The Study of China's central and western urbanization, risk and prevention during the Industrial transfer process

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Abstract

In the current economic globalization trend, industrial transfer has become a common economic phenomenon to promote macro-regional industrial restructuring, greater economic. Since reform and opening up policy, as the main field of international industry transfer, the regional economy of China's eastern coastal areas has been rapid development, while it plays a vital role to the regional urbanization. However, in the eastern region to achieve "economic miracle", the growing wealth gap between the eastern and western areas is increasing serious.

Following the implement of national regional development strategies, such as "Great Western Development Strategy", "Rise of Central China Strategy" , the central and western regions to undertake industrial transfer from the eastern region's economic development opportunities, and it will have a huge role in promoting the regional urbanization.

After experienced 1990s the government-led initiative to explore the market period, China's eastern industrial shift to the west China are under the guidance of the central macroeconomic policy, appearing initial extensive form breakthrough and market-oriented, showing the three major characteristics: Investment in expanding, large scale projects growing; Industrial projects with feature of large and high value investment; Industry has become a hot spot for investment. And it differences from the past eastern area undertake international industry transfer are: it undertakes from domestic; the industry is high consumption, high pollution and large scale; Industries to relocate to the city is eager to expand the city with the size of the industry concentration, enhance land value.

Based on the background of China's development background, analysis domestic and abroad relative research, the article makes a conclusion of China's industrial transfer characteristics of the various stages of development, power factor, etc. Comparing the

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main cities' index feature of urban industry structure and urbanization indicators, to sum up different areas undertake industry transfer feature, analysis of deep-seated reasons and the effect to urbanization. Then the paper cites the specific urban cases of central and western regions, constructing the risk theory research framework. Through the process of risk recognize, risk assessment to analyze the characteristics of the central and western regions city to undertake the industry transfer. Finally, making the recommendations and suggestions related to prevention.

1 Globalization & Industrial transfer

Economic globalization is the world's economic activity beyond the borders, foreign trade, capital flows, technology transfer, provision of services, interdependent and interrelated organic economy as a global scale economic entirety. Since the 1990s, economic globalization has become the main theme of the world's economic development. In the trend of the globalization influence, the international industrial structure increasingly upgrade and optimization.

International industrial transfer is the industrial transfer between countries.In accordance with the principle of comparative advantage, some industries from one country or regiontransferred to another country or regionthrough international trade and investment.

In recent years, China's rapid economic development plays a very important role in the process of economic globalization. Meanwhile, international industrial transfer activities also generated a great deal of influenceon the Chinese economy.

2 History and the development trend of China's industrial transfer

China's industrial transfer process can be summarized as follows: First east part and west part, first international and regional. Firstly, the eastern coastal region mainly as a carrier taken international industry transfer; with the economic level of the eastern region increasing grow, some of the industry gradually transferred to the central and western regions.

In the influence of international industrial transfer activity, China has undertaken three times of international industrial transfer. The first time is in 1980's-1990's, textile products as the representative of labor-intensive industries transfer to developing countries, accelerating the pace of upgrading of China's textile industry. The second time is since the 1990s, with the international industrial structure adjustment and transfer, prompting China to become the main destinations of international industrial

transfer. And the industry transfer focus from the raw material industries to processing industries, from manufacturing to high value-added industries, from the traditional industries to emerging industries, from manufacturing to services. The third time was around 2000 due to WTO brings new opportunity, a new round of information industry, as a representative of the high-tech industry production manufacturing process mass to transfer to China. The Yangtze river delta and pearl river delta, ring bohai bay, the coastal areas of fujian initially formed unique information industry base. China has become the international "manufacturing center". Guangdong, fujian, Shanghai, zhejiang, jiangsu, shandong, as the eastern coastal province (city) has the dual task of industrial transfer and undertake industrial transfer .

