

CHAPTER ONE

Physical Distribution and Economic Development of Inland Region

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I. NEW PROBLEMS CONFRONTING INLAND ECONOMY

Development of inland China, that is central and western regions of China, was emphasized in 1999 more than ever before. In his speeches to a central conference on aiding poverty-stricken areas and a symposium on reforming state-owned enterprises in five northwest provinces in June 1999, General-Secretary Jiang Zemin lost no time to call for redoubled efforts for the development of central-west China, and so did Premier Zhu Rongji in his remarks made during an inspection tour of Gansu, Qinghai and Ningxia. The Chinese press gave prompt coverage to their remarks. The Central Economic Working Conference held in November of the same year, too, called for attention to developing central-west China.

Development of central-west China was so reiterated out of two considerations. On the first hand, when the nation was celebrating the 50th anniversary of the founding of the People's Republic, top Chinese leaders made it clear that they wanted to step up their support of underdeveloped regions. On the other, at a time when prospects for high-speed economic growth in coastal regions have somewhat dimmed, it has dawned on the Chinese leaders that it is necessary to truly increase the level of development of inland China to ensure long-term development of the Chinese economy in the 21st century.

This book gives some insight into the issues confronting the development of the economy of the inland China from the perspective of physical distribution. First, by giving a general introduction to the environment of inland China for economic growth and the current situation in physical distribution, this chapter presents some proposals for the strategy for the economic development of this region. In Chapters Two and Three, we will look in a detailed way into the physical distribution in Henan, Anhui, Hubei, Hunan and Jiangxi provinces in central China, and such western regions as Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. Case studies are made of Sichuan Province, Chongqing Municipality, the

Xinjiang Uygur Autonomous Region, and Hubei Province in Chapters Four, Five and Six. By the way, the inland China dealt with in this book refers to the 19 provinces, autonomous regions and municipalities in central China (Shanxi, Inner Mongolia, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan) and west China, according to the 7th Five Year Plan which divides the country into east (coastal), central and west regions.

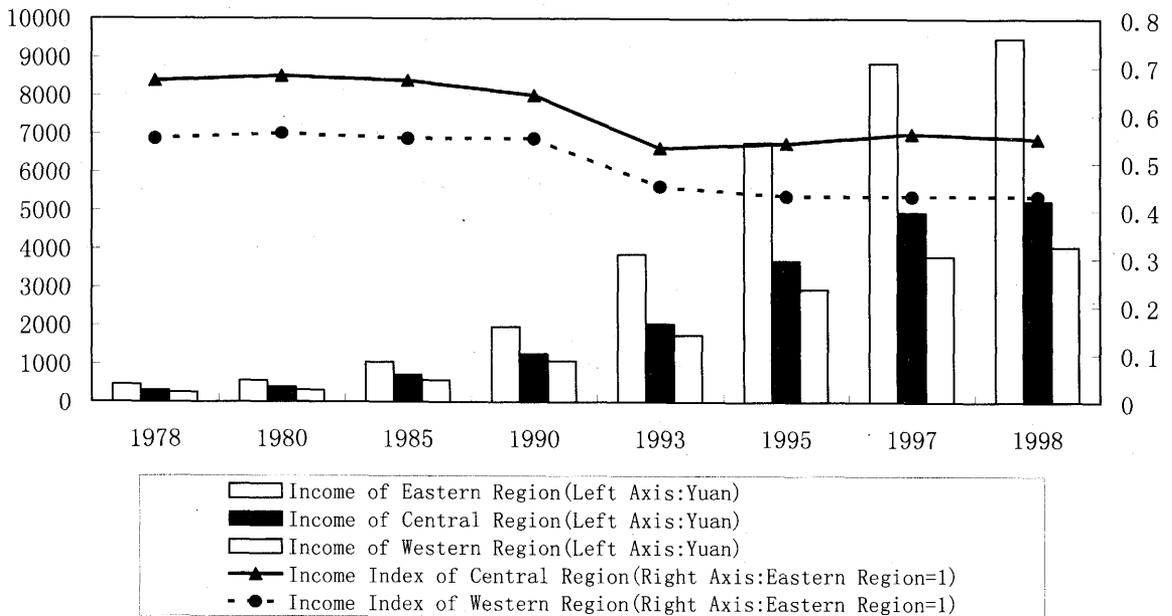
1. Paying Due Attention to Issues Related to Policies Promoting Development of Coastal Region

In the 1990s, especially after Deng Xiaoping made this renowned remarks during a south China inspection tour in 1992, China draw worldwide attention to its high-speed economic growth. However, by the late 1990s, this economic growth had been held by structural problems.

First, vestiges of an irrational industrial structure. In the 1990s China achieved high-growth by tapping its comparative advantage (i.e., low labour costs) in labour-intensive manufacturing industries and expanding their production. But it had to rely on the foreign market for product sales and raw materials supplies, while the coastal region became the nation's chief source of economic growth, and non-state enterprises became the mainstay of these industries. For this reason this kind of economic growth failed to remedy an industrial structure in which the secondary industry, manufacturing industry in particular, took too large a share, nor could it provide the impetus for the modernization of state-owned enterprises.

Second, economic gap between regions. As is mentioned above, the coastal region played the leading role in China's speedy economic growth, which widened its economic gap with inland region. In terms of per-capita GDP, the gap between the two regions remained largely the same throughout the 1980s, but in the 1990s it began to grow. Though the widening of this gap has somewhat alleviated since 1995, it remains to be seen whether this letup is only temporary or not (Figure 1-1).

Figure1-1 Regional Income Gaps(1978-1998)



Third, tardiness in globalization. Though the coastal region has made some progress in globalization through its success in world market competition, this has so far failed to exert a strong influence on the inland due to lack of growth in economic exchanges between the two regions. Furthermore, stubborn protectionism has aggravated the tardiness of inland China's pace of internationalization.

These problems in the economic growth of the 1990s have cast the economic development of the inland in shadows.

2. New Ideas on Inland Economic Growth

To better express my ideas, I would like to introduce the gist of Jin Bei's article which makes a comparative study of the economic growth of the coastal region from the 1980s to the mid-1990s and analyzes the environment for the economic growth of the inland (Table 1-1)⁽¹⁾.

