Zhejiang, and Jiangsu, have performed well in attracting FDI. Although there are no specific statistics, it is believed that foreign enterprises have greatly contributed to these provinces. Of course, there are some regions with many foreign enterprises, such as Beijing, Tianjin, and Shanghai, where the export growth rates have not been impressive. This might be because most foreign enterprises located in these regions are domestic sales-oriented enterprises. Since the cost of doing business and wages are relatively higher in these regions, they have been unfavorable to export-oriented enterprises with lower profit rates.

In the early stages of economic reform, most foreign enterprises were located in the southeast coastal regions since these regions were the first to implement various open and favorable policies. In recent years, these open and favorable policies have generally spread across the whole mainland. Nevertheless, the interior areas have been restricted by shortages of infrastructure and transportation; thus the FDI growth rate has not significantly increased. Compared to the coastal regions, the interior areas have tended to fall behind the

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<sup>8</sup>*Ta Kung Pao* (Hong Kong), May 7, 1996, C8.

<sup>9</sup>Chen Jinhua, *1996-nian Zhongguo guomin jingji he shehui fazhan baogao* (Report on China's national economic and social development in 1996) (Beijing: Zhongguo jihua chubanshe, 1996), 216.



former (see table 6). In order to remedy this situation, many people have proposed policies such as giving priority to interior areas in opening markets, providing more favorable policies to foreign enterprises which invest in these regions, and strengthening the advantages of interior areas in attracting FDI.

Of course, an increase of investment in these areas by the central government would be the best policy. This would especially help improve these regions' infrastructure, transportation, investment environment, and competitive ability. To attain this goal, the central government must have powerful fiscal ability. However, central government fiscal sources have obviously been less than those of local governments since implementation of the finance contracting system. Moreover, the gap between their fiscal sources has increased over time. Because of fiscal restrictions, the amount of subsidies from the central government to backward regions since the beginning of the 1990s has only been maintained at 50 billion *yuan*. Although local fiscal revenue has grown faster during economic reforms, the amount paid to the central government has been very limited.

In 1994, in order to change the situation of unbalanced fiscal ability between the central and local governments, mainland China decided to implement a tax-sharing system. The goal of this system is to increase the central government's fiscal revenue and reduce disparities among the provinces. In the 1994 column of table 7, no region (except Fujian) has a ratio of fiscal revenue to fiscal expenditure greater than one. In other years, the richer the region, the greater the ratio. The central government has aimed to pursue regional economic equality by means of fiscal policy. However, in order to avoid objections from local governments, the central government also gave a certain amount of tax revenue back to the regions. This ensured that the regions' fiscal revenue would not be less than that of the previous year. Thus, although the central government's fiscal revenue increased to 347.6 billion *yuan* in 1994, subsidies for regions grew sharply to 238.9 billion *yuan*, accounting for 68.7 percent of total revenue (see table 8). Hence, after adopting the tax-sharing system, the revenue local governments paid to the central government declined, causing the actual disposable fiscal revenue of the central government to decrease as well. It seems that it is impossible to increase the central government's fiscal ability in the short term by means of a tax-sharing system.

No matter how fiscal revenue is shared, the fiscal ability of every province is basically related to its economic development.