The industry transfer from the east to the west has experienced the government leading market period of 1990's. The new wave of industrial transfer will influent central and western regions in economic development, industrial structure , ecological environment, urban construction, government management mode, urban image, wage level, traditional society and national culture, etc. Comparing with the eastern region undertake the world of industrial transfer, there are some differences: ① this industry shift's industry mainly comes from domestic; ② the transfer industry is always pollution, energy consumption and large land scale; ③ the city which undertaken industrial transfer is eager to expand urban scale to promote land value.

The directions of the industrial transfer from the east China, first is to the internal developing regions transfer; second is to central and western areas gradient transfer; third is transfer to neighboring countries such as Vietnam and India. With economic strength of the eastern, its radiation and influence rage expand increasingly, forming a certain gradient differences. Some traditional industry will transfer from the core area to surroundings, even to the central and western China by radiation and influence rage expanding.

3 The current industrial transfer characteristics of central and western regions

3.1 Industrial transfer and urbanization characteristics of western regions

In 1999, the state council put forward the western development strategy. In October 2000, the15th communist party of China the CPC central committee the fifth plenary session proposed "the national economy and social development made the tenth five-year plan proposal ", the implementation of the western development and promoting the regional harmonious development as a strategic task. The development of western China strategy including Gansu province, Shaanxi province, Qinghai

province, Ningxia Hui autonomous region, Xinjiang Uygur autonomous region, Sichuan province, Yunnan province, Guizhou province, Chongqing province, Tibet autonomous region, Inner Mongolia autonomous region, Guangxi Zhuang autonomous region , totally 12 provinces, autonomous regions, and municipalities directly under the central government, three minority autonomous prefecture, covering 685 square kilometers, accounting for 71.4% of the country's. By the end of 2002 population is 367 million, accounting for 28.8% of the China's.

Table1. GDP and per capita GDP of western provinces

Province	GDP（hundred million yuan）				Per Capita GDP（yuan）			
	1999	2009	growth	Annual growth rate（%）	1999	2009	growth	Annual growth rate（%）
Neimeng	1268.2	8967.52	7699.32	21.60%	5350	37287	31937	21.43%
Guangxi	1953.27	7903.47	5950.2	15.00%	4148	16576	12428	14.86%
Chongqing	1479.71	5693.58	4213.87	14.42%	4826	20219	15393	15.40%
Sichuan	3711.61	14050.78	10339.17	14.24%	4452	17289	12837	14.53%
Guizhou	911.86	3662.43	2750.57	14.92%	2475	9214	6739	14.05%
Yunnan	1855.74	6178.25	4322.51	12.78%	4452	13687	9235	11.89%
Tibet	105.61	434.34	328.73	15.19%	4262	15294	11032	13.63%
Shanxi	1487.61	7752.2	6264.59	17.95%	4101	20497	16396	17.46%
Gansu	931.98	3373.78	2441.8	13.73%	3668	12882	9214	13.38%
Qinghai	238.39	1012.69	774.3	15.56%	4662	18346	13684	14.68%
Ningxia	241.49	1198.15	956.66	17.37%	4473	19642	15169	15.95%
Xinjiang	1168.55	4005.41	2836.86	13.11%	6470	19119	12649	11.44%

Table2. Major industrial index of western provinces

Province	Industry growth（hundred million yuan）			
	1999	2009	growth	Annual growth rate（%）
Neimeng	235.7	2668.58	2432.88	35.44%
Guangxi	281.8	2001.17	1719.37	27.77%
Chongqing	239.5	1514.72	1275.22	25.93%
Sichuan	634.3	3868.6	3234.3	25.36%
Guizhou	196	1006.02	810.02	22.69%

Yunnan	491.1	1701.78	1210.68	16.81%
Tibet	8.4	25.71	17.31	15.01%
Shanxi	346	2189.97	1843.97	25.94%
Gansu	225.6	1066.74	841.14	21.43%
Qinghai	58.3	324.05	265.75	23.91%
Ningxia	61.6	348.68	287.08	24.20%
Xinjiang	256.7	1378.48	1121.78	23.38%