According to this article, in the 20 years of reform and opening up to the outside world, the economy of the east or coastal region has made smooth development in the beneficial environment as mentioned in Table 1-1. By international standards, this region has finished the low-income stage (below 785 US dollars by World Bank standard) and reached the medium-income stage. However, with a harsher environment for economic development, the inland (central and western) region finds it difficult to attain the medium-income stage.

For example, we consider the field of physical distribution ("Location and transportation" in the Table 1-1). Though inland region has improved their access for market by investing traffic facilities, it reduce the competitiveness of inland region by raising the cost of transportation.

Considering the situation mentioned above, Jin Bei's article suggest the new ideas for

development strategy of inland region. The point of it is as follows;

Inland region should consider the changing conditions of their comparative advantage and change it to competitive advantage. Financial support and preferential policy by central government is important, but its financial ability has weakened seriously. So inland region should change their old idea of "waiting for, relying on, asking support" and bring its own strength into play.

Table 1-1 Differences between Eastern and Western Regions in Transition from the Low-income Stage to the Medium-income Stage

	Eastern region during from the 1980s to the middle of 1990s	Central and western region during the 20 years from the late 1990s to the 21st century
Mode of economic growth	High-speed quantitative expansion	Quantitative expansion has been limited
Agricultural economy	High output and high growth in revenue laid foundation for industrial development	Industrial output keeps growing, but the products are low in grade and the economic returns leave much to be desired
Industrial economy	Lowcost supply of production elements(natural resources); and expansion in processing capacity catalyzed high-speed industrial growth	The costs for development local resources are on the rise, the local industrial structure is monotonous (as it consists mostly of industries for the development and crude processing of local resources), the relationship between comparable interests is worsening and so are the conditions for developing local trade, and the local industry lacks competitiveness
Space for demand	In an economy saddled with shortages, industry sought space for growth by making up for shortages in supply	Confronted with a surplus economy, the local industry can be developed only by seeking a footing in a market that has already become saturated
Location and transportation	Ideal location on the coastal line	Improve the competitiveness by investing transportation facilities, but it reduce the competitiveness by raising the cost of products
Policy environment	A preferential policy that regulated production according to market demand and made the best use of the situation to guide local economic growth "down the river"	A regional policy that regulates local economic growth by running against market trends, a situation that has to be remedied so as to guide the local economy "against the current"
Situation in the opening-up effort	Protecting home market, opening up to the outside world by relying on preferential government policies which protected the growth of industries in their infancy	An open home market is up against growing pressure from international competition, and more local industries have been exposed to such a pressure

Sources: Jin Bei: "Economic Development in Central and western Regions Calls for New Ideas" (Economic Development in Central and western Regions Calls for New Ideas, compiled by the Chinese Geo-economics Society, 1999.)

II. STRATEGY FOR ECONOMIC DEVELOPMENT: CHARACTERISTICS AND PROBLEMS

How, then, should the inland region prepare itself for the changed environment? In our survey we have made case studies of three typical inland regions: Sichuan Province (Chengdu and Chongqing in particular), the Xinjiang Uygur Autonomous Region, and Hubei Province. We will observe the changes they have made in adapting themselves to the new environment, and the strategies they have devised for economic growth.

1. Sichuan's Strategy for Economic Development

The strategy for Sichuan's economic growth is "relying on one point (Chengdu), building a circle (Chengdu Plain Economic Circle), developing two areas (Panxi and southern Sichuan), and supporting three areas (hilly areas, mountainous areas on the rim of the Sichuan Basin, and

minority-inhabited areas)". Of these, the Chengdu Plain Economic Circle holds the key to Sichuan's strategy for economic development and is expected to become the locomotive for the economic growth of the entire province.

This economic circle, consisting of Chengdu and satellite cities and peripheral areas, covers an area of 23,346 square kilometers, or 4.8 percent of the province's total, and has a population of 16.5 million, or 20 percent of the province's total. With a GDP of 136.29 billion yuan, 41 percent of the province's total, it is the economic center of the entire province. The idea for building this economic circle is to form an economic center along the Chengdu-Chongqing trunk transport line, and rejuvenate advantageous industries while expanding economic exchanges with the coastal region in the east and the western region (Guizhou, Yunnan, Jiangxi and Tibet). The advantageous industries designated in the plan are 1) electronics and information industries, 2) machine-building and metallurgical industries, 3) construction and building materials industries, 4) drinks and foodstuff industries, 5) chemical and pharmaceutical industries, and 6) tourism - known as "six backbone industries" (2).

It is clear that Chengdu will have no future if it continues to exist as a mere grain, raw materials and labour supplier to other provinces. As a matter fact, because oil and grain are more expensive in China than abroad, the coastal region has become more reliant on imports. Just as has been mentioned above, this has become an unavoidable issue for the study of the economic development of the inland region.

The idea for the economic development of Chongqing is to keep open the transportation line to the coastal region in general and Shanghai in particular, turn the municipality into a comprehensive physical distribution center for the southwestern China, and on this basis improve and upgrade the region's industrial structure. Moreover, it is also hoped that foreign capital will be gravitated on the area around the Three Gorges Dam. However, a decision is yet to be made about the thrust of capital construction for transportation - so far there are three options: 1) strengthening shipping along the Yangtze River (including increasing the cargo-handling capacity of Chongqing Harbour), 2) building an expressway along the Yangtze, and 3) improving the Chongqing-Guizhou-Guangxi Railway. In addition, high-tech industry and the tertiary industry may be chosen as the leading industries in the region's effort to improve and upgrade its industrial structure (3).

The problem now is whether an advantageous industry can really be developed in the inland region. Take the six major mainstay industries of Sichuan Province for instance. There are two problems in this regard. The first problem is historical. Construction of the "Third Fronts" (strategic rear areas for war preparedness built in the inland with heavy investment) in the 1960s and 1970s has cultivated a number of powerful enterprises in the electronics, information, machine-building and metallurgical industries. However, being defense industrial enterprises built without consideration of economic costs, most of them find it hard to adapt themselves to the market economy and convert themselves for civilian service. Very few of them have been as successful as the famed Changhong Group (a defense factory turned television set manufacturing enterprise in Mianyang). The second problem lies with the region's location. Introducing advanced foreign

technology and capital is a good choice for upgrading the "Six Mainstay Industries". However, progress in this regard is slow for Sichuan province. By the end of 1998, the province had utilized a total sum of contractual foreign investment of 11.967 billion US dollars, or a meager 1.63 percent of the nation's total. Whether these two problems can be solved holds the key to the economic growth of Sichuan province.