**Table 6**  
**Ratio of Regional Foreign Investment to Total Foreign Investment in Mainland China (%)**

Region	1990		1991		1992		1993		1994	
	A	B	A	B	A	B	A	B	A	B
Beijing	2.61	6.45	4.03	4.76	2.73	3.33	5.57	3.00	5.39	4.51
Tianjin	1.98	1.33	1.60	2.34	2.70	2.76	1.96	1.97	4.68	4.39
Hebei	0.99	0.71	1.60	1.32	2.65	1.20	1.72	1.59	1.31	1.40
Shanxi	0.58	0.19	0.19	0.40	0.70	0.57	0.37	0.38	0.37	0.30
Inner Mongolia	0.22	0.17	0.23	0.02	0.58	0.04	0.36	0.26	0.27	0.17
Liaoning	8.49	15.24	5.90	11.82	4.03	5.66	3.56	4.79	5.33	4.26
Jilin	1.03	0.45	0.65	0.88	0.73	0.78	1.34	2.00	1.79	1.87
Heilongjiang	0.87	1.00	0.81	0.51	0.88	0.83	0.92	0.71	0.77	0.80
Shanghai	6.54	12.37	6.36	10.63	7.45	11.19	5.88	10.36	12.62	7.26
Jiangsu	5.07	4.50	6.38	4.38	11.20	9.22	9.10	8.78	8.71	10.09
Zhejiang	1.83	1.26	2.37	1.61	4.64	2.25	3.15	3.18	3.13	2.65
Anhui	0.97	0.80	1.13	0.58	0.55	0.90	0.59	1.14	0.75	1.36
Fujian	13.74	6.03	10.37	9.36	9.84	9.27	9.56	8.94	7.71	8.71
Jiangxi	1.37	0.82	1.07	1.25	1.16	1.26	0.85	1.06	0.91	1.05
Shandong	4.52	4.12	5.08	4.04	6.36	7.13	6.15	6.14	6.66	7.87
Henan	0.27	0.22	1.01	0.77	1.04	0.33	1.54	1.16	1.40	0.90
Hubei	0.69	—	1.66	1.74	1.61	1.29	1.90	1.64	2.24	1.39
Hunan	0.55	2.82	1.67	3.10	0.89	1.53	1.04	2.15	0.85	0.98
Guangdong	35.21	32.08	39.14	33.44	30.55	30.74	29.24	29.71	28.14	26.49
Guangxi	1.53	0.57	0.69	0.39	1.92	2.05	3.41	3.05	1.55	2.17
Hainan	1.43	3.01	2.66	2.67	3.48	2.86	7.03	4.36	1.31	2.12

Table 6 (Continued)

Region	1990		1991		1992		1993		1994	
	A	B	A	B	A	B	A	B	A	B
Sichuan	3.52	2.91	1.20	1.06	2.24	3.23	2.23	1.31	1.81	2.15
Guizhou	0.42	0.47	0.20	0.37	0.29	0.23	0.54	0.13	0.21	0.19
Yunnan	0.05	0.12	0.58	0.68	0.51	0.81	0.53	0.73	0.51	0.85
Tibet	0.00	—	—	—	0.00	—	0.01	—	0.01	—
Shaanxi	2.20	1.83	0.22	0.46	0.82	0.32	0.87	1.21	0.69	1.03
Gansu	0.23	0.07	0.10	0.18	0.23	0.14	0.25	0.05	0.09	0.20
Qinghai	0.07	—	0.00	—	0.03	—	0.03	0.01	0.05	0.01
Ningxia	0.08	0.21	0.01	0.02	0.04	0.02	0.03	0.02	0.07	0.06
Xinjiang	2.94	0.27	3.08	1.19	0.16	0.06	0.28	0.16	0.19	0.12
Total	100	100	100	100	100	100	100	100	100	100

A: Contract; B: Actually used.

Sources: Zhongguo duiwai jingji maoyi nianjian, various years.

**Table 7**  
**Mainland China's Regional Ratio of Fiscal Revenue to Fiscal Expenditures**

Region	1985	1990	1991	1992	1993	1994
Beijing	1.59	1.11	1.13	1.12	1.04	0.47
Tianjin	1.79	1.12	1.27	1.36	1.46	0.69
Hebei	1.08	0.93	0.99	1.00	1.01	0.59
Shanxi	0.70	0.94	0.92	0.90	0.96	0.60
Inner Mongolia	0.37	0.54	0.55	0.54	0.64	0.39
Liaoning	1.50	1.06	1.05	1.02	1.18	0.69
Jilin	0.63	0.71	0.75	0.71	0.77	0.49
Heilongjiang	0.84	0.83	0.82	0.83	0.87	0.59
Shanghai	5.73	3.76	2.11	2.06	1.95	0.89
Jiangsu	1.76	1.36	1.13	1.21	1.35	0.68
Zhejiang	1.56	1.27	1.28	1.24	1.33	0.62
Anhui	0.89	0.88	0.60	0.74	1.02	0.59
Fujian	0.82	0.83	0.88	0.89	0.97	1.09
Jiangxi	0.71	0.80	0.74	0.72	0.80	0.54
Shandong	1.21	0.88	0.97	0.96	1.03	0.62
Henan	0.99	0.93	0.93	0.89	0.94	0.55
Hubei	1.15	0.92	0.93	0.95	1.00	0.56
Hunan	0.98	0.88	0.91	0.94	0.97	0.57
Guangdong	1.08	0.87	0.97	1.01	1.05	0.72
Guangxi	0.68	0.72	0.78	0.78	0.89	0.87
Hainan	0.54	0.42	0.48	0.59	0.76	0.69
Sichuan	0.92	0.84	0.90	0.88	0.97	0.57
Guizhou	0.62	0.74	0.80	0.78	0.84	0.42
Yunnan	0.75	0.85	0.89	0.90	1.02	0.38
Tibet	-0.07	0.11	0.10	0.11	0.11	0.05
Shaanxi	0.74	0.76	0.77	0.78	0.83	0.50
Gansu	0.68	0.74	0.76	0.74	0.82	0.40
Qinghai	0.24	0.42	0.43	0.44	0.50	0.28
Ningxia	0.30	0.43	0.42	0.49	0.56	0.37
Xinjiang	0.30	0.46	0.53	0.46	0.54	0.40