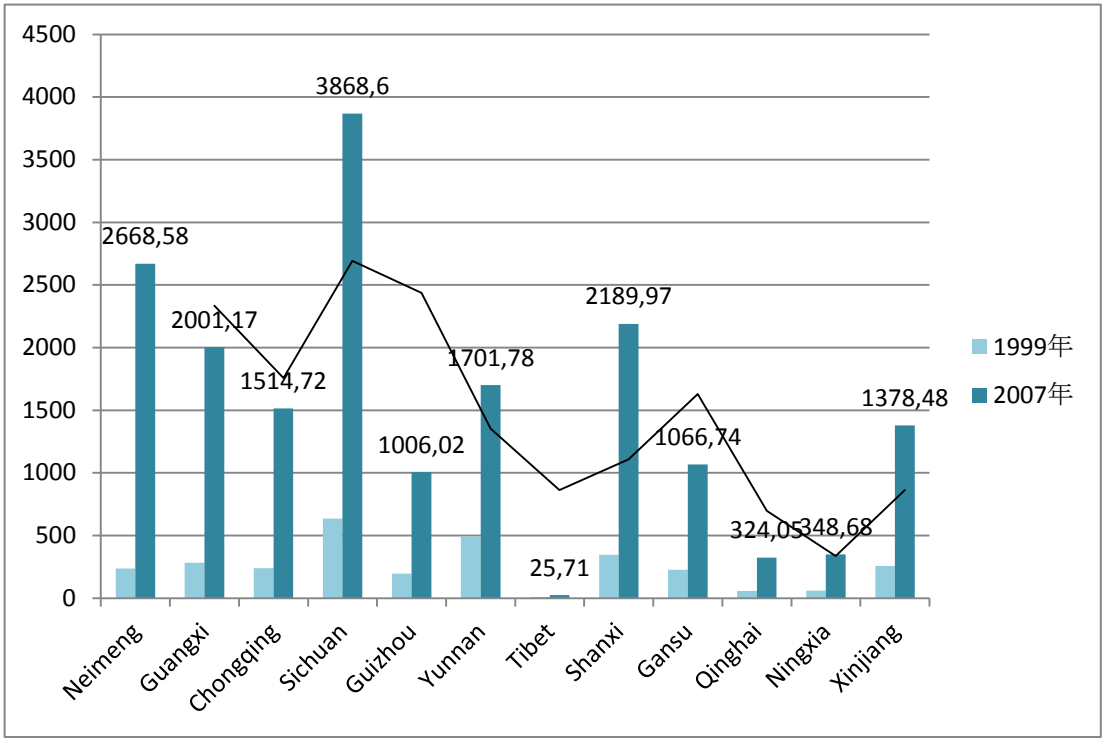

Figure1. Major economic index of western provinces

From the above data, after the implementation of the western development strategy, the western economy made great progress. And the development is uneven develop, Chongqing, Neimeng, Sichuan developed with the fastest speed. The industry also had a rapid development speed, making its share of the national economy proportion rise sharply. The industrial transfer from the eastern region to the western region promotes west China economic develop.

The central region including Shanxi ,Henan, Anhui, Hubei, Hunan, Jiangxi these six provinces, located in China's inland central part. Central China has 10.7% of the country land, the population is 28.1% of China, and the national GDP proportion is 19.5%. It is the population, economic hinterland region and the important market, which plays an important role of domestic regional division.

In March 2004, premier Wen in government work report, first put forward to promote the rise of the central region. “Central China's emerging strategy” meaning is far beyond the central region itself. The general strategy for regional development in China, the central province plays an important role of "as a bridge between the east and the west ".