2. Strategy for Economic Growth of Xinjiang Uygur Autonomous Region

The economy of Xinjiang has developed by shipping petroleum and cotton to coastal China in return for manufactured goods. Today, due to their higher prices, both products have lost their competitiveness on the world market and can hardly remain the mainstays for the region's economic development. For a time the home market was glutted with cheaper smuggled petroleum and oil products. Moreover the price per 50 kilograms of cotton is reportedly two yuan more expensive than imports ⁽⁴⁾.

Given the fact that Xinjiang is still in the primary stage of economic development, the region's reliance on natural resources can hardly be changed overnight. Fortunately, policy-makers in Xinjiang have realized that the region is still in the early stage of industrialization and economic transition from light and textile industries to heavy and chemical industries. They have adopted a basic strategy for development accordingly with the priority given to 1) supporting the development of agriculture as the foundation for industrialization, 2) developing water conservancy, energy, transport, telecommunications, exploration of subterranean resources, and other industries that play a leading role in local economic growth, 3) developing the petroleum and gas industry as a local economic mainstay and light and textile industries predicated on the foodstuff industry, and on this basis, boosting the well-founded building materials and electronics industries, and 4) cultivating high-tech, information and tourist industries for strategic purposes ⁽⁵⁾.

Different local strategies have also been formulated for the province's 1.6 million square kilometers of land (more than four times as big as Japan). The region has thus been divided into 1) the area along the Eurasian Continental Bridge (containerized sea-and-land shipping line); 2) the western part of north Xinjiang, east Xinjiang and the eastern part of south Xinjiang; 3) and the northern part of north Xinjiang and the western part of south Xinjiang. Of these, the area along the Eurasian Continental Bridge holds the key to the strategy for the region's development because this is where three fifths of the industry, one quarter of the agriculture and two fifths of the urban population of Xinjiang are concentrated. In this area the goal for agriculture is to develop rural enterprises by integrating them with the supply of non-staple foods to cities and the production of raw materials for farm produce processing industry; and the goal for industry is to give play to the leading role of oil drilling and petrochemical industry while boosting the light and textile, machinery and electronics, and metallurgical industries.

Generally speaking, this plan gives the impression that it is a rather all-inclusive one. But it indicates that the local authorities have broken out of the limitations of an economy based too much on resources and are striving to achieve the following two goals. First, instead of simply tapping such natural resources as petroleum, they want to bring the entire production process to a full cycle.

Secondly, they want to raise the quality of cotton and other farm produce and seek to produce goods with high incremental values. Another noteworthy point is that they want to base themselves on the Eurasian containerized sea-and-land shipping line not only to open the region up eastward to the coastal region but also westward to Central Asia, and at the same time step up construction of cities as bases for future development. The construction of the Turpan-Kaxgar Railway which leads from south Xinjiang to Central Asia right after the completion of the Urumqi-Alataw Railway in north Xinjiang is precisely a symbol of their enthusiastic effort to open the region up to the outside world.

Nevertheless, development of Xinjiang's economy is still up against severe tests. Despite the effort to change a resource-dependent economy and beef up basic industries, Xinjiang is still handicapped by two problems. First, its geographical location is far away from the coastal region and its cities are so small in number and so scattered that they are bound to increase costs for the construction of transportation facilities. Secondly, even after Herculean efforts have been made to expand basic transportation facilities, one-way physical distribution has kept efficiency in transportation extremely low. The demand for goods to be shipped from Xinjiang and Central Asia to the coastal region is low, and that is why most trucks from the coastal region to Xinjiang have to return to where they are from without bringing anything with them. How to integrate Xinjiang's fast growing economic exchanges with Central Asia and its economic ties with the coastal region holds the key to future economic development of Xinjiang.

3. Hubei Province's Strategy for Economic Development

During the age of central planning Hubei province had built many industrial projects to become a typical old industrial base. Wuhan, the capital city and transport hub for nine provinces, has emerged as the commercial and physical distribution center for central China. The "Golden Triangle", whose three "points" -- Huangshi, Yichang and Xiangfan -- are linked by the Yangtze River, the Beijing-Guangzhou and Beijing-Kowloon railways and the Yichang-Huangshi State Highway, with Wuhan in the center, constitutes the nucleus for the economic growth of Hubei province. The strategy for Hubei's economic development calls for the construction of "three major corridors and seven major bases", referring to the Wuhan-Ezhou-Xiangfan corridor for metallurgical industry, the Wuhan-Xiangfan-Shiyan corridor for auto industry, and the Wuhan-Jingmen-Yichang corridor for chemical industry, as well as bases for chloride chemical, phosphate chemical, building materials, textile, high-tech, and hydroelectric power generating industries and agriculture. After the Beijing-Kowloon Railway was open to traffic, construction of an economic belt along it has also been added to the list⁽⁶⁾.

Hubei gives the impression that the Yangtze River, which runs east and west across the province, is the trunk line for physical distribution in the province. Reality is contrary to this impression. More materials are circulated to and from other provinces in an south-north direction than in the east-west direction (see Table 1-6). In the south-north direction there are two trunk railways, the Beijing-Guangdong and the Beijing-Kowloon lines, whereas there is not even a passable railway in the east-west direction. There are four trunk highways in the south-north

direction, whereas there is only one in the east-west direction. In addition, trunk lines for physical distribution inside the province are the Wuhan-Huangshi, Xiangfan-Shiyan and Wuhan-Yichang lines. For this reason, Hubei's strategy for economic growth is based not so much on the Yangtze River than the above-mentioned "Golden Triangle", and it is designed to build an economic center to boost the development of all the five provinces (Henan, Anhui, Hubei, Hunan and Jiangxi) in central China. Despite its huge population of 150 million, almost all the cities in these five provinces are medium-sized or small ones with a weak role in commercial and physical distribution. Under these circumstances, the position of Wuhan becomes rather conspicuous. That is why even in the Tenth Five-Year Plan, developing the city's functions in commerce and physical distribution will become a major target in the province's strategy for economic growth ⁽⁷⁾.