Sources: *Zhongguo caizheng nianjian* (Finance yearbook of China), various years.

**Table 8**  
**The Interaction between Central and Local Public Finance**

	Unit: Billion yuan; %				
	1990	1991	1992	1993	1994
Central revenue (Value) (1)	185.006	188.995	241.442	250.181	347.655
Subsidy to local governments (Value) (2)	58.528	55.475	59.650	54.563	238.903
Ratio of central revenue [(2)/(1)]	31.6	29.3	24.7	21.8	68.7

Table 8 (Continued)

	1990	1991	1992	1993	1994
Local revenue (Value) (3)	252.996	276.598	313.040	393.607	470.069
Contribution to central government (Value) (4)	48.219	49.030	55.864	60.031	57.005
Ratio of local revenue [(4)/(2)]	19.1	17.7	17.8	15.3	12.1

Sources: *Zhongguo caizheng nianjian*, 1991 to 1995 issues.

During the early stage of establishing communist power in 1952, the differences of fiscal revenue among regions were quite large. Table 9 shows the ratios of regional fiscal revenue to total fiscal revenue in mainland China. Generally speaking, the coastal regions such as Liaoning (8.16 percent), Guangdong (7.46 percent), Jiangsu (7.09 percent), and Sichuan (8.52 percent) had stronger fiscal ability in 1952. The poor regions included Tibet (0.03 percent), Qinghai (0.10 percent), Ningxia (0.29 percent), etc. This was consistent with every region's economic performance in that period. In the thirty years before economic reforms began in 1978, disparities in regional economic development widened and regions' fiscal ability changed simultaneously. Of the eleven provinces which had an increasing ratio of fiscal revenue, six were in the east coastal regions, two were in the central regions, and three were in the west interior areas. As for the range of increase, Shanghai increased 17.47 percent, while the province in the interior areas with the highest increase (Gansu) only grew 0.16 percent. On average, the fiscal revenue of the coastal regions grew faster than that of the interior provinces. Although the central authorities endeavored to reduce disparities, it did not create the expected effect on fiscal revenue. In the worst period (1959-70) that consisted of two political catastrophes—the Great Leap Forward and Cultural Revolution—the largest CV means that there was a severe disparity in the regional fiscal revenue growth rate (see table 10).

The finance contracting system based on individual regions after 1979 reduced the gaps in regional fiscal revenue.<sup>10</sup> Obviously,

<sup>10</sup>Jiang Yue and Liu Yin, eds., *Zhongguo diqu jingji zengzhang bijiao yanjiu* (Comparative studies of China's regional economic growth) (Shenyang: Liaoning renmin chubanshe, 1992), 394-98; Song Xinzhong, *Zhongguo caizheng tizhi gaige yanjiu* (The study of China's financial system reform) (Beijing: Zhongguo caijing chubanshe, 1992), chap. 2.