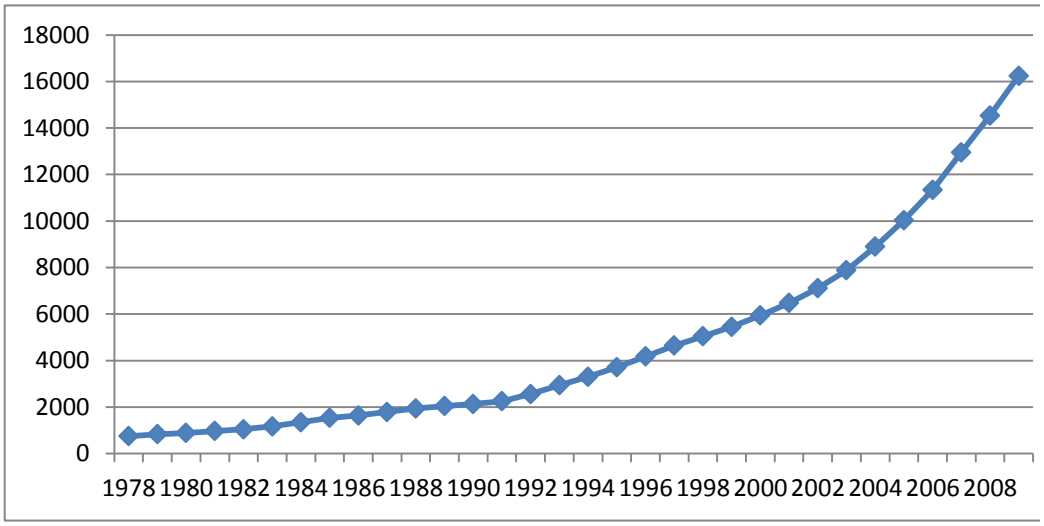

Figure2. GDP of Central China

Table3. Major economic index of Henan province

Year	GDP（hundred million yuan）	Per Capita GDP（ten-thousand yuan）	The three main industries the three main industries（hundred million yuan）		
			Primary industry	Secondary industry	tertiary-industry
1995	2988.4	0.32	763	1395	830
1996	3634.7	0.4	937.6	1677.6	1019.4
1997	4041.1	0.43	1008	1861	1171
1998	4308.2	0.46	1071	1937	1299
1999	4517.9	0.48	1123	1981	1413
2000	5053	0.54	1161	2294	1597
2001	5533	0.59	1234	2510	1788
2002	6035.5	0.6	1288	2768	1978

2003	6867.7	0.7	1198	3310	2359
2004	8553.8	0.9	1649	4182	2722
2005	10587	1.1	1892	5514	3181
2006	12496	1.3	2050	6725	3721
2007	15012.5	1.6	2217	8282	4512

(1) Government-leading industry transfer from the east to the west

Since the 1990 s, in the central macro policy guidance, the local government in the Midwest as the main force of industry transfer has not changed. Since 2000, the eastern coastal area of the industrial transfer to the central and west scale is increasing, the key industry is manufacture, especially labor-intensive industry, resources or energy depending industry.

(2) The industry source opposite concentration

By 2010, only Guangdong, Shanghai, Zhejiang, Fujian these four provinces' and cities' industrial output which need to transfer to the central and western areas will reach 1.4 trillion yuan. For example, because Shanghai successfully held the World EXPO, there were thousands of companies moved away before 2010, and a group of traditional industries gradually out of Shanghai.

(3) The industry transfer has taken shape gradually

First is the industrial transfer level gradually improve, the industry focus from former labor-intensive products to the capital intensive industry and technology intensive industry. Second is the production capacity is no longer the individual enterprise of transfer isolated behavior, industrial transfer from the original single project, a single enterprise, or rather a single industry, change to the integrity industry.

(4) In the industrial transfer process, Zhejiang merchants, Redsun, Taiwanese, Hong Kong businessman' performance is more active

Zhejiang has become China's largest domestic (mainly private funds) output province, Zhejiang merchants also has become China's largest private economic investment venture subject. The capital flow of industry transfer direction is from the east to west, from the south to the north. The transfer industry mainly is labor-intensive industries. Zhejiang enterprise has become an important force in the western development.