In the Ninth Five-Year Plan, the Yangtze River drew the attention as a trunk line for its function in radiating to the coastal region and boosting the economic growth of the inland. The development of Hubei Province in the middle reaches of the Yangtze as the commercial and physical distribution center of the abovementioned five provinces is vital to the formation of an organic cooperation relationship between the coastal region and the inland.

4. Problems in the Strategy for Inland Region's Development

Our study of these three regions has shed some light on the economic development strategy of inland China. Now let us deal with the existing problems, which boil down to the following two knotty ones.

First, problems left behind by the age of central planning. Local researchers and administrative leaders are unanimous that the economy of the inland region had come a long way during the period of "Third Front" construction. During the 1965-75 period, over 40 percent of the country's capital construction investment was pumped into the "Third Front", thus laying an industrial foundation for the inland region, while in areas other than the "Third Front" areas the emphasis was laid on the construction of a self-sufficient economic system. However, an aftermath of the "Third Front" construction is an infrastructure of the defense industry and industries associated with it, built regardless of local economic conditions. Because the industrial structure in these areas is "heavy, thick, long and large", and because many of the defense industrial enterprises are running a deficit, they have become a heavy burden on the economy of various localities.

Secondly, problems engendered by the policy of reform and opening up to the outside world during the 1980s and 1990s. As is mentioned in the beginning of this chapter, while the economy of the coastal region centred around export-oriented industries achieved high growth, the inland lost the opportunity to remedy its lopsided industrial structure, thereby causing a yawning economic gap between the inland and the coastal region. During his celebrated south China inspection tour Deng Xiaoping set an all-round pattern for the opening-up effort meant to provide equal opportunities for the development of both inland and coastal regions. However, due to differences in local conditions, the results were worlds apart between these two regions. For instance, the inland's great effort to improve the local market by stepping up construction of infrastructure in transport and communications has failed to help local products to beat the competition from the

coastal region. Construction of transportation facilities has become a heavy burden for the inland despite financial support from the central government. For instance, the costs for highways construction are shared 1:9 between the central government and the region. Though local governments have managed to pay their due with domestic and foreign loans, to repay the debts they tend to set high tolls which serve nothing but to boost transportation costs and weaken the competitiveness of inland products⁽⁸⁾.

Having become aware of these knotty problems, the central government has adopted a series of countermeasures, such as 1) increasing financial support for the inland, 2) granting preferential policies to inland industries and enterprises, 3) attracting foreign investment to the inland, and 4) allowing the governments of the coastal region to provide direct aids to designated inland region. But it is no mean task to overcome all these knotty problems.

III. PHYSICAL DISTRIBUTION: CURRENT SITUATION AND PROBLEMS

1. Basic Situation in Transport and Communications

The following is a brief introduction to transportation and communications in the inland. Basic statistics about transport and communications in the three regions are provided in Tables 1-2 and 1-3.

Table1-2 Transportation Situation of Three Regions(1998)

	Western Region	Central Region	Eastern Region	National
Length of Transportation Routes(Km)	406595	495319	536541	1446325
Length of Railways in Operation(Km)	13791	26646	17151	57588
Length of Highways(Km)	380124	436931	461419	1278474
Length of Navigable Inland Waterways(Km)	12680	31742	57971	110263
Density of Transportation Routes (Km/100Km ²)	7.46	17.55	41.38	15.06
Railways	0.25	0.93	1.32	0.60
Highways	6.97	15.32	35.54	13.31
Waterways	0.23	1.29	4.47	1.15
Total Freight Traffic(10000tons)	221787	395327	595339	1264361
Railways(10000tons:share%)	24159(10.9)	77867(19.7)	59216(9.9)	161242(12.8)
Highways(10000tons:share%)	194195(87.6)	306223(77.5)	475128(79.8)	976004(77.2)
Waterways(10000tons:share%)	3433(1.5)	11237(2.8)	60995(10.2)	109555(8.7)
Total Freight Ton-kms(100million ton-km)	3299.5	7606.3	9827.3	37840.7
Railways(100million tons:share%)	2104.1(63.8)	5469.9(71.9)	4738.0(48.2)	123122(32.5)
Highways(100million tons:share%)	1130.6(34.2)	1798.5(23.7)	2550.0(25.9)	5483.4(14.5)
Waterways(100million tons:share%)	65.0(2.0)	338.2(4.4)	2539.1(25.8)	194058(51.3)
Average Transport Distance of Freight(Km)	148.8	192.4	165.1	299.3
Railways(Km)	870.9	702.5	800.1	763.6
Highways(Km)	58.2	58.7	53.7	56.2
Waterways(Km)	189.3	301.0	416.3	1771.3
Facility Index of Freight Traffic	0.50	0.91	2.50	0.50
Railways	0.0029	0.013	0.017	0.0079
Highways	1.20	2.60	6.60	2.40
Waterways	0.012	0.043	0.11	0.0065

Note1: The figures of Freight Traffic and Freight ton-kilometers include the figure not classified by region.

So the total of figures classified by regions does not equals National figure.

Note2: Facility Index of Freight Traffic=(Density of Transportation Routes X Freight Traffic/ Freight Ton-km) X 10.

Source: China Statistical Yearbook 1999

Table1-3 Gross Industrial Output Value and Freight Traffic(1998)

	Western Region	Central Region	Eastern Region	National
Gross Industrial Output Value(100million yuan)	6749.49	14003.89	46983.76	67737.14
Freight Traffic per 100million yuan(10000ton)	32.86	28.23	12.67	18.87
Index(National:1)	1.74	1.50	0.67	1.00
Freight Ton-km per 100million yuan(10000ton-km)	4888.52	5431.56	2091.64	5586.40
Index(National:1)	0.88	0.97	0.37	1.00

Source: Year Book of China Transportation and Communications 1999

Both tables point to the following salient features of the inland region.

First, there is absolutely a shortage in transportation facilities. Only central region manages to stay above the nation's average level in terms of railway, waterway and highway density, whereas the figures for western region are only half of the average national level.

Second, railways and highways have a high proportion than any other facilities in terms of both cargo shipment and cargo turnover. Railways' cargo turnover is 1.9-2.2 times more than the national average, and that for highways is 1.6-2.3 times more than the national average.