**Table 9**  
**The Ratio of Regional Fiscal Revenue to Total Fiscal Revenue in Mainland China (%)**

Region	1952	1958	1970	1980	1985	1990	1993
Beijing	2.18	3.76	4.49	5.91	4.44	3.55	2.54
Tianjin	4.05	5.35	5.82	4.72	4.08	2.15	2.21
Hebei	4.63	4.87	4.27	4.03	3.82	3.90	4.25
Shanxi	1.91	2.21	1.91	2.41	2.12	2.48	2.13
Inner Mongolia	1.39	1.40	0.92	0.48	1.13	1.58	1.65
Liaoning	8.16	11.44	7.83	10.02	7.22	6.21	6.23
Jilin	3.72	2.69	2.14	1.66	1.84	2.43	2.35
Heilongjiang	4.93	6.05	2.99	1.96	3.17	3.68	3.19
Shanghai	2.66	4.58	20.75	20.13	15.60	13.65	6.68
Jiangsu	7.09	5.85	5.95	7.20	7.44	6.45	6.52
Zhejiang	4.05	3.92	3.20	3.59	4.93	4.88	4.91
Anhui	2.82	2.48	2.31	2.34	2.55	2.54	2.16
Fujian	2.29	1.18	1.34	1.77	2.12	2.74	3.26
Jiangxi	2.39	1.86	1.85	1.44	1.66	1.95	1.94
Shandong	7.96	6.93	6.42	5.54	5.72	5.23	5.73
Henan	4.58	4.65	4.39	3.67	4.14	4.01	4.10
Hubei	5.08	3.44	3.16	3.92	4.26	3.74	3.39
Hunan	4.24	3.44	3.10	3.44	3.32	3.36	3.76
Guangdong	7.46	5.79	5.05	4.17	5.54	6.29	10.22
Guangxi	2.28	1.53	1.52	1.42	1.71	2.10	2.83
Hainan	0.14	0.22	0.30	0.13	0.27	0.35	0.86
Sichuan	8.52	6.63	3.51	3.99	4.98	5.75	5.97
Guizhou	1.27	1.51	0.70	0.77	1.37	1.73	1.67
Yunnan	1.95	2.08	1.65	1.34	2.32	3.72	6.04
Tibet	0.03	0.01	-0.04	-0.07	-0.05	0.07	0.07
Shaanxi	1.89	2.43	2.03	1.82	1.72	1.97	1.85
Gansu	1.17	1.42	1.24	1.33	1.40	1.64	1.54
Qinghai	0.10	0.35	0.25	0.19	0.20	0.35	0.34
Ningxia	0.29	0.19	0.21	0.24	0.27	0.30	0.32
Xinjiang	0.77	1.10	0.74	0.46	0.72	1.05	1.01

Sources: Jiang Yue and Liu Yin, eds., *Zhongguo diqu jingji zengzhang bijiao yanjiu* (Comparative studies of China's regional economic growth) (Shenyang: Liaoning renmin chubanshe, 1992), 400-401; and various regional statistical yearbooks (1995).

**Table 10**  
**Mainland China's Average Annual Fiscal Revenue Growth Rate by Region (%)**

Region	1952-58	1959-70	1971-79	1980-85	1986-90	1991-93
Beijing	32.8	3.1	7.5	0.4	7.1	5.2
Tianjin	27.0	2.1	1.9	3.3	-1.4	18.6
Hebei	22.3	-0.2	8.0	5.2	12.4	21.1
Shanxi	24.3	-0.2	6.1	3.6	15.7	11.9

**Table 10 (Continued)**

Region	1952-58	1959-70	1971-79	1980-85	1986-90	1991-93
Inner Mongolia	21.5	-4.2	2.8	26.5	19.8	19.4
Liaoning	28.3	-1.1	2.6	-0.4	8.7	18.2
Jilin	14.8	-1.0	-0.9	8.5	18.5	16.3
Heilongjiang	25.4	-3.6	3.7	17.0	15.4	12.2
Shanghai	32.7	1.5	5.3	1.1	1.5	-3.9
Jiangsu	17.4	1.3	7.2	7.1	8.6	18.1
Zhejiang	20.6	-0.1	6.2	13.4	11.8	10.4
Anhui	18.7	1.7	5.3	8.3	11.9	11.4
Fujian	16.6	-1.2	8.0	10.4	17.9	24.7
Jiangxi	16.3	2.4	1.8	9.4	13.9	17.4
Shandong	18.5	2.1	4.2	7.0	11.9	21.2
Henan	21.6	1.0	3.6	9.0	11.3	18.5
Hubei	13.6	1.2	6.2	8.1	9.1	13.9
Hunan	17.1	0.7	6.2	5.6	12.3	22.1
Guangdong	16.2	1.7	2.8	12.6	14.7	38.3
Guangxi	13.4	4.1	5.3	10.4	18.3	27.0
Hainan	31.1	6.4	-0.2	23.5	18.5	57.9
Sichuan	16.3	-3.1	6.1	11.2	15.3	19.1
Guizhou	24.8	-5.1	7.2	19.3	18.9	16.1
Yunnan	22.6	-0.6	3.8	18.6	23.1	38.3
Tibet	n.a.	n.a.	6.8	n.a.	n.a.	20.6
Shaanxi	26.5	-0.1	4.7	5.1	15.2	15.2
Gansu	25.3	-0.9	3.6	7.4	15.7	15.1
Qinghai	48.7	-6.7	9.1	7.8	24.7	16.2
Ningxia	12.9	0.7	11.9	9.0	16.4	20.3
Xinjiang	28.7	-3.7	3.6	16.0	20.8	17.3
Mean	21.3	0.4	4.8	6.4	10.9	20.4
C.V.	0.36	6.72	0.56	1.00	0.52	0.52

Sources: See table 9.