With the industrial transfer process forward, based on current China's development situation and related policy guiding, it has the following developing trends: ① Industrial transfer will focus from the labor intensive gradually to the capital intensive and technology-intensive industries ;② Industrial transfer from the first single industry will transfer to the whole industry, and the industry field will be wider; ③ Industry transfer from a government's leading to the enterprise leading, enterprise's leading role is growing increasingly stronger; ④ Capital intensive industry, technology industry will pay more attention to the local technology, talent, research and development ability, and other comprehensive advantages, infrastructure and system conditions.

4 The risk analysis of industrial transfer

According to the characteristics of the industrial transfer, from the urban planning perspective, based on urban development research framework, the article made the risk identification research.

4.1 Urban planning risk

Planning development risk refers to the risk caused by the un-proper planning and design. Urban development projects not only are large scale, but also have great influence on the city development. In order to control planning and design, the government should focus on monitoring project planning and develop target.

Table4. Urban planning risk factors

NO.	Factors	Monitoring method	Monitor
A1	Development orientation	Subjective probability evaluation monitoring ， two-dimensional two-dimension risk matrix monitoring	The government planning departments 、The competent department of city development project
A2	Function layout		
A3	Space development intensity		
A4	Technology risk		
A5	Facilities risk		

Planning and design risk monitoring is in the planning decision stage, the government planning departments and urban development project departments are responsible for monitoring. Once the risk is too high, it shall be ordered to modify planning or direct negative its feasibility

4.2 Ecological environment risk

In China's current rapid urbanization and industrialization background, because the deviation of the development idea and dislocation, the manual intervention by urban development activities to ecological environment is becoming much stronger, and has become the main impact factor of urban ecological safety. So the ecological environment risk is an important urban development projects risk. Urban ecological environment development project risk is mainly in three aspects: First is ecological load, namely whether urban ecological environment can withstand the impact of the project; secondly is the human environment harmonious degree, refers to whether the environment can build project with human feelings in coordination; last is environment pollution.

Table5. Ecological environment risk factors

NO.	Style	Factors	Monitoring method	Monitor
B1	ecological load	Land resources richness	Per capita land area, such as land productivity index quantitatively estimates	The relevant government departments
		Water resources richness	Per capita water, water quality conditions in computer aided data monitoring	The relevant government departments
		Energy resources richness	Light index, energy supply and demand as indexes than quantitatively estimates	The relevant government departments
B2	human environment harmonious degree	Green Index	Building area, such as green area index quantitatively estimates	The relevant government departments, Project manager
		Landscape Diversity	Dominance index, evenness a d experts assess	The relevant government departments
B3	environment pollution.	Water pollution	Sewage treatment, wastewater index quantitatively estimates	The relevant government departments
		Air	S02, TSP emissions and	The relevant

		pollution	JingHuaLv index quantitatively estimates	government departments
		Noise pollution	Noise intensity, influence scope index quantitatively estimates	The relevant government departments
		Waste pollution	Solid waste emissions, cover an area of an area index quantitatively estimates	The relevant government departments

4.3 Social culture risk

The social culture risk mainly refers to the risk of social factors affect the project and project implementation process all kinds of external social effect brings the risk. For urban development projects, the government focused on the social culture risk can be used two monitoring indicators to reflect, namely, social and political stability and cultural risk.

Cultural risk can also let related experts according to the project of the influence of culture design a mass questionnaire, regularly collecting popular feeling, and the result will be transformed into index

The social and political stability risks and cultural risk monitoring is the project manager, but social cultural risk monitoring results and project management strategies and measures that coped with must be reported to the relevant government departments Urban development project social cultural risk often effect wide fields, improper management might cause serious social problem, so the government departments must supervise the social culture risk monitoring and response of project management.

Table6. Social culture risk factors

NO.	Factors	Monitoring method	Monitor
C1	The social and political stability	relocation, public security situation, social differentiation, social conflict, policies and regulations and improve the degree of stability to the public investigation or expert evaluation	Project manager

C2	Culture risk	The public questionnaire, expert evaluation	Project manager

4.4 Natural risk

It's inevitable for urban development project to face natural risk. Project management can regularly get natural risk the probability of information from relevant government department and research institutions and even the insurance company.