Third, there is a serious shortage in railway transportation capacity for central region and in highway transportation capacity for western region. A look at the transportation convenience index of these regions by considering differences in geographical conditions and excluding waterway transportation, indicates that central and western regions compare unfavorably with eastern region. For instance, central region handles 1.3 times as many railway cargos as eastern region, but its convenience index is a meager 76 percent, which calls for improvement. Western region is in even greater demand for improvement, for its transportation convenience index is only half of the nation's average level.

Fourth, different transport distances call for different means of transportation. Like the case with eastern region, railways and waterways handle the lion's share of massive, long-distance cargo haulage, whereas highways are a major means for short-distance transport. For all the regions, the average cargo-shipping distance is below 60 kilometres for highways, more than 700 kilometres for railways, which reaches 870 kilometres for western region. The average distance for inland waterway and offshore shipping has quickly lengthened, reaching 300-400 kilometres for inland waterway transportation.

Fifth, cargo shipment accounts for a large portion of the industrial output value. Inland region's volume of cargo shipments is 2.2-2.6 times, and its cargo turnover is 2.3-2.6 times, more than those of eastern region. This is because the mining, heavy and chemical industries constitute the bulk of the inland industrial structure, which means a heavy transportation burden for the region.

2. Situation in Transition towards Market Economy

The following tables provide some information about the transition of transport and communications to the market economy. Table 1-4 is about cargo makeup of the three major regions of China, and Table 1-5 takes a look at the structure of ownership of owners of various

means of transportation, and the situation with private transportation operators.

Table1-4 Freight Traffic by Regions and Sectors(1998)

Unit:10000ton(%)

	Western Region	Central Region	Eastern Region	National
Total Freight Traffic	221787	395327	595340	1264361
Dpt.of Communications	31442(14.2)	95617(24.2)	106078(17.8)	285044(22.5)
Others	190345(85.8)	299710(75.8)	489262(82.2)	979317(77.5)
Freight Traffic by Railways	24159	77867	59217	161243
National Railways	23549(97.5)	76020(97.6)	53638(90.6)	153208(95.0)
Local Railways	610(2.5)	1847(2.4)	5579(9.4)	8035(5.0)
Freight Traffic by Highways	194195	306223	475128	976004
Dept. of Communications	6592(3.4)	13394(4.4)	26608(5.6)	47052(4.8)
Others	187603(96.6)	292829(95.6)	448520(94.4)	928952(95.2)
Freight Traffic by Waterways	3433	11237	60995	109555
Dept. of Communications	691(20.1)	4356(38.8)	20253(33.2)	59790(54.0)
Others	2742(79.9)	6881(61.2)	40742(66.8)	50365(46.0)

Note1:Dept. of Communications includes Civil Aviation and Pipelines

Note2:The figures of Freight Traffic includes the figure not classified by region. So the total of figures classified by regions does not equals National figure.

Source: Year Book of China Transportation and Communications 1999

Table1-5 Number of Private-owned Transport Vehicles and vessels by Region

	Western Region	Central Region	Eastern Region	National
Civil Motor Vehicles owned(10000units)	253.11	359.48	706.71	1319.30
Private Vehicles(10000units:%)	72.94(28.82)	122.68(34.13)	228.03(32.27)	423.65(32.11)
Buses and Cars(10000units)	118.50	170.61	365.72	654.83
Private-owned Buses and Cars(10000units:%)	29.63(25.00)	65.87(38.61)	135.15(36.95)	230.65(35.22)
Number of Seats(10000seats)	1309.63	2123.37	4188.47	7621.47
Seats of Private-owned (10000seats:%)	339.66(25.94)	760.53(35.82)	1532.58(36.59)	2632.77(34.54)
Number of Trucks(10000units)	126.09	177.64	324.16	627.89
Private Trucks(10000units:%)	42.84(33.98)	56.1(31.60)	91.83(28.33)	190.77(30.38)
Capacity of Trucks(10000t)	439.88	753.28	1215.78	2408.94
Capacity of Private-owned(10000tons:%)	142.00(32.28)	235.62(31.28)	338.45(27.84)	716.07(29.73)
Civil Motor Vessels Owned(units)	12375	40837	157543	212093
Private-owned Vessels(units:%)	10249(82.82)	21568(52.81)	95313(60.50)	127130(59.94)
Vessels under Dep.of Communications(units:%)	—	—	—	1338(0.63)
Dead Weight Tonnage of Vessels(t)	299413	3005248	15229623	38896576
Private-Owned Vessels(t:%)	227406(75.95)	1275574(42.44)	5044115(33.12)	6547095(16.83)
Vessels under Dept. of Communications(t:%)	—	—	—	20362292(52.35)

Note:Number of "Civil Motor Vessels" includes vessels under Dept. of Communications. But the figures classified by regions does not includes it.

Source: China Statistical Yearbook 1999

Tables 1-4 and 1-5 point to the following facts:

First, Table 1-4 indicates that in eastern and western region, the non-government sector (collective, individual and private transportation firms) takes up a considerable portion of cargo shipment in comparison with transportation enterprises operated by the central authorities and local governments. This means that both regions have come a long way in their transition to the market economy.

Second, a look at the ownership structure of transportation firms shows that railway transportation is entirely owned by the state (Table 1-5 only shows the difference between railways built by central government and local governments, with little or no regional difference; the lion's share of highway transportation is operated by the non-state sector, also with little regional difference. The central and local governments take up more than 54 percent of waterway transportation, but there is a great regional difference in ownership structure.

Third, there is a small regional difference in the makeup of vehicles for civilian use. Moreover, in terms of private ownership of motor vessels for civilian use, the shares of west and east China are higher than the nation's average level, while the figure for central China is lower than the average national level. However, both regions' shares of private-owned vessels in their respective total loading capacities are smaller than their shares in their respective numbers of vessels. Enterprises run by the central authorities are in the possession of less than 1 percent of the total number of ships but 52.35 percent of the total loading capacity. This means that private-owned ships are mostly small in size.

More progress will be achieved in this field in the transition to the market economy. Our survey, however, shows that there is considerable disorder in the shipping industry, caused on the one hand by the failure of existing shipping capacity to meet the demand and on the other by the fact that newly established enterprises have either broken government rules to set up extra fee-collection items or failed to observe transportation contracts. Healthy development of the market calls for down-to-earth efforts, the reform of existing administrative and management systems, and plugging up the loopholes in related legislation.