Shanghai's ratio of fiscal revenue declined. Except for Guangdong and Fujian, the growth rates of fiscal revenue of most coastal provinces slowed. This resulted in a decline in fiscal revenue for the whole mainland. On the other hand, interior provinces showed a faster increase. Since their original fiscal bases were small, the ratios increased only slightly. Although the central government's fiscal ability has declined, a slight reduction of the disparities has still occurred through distributing fiscal revenue based on individual region.

In addition to fiscal policy, the influence of financial policy has

become more important along with market orientation in mainland China. In distributing funds, the soft constraints of the socialist system had induced a strong investment hunger. This meant loan amounts were greater than deposits and the threat of inflation is still a worry in mainland China. But in examining the data from 1988 to 1994, the ratio of loans to deposits shows a decreasing trend, illustrating that the financial authorities have adopted a loan quota policy to control inflation.

As for trends and changes in the ratio of loans to deposits among provinces, the coastal regions usually have had lower ratios. In 1994, the ratios of Beijing, Shanghai, Zhejiang, Guangdong, and Hunan were less than one (see table 11). This indicates that the central authorities have used funds from these rich provinces to support the poor regions. The ratios of the northeast region, interior regions, and the regions with more SOEs have been relatively higher. This indicates that the central authorities have tended to use financial tools to narrow the gaps in local economic development. Although the ratios of remote regions such as Tibet and Yunnan have also been less than one, this does not mean that the authorities have not supported these two regions. It is because the economies of these regions fell very much behind the other provinces and lack investment opportunity. Except for Xinjiang, Qinghai, and Tibet, the ratios in other regions decreased from 1988 to 1994. This shows that the central authorities have still emphasized macroeconomic control as the major goal, while reducing disparities among provinces has been given second priority.

### **Implications for the Further Development of the Relationship between the Central and Local Governments**

According to the above analysis, the opening-up policy since the 1980s has not widened disparities in local development. Rather, it has reduced differences. However, disparities have declined only slightly during the process. We have obtained a result that indicates improvement based on a ratio comparison, but if we consider absolute value as an indicator, the differences among provinces still show a substantial increase. One may be overly impressed and biased by the absolute difference.

Under the decentralization policy, every province has adopted short-term measures to increase their interests as quickly as possible. In the meantime, short-term measures have hurt long-term develop-



**Table 11**  
**The Ratio of Loans to Deposits by Region**

Region	1988	1990	1992	1994
Beijing	0.716	0.653	0.568	0.534
Tianjin	1.764	1.653	1.441	1.287
Hebei	1.299	1.137	1.014	1.03
Shanxi	1.229	1.137	1.095	1.106
Inner Mongolia	1.503	1.607	1.504	1.547
Liaoning	1.495	1.475	1.305	1.33
Jilin	1.882	2.008	1.861	1.799
Heilongjiang	1.565	1.494	1.374	1.385
Shanghai	1.385	1.407	1.138	0.875
Jiangsu	1.574	1.272	1.079	0.894
Zhejiang	1.258	1.052	0.925	0.898
Anhui	1.71	1.602	1.461	1.491
Fujian	1.232	1.074	0.881	n.a.
Jiangxi	1.593	1.559	1.485	1.322
Shandong	1.475	1.362	1.234	1.127
Henan	1.484	1.359	1.246	1.166
Hubei	1.818	1.802	1.577	1.338
Hunan	1.745	1.431	1.261	0.842
Guangdong	1.343	1.117	0.76	0.775
Guangxi	1.44	1.184	0.983	n.a.
Hainan	1.517	1.37	0.814	0.98
Sichuan	1.453	1.363	1.29	1.316
Guizhou	1.381	1.284	1.262	1.279
Yunnan	1.154	0.945	0.881	0.885
Tibet	0.523	0.831	0.656	0.766
Shaanxi	1.449	1.381	1.284	1.211
Gansu	1.326	1.269	1.175	1.285
Qinghai	1.156	1.287	1.452	1.693
Ningxia	1.46	1.433	1.349	1.259
Xinjiang	0.987	1.045	1.125	1.033