Table7. Natural risk factors

NO.	Factors	Monitoring method	Monitor
D1	Earthquake and its secondary disaster risk	Objective probability evaluation monitoring, computer aided data monitoring	The relevant government
D2	Other natural disasters and its secondary disaster risk	The typhoon, debris flow, lightning and other natural disasters and its secondary disaster risk, two-dimensional risk matrix monitoring, objective probability evaluation monitoring	Project manager

4.5 Economic risk

Economic risk of urban development project has four factors: macro-economic environment risk, regional competition risk and the regional cooperation risk, financing risk, debt service risk. Economic cycle, macroeconomic policy, fiscal revenues and expenditures, and other macroeconomic environment, as well as regional competition, the regional cooperation risk will inevitably influence on the project investment decision and operation of success or failure, in project decision-making stage project management should be on the basis of macro-economic environment risk, regional competition risk, the regional cooperation risk is the acceptable limits or whether there are effective strategies to decide whether or not to invest. In the project operation stage project management is still should be regularly monitoring macroeconomic environment risk, regional competition risk, the regional cooperation risk.

Table8. Economic risk factors

NO.	Factors	Monitoring method	Monitor
E1	Regional competition risk, the regional cooperation risk	risk assessment Experts assess	Project manager
E2	Macro-economic environment risk		
E3	Financing risk	Risk and control self assessment, (self assess possibility	
E4	Debt risk	Risk and control self assessment risk assessment	

4.6 Operation management risk

The operation of the urban development project management involves institutions-set, the structure organization and the daily operation management. Project organization setup has management committee, "company" or all kinds of mixed management mode. Considering the city development project public characteristics, in the project operation stage involved in providing service processes related risks but also through the mass questionnaire method regular monitoring.

Table9. Operation management risk factors

NO.	Factors	Monitoring method	Monitor
F1	Organization setup risk	The comparison inspection flow chart Risk and control self assessment	The relevant government; Project manager
F2	Operation management risk	The comparison inspection flow chart Risk and control self assessment Regular monitoring and inspection documents Mass questionnaire Key risk index monitoring	The relevant government; Project manager

4.7 Construction risk

City the large-scale development of the construction of the project need to monitor risk including project construction phase development progress can be expected to plan the project development of the risk and the progress of the project itself project risk, such as technology risk and construction risk, etc.

Table10. Construction risk factors

NO.	Factors	Monitoring method	Monitor
G1	Development progress	Regular monitoring and inspection, document risk and control self assessment	The relevant government; Project manager
G2	Project risk	Planning decision stage, and the expert two-dimensional risk matrix monitoring Development and construction stage, by using the engineering project risk management technology, comprehensive index.	The relevant government; Project manager

5 Planning response and risks prevention

5.1 Planning response strategy

In the industry of the transfer of the macro, pushed by the urbanization development bring mass construction planning, should give full consideration to the risk characteristics, in the development of management system and pattern, the innovation and perfection.

5.2 Risk prevention suggestions

（1） Set unified management institution

Urban development and management of the established separate institutions at home

and abroad in the practice of the urban construction is the common understanding. The different districts management committee may consider the film as a whole the development plan, can fully understand the basic situation of the city. At present, the city risk management methods have been widely recognized and popularity.

（2）Increase the risk management content

The risk for developing the city management work the centralized management, therefore, from duty scale, the ac requires a risk management function in the related department. Facing the complex urban development risk, city need to organize a high level of risk management team, team management ability will directly affect the city development process.

（3）Establish data information platform

In risk management, the information is vital, and how to get good information is the key to avoid the risk. Non-synchronous information cause people to the understanding of the risk degree have differences, also can't risk carries on the comprehensive analysis. Set up the development of electronic information about city data platform, we can ensure that the government, development, enterprise, residents sharing development material in the first time.