3. Salient Features of Out-of-Region Physical distribution

It is difficult to grasp the actual situation in the nation's inter-regional physical distribution. The only figures that have been published about the situation in railway transportation in different provinces are seen in Table 1-6.

Table 1-6 continuing table

Arrival	Henan	Hubei	Hunan	Guang-dong	Guangxi	Chong-qing	Sichuan	Guizhou	Yunnan	Hainan	Shaanxi	Gansu	Qinghai	Ningxia	Xinjiang	Total
Sending																
Beijing	0.05															1.67
Tianjin																1.14
Hebei	0.22	0.10	0.07	0.13	0.06		0.05									7.01
Shanxi	0.5	0.58	0.17	0.12	0.08		0.05				0.07					16.17
Inner Mongolia	0.06															5.54
Liaoning	0.08															7.89
Jilin				0.05												3.67
Heilongjiang	0.07															7.88
Shandong	0.16	0.07	0.05	0.10												6.32
Shanghai																0.75
Jiangsu	0.15			0.10												2.47
Zhejiang			0.07													1.12
Anhui			0.06	0.05												3.30
Fujian			0.10	0.13												1.51
Jiangxi																1.74
Henan	1.42	1.37	0.32	0.34	0.16		0.09				0.08					5.76
Hubei	0.24	0.93	0.15	0.24	0.08	0.05	0.1									2.63
Hunan	0.06	0.12	1.03	0.81	0.18											2.88
Guangdong	0.11	0.19	0.40	0.73	0.20	0.05	0.15	0.13	0.23		0.06					3.17
Guangxi	0.06	0.05	0.11	0.19	0.58		0.1	0.1	0.09							1.72
Chongqing					0.07	0.42	0.23	0.05								0.99
Sichuan	0.06	0.18		0.09	0.09	0.20	1.95	0.06	0.16		0.12					3.51
Guizhou			0.10	0.20	0.48	0.09	0.15	0.60								1.98
Yunnan	0.05			0.10	0.13		0.10		0.82							1.72
Hainan										0.18						0.18
Shaanxi	0.08	0.15	0.05	0.06			0.15				0.79					2.06
Gansu	0.07						0.16				0.13	0.90	0.09			1.84
Qinghai												0.09	0.10			0.38
Ningxi											0.09	0.32		0.27		1.05
Xinjiang	0.20						0.09					0.49			0.57	1.79
Total	4.02	4.19	3.03	3.87	2.43	1.18	3.91	1.26	1.72	0.18	1.88	2.29	0.41	0.50	0.98	100.0

Table 1-6 Inter-province Tonnage over Railways(1998)

Arrival	Beijing	Tianjin	Hebei	Shanxi	Inner Mongolia	Liaoning	Jilin	Heilongjiang	Shandong	Shanghai	Jiangsu	Zhejiang	Anhui	Fujian	Jiangxi
Beijing	0.52	0.28	0.27	0.06		0.07									
Tianjin	0.16	0.20	0.20	0.08											
Hebei	1.05	0.62	2.91	0.20	0.14	0.83	0.07	0.13	0.24	0.08	0.16				0.09
Shanxi	0.94	1.96	5.39	1.40	0.15	0.81	0.07	0.69	1.72	0.11	1.2	0.22	0.26	0.07	
Inner Mongolia	0.15	0.45	0.60	0.10	1.88	0.59	0.29	0.49	0.17		0.08				
Liaoning	0.11	0.22	0.30	0.08	0.28	5.20	0.49	0.49	0.12	0.07	0.07				
Jilin	0.06	0.06	0.12		0.07	0.85	1.55	0.36	0.11	0.05	0.05	0.05			
Heilongjiang	0.10	0.13	0.28	0.05	0.11	1.45	1.07	3.92	0.21	0.09	0.09				
Shandong	0.10	0.05	0.27	0.21	0.07	0.14	0.07	0.14	3.17	0.13	0.55	0.32	0.26	0.07	0.07
Shanghai										0.06		0.06			0.05
Jiangsu									0.10	0.22	0.84	0.16	0.22	0.06	
Zhejiang										0.10		0.41			0.11
Anhui									0.05	0.14	0.78	0.26	1.61	0.13	0.06
Fujian											0.05	0.15		0.79	0.07
Jiangxi												0.25		0.15	0.80
Henan			0.07	0.10		0.65			0.22	0.08	0.51	0.12	0.16	0.07	0.26
Hubei			0.10	0.05					0.12		0.05			0.06	0.09
Hunan												0.06		0.07	0.1
Guangdong	0.08		0.06			0.07		0.05	0.06	0.07	0.07	0.08			0.08
Guangxi												0.05			
Chongqing															
Sichuan											0.07				
Guizhou															
Yunnan															
Hainan															
Shaanxi												0.05			
Gansu															
Qinghai															
Ningxi		0.06				0.05									
Xinjiang															
Total	3.56	4.4	11.07	2.7	2.98	10.02	3.88	6.16	6.83	1.48	5.35	2.74	3.01	1.74	2.08

Note: Figures is an index of tonnage(total tonnage :100). Omit the figures below 0.05. The total does not reach 100.

Source: Compiled by author from "Year Book of China Transportation & Communications 1999"

Though the information provided in Table 1-6 is limited to railway transportation, we can still come to the following conclusions:

First, the density of freight transportation between different Chinese regions indicate that four regional groups have emerged: the group of Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia, Liaoning, Jilin, Heilongjiang and Shandong; the group consisting of Shanghai, Jiangsu, Zhejiang, Anhui, Fujian and Jianxi; the group comprising Henan, Hubei, Hunan, Guangdong, Guangxi, Chongqing, Sichuan, Guizhou and Yunnan (indicated by the gray part of the table; and provinces which do not belong to these three groups but which do not have a close relationship between them either. Moreover, coal-mining regions, such as Inner Mongolia, Shanxi, Shandong and Henan have also maintained considerable volumes of transportation to the provinces that do not belong to the first three groups.