Sources: *Zhongguo caizheng nianjian*, various years.

ment based on comparative advantage. Many have stated that the thirty provinces and municipalities are independent kingdoms adopting anti-trade policies against each other. For example, "wool wars" and "silk wars" occurred between Guangdong and Hunan in 1988, when local protectionism reached its apex because of the overheating economy. People made a mistake in assuming that this example and local protectionism were a long-term trend. In fact, local protectionism of profits in the manufacturing sector has been induced by

the central authorities' pricing policy. Since the late 1980s, the central government has liberalized or raised the prices of energy and raw materials. This policy has tended to equalize the profits of the manufacturing and energy industries. Profit equalization has dampened the impetus for developing manufacturing, and provinces have begun to focus on comparative advantages rather than rush into manufacturing. Since 1990, interregional trade has steadily increased in mainland China; for example, the two provinces involved in trade wars in 1988, Hunan and Guangdong, have signed extensive trade agreements to open their own markets.<sup>11</sup>

Therefore, the real solution for local protectionism is not recentralizing management of the economic plan. Instead, market-oriented reforms and mechanisms should be allowed to induce regions to utilize their own comparative advantages. In fact, local protectionism has not risen from decentralization; rather, the fact that decentralization and market orientation have not been completely realized has been the major cause of local protectionism. For example, if the market reflects shortages of wool and silk in Hunan, an increase in the materials' prices in Hunan would raise production profits, and Hunan would use its own comparative advantages to increase the supply of wool and silk. Thus, Hunan would not compete with Guangdong for textile profits, as the cause of the material "war" between the two provinces was interference in wool and silk prices by the central government.

The current basic solution to narrowing disparities among provinces is to enforce economic reforms of the market mechanisms, particularly those regarding property rights and market structure. Most of the problems which have emerged during the process of economic reform have been due to failed coordination between the centrally planned system and the market mechanisms. In the past, the mainland's authorities have seldom considered using a more open way to relieve a particular problem. Moreover, many problems have not originated from the opening-up policy, but occurred because the policy was not thoroughly implemented.

Although economic reforms have created many problems, the degree of disparity in regional development is lower than before.

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<sup>11</sup>Yasheng Huang, "Why China Will Not Collapse," *Foreign Policy*, no. 99 (Summer 1995): 65-66.

Along with the deepening of various reform measures in the 1990s, regions have gradually developed their own economies according to the principle of comparative advantage. This can be seen from evidence of a lower industrial similarity index among provinces.<sup>12</sup> As for long-term development, accelerating economic growth should be favored over directly intervening in resource allocation among regions. In the short term, priority may be given to experimenting with institutional reforms in interior areas to speed up the improvement of their organizations.

In developing foreign trade and attracting FDI, interior areas have been in an unfavorable position. However, foreign trade and FDI have greatly influenced the present stage of the mainland's economic development, as they have not only created funds and employment effects, but more importantly, promoted higher levels of knowledge, technology, and management. They have also contributed to embodied and disembodied technological progress. Certain conditions must be satisfied in order to fully take advantage of attracting and spreading technology; for example, interior areas lack favorable natural conditions. The better solution to reducing disparities among regions would be to promote interprovincial trade rather than promote foreign trade and attract FDI to interior areas. Some people have suggested that the central government should initiate more favorable and preferential policies for the interior provinces. This suggestion requires a detailed discussion. Briefly considered, however, it first violates the principle of equality, as other regions would request similar treatment. Moreover, the effects would rather be weak given the interior regions' natural conditions. To reduce restrictions on internal economic exchange, favorable policies on such activities could be shifted from the coastal to interior regions.