Second, provinces with more outgoing freight shipments than incoming freight shipments: Shanxi (outgoing shipments are 5.99 times more than incoming shipments), Ningxia (2.08 times), Inner Mongolia (1.85 times), Xinjiang (1.83 times), Hubei (1.59 times), Henan (1.57 times), Guizhou (1.57 times), Heilongjiang (1.27 times), and Chongqing (1.19 times). All these are inland provinces and municipalities, and coal shipment figures prominently in these figures. Provinces with more incoming shipments than outgoing shipments are mostly coastal provinces and municipalities with a high degree of industrialization: Tianjin (3.86 times), Zhejiang (2.44 times), Jiangsu (2.16 times), Beijing (1.97 times), Shanghai (1.98 times), Hebei (1.58 times), Liaoning (1.27 times), Jiangxi (1.19 times), Guangdong (1.22 times), Guangxi (1.41 times), and Gansu (1.24 times). Provinces with roughly equal amounts of outgoing and incoming freight shipments are Jilin, Anhui, Fujian, Shandong, Hunan, Sichuan, Yunnan, Shaanxi and Qinghai.

Third, development of physical distribution between the inland and the coastal regions is not determined by geographical distance but by if there is a trunk railway. Certainly this conclusion is reached because the only statistics available are on railway transportation. However, because the average distance for highway transportation is below 60 kilometres, and waterway transportation is out of the question in areas other than those along such major rivers as the Yangtze and Pearl rivers, railways are more important to inter-regional transport than another other means of transportation.

Though national statistics are unavailable about the makeup of products shipped in or out of individual provinces or regions, an analysis of the situation in transportation in the early 1990s on the basis of existing data has given us some idea about the makeup of outgoing and incoming products in inland areas, as is listed in Table 1-7⁽⁹⁾. The areas involved in this research are divided into central China (consisting of Shanxi, Henan, Anhui, Hubei, Hunan and Jiangxi), northwest China (Shaanxi, Qinghai, Gansu, Ningxia and Xinjiang), and southwest China (Sichuan, Guizhou, Yunnan, Jiangxi and Tibet). This means that Jilin, Heilongjiang and Inner Mongolia have been deleted from this book's version of central-west China.

Table 1-7 Inward and outward shipment of inland regions by industry

	Inward (high order)	Outward (high order)	Rate of self-support (low order)
Central China	Crude petroleum and natural gas production Manufacture of electronic and communication equipment Petroleum refineries Other mining Manufacture of instruments, meters and other measuring equipment Manufacture of electric machinery and instrument Primary metal manufacturing Manufacture of paper, cultural and educational articles Chemical industries Manufacture of metal products Manufacture of transport equipment Manufacture of machinery Construction Manufacture of electric machinery and instrument Maintenance and repair of machinery and equipment Manufacture of instruments, meters and other measuring equipment Manufacture of electronic and communication equipment Equipment Commerce Manufacture of metal products Agriculture	Petroleum refineries Coal mining Primary metal manufacturing Crude petroleum and natural gas production Coking, manufacture of gas and coal products Manufacture of transport equipment Metal ore mining Manufacture of electronic and communication equipment Manufacture of machinery Chemical industries	Other mining Metal ore mining Primary metal manufacturing Electricity, steam production and supply Coal mining Petroleum refineries Coking, manufacture of gas and coal products Chemical industries Manufacture of building materials Manufacture of transport equipment
North-western China	Primary metal manufacturing Metal ore mining Manufacture of transport equipment Other mining Manufacture of electronic and communication equipment Chemical industries Petroleum refineries Passenger transport Manufacture of electric machinery and instrument Manufacture of instruments, meters and other measuring equipment	Primary metal manufacturing Metal ore mining Manufacture of transport equipment Other mining Manufacture of electronic and communication equipment Chemical industries Petroleum refineries Passenger transport Manufacture of electric machinery and instrument Manufacture of instruments, meters and other measuring equipment	Metal ore mining Manufacture of building materials Finance and insurance Coal mining Manufacture of paper, cultural and educational articles Petroleum refineries Sawmills and manufacture of furniture Freight transport and communication Passenger transport Manufacture of textiles
South-western China	Petroleum refineries Manufacture of electronic and communication equipment Communication equipment Passenger transport Manufacture of transport equipment Metal ore mining Chemical industries Coking, manufacture of gas and coal products Manufacture of electric machinery and instrument Manufacture of machinery	Primary metal manufacturing Manufacture of electronic and communication equipment Manufacture of instruments, meters and other measuring equipment Other mining Manufacture of machinery Manufacture of transport equipment Food manufacturing Metal ore mining Commerce Manufacture of textiles	Metal ore mining Primary metal manufacturing Other mining Coal mining Chemical industries Manufacture of instruments, meters and other measuring equipment Commerce Crude petroleum and natural gas production Manufacture of transport equipment Freight transport and communication

Note: Central China includes Shanxi, Henan, Anhui, Hubei, Hunan, Jiangxi.

Source: compiled by author from "Strategy for coordinated regional development of China" (China Economic Press, 1994) pp. 158-160.

Because Table 1-7 is composed according to an analysis of inter-industrial relationship, there are industries with larger amounts of incoming and outgoing freight shipments. The difference between incoming and outgoing shipments is known as net volume of incoming (or outgoing) shipments. A comparison between net incoming and outgoing shipments indicates that ;

First, in central China, “manufacture of instruments, meters and other measuring equipment”, “electric machinery”, “manufacture of paper, cultural and educational articles” have registered net incoming shipments, while the “coal mining”, “coking , manufacture of gas and coal products” and “manufacture of transport equipment” have reported net outgoing shipments, indicating that Shanxi is a coal-mining center and Hubei is an auto-making center.

Second, in northwestern China, “manufacture of machinery”, “construction”, “maintenance and repair of machinery and equipment”, “commerce” and “agriculture” have reported net incoming shipments, and “primary metal manufacturing”, “metal ore mining”, “other mining”, “chemical industries” and “petroleum refineries” have net outgoing shipments indicating that this region consists of a machine-building industrial base in Shaanxi and an oil production center in Xinjiang.

Third, in southwestern China, “passenger transport”, “coking, manufacture of gas and coal products” and “manufacture of electric machinery” have reported net incoming shipment, and “primary metal manufacturing” , “other mining” and “manufacture of instruments, meters and other measuring equipment”, “commerce” are in the state of net outgoing shipment. A small economic scale and a tendency for self-sufficiency, however, characterize this region, and accordingly, it tends to ship all its surplus materials out to other parts of the country⁽¹⁰⁾.