As for allocating fiscal revenue among provinces, southeastern provinces such as Guangdong and Fujian have greatly benefitted from the finance contracting system. Fiscal revenues in these two provinces have experienced a significant increase during economic reforms. The fiscal revenues of the three municipalities (Beijing, Tianjin, and Shanghai) grew at a relatively slow rate, while the other regions

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<sup>12</sup>Feng-cheng Fu, "Institutional Transformation and the Changes of Industrial Development in Mainland China" (Mimeo, Chung-Hua Institution for Economic Research, 1995); Ma Jun and Li Yong, "China's Regional Economic Policy: Effects and Alternatives," *Asian Economic Journal* 8, no. 1 (1994): 39-58.

have had no apparent change. Nevertheless, increasing the central government's fiscal revenue paid by provinces and further subsidizing backward regions may not be practicable. Even though mainland China has adopted a tax-sharing system, the central government's fiscal ability cannot be increased greatly in the short run. Hence, although the suggestion of increasing infrastructure investment in the interior areas is a good idea, the possibility of realizing it is low.

For the central government, there must be changes in the measures supporting construction in the interior regions. It might be better to use indirect subsidies rather than the direct fiscal subsidies used previously. For instance, the central government might issue high-interest bonds for special funds to be used in construction for interior areas. The beneficiary provinces would only pay the principal. Allowing domestic and foreign investors to develop transportation construction in the interior regions and using the exploration rights of real estate, land, and resources to attract investors would also be favorable measures for interior provinces. If necessary, investors could be allowed to receive lower cost funds by using fiscal revenue to subsidize interest rates. Thus, a certain amount of fiscal funds could be used as a lever to shift a great quantity of funds to the interior regions for development.

As for flows of funds, deposit amounts in rich regions have been generally greater than those of poor regions, but the latter have had a greater ratio of loans to deposits. This indicates that the funds controlled by the government tend to flow to the interior regions. In a situation of decreasing fiscal ability, monetary policy has been placed in a more important position in the central government's attempt to reduce disparities. In a system with soft budget constraints such as mainland China, excessive funding to SOEs which have incurred losses may solve the short-term problem but distort long-term economic development. The central authorities have endeavored to realize this policy in order to take care of the backward regions; whether this method is right and will effectively achieve its goal is another issue.

### Conclusion

Although economic reforms since 1978 have created many interrelated problems between the central and local governments and among local governments, many problems have been alleviated with the liberalization of planned control and the introduction of an

effective market mechanism. The disparities among provinces have actually not widened. Regional development resulting in convergence as asserted by neoclassical theory has gradually been demonstrated through empirical evidence in mainland China. Logically, then, enforcing the market mechanisms and accelerating reforms relating to property institutions should be the basic means of developing equitable local development.

The neoclassical growth theory is built on the assumption that constant returns to scale, decreasing marginal returns of capital, and technological progress are exogenous. According to the findings of newly endogenous growth theory in the late 1980s, division of labor will lead to increasing returns to scale while technological progress is closely related to human capital. Since technological progress and human capital are public goods, there would be positive external effects for economic development. Savings and investment not only influence short-term economic growth, but also affect long-term economic performance.<sup>13</sup> Based on these theoretical studies, if mainland China cannot properly deal with the relevant factors of technological progress among provinces in the future, it is possible this will harm regional economic development.

In the past, mainland China adopted a centrally planned economic system which hampered economic incentive and distorted the development of comparative advantage in regions. Market-oriented economic reforms have promoted effective economic incentives and relaxed restrictions on resource transfers. The potential of each region has gradually emerged as economic reforms have further accelerated mainland China's economic growth. Moreover, the influence of institutional technological progress has been greater than economic technological progress. This has caused mainland China not only to experience impressive economic growth, but also achieve the goal of more equitable regional development. This kind of institutional progress still has room to develop; with the gradual completion of economic institutional progress, disparities will be less than before if economic technological progress can develop in the interior.

Technological progress includes both embodied and disembodied

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<sup>13</sup>See Paul M. Romer, "Increasing Returns and Long Run Growth," *Journal of Political Economy* 94 (1986): 1002-37; and Robert E. Lucas, "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22 (June 1988): 3-42.

components. The former represents human capital while the latter represents the increase in knowledge and experience which come from real accumulation of capital.<sup>14</sup> Therefore, enforcing investment in education in the interior regions is a crucial issue. Increasing real accumulation of capital in interior regions, particularly infrastructure and transportation, is also very important. Current measures should encourage attracting domestic and foreign investment, using indirect fiscal subsidies rather than direct fiscal subsidies by the central government. Although regional monetary tools are easier to use, care should be taken to avoid inflation and inefficient resource allocation.

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<sup>14</sup>Kenneth J. Arrow, "The Economic Implications of Learning by Doing," *Review of Economic Studies* 29 (June 1962): 155-73.