The situation with physical distribution in inland region contains major factors to be considered when strategies for future economic development are made. In the following section Chinese researchers present some suggestions on economic development of the inland region.

IV. PROSPECTS AND SUGGESTIONS

It is the consensus of virtually all the scholars that in the next century it is necessary to pay due attention to the economic development of the inland region, but there is much controversy about what kind of strategy to take. The most practical dispute is the one about whether attention should be paid to the making of preferential policies or the reform of the economic structure.

Pros for preferential policies maintain that it is necessary to use financial aids and preferential policies to attract investment from at home and abroad to make up for the economic deficiency and support the economic development of the inland region. Advocates of reforming the economic structure emphasize that it is necessary to pay due attention to the lopsided economic structure of the inland region which has inherited from the age of central planning. As a matter of fact, these two opinions are not necessarily opposed to each other; they are actually mutually supplementary as each has drawn the other's inspiration. Considering the changes in interior and exterior economic environments and the weakening function of the central financial authorities, it is my opinion that we should attach importance to reforming the economic structure if we want to achieve sustained

economic growth.

Here I would like to cite Jin Bei's suggestions once again: 1) relinquishing the idea of waiting for, relying on, and asking for government support and bringing the inland's own strength into play; 2) fostering a sense of competition and an awareness of opening up to the outside world; 3) seeking development in a larger market and economic network; 4) awarding the pioneering spirit and the effort to make innovations and cultivating an atmosphere in support of such spirit and effort; and 5) fostering the idea of setting great store by knowledge and talent⁽¹¹⁾.

All these suggestions sound feasible at the first sight, but each calls for changes with a changing interior or exterior environment. These suggestions may be interpreted as follows. The first suggestion means that at a time when the function of the government financial authorities is decreasing, it is necessary to give up the idea of relying on others and bring one's own strengths into full play. The second and third suggestions call for setting one's eye on home and world markets during transition towards the market economy and seeking survival through competition. The fourth and fifth suggestions mean that the key to success in competition lies in creativity and innovation and knowledge and talent. These suggestions may be regarded as expressions of inland policy-makers' strong urge to change their minds.

Finally, the other article which concludes that industrialization of central and western region (the inland) calls for new ideas has made the following suggestions⁽¹²⁾: 1) the fundamental goal for industrializing central and western regions is to make local residents rich and local economies prosperous; 2) it is necessary to switch from reliance on the state to reliance on the market; 3) the starting point of the economic strategy should be switched from local resources to the market; 4) attention should be switched from relative strengths of the region to competitiveness of local enterprises; and 5) the role of economic restructuring should be brought into full play.

The first suggestion means that in industrializing the inland region the old idea of paying too much attention to the national need for industrialization and the need of the processing industries of the coastal region should be changed and replaced by the new idea of paying more attention to making the localities and local residents rich. The second and third suggestions need no further explanation. The fourth, and central, suggestion has listed four different groupings of "comparative advantages of region" and "competitive edges of enterprises", and calls for major efforts to sharpen enterprises' competitive edge. These are: A: having little or no relative advantage and competitiveness; B: having (great) relative advantage but no or little competitive edge; C: having no or little relative advantage but great competitiveness; and D: having great relative strength and a (great) competitive edge. The Changhong Electronics Company is a typical example of D, in which the enterprise relied on its own effort to overcome all the negative factors of the inland. The Xinjiang Television Factory was a typical example of A, for it was finally forced to stop production. The renowned Jingdezhen Daily-Use Ceramics Industrial Company belongs to B, for its decline provides a typical example of an enterprise whose doom is attributed to its failure to fully convert its comparative advantage into a competitive edge. The fifth suggestion, similar to the one raised by Jin Bei, emphasizes the importance of innovation and talent to economic growth.

In the case of the manufacturing industry, physical distribution is an important element in a

region's comparative advantage, while the strategy for physical distribution adopted by an enterprise constitutes the major factor for the enterprise's competitive edge. The process of physical distribution of inland China and China as a whole has left much to be desired. In a "buyer's market", the sales strategy is important, and the strategy for physical distribution and the sales strategy are of a highly integrated relationship⁽¹³⁾. Though the purpose of this research is mainly to recapture the actual situation of the semi-macroeconomic situation of a region from the perspective of physical distribution, it is necessary to conduct our research at the microeconomic (that is, corporate) level in the following chapters on the basis of grasping the actual situation with the macroeconomic physical distribution.

I hope that someday I can come up with something useful on this topic.

NOTES

- (1) Jin Bei: Economic Development of Central and Western Regions Calls for New Ideas - A Look at Central and western Regions from the Perspective of the City of Changzhi, The Great Development of West China Calls for New Guidelines, 1999, compiled by the China Geographical Economic Society.
- (2) Sichuan Provincial Planning Commission and Society for Economic Exchanges with Foreign Countries: A General Survey of the Economy of Sichuan, 1999.
- (3) Based on interviews with the Chongqing Academy of Social Sciences.
- (4) Based on interviews with the Xinjiang Academy of Social Sciences.
- (5) Huang Jun and Zeng Dazhao: A Study of Strategy for Economic Development of Xinjiang in the 21st Century, Xinjiang People's Publishing House, 1999.
- (6) Jiang Zhuping: "A Report on the Ninth Five-Year Plan and the Long-term Outline Programme for the Economic and Social Development of Hubei Province".
- (7) Based on interviews with the Hubei Provincial Academy of Social Sciences.
- (8) Based on interviews conducted in various localities.
- (9) Topical panel of the State Council Development Research Centre: Strategy for Coordinated Regional Development of China, compiled by the, China Economic Press, 1994.
- (10) Same as (9).
- (11) Same as (1).
- (12) Research Group for Quickening the Industrialization of Central and Western Region : A study of the Strategy of and Policy for the Industrialization of Central and western Regions, The Great Development of Western Region Calls for New Guidelines, 1999, compiled by China Regional Economic Society.
- (13) Yasuo Onishi: Strategy for Circulation and Physical distribution in the "Buyer's Market", Chinese Economy, June issue, 1999, Japan External Trade Organization.

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